

Directional Cartridges

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DTAF	FLeX Series 2-way, direct-acting, solenoid-operated directional blocking poppetvalve	1
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DBAH	3-way, hydraulically operated, spool directional valve - pilot capacity
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DBAP	3-way, air-operated, spool directional valve - pilot
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DFEA8	2-way, poppet directional valve with integral T-8A control cavity - control 1
DFFA8	2-way, poppet directional valve with integral T-8A control cavity - control 1
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DPBP	3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3
DPCP	3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3
DRBP	3-way, direct-acting, directional valve with drain to port 4 (1 to 2 open, 3 blocked)
DVBP	3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A
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CXJC	Free flow nose to side check valve with port 3
CXCE	Free flow side to nose check valve with port 3
CXEE	Free flow side to nose check valve with port 3
CXGE	Free flow side to nose check valve with port 3
CXIE	Free flow side to nose check valve with port 3
CNCD	Free flow side to nose check valve with bypass orifice and port 3
CNED	Free flow side to nose check valve with bypass orifice and port 3
CNGD	Free flow side to nose check valve with bypass orifice and port 3
CNID	Free flow side to nose check valve with bypass orifice and port 3
DKDC	Normally closed, balanced poppet, logic element - pilot-to
DKDS	Normally closed, balanced poppet, logic element - pilot-to
DKFC	Normally closed, balanced poppet, logic element - pilot-to
DKFS	Normally closed, balanced poppet, logic element - pilot-to
DKHC	Normally closed, balanced poppet, logic element - pilot-to



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DSIO	Spring offset, 2-position, high side shuttle
DSCY	3-way, 2-position, vent-to-shift diverter valve, normally
DSEY	3-way, 2-position, vent-to-shift diverter valve, normally
DSGY	3-way, 2-position, vent-to-shift diverter valve, normally
DSIY	3-way, 2-position, vent-to-shift diverter valve, normally
DSCX	3-way, 2-position, vent-to-shift diverter valve, normally
DSEX	3-way, 2-position, vent-to-shift diverter valve, normally283 closed
DSGX	3-way, 2-position, vent-to-shift diverter valve, normally284 closed
DSIX	3-way, 2-position, vent-to-shift diverter valve, normally285 closed
DDDG	3-way, 2-position, pilot-to-shift, directional
DDFG	3-way, 2-position, pilot-to-shift, directional
DDHG	3-way, 2-position, pilot-to-shift, directional
DPBA	2-way, pilot-operated, directional valve with internal drain to port 3 - normally289 open
DPCA	2-way, pilot-operated, directional valve with internal drain to port 3 - normally290 open
DRBA	2-way, direct-acting, directional valve with internal drain to port 3 - normally291 open
DVBA	2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T292 8A control cavity - normally open
DVCA	2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T293 8A control cavity - normally open
DPBB	2-way, pilot-operated, directional valve with internal drain to port 3 - normally294 closed
DPCB	2-way, pilot-operated, directional valve with internal drain to port 3 - normally295 closed
DRBB	2-way, direct-acting, directional valve with internal drain to port 3 - normally296 closed
DVBB	2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T297 8A control cavity - normally closed
DVCB	2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T298 8A control cavity - normally closed
DPBM	2-way, pilot-operated, directional valve with drain to port 4 - normally299 open



DPCM	2-way, pilot-operated, directional valve with drain to port 4 - normally300 open
DRBM	2-way, direct-acting, directional valve with drain to port 4 - normally
DVBM	2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A302 control cavity - normally open
DVCM	2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A303 control cavity - normally open
DRBMX	2-way, direct-acting, fixed setting, directional valve with drain to port 4 - normally304 open
DRAY	2-way, pilot-to-shift directional valve with drain to port 4 - normally
DPBN	2-way, pilot-operated, directional valve with drain to port 4 - normally306 closed
DPCN	2-way, pilot-operated, directional valve with drain to port 4 - normally307 closed
DRBN	3-way, direct-acting, directional valve with drain to port 4 - normally308 closed
DVBN	2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A309 control cavity - normally closed
DVCN	2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A310 control cavity - normally closed
DRBNX	2-way, direct-acting, fixed setting, directional valve with drain to port 4 - normally311 closed
DRAX	2-way, pilot-to-shift directional valve with drain to port 4 - normally312 closed
DPBC	3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3313 open)
DPCC	3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3314 open)
DRBC	3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3315 open)
DRCC	3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3316 open)
DVBC	3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T317 8A control cavity (1 blocked, 2 to 3 open)
DVCC	3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T318 8A control cavity (1 blocked, 2 to 3 open)
DPBD	3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3319 blocked)
DPCD	3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3320 blocked)
DRBD	3-way, direct-acting, directional valve with internal drain to port 3 (1 to 2 open, 3321 blocked)
DVBD	3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T322 8A control cavity (1 to 2 open, 3 blocked)



DVCD	3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T 8A control cavity (1 to 2 open, 3 blocked)	323
DPBO	3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 open)	324
DPCO	3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 open)	325
DRBO	3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)	326
DRCO	3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)	327
DVBO	3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 blocked, 2 to 3 open)	328
DVCO	3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 blocked, 2 to 3 open)	329
DRBOX	3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)	330
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DCCF	4-way, 2-position, pilot-to-shift directionalvalve	332
DCDF	4-way, 2-position, pilot-to-shift directional valve	333
DCEF	4-way, 2-position, pilot-to-shift directional valve	334
DCFF	4-way, 2-position, pilot-to-shift directionalvalve	335
DCCD	4-way, 2-position, pilot-to-shift, detented, directional valve	336
DCDD	4-way, 2-position, pilot-to-shift, detented, directional valve	337
DCED	4-way, 2-position, pilot-to-shift, detented, directional valve	338
DCFD	4-way, 2-position, pilot-to-shift, detented, directional valve	339
DCCC	4-way, 3-position, pilot-to-shift directionalvalve	340
DCDC	4-way, 3-position, pilot-to-shift directionalvalve	341
DCEC	4-way, 3-position, pilot-to-shift directionalvalve	342
DCFC	4-way, 3-position, pilot-to-shift directional valve	343
DDDC	4-way, 3-position, pilot-to-shift directional valve	344
DDFC	4-way, 3-position, pilot-to-shift directional valve	345



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FTCC	4-way, 3-position, meter in proportional directional valve	347
FTDC	4-way, 3-position, meter in proportional directional valve	348
FTEC	4-way, 3-position, meter in proportional directional valve	349
FTFC	4-way, 3-position, meter in proportional directional valve	350
FTHC	4-way, 3-position, meter in proportional directional valve	351
CKCR	5:1 pilot ratio, pilot-to-open check valve with standard pilot	352
CKCS	5:1 pilot ratio, pilot-to-open check valve with sealed pilot	353
CXBM	Insert style, free flow nose to side check valve	354
CXFHZ	Free flow nose to side check valve with position switch	355
CXHHZ	Free flow nose to side check valve with position switch	356



Cavity Information

Series	Ports	Cavities
Series Z Cartridges	3-Port	T-382A
3/8-24 UNF Cartridge Thread		
5 mm Valve Hex Size		
1 - 14 Nm Valve Installation Torque		
Series P Cartridges	2-Port	T-8A
M16 Cartridge Thread	2-Port (Deep)	T-8DP
22.2 mm Valve Hex Size	3-Port	T-9A
27 - 33 Nm Valve Installation Torque		
Series 0 Cartridges	2-Port	T-162A
	2-Port (Deep)	T-162DP
И16 Cartridge Thread 19,1 mm Valve Hex Size	3-Port	T-150A
25,4 mm Valve Hex Size	3-Port	T-163A
27 - 33 Nm Valve Installation Torque	4-Port	T-30A
Series 1 Cartridges	2-Port	T-10A
M20 Cartridge Thread	2-Port	T-13A
vi20 Carmage Thread 22.2 mm Valve Hex Size	3-Port	T-11A
11 - 47 Nm Valve Installation Torque	4-Port	T-21A
The state of the s	4-Port	T-31A
	6-Port	T-61A
Series 2 Cartridges	2-Port	T-3A
I"-14 UNS Cartridge Thread	2-Port	T-5A
28,6 mm Valve Hex Size	3-Port	T-2A
1 - 68 Nm Valve Installation Torque	4-Port 4-Port	T-22A
	4-Port (Dual path)	T-32A T-52AD
	6-Port	T-52AD T-52A
	6-Port	T-62A
Series 3 Cartridges	2-Port	T-16A
•	3-Port	T-17A
M36 Cartridge Thread 31,8 mm Valve Hex Size	4-Port	T-23A
203 - 217 Nm Valve Installation Torque	4-Port	T-33A
2	4-Port (Dual path)	T-53AD
	6-Port	T-53A
	6-Port	T-63A
Series 4 Cartridges	2-Port	T-18A
M48 Cartridge Thread	2-Port (Undercut)	T-18AU
11,3 mm Valve Hex Size	3-Port	T-19A T-19AU
174 - 508 Nm Valve Installation Torque	3-Port (Undercut) 4-Port	T-19AU T-24A
	4-Port (Undercut)	T-24A T-24AU
	4-Port	T-34A
	4-Port (Dual path)	T-54AD
	6-Port	T-54A
	6-Port	T-64A

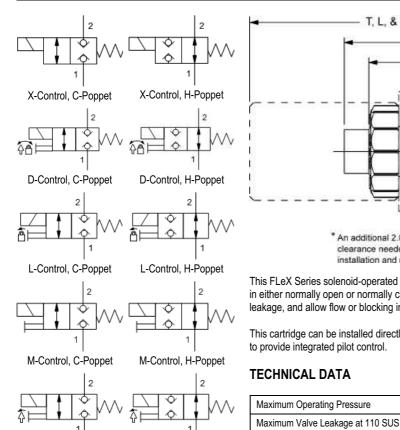




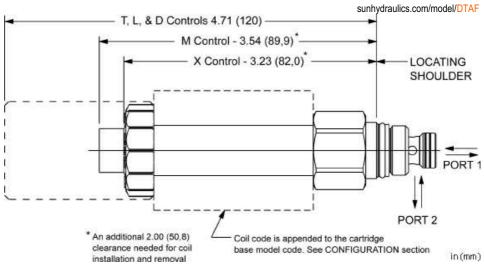
FLeX Series 2-way, direct-acting, solenoid-operated directional blocking poppet valve

SERIES P / CAPACITY: 28 L/min. / CAVITY: T-8A





T-Control, H-Poppet



This FLeX Series solenoid-operated 2-way, 2-position cartridge is a direct-acting directional poppet valve. Available in either normally open or normally closed configurations, these valves feature a pressure-balanced design, low leakage, and allow flow or blocking in both directions.

This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@350 bar		
Viscosity Range	2,8 - 380 cSt		
Response Time - Typical	50 ms		
Switching Frequency	15,000 max. cycles/hr		
U.S. Patent #	10,302,201		
Seal kit - Cartridge	Buna: 990608007		
Seal kit - Cartridge	Viton: 990608006		

NOTES

M Manual Override

T-Control, C-Poppet

- For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.
- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

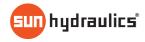
CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DTAFXCN

CONTROL	(X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available
L Twist/Lock (Detent) Manual Overrid	е		V Viton		

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MODEL DTBF

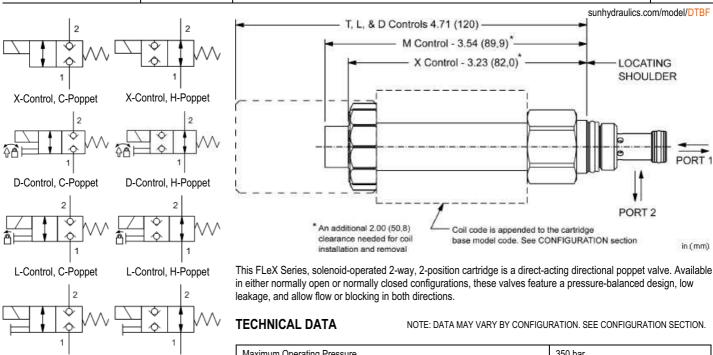
M-Control, H-Poppet

T-Control, H-Poppet

FLeX Series 2-way, direct-acting, solenoid-operated directional blocking poppet valve

CAPACITY: 34 L/min. / CAVITY: T-162A





Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@350 bar
Viscosity Range	2,8 - 380 cSt
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
U.S. Patent #	10,302,201
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

NOTES

M Manual Override

M-Control, C-Poppet

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DTBFXCN

CONTROL (X	POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM	_	* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton		4

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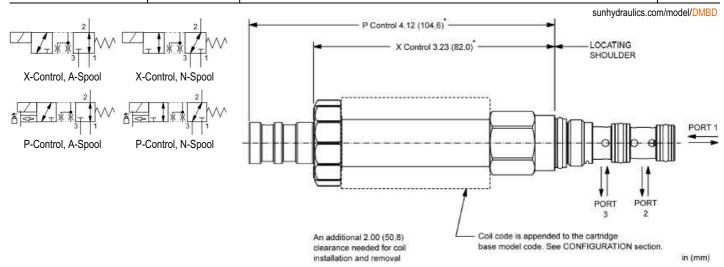


MODEL DMBD

FLeX Series 3-way, solenoid-operated directional spool valve - 3000 psi (210 bar)

CAPACITY: 15 L/min. / CAVITY: T-150A





This FLeX Series solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	210 bar
Typical Valve Leakage at 110 SUS (24 cSt) from port 1 to port 3	50 cc/min.@210 bar
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990150007
Seal kit - Cartridge	Viton: 990150006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DMBDXAN

CONTROL (X) SPOOL CONFIGURATION (A) SEAL MATERIAL (N) COIL *

X No Manual Override A Normally Open 1 to 2, Closed 2 to 3
P Manual Pull Override N Normally Open 2 to 3, Closed 1 to 2
E EPDM
V Viton
*Additional coil options are available V

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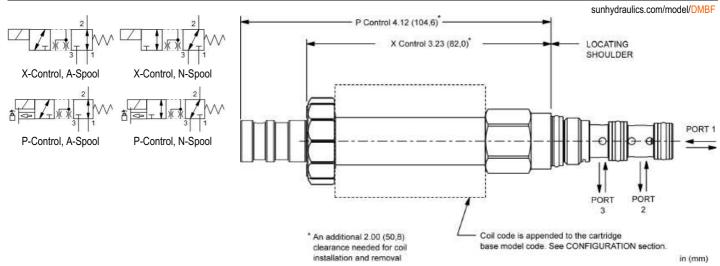




FLeX Series 3-way, solenoid-operated directional spool valve

CAPACITY: 15 L/min. / CAVITY: T-150A





This FLeX Series solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Typical Valve Leakage at 110 SUS (24 cSt) Inlet on 1	164 cc/min.@350 bar		
Typical Valve Leakage at 110 SUS (24 cSt) Inlet on 2 or 3	82 cc/min.@350 bar		
Response Time - Typical	50 ms		
Switching Frequency	15,000 max. cycles/hr		
Seal kit - Cartridge	Buna: 990150007		
Seal kit - Cartridge	Viton: 990150006		

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DMBFXAN

CONTROL	(X)	SPOOL CONFIGURATION	(A)	SEAL MATERIAL	(N)	COIL *
X No Manual Override		A Normally Open 1 to 2, Closed 1 to 3	3	N Buna-N		No coil
P Manual Pull Override		N Normally Open 2 to 3, Closed 1 to 2	2	E EPDM		* Additional coil options are available
				V Viton		

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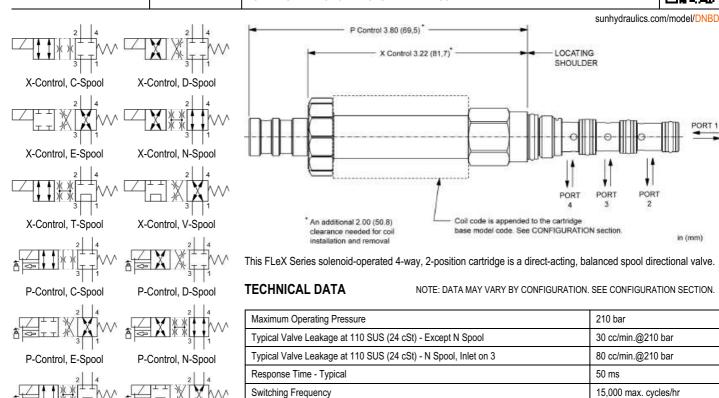
DNBD

FLeX Series 4-way, 2-position, solenoid-operated directional spool valve - 3000 psi (210 bar)

CAPACITY: 15 L/min. / CAVITY: T-30A



in (mm)



NOTES

P-Control, T-Spool

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

Seal kit - Cartridge

Seal kit - Cartridge

CONFIGURATION OPTIONS

Model Code Example: DNBDXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) COIL *	
X No Manual Override	C Closed, Shift to Through	N Buna-N	No coil	
P Manual Pull Override	D Closed, Shift to Cross	V Viton	* Additional coil options are available	

P-Control, V-Spool

- E Cross, Shift to Closed
- N Through, Shift to Cross
- T Tandem, Shift to Through
- V Cross, Shift to Tandem

Additional coil options are available

Buna: 990030007

Viton: 990030006

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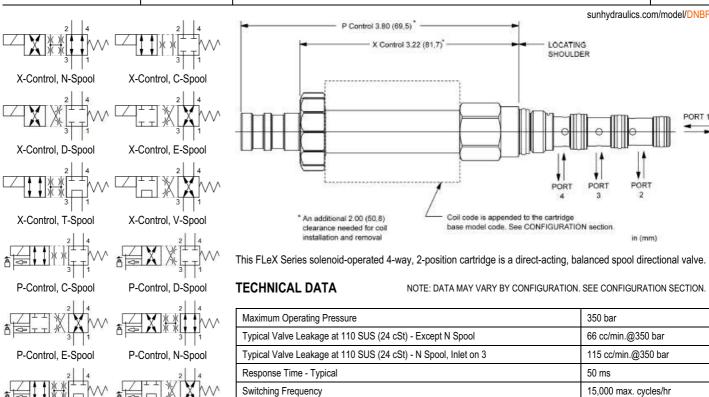
P-Control, V-Spool

FLeX Series 4-way, 2-position, solenoid-operated directional spool valve CAPACITY: 15 L/min. / CAVITY: T-30A



Buna: 990030007

Viton: 990030006



NOTES

P-Control, T-Spool

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

Seal kit - Cartridge

Seal kit - Cartridge

T Tandem, Shift to ThroughV Cross, Shift to Tandem

CONFIGURATION OPTIONS

Model Code Example: DNBFXNN

CONTROL	(X) SPOOL CONFIGURATION	(N) SEAL MATERIAL	(N) COIL*
X No Manual Override	N Through, Shift to Cross	N Buna-N	No coil
P Manual Pull Override	C Closed, Shift to Through	V Viton	* Additional coil options are available
	D Closed, Shift to Cross		
	E Cross, Shift to Closed		

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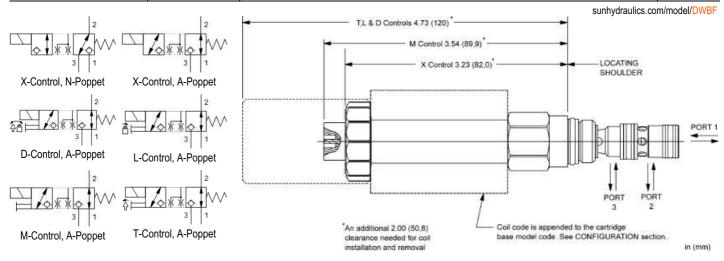




FLeX Series 3-way, direct-acting, solenoid-operated directional blocking poppet valve

CAPACITY: 23 L/min. / CAVITY: T-150A





This FLeX Series solenoid-operated 3-way, 2-position cartridge is a direct-acting, poppet-style directional valve.

Due to the poppet style construction, this valve has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@350 bar
Response Time - Typical	50 ms
Switching Frequency	10,000 max. cycles/hr
U.S. Patent #	10,302,201
Seal kit - Cartridge	Buna: 990150007
Seal kit - Cartridge	Viton: 990150006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.
- These typical performance curves show the preferred flow path for the valve. If you would like to use this valve in any way other than the preferred flow path, please contact the Sun Hydraulics Systems Group to discuss your application.
- Sun Hydraulics bases solenoid valve performance data on testing at maximum ambient temperature (50° C) and 15% undervoltage at stabilized current (580 mA). This ensures that our data represents valve performance under worst-case conditions.

CONFIGURATION OPTIONS

Model Code Example: DWBFXNN

CONTROL (X) POPPET CONFIGURATION (N) SEAL MATERIAL (N) COIL * N Normally Open 2 to 3, Closed 1 to 2

A Normally Open 1 to 2, Closed 2 to 3

- X No Manual Override D Twist/Lock (Dual) Manual Override
- L Twist/Lock (Detent) Manual Override
- M Manual Override
- T Twist (Momentary) Manual Override

N Buna-N V Viton

* Additional coil options are available

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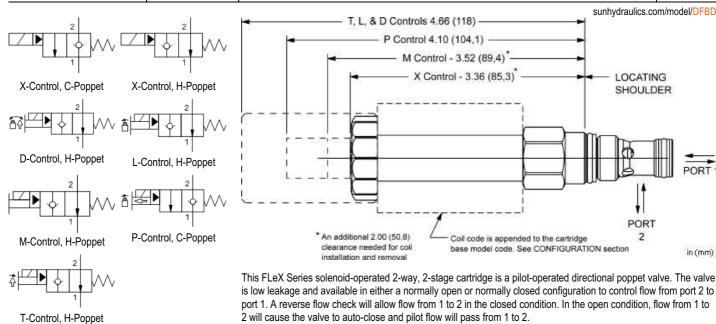
MODEL DFBD

FLeX Series 2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check - flow 2-1, 3000 psi (210 bar)

CAPACITY: 40 L/min. / CAVITY: T-162A



in (mm)



TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	210 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@210 bar
Check Cracking Pressure	3,5 bar
Viscosity Range	2,8 - 380 cSt
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

NOTES

M Manual Override P Manual Pull Override

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DFBDXCN

CONTROL	(X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	l
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available	
L Twist/Lock (Detent) Manual Override			V Viton			

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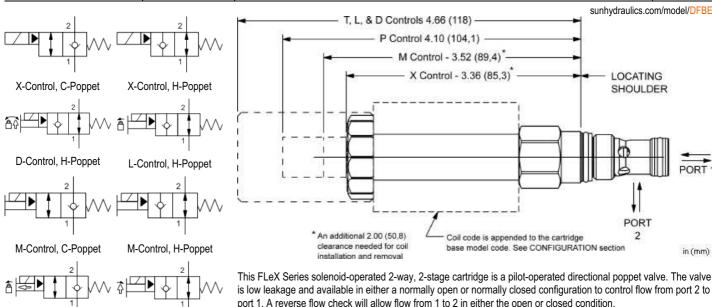


T-Control, H-Poppet

FLeX Series 2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check - flow 2-1, 3000 psi (210 bar)

CAPACITY: 40 L/min. / CAVITY: T-162A





is low leakage and available in either a normally open or normally closed configuration to control flow from port 2 to port 1. A reverse flow check will allow flow from 1 to 2 in either the open or closed condition.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	210 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@210 bar
Check Cracking Pressure	3,5 bar
Viscosity Range	2,8 - 380 cSt
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFBEXCN

(N) COIL * CONTROL (X) POPPET CONFIGURATION (C) SEAL MATERIAL

> C Normally Close H Normally Open

X No Manual Override

P-Control, C-Poppet

- D Twist/Lock (Dual) Manual Override
- L Twist/Lock (Detent) Manual Override
- M Manual Override
- P Manual Pull Override
- T Twist (Momentary) Manual Override

E EPDM

V Viton

Additional coil options are available

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FLeX Series 2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check - flow 2-1

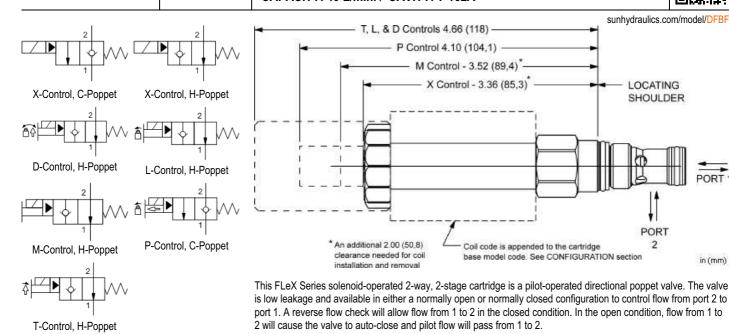
CAPACITY: 40 L/min. / CAVITY: T-162A



PORT

2

in (mm)



TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt) 0,07 cc/min.@350 bar	
Check Cracking Pressure	3,5 bar
Viscosity Range	2,8 - 380 cSt
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFBFXCN

(CONTROL (X	POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	_
	X No Manual Override	C Normally Closed		N Buna-N		No coil	ı
	D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available	_
	I Twist/Lock (Detent) Manual Override			V Viton			

M Manual Override

P Manual Pull Override

T Twist (Momentary) Manual Override

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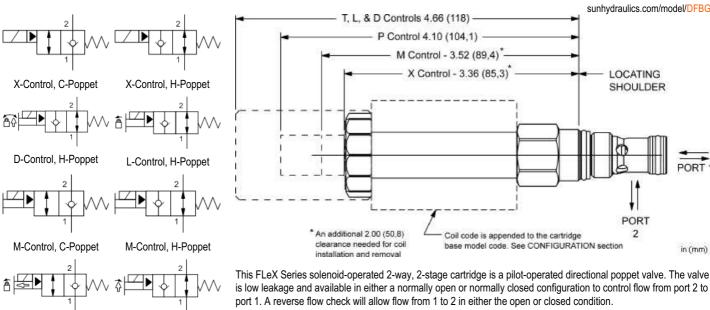
MODEL DFBG

T-Control, H-Poppet

FLeX Series 2-way, 2-stage, solenoid-operated directional poppet valve with reverse flow check - flow 2-1

CAPACITY: 40 L/min. / CAVITY: T-162A





is low leakage and available in either a normally open or normally closed configuration to control flow from port 2 to

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Viscosity Range	2,8 - 380 cSt
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFBGXCN

(N) COIL * CONTROL (X) POPPET CONFIGURATION (C) SEAL MATERIAL

X No Manual Override

P-Control, C-Poppet

- C Normally Close D Twist/Lock (Dual) Manual Override H Normally Open
- L Twist/Lock (Detent) Manual Override
- M Manual Override
- P Manual Pull Override
- T Twist (Momentary) Manual Override

- - **E** EPDM
 - V Viton

Additional coil options are available

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T-Control, H-Poppet

2-way, direct-acting, solenoid-operated directional blocking poppet valve (740 Series)

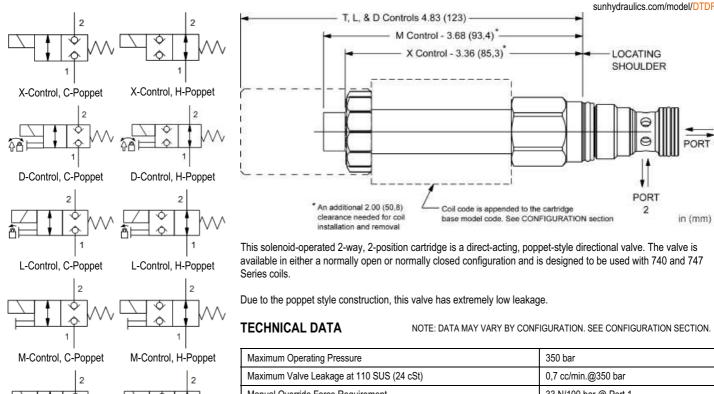
SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-13A



PORT

2

in (mm)



0,7 cc/min.@350 bar Manual Override Force Requirement 33 N/100 bar @ Port 1 Manual Override Stroke 2,5 mm Response Time - Typical 50 ms Switching Frequency 15,000 max. cycles/hr Seal kit - Cartridge Buna: 990413007 Polyurethane: 990413002 Seal kit - Cartridge Viton: 990413006 Seal kit - Cartridge

NOTES

T-Control, C-Poppet

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: DTDFXCN

CONTROL	X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton		

M Manual Override T Twist (Momentary) Manual Override

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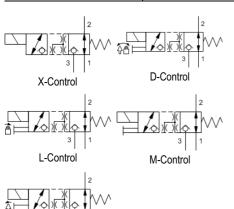


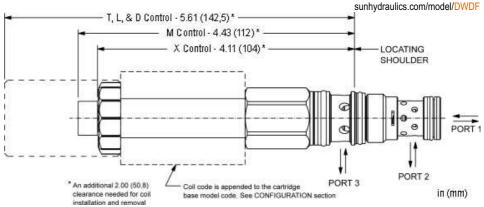
T-Control



3-way, direct-acting, solenoid-operated directional poppet valve (740 Series) SERIES 1 / CAPACITY: 30 L/min. / CAVITY: T-11A







This solenoid-operated 3-way, 2-position cartridge is a direct-acting, poppet-style directional valve. The valve is normally open between port 1 and port 2 with port 3 blocked. Energizing the valve connects port 2 to 3 and blocks port 1. All flow paths are bidirectional and blocked paths are blocked in both directions. Due to the poppet style construction, this valve has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	Viton: 990411006

NOTES

M Manual Override

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DWDFXAN

CONTROL	(X) POPPET CONFIGURATION (A)	SEAL MATERIAL (N)	COIL *
X No Manual Override	A Normally Open 1 to 2, Closed 2 to 3	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override		E EPDM	* Additional coil options are available
L Twist/Lock (Detent) Manual Override		V Viton	•

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T-Control, H-Spool

2-way, solenoid-operated directional spool valve (740 Series)

SERIES 1 / CAPACITY: 45 L/min. / CAVITY: T-13A

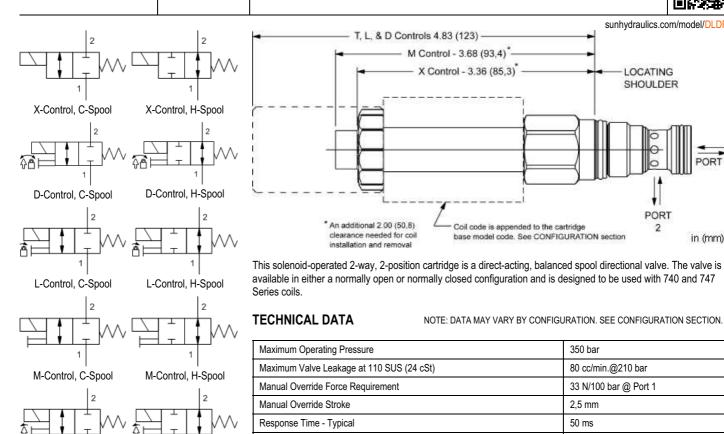


in (mm)

15,000 max. cycles/hr

Buna: 990413007

Viton: 990413006



Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances. **NOTES**

Switching Frequency

Seal kit - Cartridge

Seal kit - Cartridge

CONFIGURATION OPTIONS

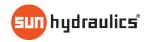
T-Control, C-Spool

Model Code Example: DLDFXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) COIL *	
X No Manual Override	C Normally Closed	N Buna-N	No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open	E EPDM	* Additional coil options ar	e available
I Manual Override - Adjustable		V Viton		

M Manual Override T Twist (Momentary) Manual Override

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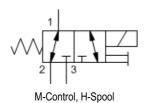


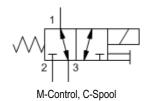


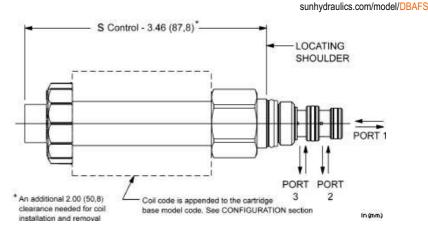
3-way, soft shift, solenoid-operated directional spool valve - pilot capacity (740 Series)

SERIES P / CAPACITY: 1 L/min. / CAVITY: T-9A









This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is normally open between port 1 and port 2 or port 1 and port 3 and all flow paths are bidirectional.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	66 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990009007
Seal kit - Cartridge	Polyurethane: 990009002
Seal kit - Cartridge	Viton: 990009006

NOTES

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

DODDET CONFICURATION

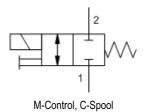
Model Code Example: DBAFSHN

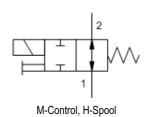
POPPET CONFIGURATION	(H) SEAL MATERIAL	(N) COIL *
H Normally Open	N Buna-N	No coil
C Normally Closed	V Viton	* Additional coil options are available

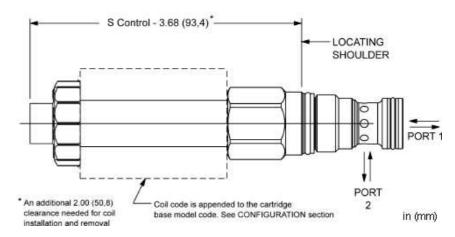
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sunhydraulics.com/model/DLDFS







This solenoid-operated 2-way, 2-position cartridge is a direct-acting, balanced spool valve with a soft shift feature. The soft shift feature reduces system shock due to valve actuation. The valve is available in either a normally open or normally closed configuration.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Viton: 990413006

NOTES

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: DLDFSCN

POPPET CONFIGURATION

(C) SEAL MATERIAL

(N) COIL*

C Normally ClosedH Normally Open

N Buna-N

No co

V Viton * Additional coil options are available

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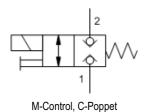


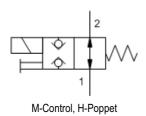


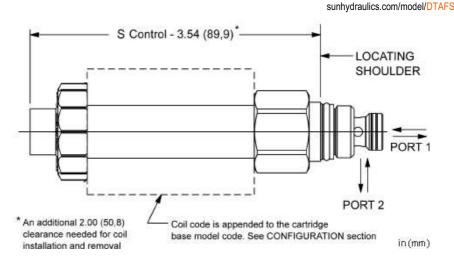
FLeX Series 2-way, soft shift, solenoid-operated directional poppet valve - pilot capacity

SERIES P / CAPACITY: 28 L/min. / CAVITY: T-8A









This FLeX Series, solenoid-operated 2-way, 2-position cartridge is a direct-acting directional poppet valve with a soft shift feature. Available in either normally open or normally closed configurations, these valves feature a pressure-balanced design, low leakage, and allow flow or blocking in both directions.

This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.@350 bar
Manual Override Force Requirement	66 N/100 bar @ Port 1
Viscosity Range	2,8 - 380 cSt
Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	Viton: 990608006

CONFIGURATION OPTIONS

Model Code Example: DTAFSCN

POPPET CONFIGURATION

(C) SEAL MATERIAL

(N) COIL *

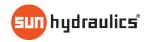
C Normally Closed

N Buna-N

No co

H Normally Open V Viton *Additional coil options are available

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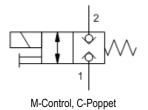


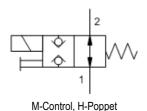


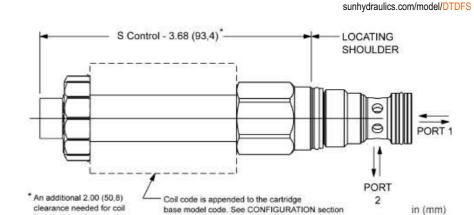
2-way, direct-acting, soft shift, solenoid-operated directional blocking poppet valve (740 Series)

SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-13A









This solenoid-operated 2-way, 2-position cartridge is a direct-acting, poppet-style directional valve with a soft shift feature. The soft shift feature reduces system shock due to valve actuation. The valve is available in either a normally open or normally closed configuration.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

installation and removal

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

NOTES

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: DTDFSCN

POPPET CONFIGURATION (C)	SEAL MATERIAL (N)	COIL "
C Normally Closed	N Buna-N	No coil
H Normally Open	V Viton	* Additional coil options are available

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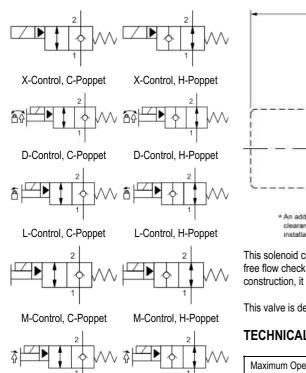


MODEL

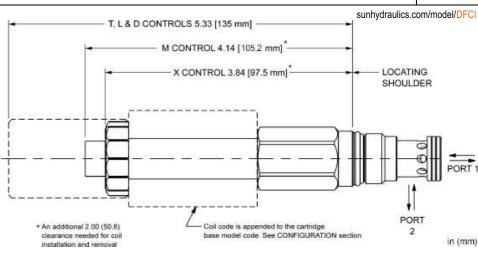
2-way, 2-stage, solenoid-operated directional poppet valve - flow 1-2 (740 Series)

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A





T-Control, H-Poppet



This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006

CONFIGURATION OPTIONS

T-Control, C-Poppet

Model Code Example: DFCIXCN

CONTROL	(X) SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL*
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM	_	* Additional coil options are available
L Twist/Lock (Detent) Manual Override	9		V Viton		

M Manual Override T Twist (Momentary) Manual Override

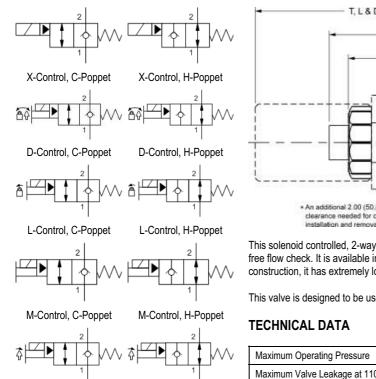
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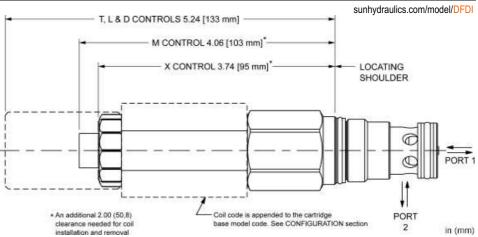
MODEL DFDI 2-way, 2-stage, solenoid-operated directional poppet valve - flow 1-2 (740 Series)

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A





T-Control, H-Poppet



This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

NOTES

M Manual Override

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DFDIXCN

CONTROL ()	() SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton		·

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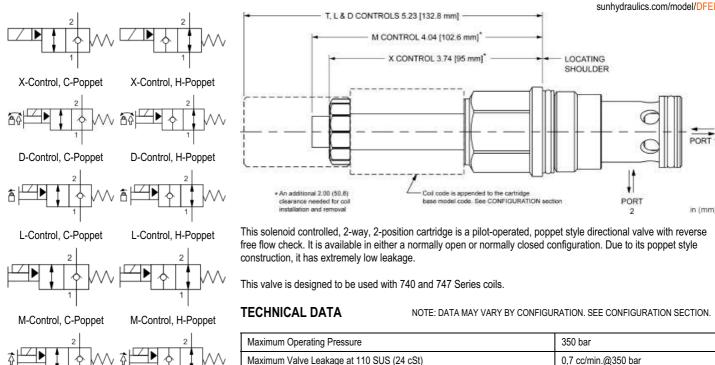
2-way, 2-stage, solenoid-operated directional poppet valve - flow 1-2 (740 Series)

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A



PORT 1

PORT



NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Viton: 990016006

NOTES

M Manual Override

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DFEIXCN

CONTROL (X	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available	
L Twist/Lock (Detent) Manual Override			V Viton			

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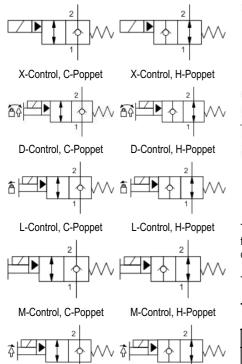




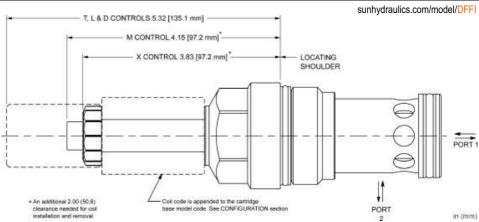
2-way, 2-stage, solenoid-operated directional poppet valve - flow 1-2 (740 Series)

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-18A





T-Control, H-Poppet



This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

T-Control, C-Poppet

Model Code Example: DFFIXCN

CONTROL	(X)	POPPET CONFIGURATION	(C	SEAL MATERIAL	(N)	COIL *	_
X No Manual Override		C Normally Closed		N Buna-N		No coil	ı
D Twist/Lock (Dual) Manual Override		H Normally Open		E EPDM		* Additional coil options are available	-
L Twist/Lock (Detent) Manual Override	9			V Viton		·	

T Twist (Momentary) Manual Override

M Manual Override

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MODEL DFCJ

T-Control, H-Poppet

2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1 (740 Series)

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A

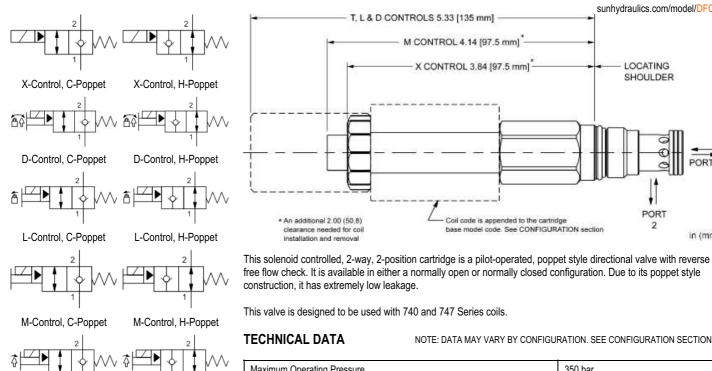


sunhydraulics.com/model/DFCJ

LOCATING SHOULDER

PORT

in (mm)



NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DFCJXCN

CONTROL	(X) SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM	_	* Additional coil options are available
L Twist/Lock (Detent) Manual Override	9		V Viton		'
M Manual Override					

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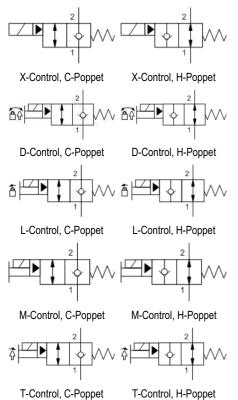


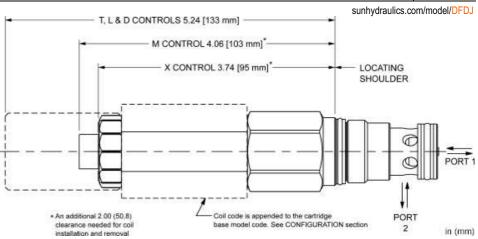
MODEL **DFDJ**

2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1 (740 Series)

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A







This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFDJXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MA	ATERIAL (N) COIL *
X No Manual Override	C Normally Closed	N Buna	-N	No coil
D Twist/Lock (Dual) Manual Override	H Normally Open	E EPDI	M	* Additional coil options are available
L Twist/Lock (Detent) Manual Override		V Viton		•

M Manual OverrideT Twist (Momentary) Manual Override

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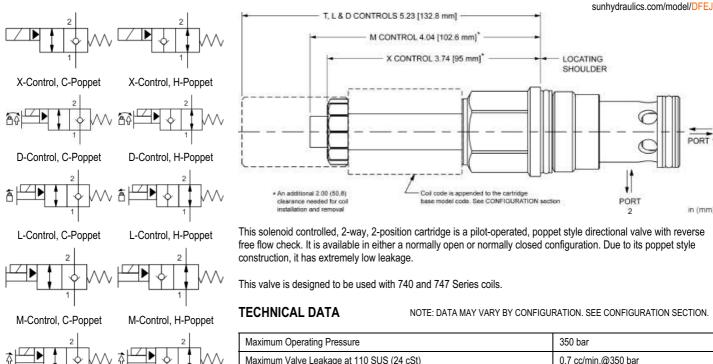
2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1 (740 Series)

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A



PORT 1

PORT



NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar	
Check Cracking Pressure	3,5 bar	
Response Time - Typical	30 ms	
Switching Frequency	15,000 max. cycles/hr	
Seal kit - Cartridge	Buna: 990016007	
Seal kit - Cartridge	EPDM: 990016014	
Seal kit - Cartridge	Viton: 990016006	

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFEJXCN

CONTROL ()	() POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton		

- M Manual Override (Standard)
- T Twist (Momentary) Manual Override

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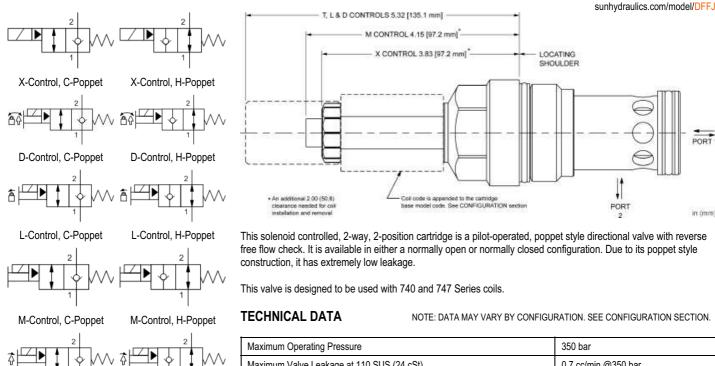


2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1 (740 Series)

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-18A



PORT 1



PORT

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar		
Check Cracking Pressure	3,5 bar		
Response Time - Typical	30 ms		
Switching Frequency	15,000 max. cycles/hr		
Seal kit - Cartridge	Buna: 990018007		
Seal kit - Cartridge	EPDM: 990018014		
Seal kit - Cartridge	Viton: 990018006		

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DFFJXCN

CONTROL	X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton		
M Manual Override					

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MODEL DTCF

2-way, direct-acting, solenoid-operated directional blocking poppet valve with overlap (740 Series)

SERIES 1 / CAPACITY: 23 L/min. / CAVITY: T-13A



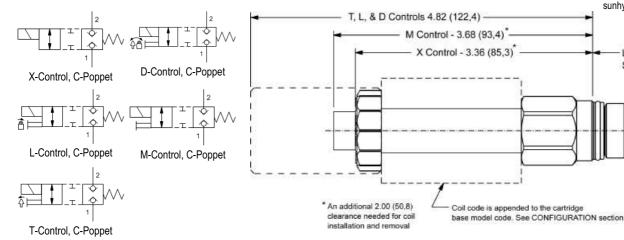
sunhydraulics.com/model/D

LOCATING SHOULDER

PORT

2

in (mm)



This solenoid-operated 2-way, 2-position cartridge is a direct-acting, poppet-style directional valve. The valve is only available in a normally closed configuration. Due to the poppet style construction, this valve has extremely low leakage.

Many poppet style directional valves pass a small amount of fluid when the pressure across them changes suddenly. This is due to the compressibility of the fluid. This valve has been designed to prevent this from happening.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

NOTES

M Manual Override

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

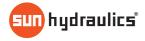
CONFIGURATION OPTIONS

T Twist (Momentary) Manual Override

Model Code Example: DTCFXCN

CONTROL	X) POPPET CONFIGURATION	(C)	SEAL MATERIAL (N	N) COIL*
X No Manual Override	C Normally Closed		N Buna-N	No coil
D Twist/Lock (Dual) Manual Override			E EPDM	* Additional coil options are available
L Twist/Lock (Detent) Manual Override			V Viton	

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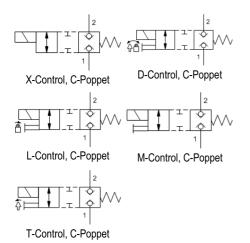
2-way, direct-acting, solenoid-operated directional blocking poppet valve with overlap

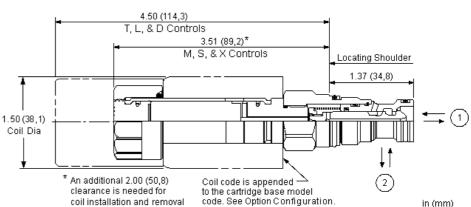
SERIES 1 / CAPACITY: 23 L/min. / CAVITY: T-13A



in (mm)

sunhydraulics.com/model/DT





This solenoid-operated 2-way, 2-position cartridge is a direct-acting, poppet-style directional valve. The valve is only available in a normally closed configuration. Due to the poppet style construction, this valve has extremely low leakage.

Many poppet style directional valves pass a small amount of fluid when the pressure across them changes suddenly. This is due to the compressibility of the fluid. This valve has been designed to prevent this from happening.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DTCAXCN

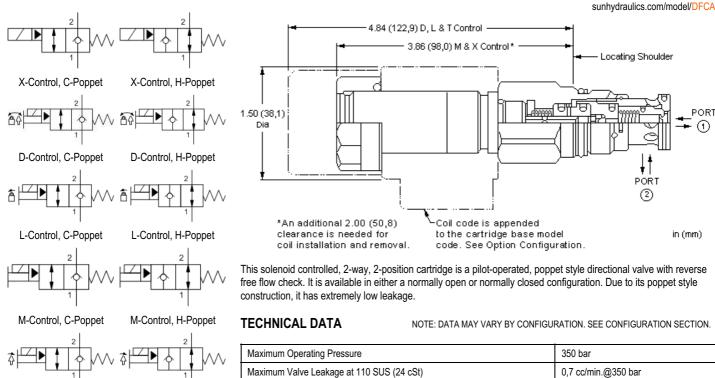
CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)	COIL *
X No Manual Override	C Normally Closed	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override		E EPDM	212 DIN 43650-Form A, 12 VDC
L Twist/Lock (Detent) Manual Override		V Viton	224 DIN 43650-Form A, 24 VDC
M Manual Override			912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override			924 Deutsch DT04-2P, 24 VDC
			* Additional coil options are available

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PORT ②

in (mm)



NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar	
Check Cracking Pressure	3,5 bar	
Response Time - Typical	30 ms	
Switching Frequency	15,000 max. cycles/hr	
Seal kit - Cartridge	Buna: 990310007	
Seal kit - Cartridge	Viton: 990310006	

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFCAXCN

CONTROL ()	() POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC	<u>.</u>
L Twist/Lock (Detent) Manual Override			V Viton		224 DIN 43650-Form A, 24 VDC	
M Manual Override					912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override					924 Deutsch DT04-2P, 24 VDC	
					* Additional coil options are available	
	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override C Normally Closed H Normally Open E EPDM V Viton	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override C Normally Closed H Normally Open E EPDM V Viton	X No Manual Override D Twist/Lock (Dual) Manual Override L Twist/Lock (Detent) Manual Override M Manual Override T Twist (Momentary) Manual Override T Twist (Momentary) Manual Override D N Buna-N E EPDM 212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC 912 Deutsch DT04-2P, 12 VDC 924 Deutsch DT04-2P, 24 VDC

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SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A



PORT

∓◑

in (mm)

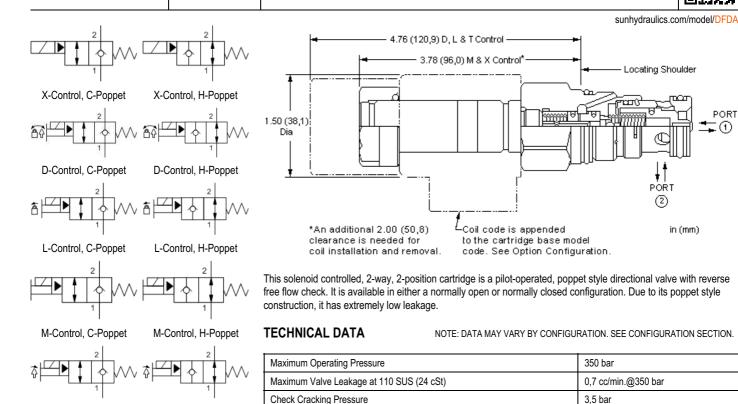
30 ms

15,000 max. cycles/hr

Buna: 990203007

EPDM: 990203014

Viton: 990203006



NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

Response Time - Typical

Switching Frequency

Seal kit - Cartridge

Seal kit - Cartridge

Seal kit - Cartridge

CONFIGURATION OPTIONS

Model Code Example: DFDAXCN

CONTROL	X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC	
L Twist/Lock (Detent) Manual Override			V Viton		224 DIN 43650-Form A, 24 VDC	
M Manual Override					912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override					924 Deutsch DT04-2P, 24 VDC	
					* Additional coil options are available	

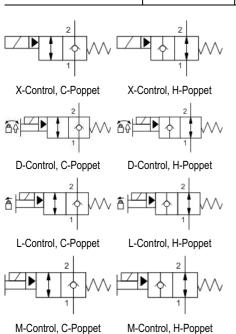
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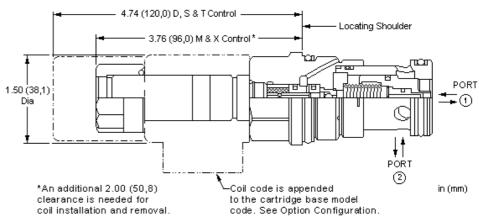
2-way, 2-stage, solenoid-operated directional poppet valve - flow 1-2

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A



sunhydraulics.com/model/DFEA





This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

(N) COII *

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar	
Check Cracking Pressure	3,5 bar	
Response Time - Typical	30 ms	
Switching Frequency	15,000 max. cycles/hr	
Seal kit - Cartridge	Buna: 990016007	
Seal kit - Cartridge	EPDM: 990016014	
Seal kit - Cartridge	Viton: 990016006	

NOTES

CONTROL

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

(Y) POPPET CONFIGURATION

CONFIGURATION OPTIONS

Model Code Example: DFEAXCN

(C) SEAL MATERIAL

OCHTINOL (A)	TOTTET CONTINUENT (O)	OLAL MATERIAL (11)	OOIL
X No Manual Override	C Normally Closed	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override	H Normally Open	E EPDM	212 DIN 43650-Form A, 12 VDC
L Twist/Lock (Detent) Manual Override		V Viton	224 DIN 43650-Form A, 24 VDC
M Manual Override			912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override			924 Deutsch DT04-2P, 24 VDC
			* Additional coil options are available

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SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-18A

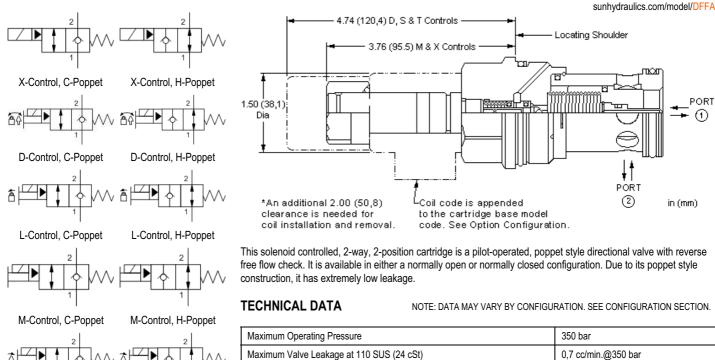


PORT

- ①

in (mm)

PORT 2



NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Viton: 990018006

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

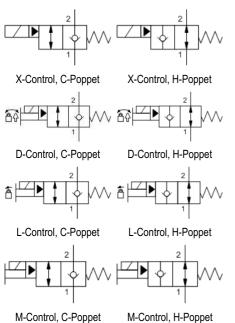
Model Code Example: DFFAXCN

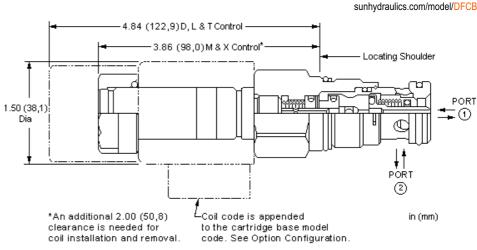
CONTROL	(X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC
L Twist/Lock (Detent) Manual Overrid	e		V Viton		224 DIN 43650-Form A, 24 VDC
M Manual Override					912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override	9				924 Deutsch DT04-2P, 24 VDC
					* Additional coil options are available

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SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A







This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

350 bar
0,7 cc/min.@350 bar
3,5 bar
30 ms
15,000 max. cycles/hr
Buna: 990413007
EPDM: 990413014
Viton: 990413006

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFCBXCN

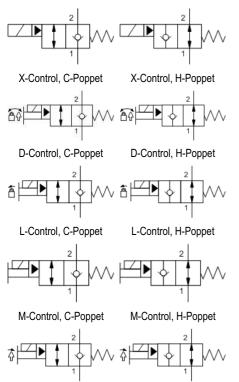
CONTROL (X	POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC	
L Twist/Lock (Detent) Manual Override			V Viton		224 DIN 43650-Form A, 24 VDC	
M Manual Override					912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override					924 Deutsch DT04-2P, 24 VDC	
					* Additional coil options are available	

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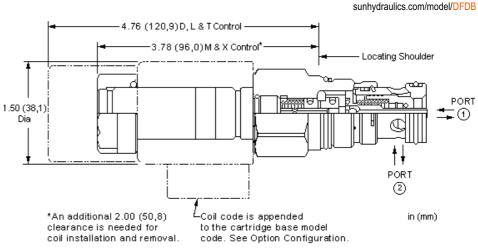
2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A





T-Control, H-Poppet



This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFDBXCN

CONTROL ()	() POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
X No Manual Override	C Normally Closed		N Buna-N		No coil	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC	_
L Twist/Lock (Detent) Manual Override			V Viton		224 DIN 43650-Form A, 24 VDC	
M Manual Override					912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override					924 Deutsch DT04-2P, 24 VDC	
					* Additional coil options are available	

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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A



PORT

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PORT 2

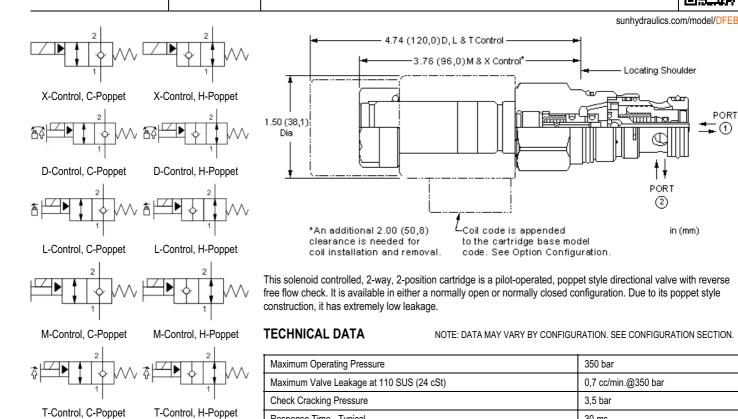
30 ms

15,000 max. cycles/hr

Buna: 990016007

Viton: 990016006

in (mm)



NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

Response Time - Typical

Switching Frequency

Seal kit - Cartridge

Seal kit - Cartridge

CONFIGURATION OPTIONS

Model Code Example: DFEBXCN

CONTROL (X)	POPPET CONFIGURATION (C)	SEAL MATERIAL (N)	COIL *
X No Manual Override	C Normally Closed	N Buna-N	No coil
D Twist/Lock (Dual) Manual Override	H Normally Open	E EPDM	212 DIN 43650-Form A, 12 VDC
L Twist/Lock (Detent) Manual Override		V Viton	224 DIN 43650-Form A, 24 VDC
M Manual Override			912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override			924 Deutsch DT04-2P, 24 VDC
			* Additional coil antions are available

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MODEL

T-Control, H-Poppet

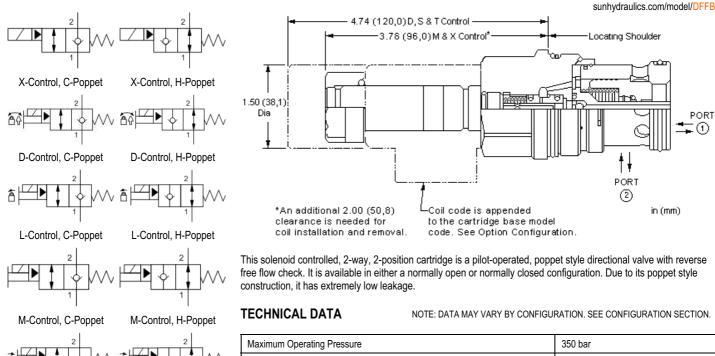
2-way, 2-stage, solenoid-operated directional poppet valve - flow 2-1

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-18A



PORT ∓◑

in (mm)



Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Viton: 990018006

NOTES

T-Control, C-Poppet

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DFFBXCN

CONTROL	(X) POPPET CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *
X No Manual Override	C Normally Closed		N Buna-N		No coil
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM		212 DIN 43650-Form A, 12 VDC
L Twist/Lock (Detent) Manual Override	e		V Viton		224 DIN 43650-Form A, 24 VDC
M Manual Override					912 Deutsch DT04-2P, 12 VDC
T Twist (Momentary) Manual Override	3				924 Deutsch DT04-2P, 24 VDC
					* Additional coil options are available

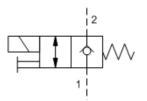
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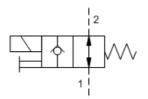


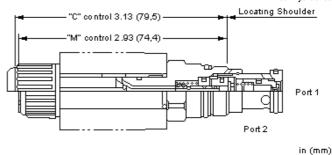
2-way, 2-stage, solenoid-operated directional poppet valve SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A



sunhydraulics.com/model/DACC







This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Response Time - Typical	30 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990313014
Seal kit - Cartridge	Viton: 990310006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DACCMCN

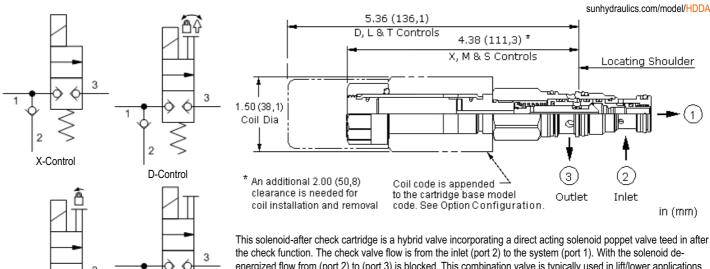
CONTROL	(IVI)	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	COIL *	
M Manual Override		C Normally Closed		N Buna-N		No coil	
C Concealed Manual Override		H Normally Open	<u>.</u>	E EPDM		212 DIN 43650-Form A, 12 VDC	_
				V Viton		224 DIN 43650-Form A, 24 VDC	
	M Manual Override	M Manual Override	M Manual Override C Normally Closed	M Manual Override C Normally Closed	M Manual Override C Concealed Manual Override H Normally Open E EPDM	M Manual Override C Normally Closed H Normally Open E EPDM	M Manual Override C Normally Closed N Buna-N No coil Normally Open E EPDM 212 DIN 43650-Form A, 12 VDC

* Additional coil options are available

© 2021 Sun Hydraulics 37 of 356 M or S-Control

SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-11A





energized flow from (port 2) to (port 3) is blocked. This combination valve is typically used in lift/lower applications and can be integrated directly into the actuator.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	2 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

T-Control

L-Control

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

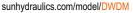
CONFIGURATION OPTIONS

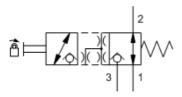
Model Code Example: HDDAXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) COIL*	
X No Manual Override	C Normally Closed	N Buna-N	No coil	
D Twist/Lock (Dual) Manual Over	ride	V Viton	212 DIN 43650-Form A, 12 VDC	
L Twist/Lock (Detent) Manual Ov	erride		224 DIN 43650-Form A, 24 VDC	
M Manual Override			912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Ove	erride		924 Deutsch DT04-2P, 24 VDC	
			* Additional coil ontions are available	

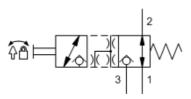
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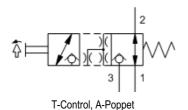


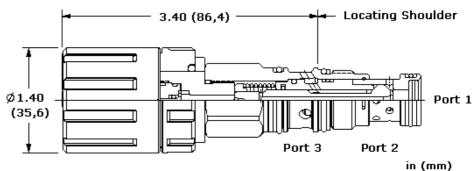


L-Control, A-Poppet



D-Control, A-Poppet





This manually operated, 2-position, 3-way directional cartridge is a direct-acting, poppet-style valve used to control the direction of flow in a hydraulic circuit. The valve is normally open between port 1 and port 2 with port 3 blocked. Operating the valve connects port 2 to 3 and blocks port 1. All flow paths are bidirectional and blocked paths are blocked in both directions. Due to the poppet style construction, this valve has extremely low leakage.

Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Operating Torque	1,2 Nm
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	Viton: 990411006

CONFIGURATION OPTIONS

Model Code Example: DWDMLAN

CONTROL	(L)	POPPET CONFIGURATION	(A)	SEAL MATERIAL	(N)
-					

L Twist/Lock (Detent) Manual Override

A Normally Open 1 to 2, Closed 2 to 3

N Buna-I

E 8

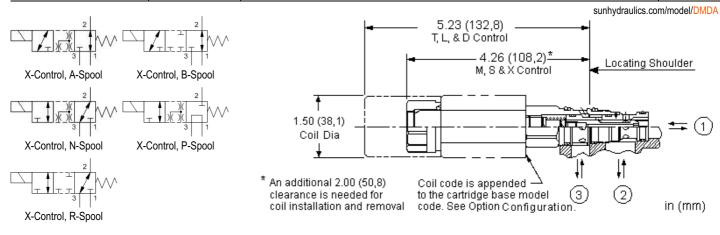
E EPDM

D Twist/Lock (Dual) Manual OverrideT Twist (Momentary) Manual Override

V Viton

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This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar	
Manual Override Force Requirement	33 N/100 bar @ Port 1	
Manual Override Stroke	2,5 mm	
Response Time - Typical	50 ms	
Switching Frequency	15,000 max. cycles/hr	
Seal kit - Cartridge	Buna: 990411007	
Seal kit - Cartridge	EPDM: 990411014	
Seal kit - Cartridge	Viton: 990411006	

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

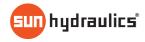
Model Code Example: DMDAXAN

CONTROL	(X) SPOOL CONFIGURATION	(A) SEAL MATERIAL	(N) COIL*
X No Manual Override	A Normally Open 1 to 2, Closed 2	to 3 N Buna-N	No coil
		= ====::	

•	110 manaan O Tom	i
М	Manual Override	

- D Twist/Lock (Dual) Manual Override
- L Twist/Lock (Detent) Manual Override
- T Twist (Momentary) Manual Override
- N Normally Open 2 to 3, Closed 1 to 2
- B Normally Open 1 to 2, Closed 2 to 3, Closed Transition
- P Normally Open 1 to 3, Closed 1 to 2
- R Normally Open 2 to 3, Closed 1 to 2, Closed Transition
- 212 DIN 43650-Form A, 12 VDC V Viton 224 DIN 43650-Form A, 24 VDC 912 Deutsch DT04-2P, 12 VDC
 - 924 Deutsch DT04-2P, 24 VDC
 - * Additional coil options are available

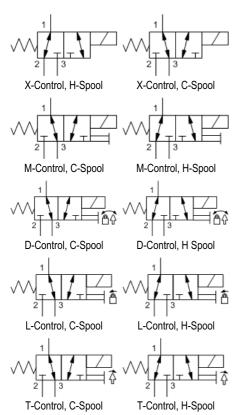
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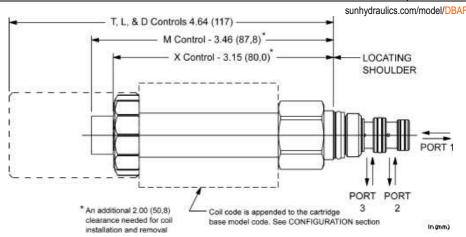




3-way solenoid-operated directional spool valve - pilot capacity (740 Series) SERIES P / CAPACITY: 1 L/min. / CAVITY: T-9A







This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is normally open between port 1 and port 2 or port 1 and port 3 and all flow paths are bidirectional.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar		
Manual Override Force Requirement	66 N/100 bar @ Port 1		
Manual Override Stroke	2,5 mm		
Response Time - Typical	50 ms		
Switching Frequency	15,000 max. cycles/hr		
Seal kit - Cartridge	Buna: 990009007		
Seal kit - Cartridge	Polyurethane: 990009002		
Seal kit - Cartridge	Viton: 990009006		

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DBAFXHN

 CONTROL
 (X)
 SPOOL CONFIGURATION
 (H)
 SEAL MATERIAL
 (N)
 COIL *

 X
 No Manual Override
 H
 Normally Open
 N Buna-N
 No coil

 D
 Twist/Lock (Dual) Manual Override
 C
 Normally Closed
 E
 EPDM
 * Additional coil options are available

 L
 Twist/Lock (Detent) Manual Override
 V
 V Viton

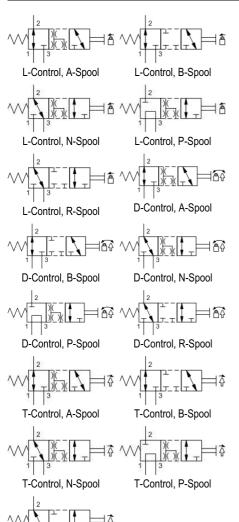
T Twist (Momentary) Manual Override

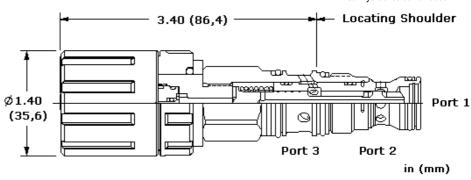
M Manual Override (Standard)

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This manually operated, 2-position, 3-way directional cartridge is a direct-acting, balanced spool valve used to control the direction of flow in a hydraulic circuit. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar		
Operating Torque 1,2 Nm			
Seal kit - Cartridge Buna: 990411007			
Seal kit - Cartridge Viton: 990411006			

CONFIGURATION OPTIONS

T-Control, R-Spool

Model Code Example: DMDMLAN

CONTROL (L) SPOOL CONFIGURATION (A) SEAL MATERIAL (N)

L Twist/Lock (Detent) Manual Override

- D Twist/Lock (Dual) Manual Override
- T Twist (Momentary) Manual Override
- A Normally Open 1 to 2, Closed 2 to 3 B Normally Open 1 to 2, Closed 2 to 3,
- N Buna-N
- N Normally Open 2 to 3, Closed 1 to 2

Closed Transition

- P Normally Open 1 to 3, Closed 1 to 2
- R Normally Open 2 to 3, Closed 1 to 2, Closed Transition

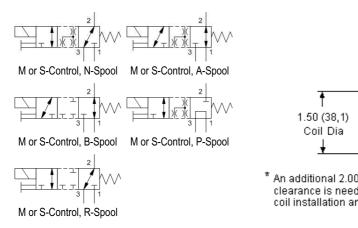
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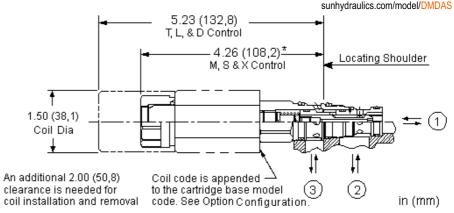




3-way, soft shift, solenoid-operated directional spool valve SERIES 1 / CAPACITY: 20 L/min. / CAVITY: T-11A







This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	EPDM: 990411014
Seal kit - Cartridge	Viton: 990411006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DMDASNN

۲	OU	L	ON	FIG	UKA	ΑΠC	N

(N) SEAL MATERIAL

(N) COIL*

N Normally Open 2 to 3, Closed 1 to 2

- A Normally Open 1 to 2, Closed 2 to 3
- **B** Normally Open 1 to 2, Closed 2 to 3, Closed Transition
- \boldsymbol{P} $\,$ Normally Open 1 to 3, Closed 1 to 2
- R Normally Open 2 to 3, Closed 1 to 2, Closed Transition

N Buna-N

E EPDM

V Viton

No co

212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC 912 Deutsch DT04-2P, 12 VDC 924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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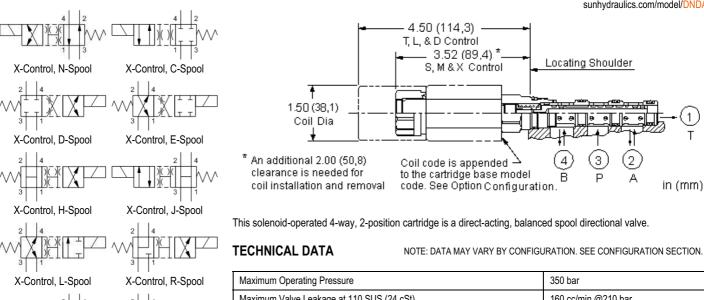
X-Control, T-Spool

X-Control, X-Spool

X-Control, Z-Spool







350 bar
160 cc/min.@210 bar
33 N/100 bar @ Port 1
2,5 mm
50 ms
15,000 max. cycles/hr
Buna: 990431007
EPDM: 990431014
Viton: 990431006

NOTES

X-Control, S-Spool

X-Control, U-Spool

X-Control, Y-Spool

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DNDAXNN

CONTROL (X	SPOOL CONFIGURATION	(N) SEAL MATERIAL	(N)	COIL*	
X No Manual Override	N Through, Shift to Cross	N Buna-N		No coil	ı
M Manual Override	C Closed, Shift to Through	E EPDM		212 DIN 43650-Form A, 12 VDC	
D Twist/Lock (Dual) Manual Override	D Closed, Shift to Cross	V Viton		224 DIN 43650-Form A, 24 VDC	
L Twist/Lock (Detent) Manual Override	E Cross, Shift to Closed			912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override	H Open, Shift to Cross			924 Deutsch DT04-2P. 24 VDC	

Open, Shift to Through Cross, Shift to P to A, B and T Blocked R Regen, Shift to Cross

S Regen, Shift to Through T Tandem, Shift to Through

U Through, Shift to Tandem

Cross, Shift to Through

Motor, Shift to Cross

Z Motor, Shift to Through

* Additional coil options are available

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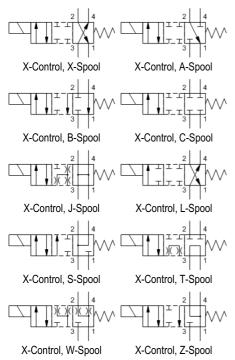


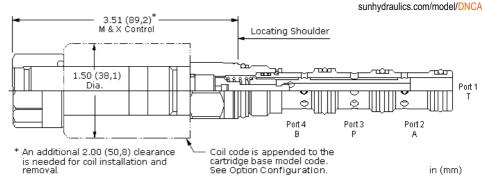


4-way, 2-position, solenoid-operated directional spool valve with closed transition

SERIES 1 / CAPACITY: 30 L/min. / CAVITY: T-31A







This solenoid-operated, 4-way, 2-position cartridge is a direct-acting, balanced spool directional valve. The transition between positions is closed. The closed transition greatly reduces the loss of oil when shifting which can be of particular importance in pilot control circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990431007
Seal kit - Cartridge	EPDM: 990431014
Seal kit - Cartridge	Viton: 990431006

NOTES

Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

Model Code Example: DNCAXXN

E EPDM

V Viton

	CONTROL	(X)	SPOOL CONFIGURATION	(X)	SEAL MATERIAL	(N)	COIL '
--	---------	-----	---------------------	-----	---------------	-----	--------

	T : (0)	0 1		
υ	Twist/Lock	(Dual)	Manual	Override

- L Twist/Lock (Detent) Manual Override
- M Manual Override

X No Manual Override

- T Twist (Momentary) Manual Override
- X Cross, Shift to Through
- C Closed, Shift to Through
- A A to T, Shift to Through
- B B to T, Shift to Through
- J Open, Shift to Through
- Cross, Shift to P to A, B and T Blocked
- S Regen, Shift to Through
- T Tandem, Shift to Through
- W A and B Bleed to T, Shift to Through
- Z Motor, Shift to Through

N Buna-N

212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC 912 Deutsch DT04-2P, 12 VDC

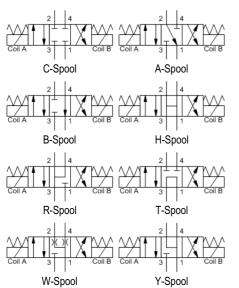
924 Deutsch DT04-2P, 24 VDC

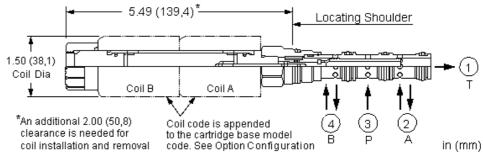
* Additional coil options are available

© 2021 Sun Hydraulics 45 of 356 4-way, 3-position, solenoid-operated directional spool valve SERIES 1 / CAPACITY: 20 L/min. / CAVITY: T-31A









This direct acting, solenoid-operated, 4-way, 3-position spool valve is spring centered to the neutral position. When coil A is energized, the flow is from port 3 (P) to port 2 (A) and from port 4 (B) to port 1 (T). When coil B is energized, the flow is from port 3 to port 4 and from port 2 to port 1.

TECHNICAL DATA

Y A and B to T Center

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@210 bar
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990431007
Seal kit - Cartridge	EPDM: 990431014
Seal kit - Cartridge	Viton: 990431006

NOTES

The two coils used in this assembly are interchangeable with one another, but once installed and wired, the coil closest to the hex body is considered Coil A, and the coil closest to the coil nut is Coil B.

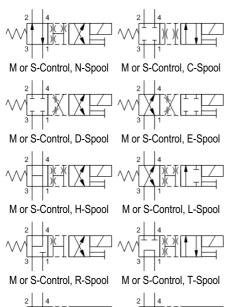
CONFIGURATION OPTIONS

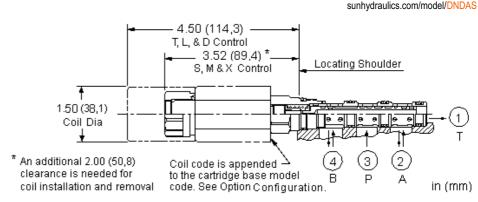
Model Code Example: DNDCXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) COIL*	
X No Manual Override	C Blocked Center	N Buna-N	No coil	
	A A to T Center	E EPDM	212 DIN 43650-Form A, 12 VDC	_
	B B to T Center	V Viton	224 DIN 43650-Form A, 24 VDC	
	H Open Center		912 Deutsch DT04-2P, 12 VDC	
	R Regen Center		924 Deutsch DT04-2P, 24 VDC	
	T Tandem Center		* Additional coil options are available	
	W A and B Bleed to T Center			

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This solenoid-operated 4-way, 2-position cartridge is a direct-acting, balanced spool directional valve with a soft shift feature. The soft shift feature greatly reduces system shock due to valve actuation.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990431007
Seal kit - Cartridge	EPDM: 990431014
Seal kit - Cartridge	Viton: 990431006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DNDASNN

SP	00L	COI	NFIGL	JRA'	TION
				_	

M or S-Control, U-Spool

- (N) SEAL MATERIAL

 N Buna-N
 E EPDM

V Viton

M or S-Control, Y-Spool

(N) COIL*

N Through, Shift to Cross

- C Closed, Shift to Through
- D Closed, Shift to Cross
- E Cross, Shift to Closed
- H Open, Shift to Cross
- H Open, Shift to Cross
- L Cross, Shift to P to A, B and T Blocked
- R Regen, Shift to Cross
- T Tandem, Shift to Through
- U Through, Shift to Tandem
- Y Motor, Shift to Cross

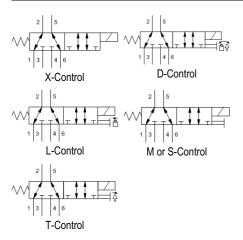
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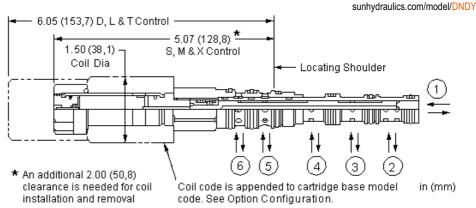
212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC 912 Deutsch DT04-2P, 12 VDC 924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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This solenoid-operated 6-way, 2-position cartridge is a direct-acting, balanced spool valve. The typical use for this valve is to select between two separate circuits. The de-energized condition connects P and T to the first circuit and when energized connects P and T to the second circuit.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

* Additional coil options are available

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Response Time - Typical	50 ms
Switching Frequency	15,000 max. cycles/hr
Seal kit - Cartridge	Buna: 990461007
Seal kit - Cartridge	EPDM: 990461014
Seal kit - Cartridge	Viton: 990461006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DNDYXXN

CONTROL	(X) SPOOL CONFIGURATION	(X)	SEAL MATERIAL	(N)	COIL *	_
X No Manual Override	X -		N Buna-N		No coil	ı
D Twist/Lock (Dual) Manual Override			E EPDM		212 DIN 43650-Form A, 12 VDC	
L Twist/Lock (Detent) Manual Override	e		V Viton		224 DIN 43650-Form A, 24 VDC	
M Manual Override					912 Deutsch DT04-2P, 12 VDC	
T Twist (Momentary) Manual Override					924 Deutsch DT04-2P, 24 VDC	

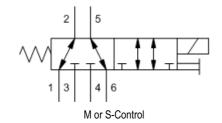
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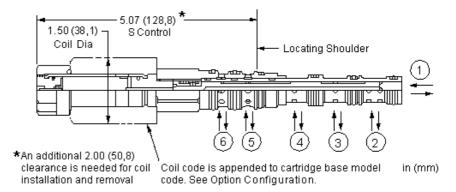
2-position, 6-way, soft shift, solenoid-operated directional spool valve

SERIES 1 / CAPACITY: 20 L/min. / CAVITY: T-61A



sunhydraulics.com/model/DNDYS





This solenoid-operated 6-way, 2-position cartridge is a direct-acting, balanced spool valve with a soft shift feature. The soft shift feature greatly reduces system shock due to valve actuation. The typical use for this valve is to select between two separate circuits. The de-energized condition connects P and T to the first circuit and when energized connects P and T to the second circuit.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990461007
Seal kit - Cartridge	Viton: 990461006

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DNDYSXN

SPOOL CONFIGURATION				
		CONIE		
	SPUUL	(.()NF	IC-IIIRA	I IC DN

(X) SEAL MATERIAL

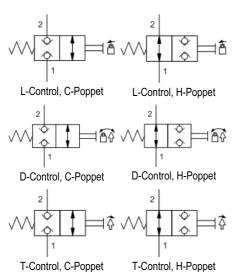
(N) COIL*

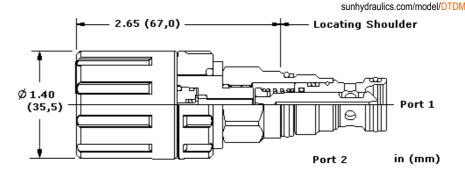
N	Buna-N	
 Е	EPDM	
٧	Viton	

No coil
212 DIN 43650-Form A, 12 VDC
224 DIN 43650-Form A, 24 VDC
912 Deutsch DT04-2P, 12 VDC
924 Deutsch DT04-2P, 24 VDC
* Additional coil options are available

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This manually operated, 2-position, 2-way directional cartridge is a direct-acting, poppet-style valve used to control the direction of flow in a hydraulic circuit. The valve is available in either a normally open or normally closed configuration. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only. Due to the poppet-style construction, this valve has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Operating Torque	1,2 Nm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

CONFIGURATION OPTIONS

Model Code Example: DTDMLCN

CONTROL	(L) POPPET CONFIGURATION	(C) SEAL MATERIAL	(N)
L Twist/Lock (Detent) Manual Override	C Normally Closed	N Buna-N	
B T 1:(/L - 1 /D - 1) M 1 O 1 1	II N	F EDDM	

D Twist/Lock (Dual) Manual Override

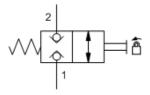
T Twist (Momentary) Manual Override

H Normally Open

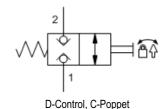
E EPDM V Viton

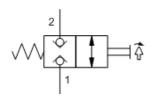
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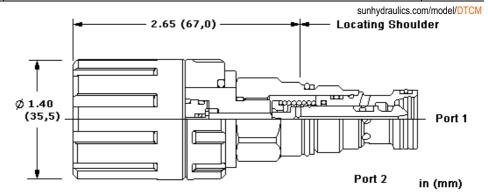


L-Control, C-Poppet





T-Control, C-Poppet



This manually operated, 2-position, 2-way directional cartridge is a direct-acting, poppet-style valve used to control the direction of flow in a hydraulic circuit. The valve is only available in a normally closed configuration. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only. Due to the poppet-style construction, this valve has extremely low leakage.

Many poppet style directional valves pass a small amount of fluid when the pressure across them changes suddenly. This is due to the compressibility of the fluid. This valve has been designed to prevent this from happening.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Operating Torque	1,2 Nm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

CONFIGURATION OPTIONS

Model Code Example: DTCMLCN

CONTROL	(L)	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)
L Twist/Lock (Detent) Manual Over	ride	C Normally Closed		N Buna-N	

D Twist/Lock (Dual) Manual Override

T Twist (Momentary) Manual Override

N Buna-V Viton

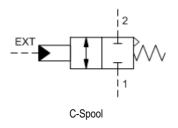
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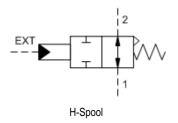


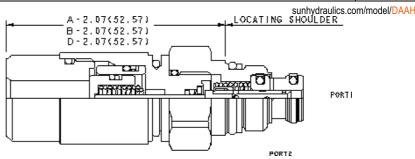
2-way, hydraulically operated, spool directional valve - pilot capacity

SERIES P / CAPACITY: 1 L/min. / CAVITY: T-8A









These pilot-stage, directional, 2-position, 2-way valves are hydraulically operated, spring-return cartridges and are available in either a normally open or normally closed configuration. These cartridges are designed for pilot flow applications and utilize Sun's T-8A cavity so they can be used in conjunction with Sun's pilot-operated, main-stage valves.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Minimum Pilot Pressure to Operate	See Technical Features
Pilot Control Port	See Control Options
Seal kit - Cartridge	Buna: 990508007
Seal kit - Cartridge	Viton: 990508006

CONFIGURATION OPTIONS

Model Code Example: DAAHBCN

CONTROL	(B) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING
B External 4-SAE Port	C Normally Closed	N Buna-N	Standard Material/Coating
A Futomod 1/0 NDTF Dout	H. Marmally Onen	V Viton	IAD Ctainless Ctast Descripted

D External 1/8 BSPP Port

A External 1/8 NPTF Port H Normally Open V Viton I/AP Stainless Steel, Passivated

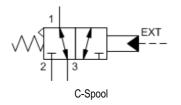
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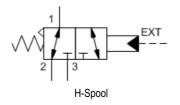


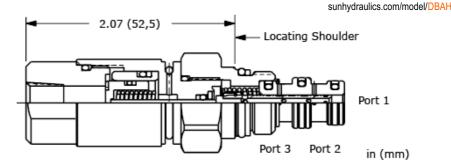
3-way, hydraulically operated, spool directional valve - pilot capacity

SERIES P / CAPACITY: 1 L/min. / CAVITY: T-9A









These pilot-stage, directional, 2-position, 3-way valves are hydraulically operated, spring-return cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3. These cartridges are designed for pilot flow applications.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Minimum Pilot Pressure to Operate	See Technical Features
Pilot Control Port	See Control Options
Seal kit - Cartridge	Buna: 990509007
Seal kit - Cartridge	Viton: 990509006

CONFIGURATION OPTIONS

Model Code Example: DBAHBCN

CONTROL (B) SPOOL CONFIGURATION (C) SEAL MATERIAL (N) MATERIAL/COATING

B External 4-SAE Port

A External 1/8 NPTF Port H Normally Open 1 to 2, Closed 1 to 3

N Buna-N **V** Viton

/AP Stainless Steel, Passivated

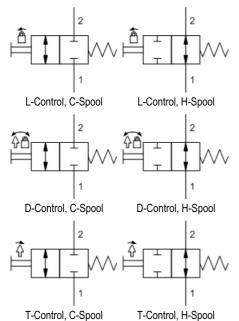
D External 1/8 BSPP Port

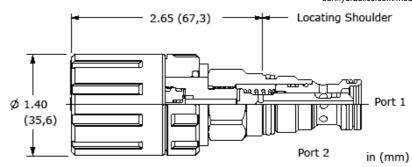
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2-way, manually operated, directional spool valve SERIES 1 / CAPACITY: 45 L/min. / CAVITY: T-13A



sunhydraulics.com/model/DLDM





This manually operated, 2-position, 2-way directional cartridge is a direct-acting, balanced spool valve used to control the direction of flow in a hydraulic circuit. The valve is available in either a normally open or normally closed configuration. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@210 bar
Operating Torque	1,2 Nm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

CONFIGURATION OPTIONS

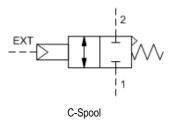
Model Code Example: DLDMLCN

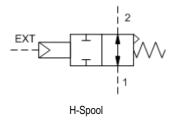
CONTROL (L)	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)
L Twist/Lock (Detent) Manual Override	C Normally Closed		N Buna-N	
D Twist/Lock (Dual) Manual Override	H Normally Open		E EPDM	
T Twist (Momentary) Manual Override			V Viton	

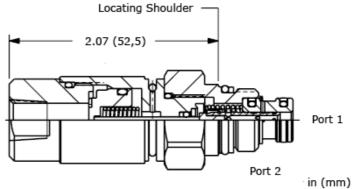
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sunhydraulics.com/model/DAAP







These pilot-stage, directional, 2-position, 2-way valves are pneumatically operated, spring-return cartridges and are available in either normally open or normally closed configurations. These cartridges are designed for pilot flow applications and utilize Sun's T-8A cavity so they can be used in conjunction with Sun's pilot-operated, main-stage valves.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Minimum Pilot Pressure to Operate	See Technical Features
Pilot Control Port	See Control Options
Seal kit - Cartridge	Buna: 990508007
Seal kit - Cartridge	Viton: 990508006

CONFIGURATION OPTIONS

P External 1/8 BSPP Port

Model Code Example: DAAPFCN

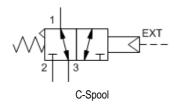
CONTROL	(F)	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
---------	-----	---------------------	-----	---------------	-----	------------------

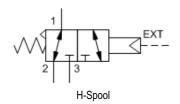
F External 1/8 NPTF Port	C Normally Closed	N
E External 4-SAE Port	H Normally Open	Е

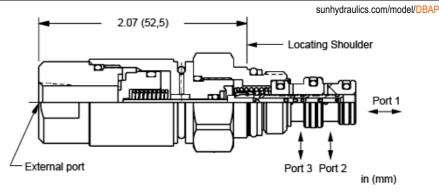
N Buna-N	Standard Material/Coating
E EPDM	/AP Stainless Steel, Passivated
V Viton	

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These pilot-stage, directional, 2-position, 3-way valves are pneumatically operated, spring-return cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Minimum Pilot Pressure to Operate	1,5 [+ port 1 press./100] bar
Pilot Control Port	See Control Options
Seal kit - Cartridge	Buna: 990509007
Seal kit - Cartridge	Viton: 990509006

CONFIGURATION OPTIONS

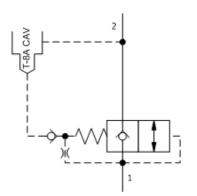
Model Code Example: DBAPFCN

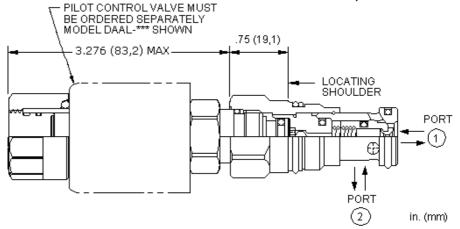
CONTROL	(F)	SPOOL CONFIGURATION	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
F External 1/8 NPTF Port		C Normally Open 1 to 3, Closed 1	I to 2	N Buna-N		Standard Material/Coating
E External 4-SAE Port		H Normally Open 1 to 2, Closed 1	I to 3	E EPDM		/AP Stainless Steel, Passivated
P External 1/8 BSPP Port				V Viton		

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sunhydraulics.com/model/DFCA8





This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 1 to port 2, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high-flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	Viton: 990310006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFCA8DN

CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

D 50 psi (3,5 bar)

N Buna-N

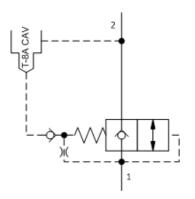
Standard Material/Coating

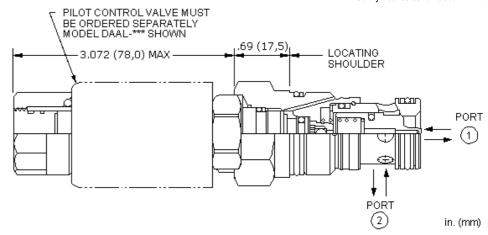
V Viton VAP Stainless Steel, Passivated

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sunhydraulics.com/model/DFDA8





This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 1 to port 2, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high-flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Check Cracking Pressure	3,5 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFDA8DN

CRACKING PRESSURE (D) SEAL MATERIAL

(N) MATERIAL/COATING

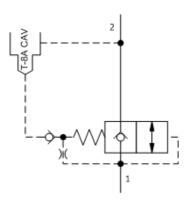
D 50 psi (3,5 bar)

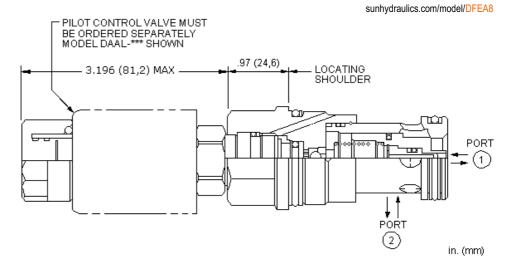
N Buna-N V Viton Standard Material/Coating /AP Stainless Steel, Passivated

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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A







This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 1 to port 2, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high-flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFEA8DN

CRACKING PRESSURE

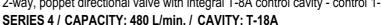
(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

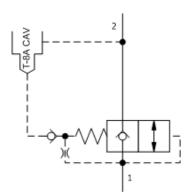
N Buna-N
E EPDM
V Viton

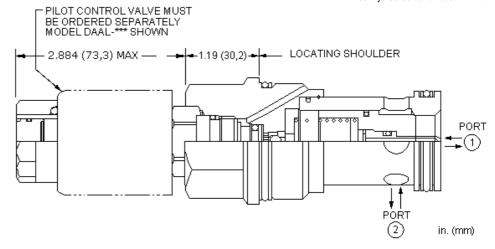
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sunhydraulics.com/model/DFFA8





This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 1 to port 2, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high-flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFFA8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N) MATERIAL/COATING

D 50 psi (3,5 bar)

N Buna-N E FPDM

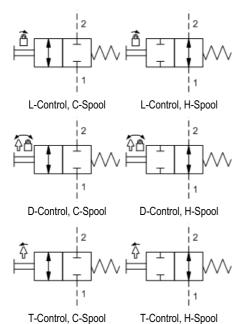
Standard Material/Coating /AP Stainless Steel, Passivated

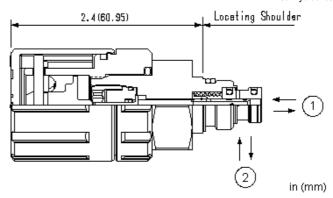
V Viton

© 2021 Sun Hydraulics 60 of 356 T-Control, H-Spool



sunhydraulics.com/model/DAAM





These pilot-stage, directional, 2-position, 2-way valves are manually operated cartridges and are available in either a normally open or normally closed configuration. These cartridges are designed for pilot flow applications and utilize Sun's T-8A cavity so they can be used in conjunction with Sun's pilot-operated, main-stage valves. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Operating Torque	1,2 Nm
Seal kit - Cartridge	Buna: 990108007
Seal kit - Cartridge	Viton: 990108006

CONFIGURATION OPTIONS

Model Code Example: DAAMLCN

CONTROL (L) SPOOL CONFIGURATION (C) SEAL MATERIAL (N) L Twist/Lock (Detent) Manual Override C Normally Closed N Buna-N

D Twist/Lock (Dual) Manual Override

T Twist (Momentary) Manual Override

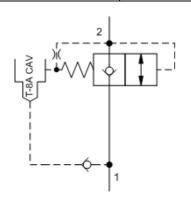
H Normally Open

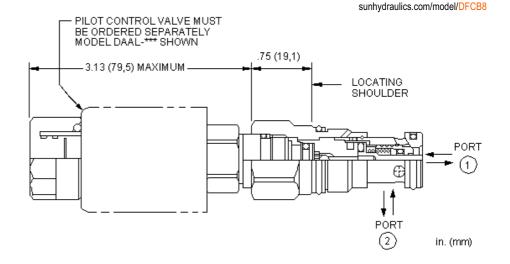
V Viton

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2-way, poppet directional valve with integral T-8A control cavity - control 2-1 SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A







This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 2 to port 1, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFCB8DN

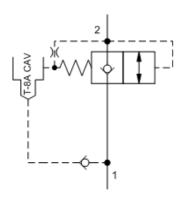
CRACKING PRESSURE (D) SEAL MATERIAL N Buna-N **D** 50 psi (3,5 bar)

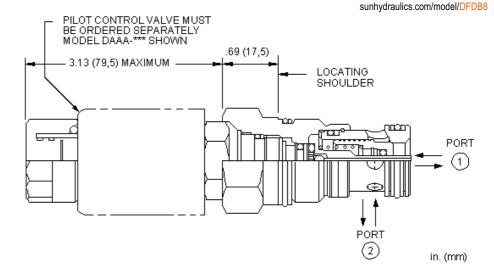
E EPDM

V Viton

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This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 2 to port 1, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFDB8DN

CRACKING PRESSURE (D) SEAL MATERIAL

(N)

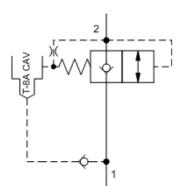
D 50 psi (3,5 bar)

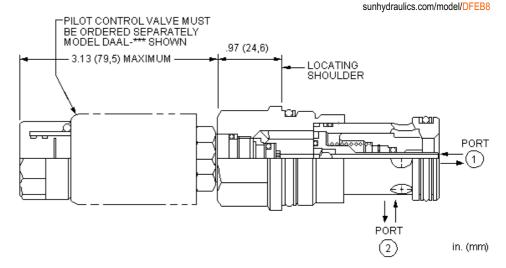
N Buna-N V Viton

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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A







This valve is a 2-position, 2-way poppet cartridge that incorporates an integral pilot control cavity. It controls flow from port 2 to port 1, exhibits extremely low leakage rates and will accept 5000 psi (350 bar) at both ports. Installing a pilot solenoid cartridge in the T-8A cavity results in a high flow directional valve. Other pilot options include manual, hydraulic and pneumatic pilot cartridges.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Response Time - Typical	see pilot control ms
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DFEB8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N
E EPDM
V Viton

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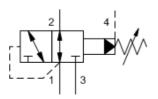


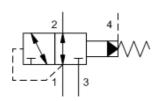


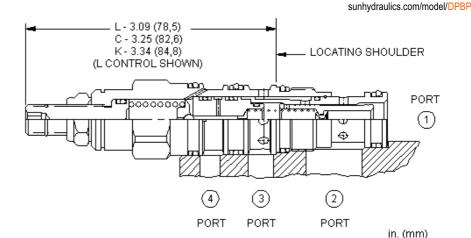
3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DPBPLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

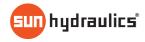
- C Tamper Resistant Factory Set
- K Handknob

- 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- J 25 1500 psi (1,7 105 bar), 1000 psi (70 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N
E EPDM
V Viton

Standard Material/Coating
/LH Mild Steel, Zinc-Nickel

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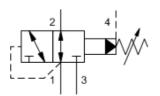


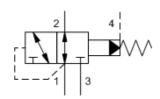
3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3 blocked)

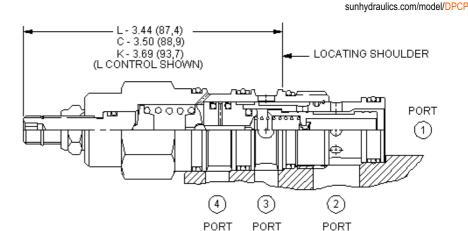
SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



in. (mm)







Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DPCPLAN

CONTROL	(L)	ADJUSTMENT RANGE (A) SEAL MATERIAL	(N)
L Standard Screw Adjustment		A 100 - 3000 psi (7 - 210 bar), 1000 psi	N Buna-N	

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- (70 bar) Standard Setting 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting
- **E** EPDM
- V Viton

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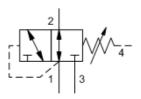


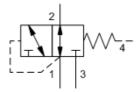


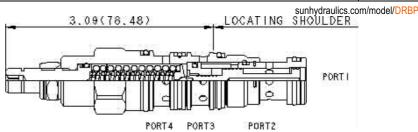
3-way, direct-acting, directional valve with drain to port 4 (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

(N)

NOTES

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBPLAN

CONTROL	(L)	ADJUSTMENT RANGE (A	4)	SEAL MATERIAL

- L Standard Screw Adjustment
- C Tamper Resistant Factory Set
- K Handknob
- O Handknob with Panel Mount
- A 500 3000 psi (35 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- **W** 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

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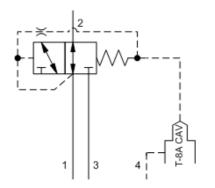


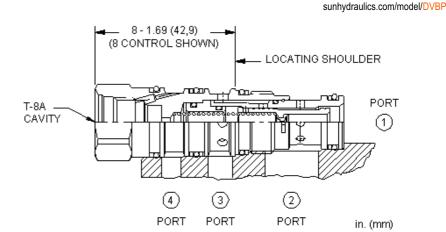
MODEL DVBP

3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBP8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

-8A Cavity F 100 psi (7 bar) N Buna
V Viton

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MODEL DVCP

3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 to 2 open, 3 blocked)

___ 8 - 2.00 (50,8) ___ (8 CONTROL SHOWN)

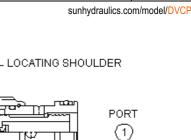
(4)

PORT

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



1 3 4 T



in. (mm)

This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

③ PORT

TECHNICAL DATA

T-8A _ CAVITY

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

✡

2

PORT

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

V Viton

CONFIGURATION OPTIONS

Model Code Example: DVCP8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

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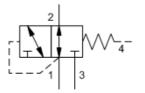


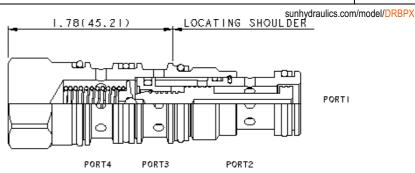


3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBPXFN

 SHIFTING PRESSURE
 (F)
 SEAL MATERIAL
 (N)

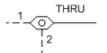
 F 100 psi (7 bar)
 N Buna-N

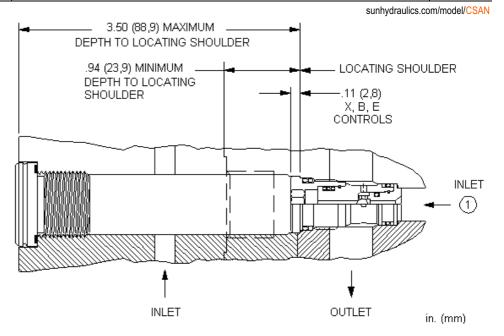
 V Viton

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CAPACITY: 4,7 L/min. / CAVITY: T-162DP







The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

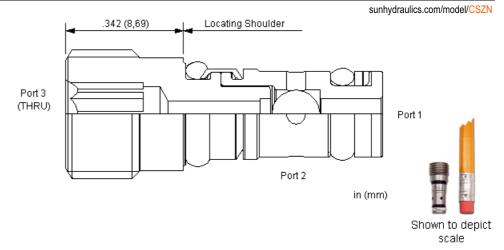
Model Code Example: CSANXXN

CONTROL	(X) ADJUSTMENT RANGE	(X) SEAL MATERIAL	(N)
X Not Adjustable	X -	N Buna-N	
		V Viton	

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-1-0-3-



The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Valve Internal Hex Size	4 mm
Seal kit - Cartridge	Buna: 990382007
Seal kit - Cartridge	Viton: 990382006

CONFIGURATION OPTIONS

Model Code Example: CSZNXXN

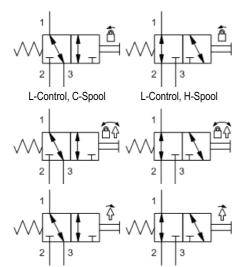
CONTROL	(X) ADJUSTMENT RANGE	(X) SEAL MATERIAL	(N)
X Not Adjustable	X -	N Buna-N	
		V Viton	

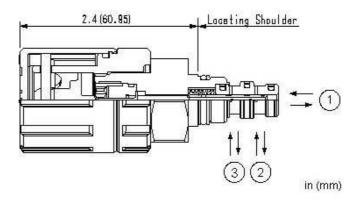
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SERIES P / CAPACITY: 1 L/min. / CAVITY: T-9A



sunhydraulics.com/model/DBAM





These pilot-stage, directional, 2-position, 3-way valves are manually operated cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3. These cartridges are designed for pilot flow applications. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990109007
Seal kit - Cartridge	EPDM: 990009014
Seal kit - Cartridge	Viton: 990109006

CONFIGURATION OPTIONS

Model Code Example: DBAMLCN

CONTROL (L) SPOOL CONFIGURATION (C) SEAL MATERIAL (N)

L Twist/Lock (Detent) Manual Override

D Twist/Lock (Dual) Manual Override

H Normally Open 1 to 2, Closed 1 to 3

N Buna-N

E EPDM

T Twist (Momentary) Manual Override

V Viton

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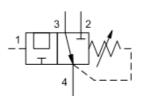


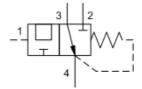


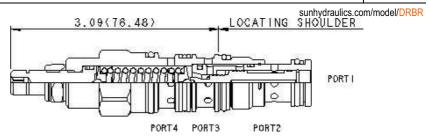
3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBRLNN

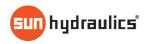
CONTROL (L) ADJUSTMENT RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob
- O Handknob with Panel Mount
- N 60 800 psi (4 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 200 psi (14 bar) Standard Setting

N Buna-N V Viton Standard Material/Coating
/AP Stainless Steel, Passivated

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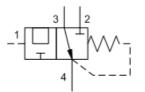


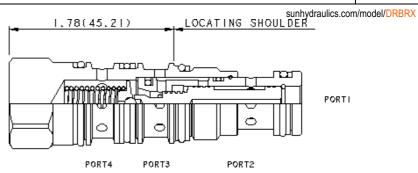


3-way, direct-acting, fixed setting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBRXFN

 SHIFTING PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 F 100 psi (7 bar)
 N Buna-N

 V Viton

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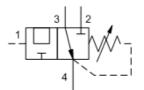


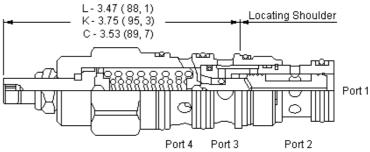
3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DRCR





in (mm)

Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@210 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DRCRLNN

CONTROL (L) ADJUSTMENT RANGE (N) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Concealed Manual Override

K Handknob

N 60 - 800 psi (4 - 55 bar), 200 psi (14 bar) Standard Setting

E 200 - 400 psi (14 - 28 bar), 200 psi (14 bar) Standard Setting

S 25 - 200 psi (1,7 - 14 bar), 200 psi (14 bar) Standard Setting

N Buna-N V Viton Standard Material/Coating
/LH Mild Steel, Zinc-Nickel

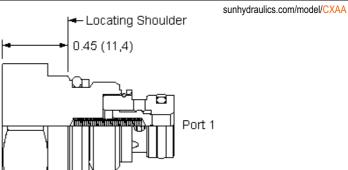
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Free flow nose to side check valve - pilot capacity SERIES P / CAPACITY: 20 L/min. / CAVITY: T-8A



2 |



Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

Port 2

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Seal kit - Cartridge	Buna: 990608007
Seal kit - Cartridge	EPDM: 990608014
Seal kit - Cartridge	Viton: 990608006

CONFIGURATION OPTIONS

Model Code Example: CXAAXBN

CONTROL	(X)	CRACKING PRESSURE	(B)	SEAL MATERIAL (N)	<u>)</u>	MATERIAL/COATING	
X Not Adjustable		B 15 psi (1 bar)		N Buna-N		Standard Material/Coating	
		F 100 psi (7 bar)		E EPDM		/AP Stainless Steel, Passivated	
		Z 1 psi (0,07 bar)		V Viton		/LH Mild Steel, Zinc-Nickel	

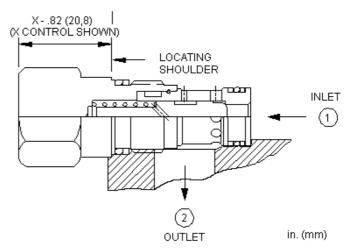
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Free flow nose to side check valve CAPACITY: 40 L/min. / CAVITY: T-162A



sunhydraulics.com/model/CXBA





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CXBAXCN

CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Not Adjustable		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
		A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel	
		D 50 psi (3,5 bar)					
		E 75 psi (5 bar)					

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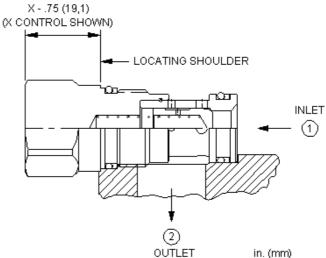
SERIES 1 / CAPACITY: 80 L/min. / CAVITY: T-13A



sunhydraulics.com/model/CXDA







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CXDAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated

B 15 psi (1 bar)

D 50 psi (3,5 bar) **E** 75 psi (5 bar)

F 100 psi (7 bar)

V Viton

/LH Mild Steel, Zinc-Nickel

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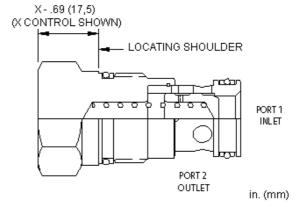


SERIES 2 / CAPACITY: 160 L/min. / CAVITY: T-5A



sunhydraulics.com/model/CXFA





Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: CXFAXCN

CONTROL	(X) CRACK	ING PRESSURE	(C) S	EAL MATERIAL	(N)	MATERIAL/COATING	
X Not Adjustable	C 30 p	si (2 bar)		N Buna-N		Standard Material/Coating	
•	A 4 ps	i (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated	
	B 15 p	si (1 bar)	,	√ Viton		/LH Mild Steel, Zinc-Nickel	
	D 50 p	si (3,5 bar)					
	E 75 p	si (5 bar)					

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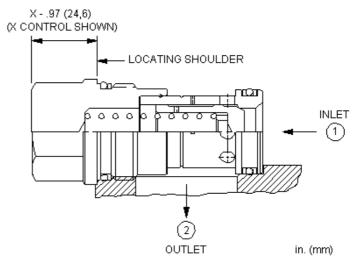
SERIES 3 / CAPACITY: 320 L/min. / CAVITY: T-16A



sunhydraulics.com/model/CXHA







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CXHAXCN

(N) MATERIAL/COATING CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL

X	Not	Adi	usta	ble

L Manual Override

C 30 psi (2 bar) A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N **E** EPDM ${f V}$ Viton

Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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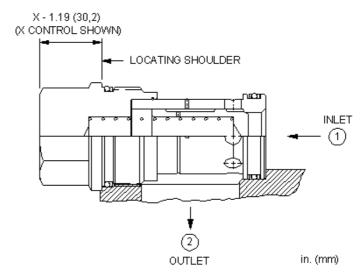
SERIES 4 / CAPACITY: 610 L/min. / CAVITY: T-18A



sunhydraulics.com/model/CXJA







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

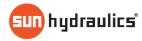
CONFIGURATION OPTIONS

Model Code Example: CXJAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel

- **B** 15 psi (1 bar)
- **D** 50 psi (3,5 bar)
- **E** 75 psi (5 bar)
- **F** 100 psi (7 bar)
- **G** 150 psi (10,5 bar)

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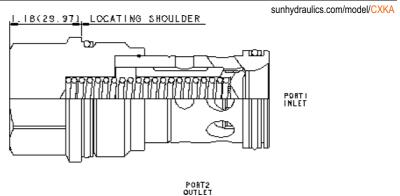




SERIES 4 / CAPACITY: 900 L/min. / CAVITY: T-18AU







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)G 150 psi (10,5 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: CXKAXCN

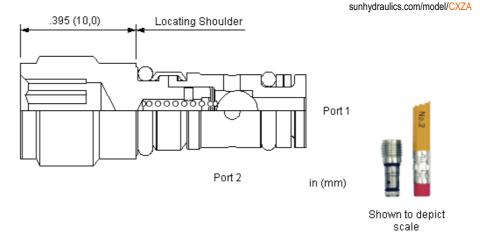
CONTROL	(X) CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
	A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)				
	E 75 psi (5 bar)				

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SERIES Z / CAPACITY: 4 L/min. / CAVITY: T-382A







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	5 mm
Seal kit - Cartridge	Buna: 990382007
Seal kit - Cartridge	EPDM: 990382014
Seal kit - Cartridge	Viton: 990382006

CONFIGURATION OPTIONS

Model Code Example: CXZAXCN

CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Not Adjustable		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
	_	A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel	

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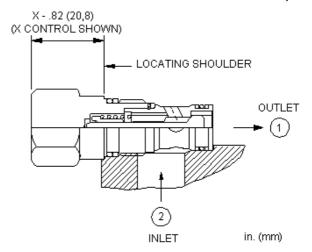
Free flow side to nose check valve CAPACITY: 30 L/min. / CAVITY: T-162A



sunhydraulics.com/model/CXAD







Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CXADXCN

CONTROL ()	NOMINAL CONTRO	DL PRESSURE (C) SEA	AL MATERIAL (N)	MATERIAL/COATING
------------	----------------	---------------------	-----------------	------------------

X	Not	Adiu	stah	e

U	30 psi (2 bar)	
Α	4 psi (0,3 bar)	
D	50 psi (3,5 bar)	
Ε	75 psi (5 bar)	

Z 1 psi (0,07 bar)

N Buna-N **E** EPDM V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

© 2021 Sun Hydraulics 85 of 356 Free flow side to nose check valve

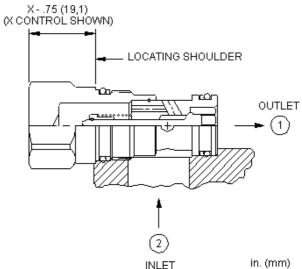
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-13A



sunhydraulics.com/model/CXCD







Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CXCDXCN

CONTROL	(X) CRACKING PRESSURE	(C)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Override	A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated
	B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)				
	E 75 psi (5 bar)				

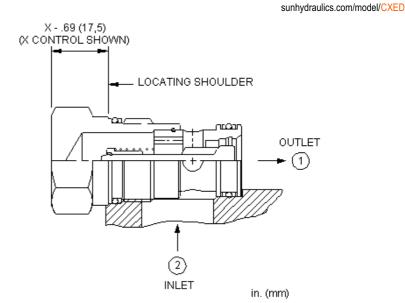
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Free flow side to nose check valve





SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A



Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: CXEDXCN

CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
		A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated
		B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				

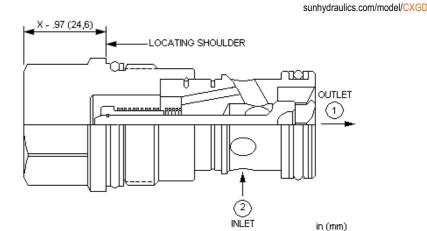
© 2021 Sun Hydraulics 87 of 356 Free flow side to nose check valve

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A









Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CXGDXCN

CONTROL	(X) CRACKING PRESSUR	RE (C) SEA	AL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N	Buna-N	Standard Material/Coating
	A 4 psi (0,3 bar)	E	EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V	Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)			
	E 75 psi (5 bar)			

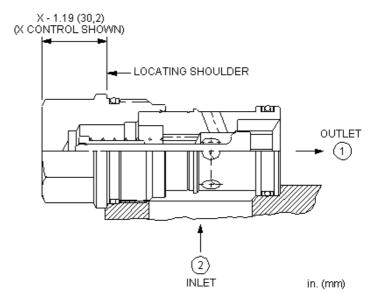
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sunhydraulics.com/model/CXID







Free-flow, side-to-nose check valves are on/off circuit components that allow free flow from the inlet (port 2) to the outlet (port 1) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: CXIDXCN

CONTROL (X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING

X	Not Adjustable	С	30 psi (2 bar)
		Α	4 psi (0,3 bar)
		В	15 psi (1 har)

B 15 psi (1 bar) **D** 50 psi (3,5 bar)

E 75 psi (5 bar) **F** 100 psi (7 bar)

N Buna-N
E EPDM
V Viton

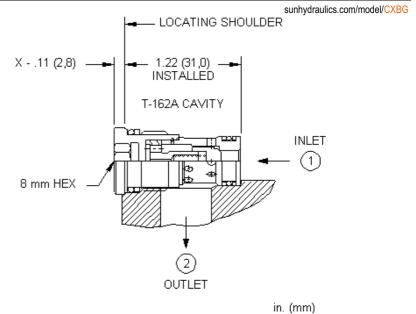
Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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CAPACITY: 40 L/min. / CAVITY: T-162A







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

D 50 psi (3,5 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CXBGXAN

CONTROL	(X) CRACKING PRESSURE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	A 4 psi (0,3 bar)	N Buna-N	Standard Material/Coating
	B 15 psi (1 bar)	V Viton	/AP Stainless Steel, Passivated
	C 20 noi (2 hor)		/I U Mild Stool Tine Niekel

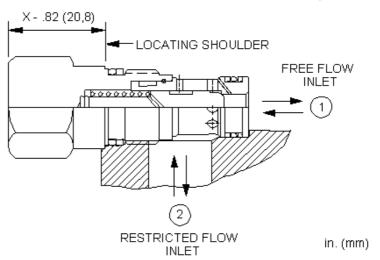
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Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 1,6 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CNBCXCN

CONTROL	(X)	SETTING RANGE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
---------	-----	---------------	-----	---------------	-----	------------------

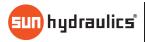
X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)

- **A** 4 psi (0,3 bar) Cracking Pressure, .016 .062 in. (0,4 1,6 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 .062 in. (0,4 1,6 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 .062 in. (0,4 1,6 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 .062 in. (0,4 1,6 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)

N Buna-N Standard Material/Coating
E EPDM /AP Stainless Steel, Passivated
V Viton /LH Mild Steel, Zinc-Nickel

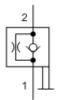
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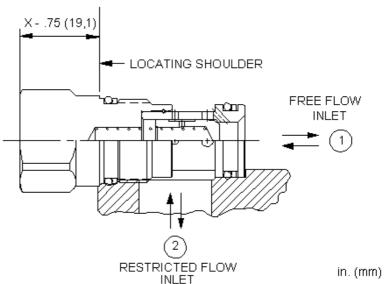




sunhydraulics.com/model/CNDC







Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 2,7 mm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CNDCXCN

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CONTROL

(X) SETTING RANGE

(C) SEAL MATERIAL N Buna-N

Viton

(N) MATERIAL/COATING

X Not Adjustable L Manual Load Release

C 30 psi (2 bar) Cracking Pressure, .016 -.107 in. (0,4 - 2,7 mm)

- A 4 psi (0,3 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.107 in. (0,4 - 2,7 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.107 in. (0,4 - 2,7 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .107 in. (0,4 - 2,7 mm)

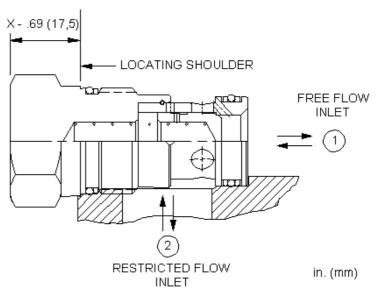
Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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sunhydraulics.com/model/CNFC





Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,2 mm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: CNFCXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL N Buna-N

V Viton

(N) MATERIAL/COATING

X Not Adjustable

.127 in. (0,4 - 3,2 mm)

- A 4 psi (0,3 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.127 in. (0,4 - 3,2 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.127 in. (0,4 - 3,2 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

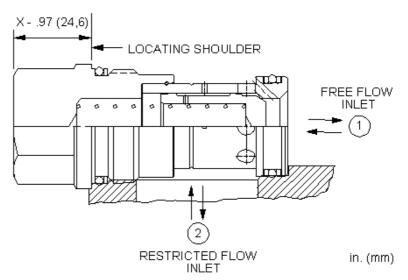
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Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 6,4 mm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CNHCXCN

(X) SETTING RANGE CONTROL X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 -.252 in. (0,4 - 6,4 mm)

- A 4 psi (0,3 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.252 in. (0,4 - 6,4 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.252 in. (0,4 - 6,4 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .252 in. (0,4 - 6,4 mm)

(N) MATERIAL/COATING (C) SEAL MATERIAL N Buna-N Standard Material/Coating **E** EPDM

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

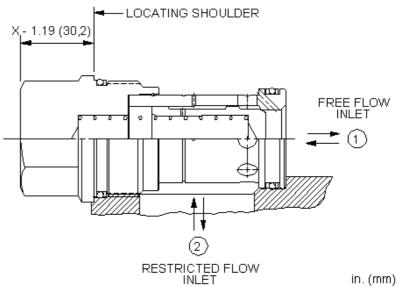
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Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 9 mm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

X Not Adjustable

Model Code Example: CNJCXCN

N Buna-N

Viton

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL (N) MATERIAL/COATING

C 30 psi (2 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

A 4 psi (0,3 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

B 15 psi (1 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

D 50 psi (3,5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

E 75 psi (5 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

F 100 psi (7 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

G 150 psi (10 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

Standard Material/Coating
/AP Stainless Steel, Passivated

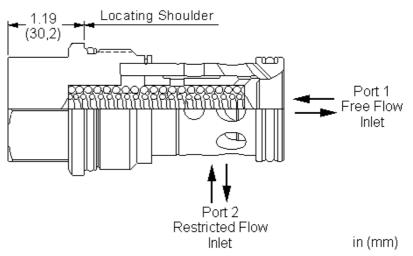
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Free flow nose to side check valve with bypass orifice SERIES 4 / CAPACITY: 680 L/min. / CAVITY: T-18AU



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Free-flow, nose-to-side check valves with a bypass orifice allow free flow from port 1 to port 2. A customer specified orifice is included to restrict flow from port 2 to port 1. See technical data below for orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 9 mm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: CNKCXAN

CONTROL (X) SETTING RANGE (A) SEAL MATERIAL (N)

X Not Adjustable

- .354 in. (0,4 - 9 mm)

- B 15 psi (1 bar) Cracking Pressure, .016 -.354 in. (0,4 - 9 mm)
- **C** 30 psi (2 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **G** 150 psi (10 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **Z** 1 psi (0,07 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)

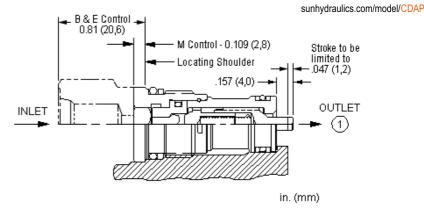
N Buna-N

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CAPACITY: 4,7 L/min. / CAVITY: T-162DP







The phaser check is a pair of checks, back-to-back, with the poppet at port 1 mechanically actuated. The valve is meant to be installed into the piston of a cylinder. When the cylinder reaches the end of its stroke the poppet in the phaser check is shoved off its seat allowing flow through the piston. This allows two cylinders to get back into phase.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CDAPMCN

CONTROL	(M)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
M Mechanical Actuation		C 30 psi (2 bar)		N Buna-N	
B External 1/4 BSPP Port				V Viton	

B External 1/4 BSPP Port

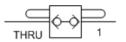
E External 4-SAE Port

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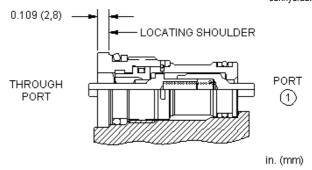
Mechanically operated, back-to-back check valve

CAPACITY: 4,7 L/min. / CAVITY: T-162DP









The phaser check is a pair of checks, back-to-back, with both poppets mechanically actuated. The valve is meant to be installed into the piston or rod of a cylinder. When the cylinder reaches the end of its stroke the poppet in the phaser check is shoved off its seat allowing flow through the piston. This allows two cylinders to get back into phase.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

NOTES

A special tool is required to install this cartridge. Use part number 998-101 to order this tool.

CONFIGURATION OPTIONS

Model Code Example: CDAQMCN

CONTROL (M) CRACKING PRESSURE (C) SEAL MATERIAL (N)

M Mechanical Actuation

C 30 psi (2 bar)

N Buna-V Viton

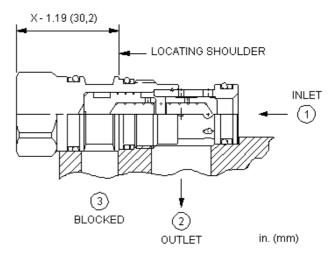
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Free flow nose to side check valve with port 3 blocked SERIES 1 / CAPACITY: 80 L/min. / CAVITY: T-11A



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Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CXDCXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coat

v	NI_4	۸ ـ۱:	4-	LI-
X	IOVI	Aai	usta	pie

C	30 psi (2 bar)
Α	4 psi (0,3 bar)
В	15 psi (1 bar)
п	50 nei /3 5 har)

E 75 psi (5 bar)

F 100 psi (7 bar)

Z 1 psi (0,07 bar)

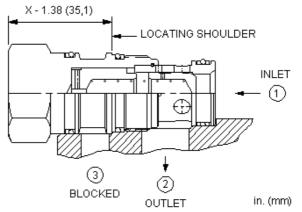
Standard Material/Coating V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

© 2021 Sun Hydraulics 99 of 356 Free flow nose to side check valve with port 3 blocked SERIES 2 / CAPACITY: 160 L/min. / CAVITY: T-2A



sunhydraulics.com/model/CXFC





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990202007		
Seal kit - Cartridge	Polyurethane: 990002002		
Seal kit - Cartridge	Viton: 990202006		

CONFIGURATION OPTIONS

Model Code Example: CXFCXCN

CONTROL	(X)	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING

X Not Adjustable

C 30 psi (2 bar) **A** 4 psi (0,3 bar)

N Buna-N

V Viton

/LH Mild Steel, Zinc-Nickel

B 15 psi (1 bar) **D** 50 psi (3,5 bar)

E 75 psi (5 bar)

100 psi (7 bar)

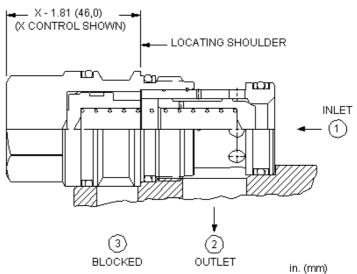
Z 1 psi (0,07 bar)

© 2021 Sun Hydraulics 100 of 356 Free flow nose to side check valve with port 3 blocked SERIES 3 / CAPACITY: 320 L/min. / CAVITY: T-17A



sunhydraulics.com/model/CXHC





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990017007		
Seal kit - Cartridge	Polyurethane: 990017002		
Seal kit - Cartridge	Viton: 990017006		

CONFIGURATION OPTIONS

Model Code Example: CXHCXCN

V Viton

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/0

C 30 psi (2 bar) A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

100 psi (7 bar)

Z 1 psi (0,07 bar)

Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

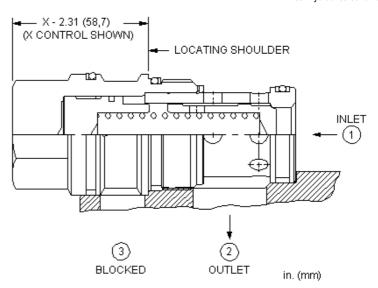
© 2021 Sun Hydraulics 101 of 356 MODEL CXJC

Free flow nose to side check valve with port 3 blocked SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-19A



sunhydraulics.com/model/CXJC





Free-flow, nose-to-side cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Seal kit - Cartridge	Buna: 990019007		
Seal kit - Cartridge	Polyurethane: 990019002		
Seal kit - Cartridge	Viton: 990019006		

CONFIGURATION OPTIONS

Model Code Example: CXJCXCN

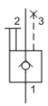
CONTROL	(X) CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)
X Not Adjustable	C 30 psi (2 bar)		N Buna-N	
-	A 4 psi (0,3 bar)		V Viton	
	B 15 psi (1 bar)			
	D 50 psi (3,5 bar)			
	E 75 psi (5 bar)			
	F 100 psi (7 bar)			
	Z 1 psi (0,07 bar)			

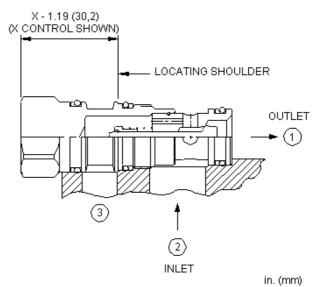
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sunhydraulics.com/model/CXCE







Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990011007		
Seal kit - Cartridge	Polyurethane: 990011002		
Seal kit - Cartridge	Viton: 990011006		

CONFIGURATION OPTIONS

Model Code Example: CXCEXCN

N Buna-N

V Viton

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable C 30 psi (2 bar)

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

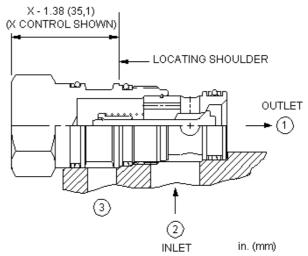
/LH Mild Steel, Zinc-Nickel

© 2021 Sun Hydraulics 103 of 356 Free flow side to nose check valve with port 3 blocked SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A



sunhydraulics.com/model/CXEI





Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CXEEXCN

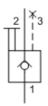
CONTROL	(X) CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
	A 4 psi (0,3 bar)		V Viton		/AP Stainless Steel, Passivated
	B 15 psi (1 bar)				/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)				
	E 75 psi (5 bar)				
	F 100 psi (7 bar)				

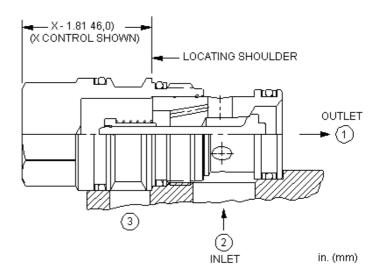
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sunhydraulics.com/model/CXGE







Free-flow, side-to-nose cheater check valves function as a standard 2-port check valve in a 3-port cavity with port 3 of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990017007		
Seal kit - Cartridge	Polyurethane: 990017002		
Seal kit - Cartridge	Viton: 990017006		

CONFIGURATION OPTIONS

Model Code Example: CXGEXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
	A 4 psi (0.3 bar)	V Viton	/AP Stainless Steel Passivated

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

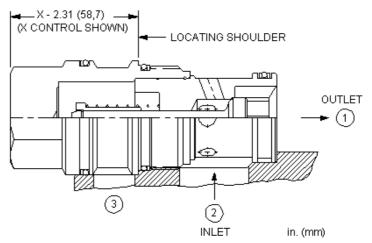
/LH Mild Steel, Zinc-Nickel

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sunhydraulics.com/model/CXIE





 $Free-flow, side-to-nose \ cheater \ check \ valves \ function \ as \ a \ standard \ 2-port \ check \ valve \ in \ a \ 3-port \ cavity \ with \ port \ 3$ of the cartridge blocked off. These valves are useful in circuits where a check valve is required in an existing three port cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CXIEXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING	
X Not Adjustable	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating	
	A 4 psi (0,3 bar)	V Viton	/AP Stainless Steel, Passivated	
	D 15 noi /1 hor)		ILLI Mild Charl Tine Niekel	

B 15 psi (1 bar) **D** 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

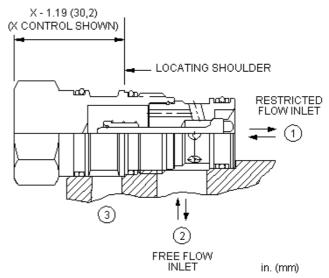
© 2021 Sun Hydraulics 106 of 356 **MODEL CNCD**

Free flow side to nose check valve with bypass orifice and port 3 blocked SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A



sunhydraulics.com/model/CNCD





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 3,9 mm	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CNCDXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL (N) MATERIAL/COATING X Not Adjustable C 30 psi (2 bar) Cracking Pressure, .016 -N Buna-N Standard Material/Coating

.153 in. (0,4 - 3,9 mm)

V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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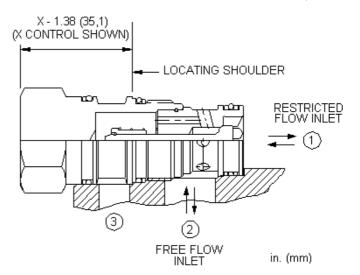


Free flow side to nose check valve with bypass orifice and port 3 blocked SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A



sunhydraulics.com/model/CNED





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 3,4 mm	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

Model Code Example: CNEDXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 . .135 in. (0,4 - 3,4 mm)

N Buna-N
V Viton

/AP Stainless Steel, Passivated //LH Mild Steel, Zinc-Nickel

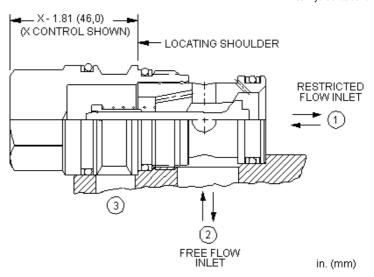
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Free flow side to nose check valve with bypass orifice and port 3 blocked SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



sunhydraulics.com/model/CNGD





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

/AP Stainless Steel, Passivated

Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 5,5 mm	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

CONFIGURATION OPTIONS

Model Code Example: CNGDXCN

Viton

CONTROL (X) SETTING RANGE (N) MATERIAL/COATING (C) SEAL MATERIAL

X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)

N Buna-N

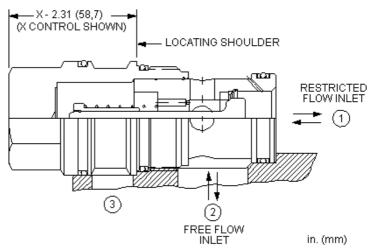
- A 4 psi (0,3 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)

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sunhydraulics.com/model/CNID





Free-flow, side-to-nose cheater check valves with a bypass orifice function as a 2-port check valve in a 3-port cavity. They allow free flow from port 2 to port 1 with a customer specified orifice that controls flow from port 1 to port 2. Port 3 of the cartridge is blocked off.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 5,5 mm	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: CNIDXCN

 CONTROL
 (X)
 SETTING RANGE
 (C)
 SEAL MATERIAL
 (N)
 MATERIAL/COATING

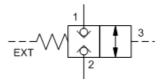
 X
 Not Adjustable
 C 30 psi (2 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
 N Buna-N V Viton
 Standard Material/Coating /AP Stainless Steel, Passivated

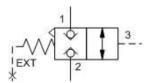
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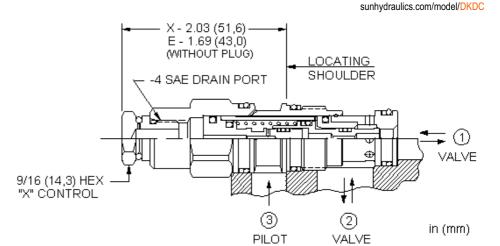
Normally closed, balanced poppet, logic element - pilot-to-open

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A









This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Seal kit - Cartridge	Buna: 990311007
Seal kit - Cartridge	Viton: 990311006

CONFIGURATION OPTIONS

Model Code Example: DKDCEHN

CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N) MATERIAL/COATING

E External 4-SAE Drain Port

X Standard Pilot, Atmospheric Vent

N Buna-N
E EPDM
V Viton

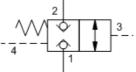
Standard Material/Coating
/LH Mild Steel, Zinc-Nickel

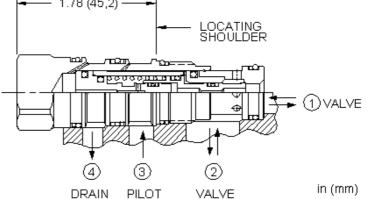
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SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A



sunhydraulics.com/model/DKDS





This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

/LH Mild Steel, Zinc-Nickel

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Pilot Passage into Valve	0,8 mm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DKDSXHN

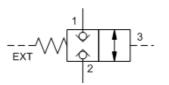
CONTROL (X) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N) MATERIAL/COATING

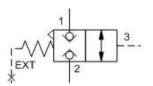
X Standard Pilot H 400 psi (28 bar) N Buna-N Standard Material/Coating V Viton /AP Stainless Steel, Passivated

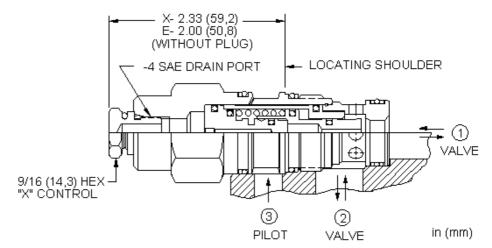
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sunhydraulics.com/model/DKFC







This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

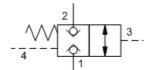
Model Code Example: DKFCEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
X Standard Pilot, Atmospheric Vent				V Viton	

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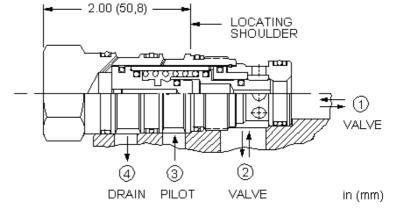
SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A







sunhydraulics.com/model/DKFS



This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DKFSXHN

CONTROL	(X) MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Standard Pilot	H 300 psi (20 bar)		N Buna-N		Standard Material/Coating	
			E EPDM		/AP Stainless Steel, Passivated	
			V Viton		/LH Mild Steel, Zinc-Nickel	

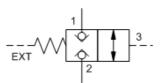
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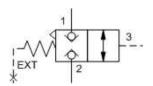


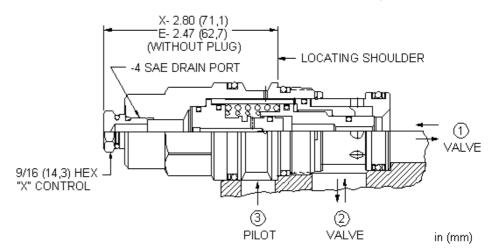
Normally closed, balanced poppet, logic element - pilot-to-open SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



sunhydraulics.com/model/DKHC







This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: DKHCEHN

CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N)

X Standard Pilot, Atmospheric Vent

V Viton

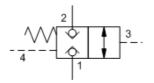
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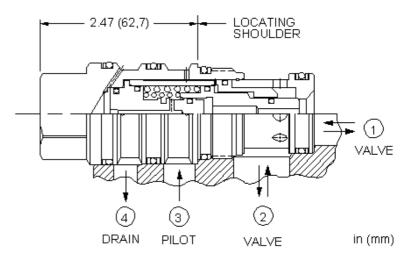


Normally closed, balanced poppet, logic element - pilot-to-open SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/DKHS





This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DKHSXHN

CONTROL	(X) MINIMUM PILOT PRESSURE	(H) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	H 300 psi (20 bar)	N Buna-N	Standard Material/Coating

E EPDM /AP Stainless Steel, Passivated V Viton /LH Mild Steel, Zinc-Nickel

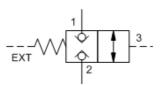
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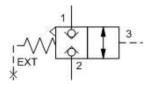


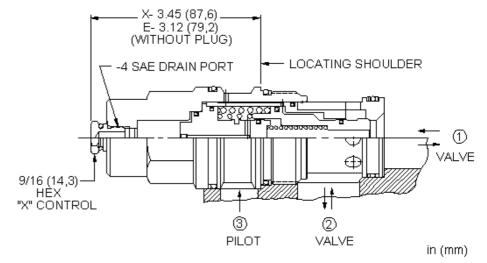
Normally closed, balanced poppet, logic element - pilot-to-open SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-19A



sunhydraulics.com/model/DKJC







This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: DKJCEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING

E External 4-SAE Drain Port

X Standard Pilot, Atmospheric Vent

E EPDM
V Viton

/AP Stainless Steel, Passivated

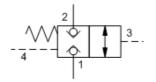
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SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A

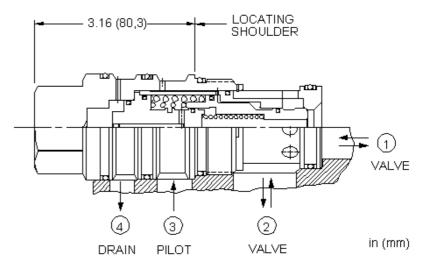


sunhydraulics.com/model/DKJS



MODEL

DKJS



This is a normally closed, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: DKJSXHN

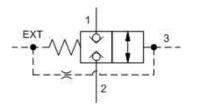
CONTROL	(X) I	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		H 300 psi (20 bar)		N Buna-N		Standard Material/Coating
				E EPDM		/AP Stainless Steel, Passivated
				V Viton		/LH Mild Steel, Zinc-Nickel

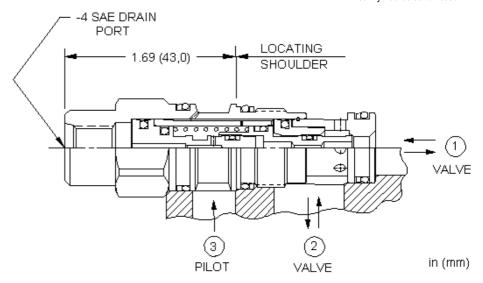
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SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DKDD





This is a normally closed, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the closed position. Venting the external port shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Pilot Passage into Valve	0,8 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: DKDDEHN

CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N)

E External 4-SAE Drain Port H 400 psi (28 bar) N Buna-N

V Viton

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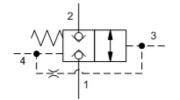


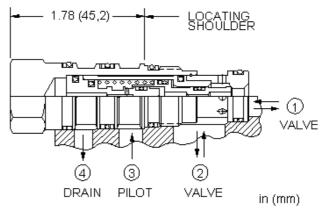
Normally closed, balanced poppet, logic element - vent-to-open

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A



sunhydraulics.com/model/DKDR





This is a normally closed, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the closed position. Venting port 4 shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DKDRXHN

CONTROL (X) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N) MATERIAL/COATING

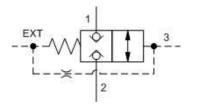
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SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A

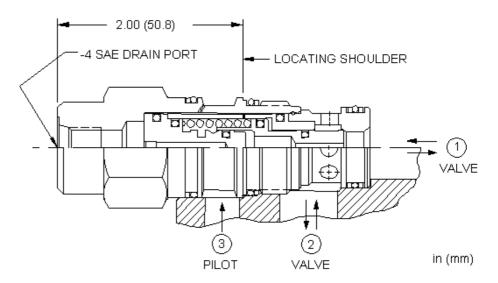


sunhydraulics.com/model/DKFD



MODEL

DKFD



This is a normally closed, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the closed position. Venting the external port shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: DKFDEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
				V Viton	

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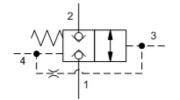


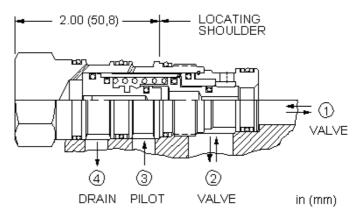
Normally closed, balanced poppet, logic element - vent-to-open

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DKFR





This is a normally closed, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the closed position. Venting port 4 shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DKFRXHN

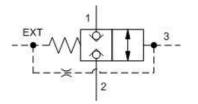
CONTROL	(X)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
X Vent to Operate		H 300 psi (20 bar)		N Buna-N	
				V Viton	

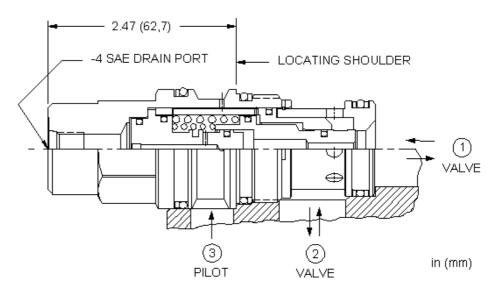
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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



sunhydraulics.com/model/DKHD





This is a normally closed, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the closed position. Venting the external port shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: DKHDEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
				V Viton	

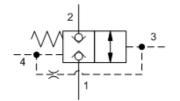
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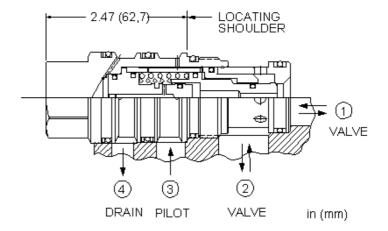


Normally closed, balanced poppet, logic element - vent-to-open SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/DKHR





This is a normally closed, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the closed position. Venting port 4 shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DKHRXHN

CONTROL	(X)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
X Vent to Operate		H 300 psi (20 bar)		N Buna-N	
				V Viton	

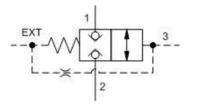
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SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-19A

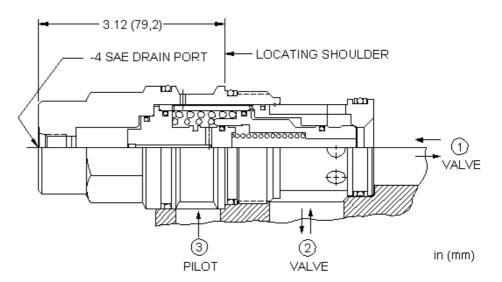


sunhydraulics.com/model/DKJD



MODEL

DKJD



This is a normally closed, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the closed position. Venting the external port shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: DKJDEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
				V Viton	

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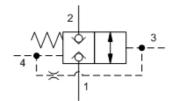


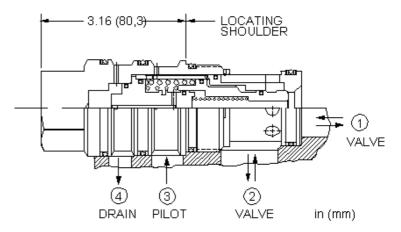
Normally closed, balanced poppet, logic element - vent-to-open

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A



sunhydraulics.com/model/DKJR





This is a normally closed, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the closed position. Venting port 4 shifts it to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: DKJRXHN

CONTROL	(X)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
X Vent to Operate		H 300 psi (20 bar)		N Buna-N	
				V Viton	

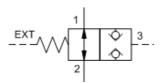
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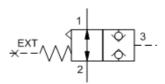
MODEL DODC

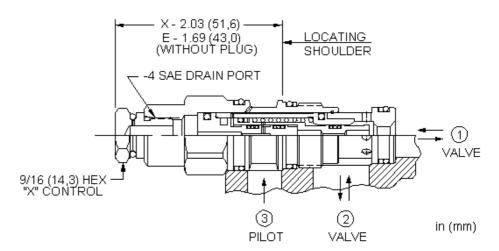
Normally open, balanced poppet, logic element - pilot-to-close SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DODC







This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Seal kit - Cartridge	Buna: 990311007
Seal kit - Cartridge	Viton: 990311006

CONFIGURATION OPTIONS

Model Code Example: DODCEHN

CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N) MATERIAL/COATING

E External 4-SAE Drain PortX Standard Pilot, Atmospheric Vent

H 400 psi (28 bar)

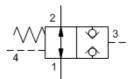
N Buna-N V Viton

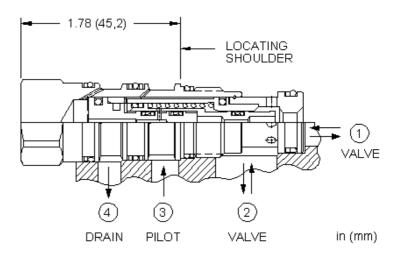
Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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sunhydraulics.com/model/DODS





This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Pilot Passage into Valve	0,8 mm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

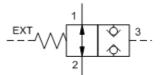
Model Code Example: DODSXHN

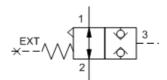
CONTROL	(X) MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot	H 400 psi (28 bar)		N Buna-N		Standard Material/Coating
			E EPDM		/AP Stainless Steel, Passivated
			V Viton		/LH Mild Steel. Zinc-Nickel

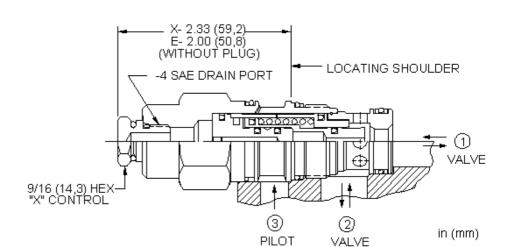
© 2021 Sun Hydraulics 128 of 356 SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DOFC







This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: DOFCEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
X Standard Pilot, Atmospheric Vent				V Viton	

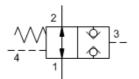
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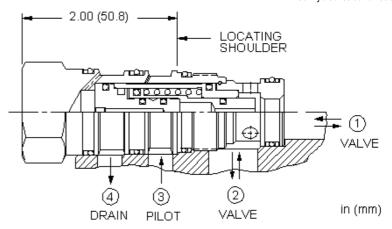


Normally open, balanced poppet, logic element - pilot-to-close SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DOFS





This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

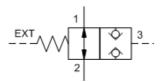
Model Code Example: DOFSXHN

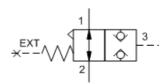
CONTROL	(X) MINIMUM PILOT PRESSURE	(H) SEAL MATERIA	AL (N) MATERIAL/COATING
X Standard Pilot	H 300 psi (20 bar)	N Buna-N	Standard Material/Coating
		E EPDM	/AP Stainless Steel, Passivated
		V Viton	/LH Mild Steel, Zinc-Nickel

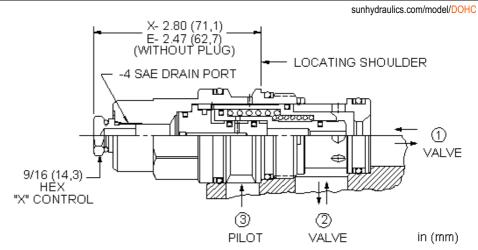
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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A









This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: DOHCEHN

CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N) MATERIAL/COATING

X Standard Pilot, Atmospheric Vent

E EPDM

Standard Material/Coating

V Viton

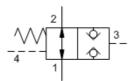
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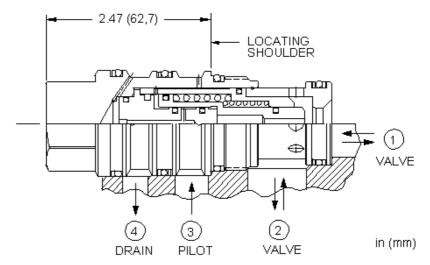


Normally open, balanced poppet, logic element - pilot-to-close SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/DOHS





This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DOHSXHN

CONTROL	(X) MINIMUM PILOT PRESSURE	(H) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	H 300 psi (20 bar)	N Buna-N	Standard Material/Coating

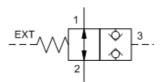
E EPDM /AP Stainless Steel, Passivated

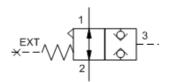
V Viton /LH Mild Steel, Zinc-Nickel

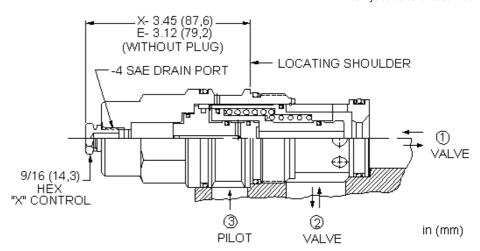
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sunhydraulics.com/model/DOJC







This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

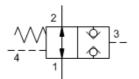
Model Code Example: DOJCEHN

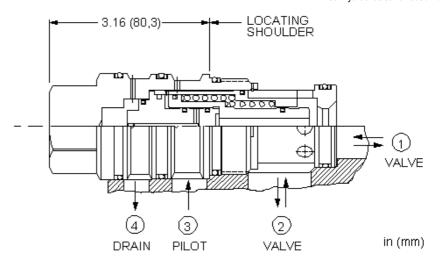
CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
X Standard Pilot, Atmospheric Vent				V Viton	

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sunhydraulics.com/model/DOJS





This is a normally open, balanced poppet, switching element. Pilot pressure at port 3 shifts the valve to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: DOJSXHN

(CONTROL	(X)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL (N	N)	MATERIAL/COATING	_
	X Standard Pilot		H 300 psi (20 bar)		N Buna-N		Standard Material/Coating	ı
					E EPDM		/AP Stainless Steel, Passivated	
					V Viton		/LH Mild Steel, Zinc-Nickel	
	X Standard Pilot		H 300 psi (20 bar)		E EPDM		/AP Stainless Steel, Passivated	

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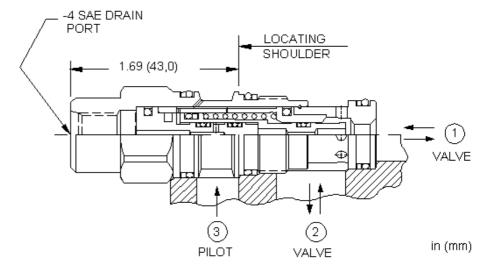
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A







sunhydraulics.com/model/DODD



This is a normally open, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the open position. Venting the external port shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,16 cc
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: DODDEHN

(E) MINIMUM PILOT PRESSURE CONTROL (H) SEAL MATERIAL (N) E External 4-SAE Drain Port N Buna-N **V** Viton

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Normally open, balanced poppet, logic element - vent-to-close

1.78 (45,2)

(4)

DRAIN

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A





This is a normally open, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the open position. Venting port 4 shifts it to the closed position, provided there is sufficient pressure at port 3.

(3)

PILOT

LOCATING SHOULDER

(2)

VALVE

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

in (mm)

/LH Mild Steel, Zinc-Nickel

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

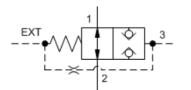
Model Code Example: DODRXHN

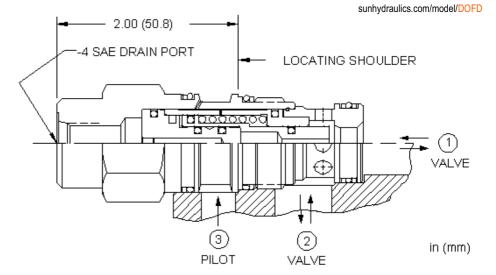
(X) MINIMUM PILOT PRESSURE CONTROL (H) SEAL MATERIAL (N) MATERIAL/COATING N Buna-N X Vent to Operate Standard Material/Coating

V Viton

© 2021 Sun Hydraulics 136 of 356 SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A







This is a normally open, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the open position. Venting the external port shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: DOFDEHN

 CONTROL
 (E)
 MINIMUM PILOT PRESSURE
 (H)
 SEAL MATERIAL
 (N)

 E External 4-SAE Drain Port
 H 300 psi (20 bar)
 N Buna-N
 V Viton

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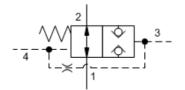


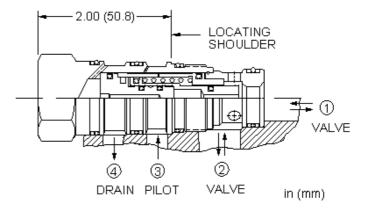
Normally open, balanced poppet, logic element - vent-to-close

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DOFR





This is a normally open, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the open position. Venting port 4 shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DOFRXHN

 CONTROL
 (X)
 MINIMUM PILOT PRESSURE
 (H)
 SEAL MATERIAL
 (N)

 X Vent to Operate
 H 300 psi (20 bar)
 N Buna-N

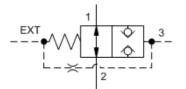
 V Viton

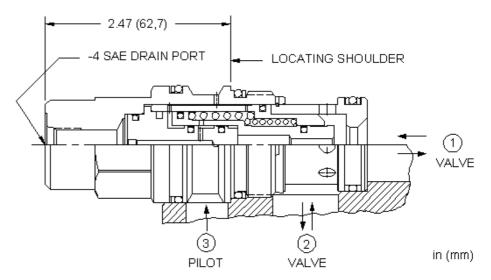
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SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-17A



sunhydraulics.com/model/DOHD





This is a normally open, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the open position. Venting the external port shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: DOHDEHN

CONTROL	(E)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
E External 4-SAE Drain Port		H 300 psi (20 bar)		N Buna-N	
				V Viton	

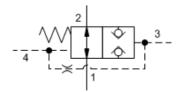
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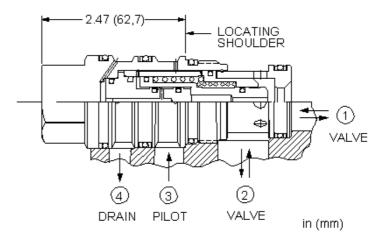


Normally open, balanced poppet, logic element - vent-to-close SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/DOHR





This is a normally open, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the open position. Venting port 4 shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DOHRXHN

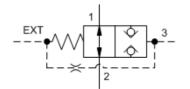
CONTROL	(X) MINIMUM PILOT PRESSURE	(H) SEAL MATERIAL	(N)
X Vent to Operate	H 300 psi (20 bar)	N Buna-N	
		V Viton	

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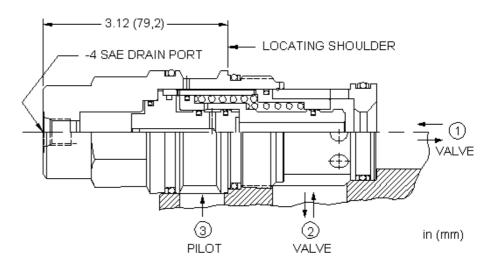
Normally open, balanced poppet, logic element - vent-to-close SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-19A



sunhydraulics.com/model/DOJD



<mark>sun</mark> hydraulics



This is a normally open, balanced poppet, switching element. When the external vent port is blocked, the poppet remains in the open position. Venting the external port shifts it to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: DOJDEHN

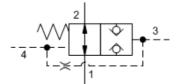
CONTROL (E) MINIMUM PILOT PRESSURE (H) SEAL MATERIAL N Buna-N **V** Viton

© 2021 Sun Hydraulics 141 of 356 Normally open, balanced poppet, logic element - vent-to-close

-3.16 (80,3)

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A







4 DRAIN PILOT VALVE in (mm)

LOCATING SHOULDER

This is a normally open, balanced poppet, switching element. When the vent port (port 4) is blocked, the poppet remains in the open position. Venting port 4 shifts it to the closed position, provided there is sufficient pressure at

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

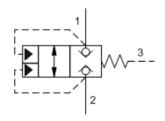
Model Code Example: DOJRXHN

CONTROL	(X)	MINIMUM PILOT PRESSURE	(H)	SEAL MATERIAL	(N)
X Vent to Operate		H 300 psi (20 bar)		N Buna-N	
				V Viton	

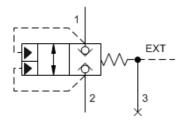
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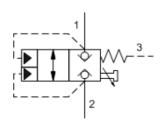


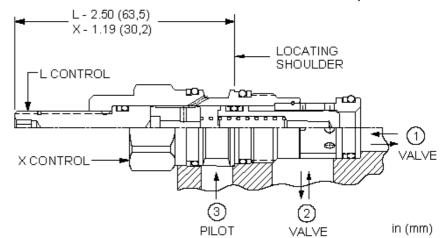




sun hydraulics







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	0,66 cc
Pilot Passage into Valve	0,8 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LODCXDN

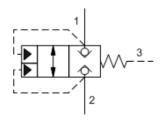
CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

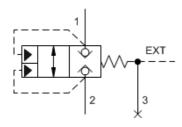
V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

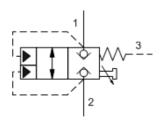
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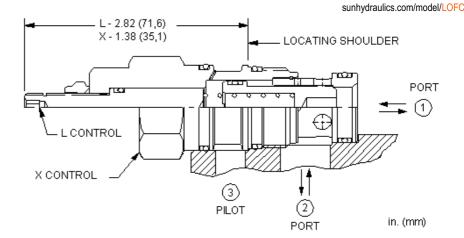
SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A











These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

/LH Mild Steel, Zinc-Nickel

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.	
Pilot Volume Displacement	1,1 cc	
Pilot Passage into Valve	0,9 mm	
Area Ratio, A3 to A1	1.8:1	
Area Ratio, A3 to A2	2.25:1	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

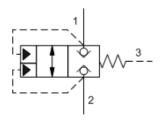
Model Code Example: LOFCXDN

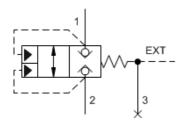
CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
		E EPDM	/AP Stainless Steel, Passivated

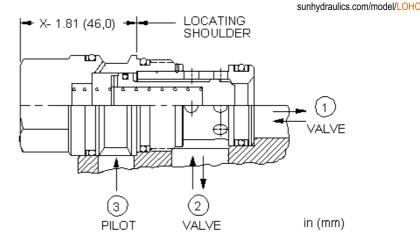
V Viton

© 2021 Sun Hydraulics 144 of 356 SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A









These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	4,1 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

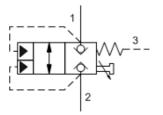
CONFIGURATION OPTIONS

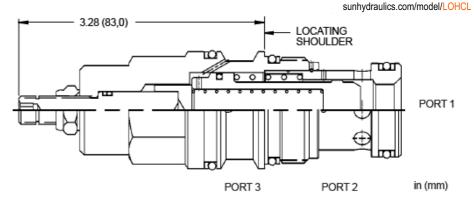
Model Code Example: LOHCXDN

CONTROL	(X)	CRACKING PRESSURE	(D)	SEAL MATERIAL	N)	MATERIAL/COATING
X Not Adjustable		D 50 psi (3,5 bar)		N Buna-N		Standard Material/Coating
				E EPDM		/AP Stainless Steel, Passivated
				V Viton		/LH Mild Steel, Zinc-Nickel

© 2021 Sun Hydraulics 145 of 356 SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHCLDN

CRACKING PRESSURE (D) SEAL MATERIAL

(N) MATERIAL/COATING

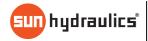
D 50 psi (3,5 bar)

N Buna-N
E EPDM

V Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

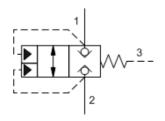
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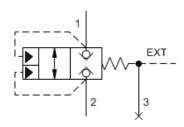


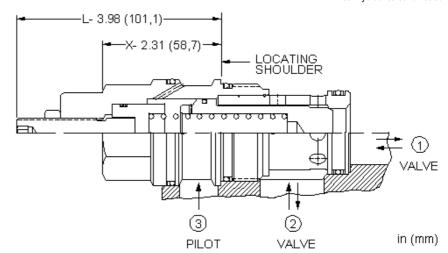
SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A



sunhydraulics.com/model/LOJC







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	6,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

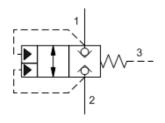
Model Code Example: LOJCXDN

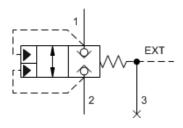
CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
•		V Viton	/AP Stainless Steel, Passivated

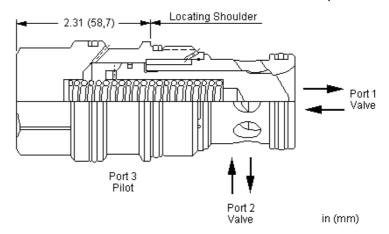
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sunhydraulics.com/model/LOKC







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	7,7 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKCXDN

(D) SEAL MATERIAL CONTROL (X) CRACKING PRESSURE (N) MATERIAL/COATING

E EPDM /AP Stainless Steel, Passivated V Viton /LH Mild Steel, Zinc-Nickel

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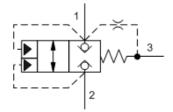


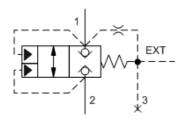
MODEL LODA Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1

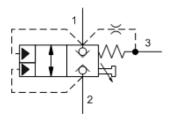
SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A

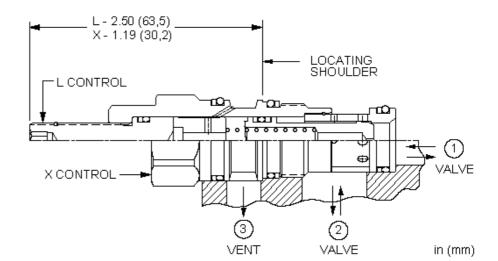


sunhydraulics.com/model/LODA









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 1 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 1 to 2 direction and will function as a check valve from 2 to 1. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.	
Pilot Volume Displacement	0,66 cc	
Area Ratio, A3 to A1	1.8:1	
Area Ratio, A3 to A2	2.25:1	
Control Orifice Diameter	0,53 mm	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: LODAXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating V Viton /AP Stainless Steel, Passivated

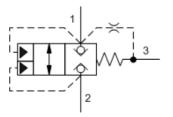
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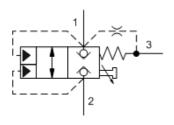


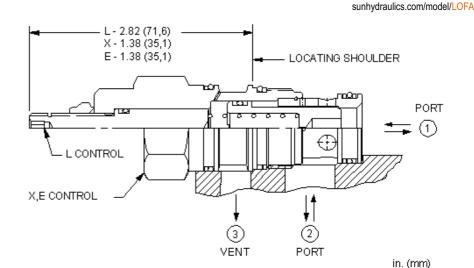


SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 1 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 1 to 2 direction and will function as a check valve from 2 to 1. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFAXDN

 CONTROL
 (X)
 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N)
 MATERIAL/COATING

 X
 Not Adjustable
 D
 50 psi (3,5 bar)
 N
 Buna-N
 Standard Material/Coating

 V
 V Viton
 /AP Stainless Steel, Passivated

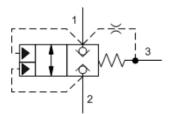
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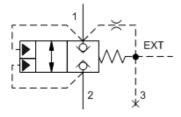


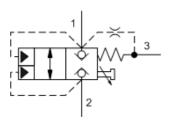


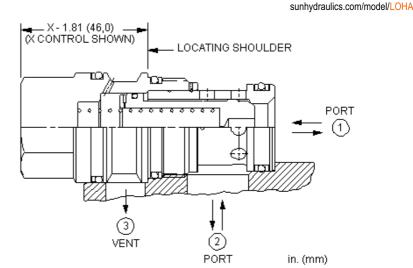
SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A











These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 1 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 1 to 2 direction and will function as a check valve from 2 to 1. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,8 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHAXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating
V Viton /AP Stainless Steel, Passivated

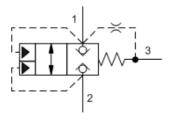
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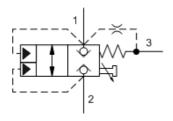


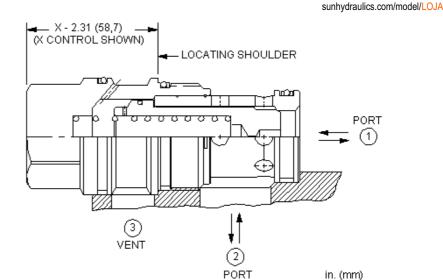


SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 1 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 1 to 2 direction and will function as a check valve from 2 to 1. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJAXDN

CONTROL	(X)	CRACKING PRESSURE	(D)	SEAL MATERIAL (N	MATERIAL/COATING
X Not Adjustable		D 50 psi (3,5 bar)		N Buna-N	Standard Material/Coating
L Stroke Adjustment				V Viton	/AP Stainless Steel, Passivated

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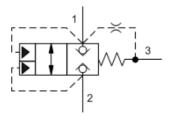


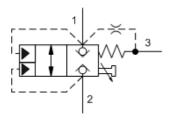


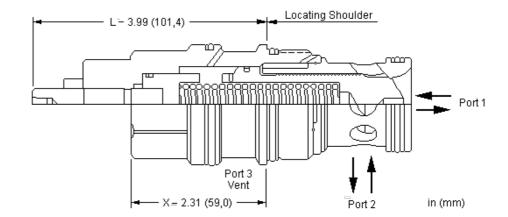
SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU











These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 1 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 1 to 2 direction and will function as a check valve from 2 to 1. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKAXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
L Stroke Adjustment		V Viton	/AP Stainless Steel, Passivated

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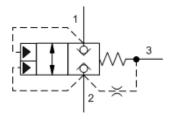


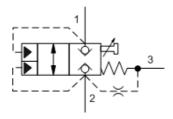


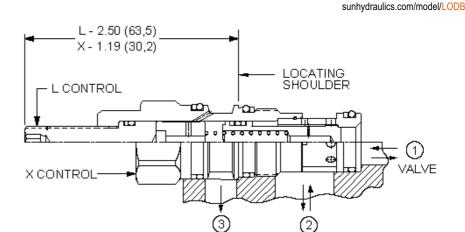
SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A



in (mm)







These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 2 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 2 to 1 direction and will function as a check valve from 1 to 2. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

VENT

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	0,66 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LODBXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
		V Viton	/AP Stainless Steel, Passivated

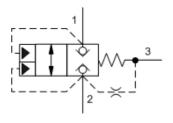
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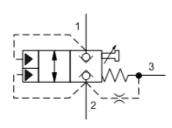


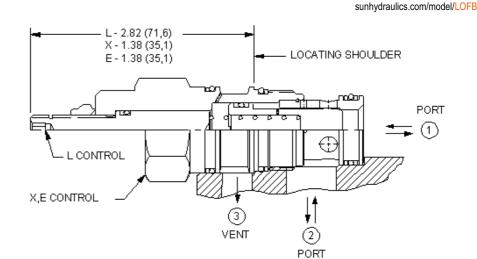


SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 2 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 2 to 1 direction and will function as a check valve from 1 to 2. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFBXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
		V Viton	/AP Stainless Steel, Passivated

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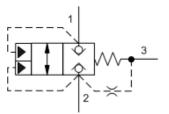


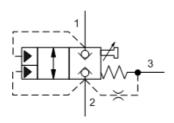


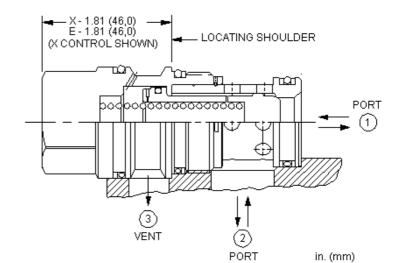
SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A



sunhydraulics.com/model/LOHB







These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 2 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 2 to 1 direction and will function as a check valve from 1 to 2. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,8 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHBXDN

(N) MATERIAL/COATING
Standard Material/Coating

E EPDM V Viton /AP Stainless Steel, Passivated

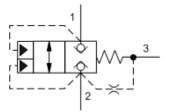
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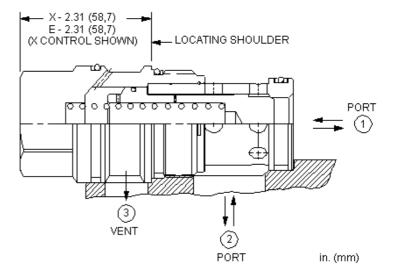


SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A





sunhydraulics.com/model/LOJB



These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 2 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 2 to 1 direction and will function as a check valve from 1 to 2. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJBXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating V Viton /AP Stainless Steel, Passivated

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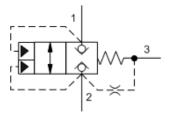


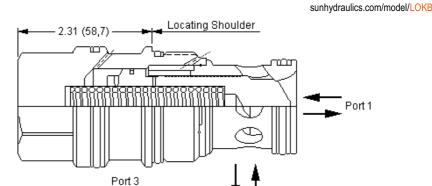


SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU

Vent







These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and have port 2 as a pilot source. With port 3 blocked, the valve will remain in the closed position in the 2 to 1 direction and will function as a check valve from 1 to 2. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

in (mm)

Port 2

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKBXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING	
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating	l
		V Viton	/AP Stainless Steel, Passivated	

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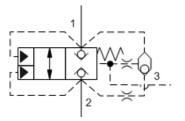


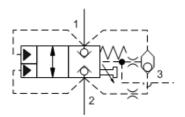
MODEL LODD

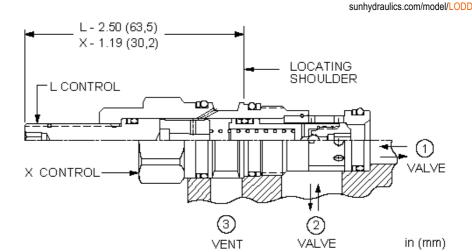
Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	0,66 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LODDXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING X Not Adjustabl **E** EPDM

V Viton

/AP Stainless Steel, Passivated

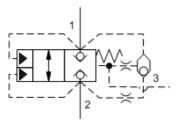
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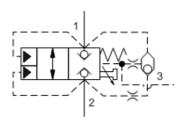


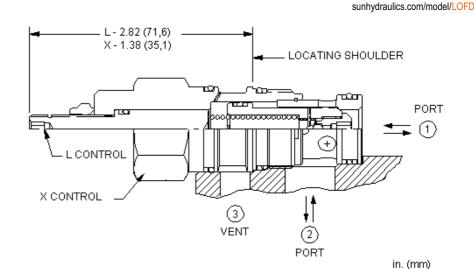
MODEL LOFD Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFDXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating
E EPDM /AP Stainless Steel, Passivated

V Viton

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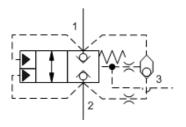


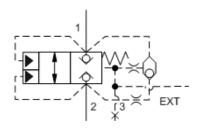
MODEL LOHD Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

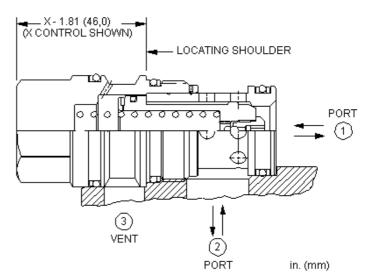
SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A



sunhydraulics.com/model/LOHD







These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.		
Pilot Volume Displacement	4,1 cc		
Area Ratio, A3 to A1	1.8:1		
Area Ratio, A3 to A2	2.25:1		
Control Orifice Diameter	0,8 mm		
Seal kit - Cartridge	Buna: 990017007		
Seal kit - Cartridge	Polyurethane: 990017002		
Seal kit - Cartridge	Viton: 990017006		

CONFIGURATION OPTIONS

Model Code Example: LOHDXDN

CONTROL (X) CRACKING PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) Buna-N Standard Material/Coating
E EPDM /AP Stainless Steel, Passivated

V Viton

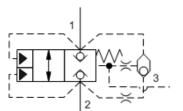
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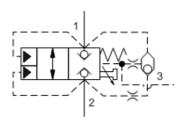


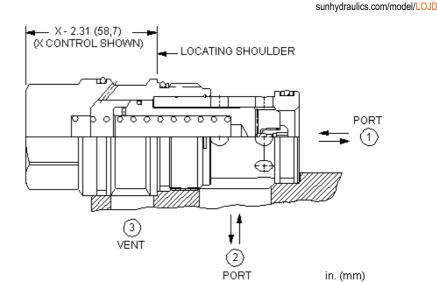
MODEL LOJD Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A









These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJDXDN

CONTROL	(X)	CRACKING PRESSURE	(D)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Not Adjustable		D 50 psi (3,5 bar)		N Buna-N		Standard Material/Coating	
L Stroke Adjustment				V Viton		/AP Stainless Steel, Passivated	
						/LH Mild Steel, Zinc-Nickel	

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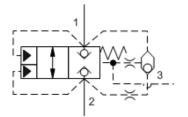


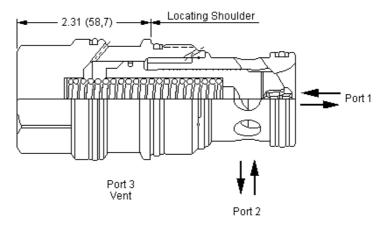
MODEL LOKD Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU



sunhydraulics.com/model/LOKD





in (mm)

These unbalanced, vent-to-open logic valves are 2-way switching elements that are spring-biased closed and incorporate an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With port 3 blocked, the valve is held in the closed position by the spring force. With port 3 vented, the valve will open provided there is sufficient pressure to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

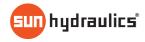
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKDXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N)
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	
		V Viton	

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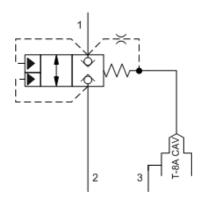


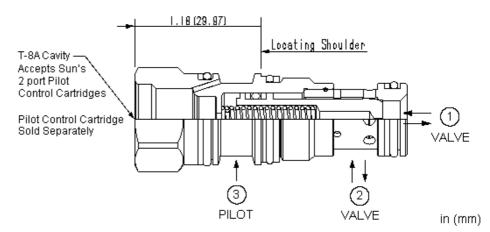
MODEL LODA8 Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 and integral T-8A control cavity

SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A



sunhydraulics.com/model/LODA8





This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 1 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	0,66 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LODA8DN

CRACKING PRESSURE (D) S

(D) SEAL MATERIAL

(N) MATERIAL/COATING

D 50 psi (3,5 bar)

N Buna-N
V Viton

/AP Stainless Steel, Passivated

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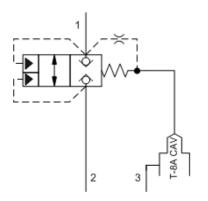
MODEL LOFA8

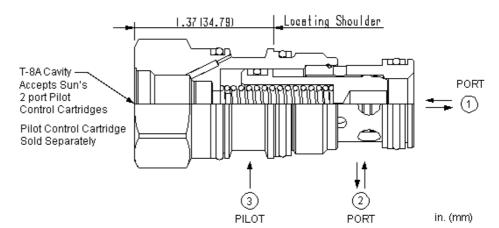
Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 and integral T-8A control cavity

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A



sunhydraulics.com/model/LOFA8





This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 1 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOFA8DN

CRACKING PRESSURE (D) SEAL MATERIAL (N

D 50 psi (3,5 bar)

N Buna-N
V Viton

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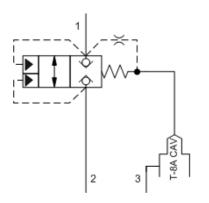


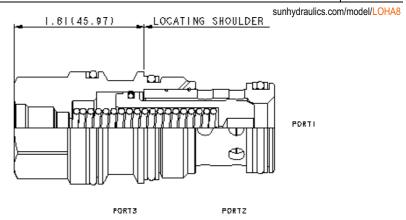
MODEL LOHA8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 and integral T-8A control cavity

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 1 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,8 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOHA8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3.5 bar)

N Buna-N V Viton

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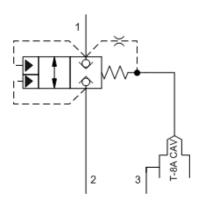


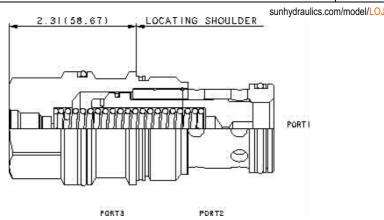


Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 and integral T-8A control cavity

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 1 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOJA8DN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N

 D 50 psi (3,5 bar)
 N Buna-N

 V Viton

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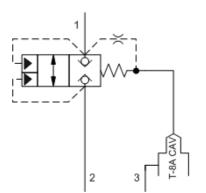


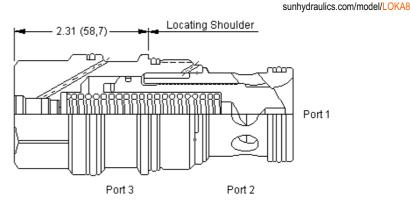


Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 and integral T-8A control cavity

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU







in (mm)

This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 1 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOKA8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3.5 har)

N Buna-N V Viton

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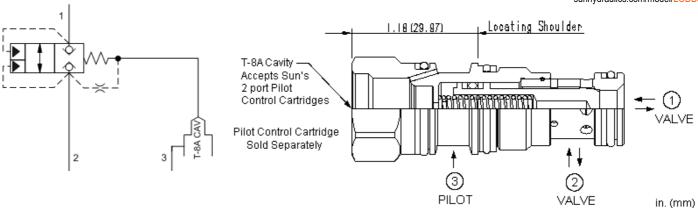
MODEL LODB8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A



sunhydraulics.com/model/LODB8



This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	0,66 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LODB8DN

BIAS PRESSURE (D) SEAL MATERIAL **D** 50 psi (3,5 bar) V Viton

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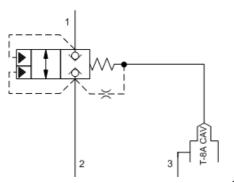


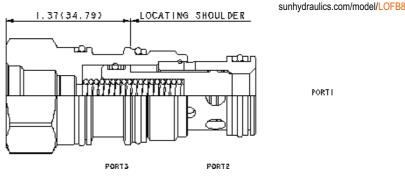
MODEL LOFB8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOFB8DN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N)

 D 50 psi (3,5 bar)
 N Buna-N
 V Viton

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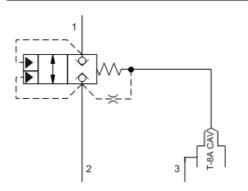


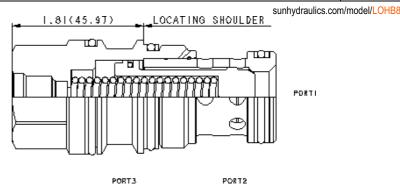
MODEL LOHB8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,8 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOHB8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N

E EPDM

V Viton

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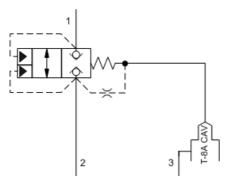


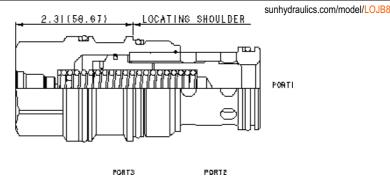
MODEL LOJB8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOJB8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N V Viton

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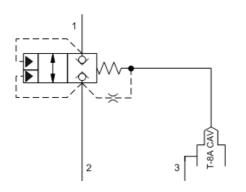


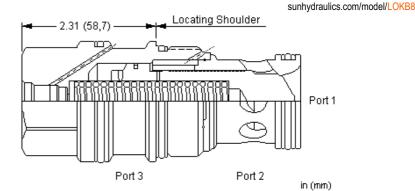


Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 2 and integral T-8A control cavity

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU







This valve is an unbalanced, vent-to-open, 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and uses port 2 as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOKB8DN

CRACKING PRESSURE

D 50 psi (3,5 bar)

(D) SEAL MATERIAL

V Viton

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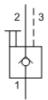


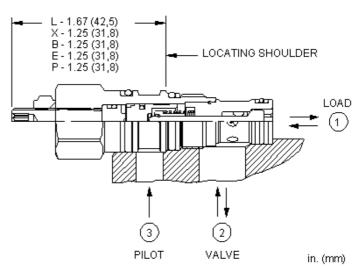
MODEL CKBB



sunhydraulics.com/model/CKBB







This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	EPDM: 990163014
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: CKBBXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	E 75 psi (5 bar)	E EPDM	/AP Stainless Steel, Passivated
		V Viton	/LH Mild Steel, Zinc-Nickel

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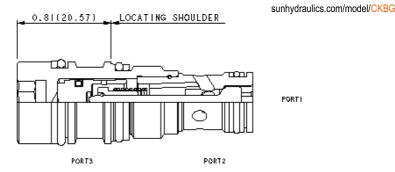


Flush mount pilot-to-open check valve with sealed pilot

CAPACITY: 30 L/min. / CAVITY: T-163A







This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Valve Internal Hex Size	8 mm		
Seal kit - Cartridge	Buna: 990163007		
Seal kit - Cartridge	Polyurethane: 990163002		
Seal kit - Cartridge	Viton: 990163006		

CONFIGURATION OPTIONS

Model Code Example: CKBGXCN

CONTROL	(X) BIAS PRESSURE	(C)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adustable, Standard Hydraulic F	Pilot C 30 psi (2 bar)		N Buna-N	Standard Material/Coating
	E 75 psi (5 bar)		V Viton	/AP Stainless Steel, Passivated

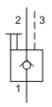
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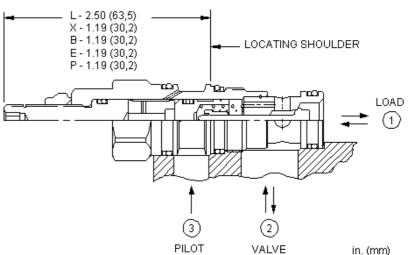


sunhydraulics.com/model/CKCB









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	EPDM: 990011014	
Seal kit - Cartridge Polyurethane: 990011002		
Seal kit - Cartridge Viton: 990011006		

CONFIGURATION OPTIONS

Model Code Example: CKCBXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X	Standard Pilot
L	Manual Load Release

С	30 psi (2 bar)
Α	4 psi (0,3 bar)
В	15 psi (1 bar)
D	50 psi (3,5 bar)

E 75 psi (5 bar) **F** 100 psi (7 bar)

Ν	Buna-N
Е	EPDM
٧	Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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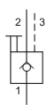
Pilot-to-open check valve with standard pilot

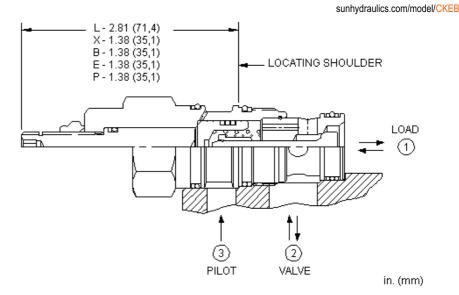
SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A











This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CKEBXCN

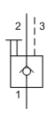
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		

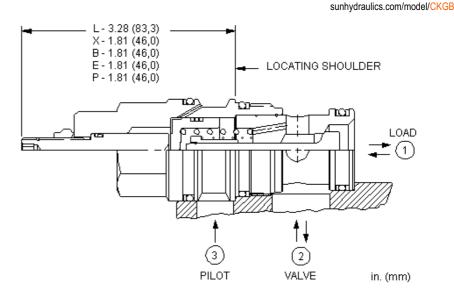
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This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CKGBXCN

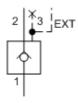
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated
		B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel
		D 50 psi (3,5 bar)				
		E 75 psi (5 bar)				
		F 100 psi (7 bar)				

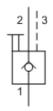
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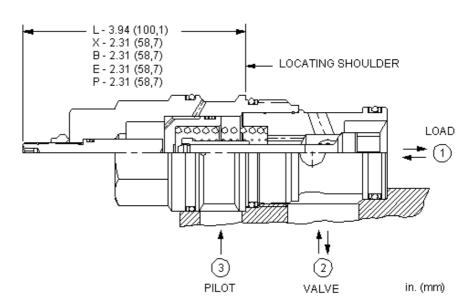


sunhydraulics.com/model/CKIB









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	EPDM: 990019014	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: CKIBXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Standard PilotL Manual Load Release

C 30 psi (2 bar)
A 4 psi (0,3 bar)
B 15 psi (1 bar)

D 50 psi (3,5 bar)E 75 psi (5 bar)F 100 psi (7 bar)

N Buna-N
E EPDM
V Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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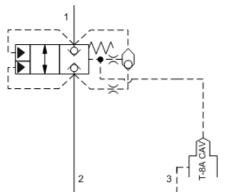
MODEL LODD8

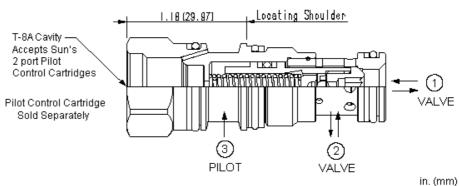
Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-11A



sunhydraulics.com/model/LODD8





This valve is an unbalanced, vent-to-open 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and incorporates an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	0,66 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LODD8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N
E EPDM
V Viton

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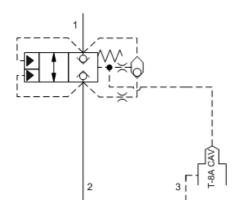
MODEL LOFD8

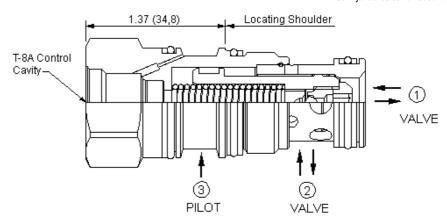
Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A



sunhydraulics.com/model/LOFD8





This valve is an unbalanced, vent-to-open 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and incorporates an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	1,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOFD8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N E EPDM

V Viton

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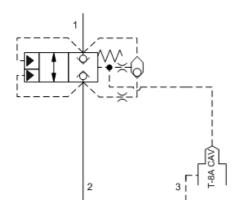


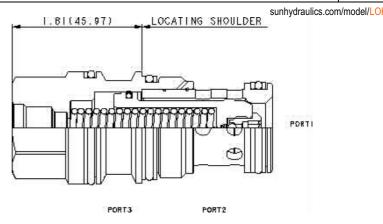
MODEL LOHD8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A







This valve is an unbalanced, vent-to-open 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and incorporates an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	4,1 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,8 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOHD8DN

CRACKING PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N
E EPDM
V Viton

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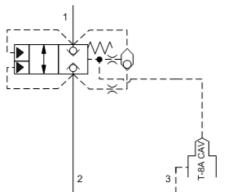


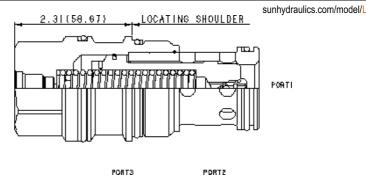
MODEL LOJD8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A







This valve is an unbalanced, vent-to-open 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and incorporates an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	6,9 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOJD8DN

(N)

CRACKING PRESSURE (D) SEAL MATERIAL

D 50 psi (3,5 bar)

N Buna-N V Viton

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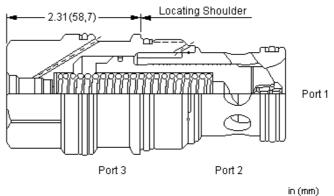
MODEL LOKD8

Vent-to-open, spring-biased closed, unbalanced poppet logic element with pilot source from port 1 or 2 and integral T-8A control cavity

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU



sunhydraulics.com/model/LOKD8



This valve is an unbalanced, vent-to-open 2-way logic switching element with an integral pilot control cavity. It is spring biased closed and incorporates an integral shuttle so that the higher of pressures at either port 1 or port 2 can be used as a pilot source. With a pilot 2-way valve in the closed position installed in the T-8A cavity, the logic element will remain in the closed position. With the pilot valve open, the logic element will open providing there is a sufficient combination of pressures to overcome the spring force. The force generated at port 3, plus the spring force, must be greater than the sum of the forces acting at port 1 and port 2 for the valve to remain closed. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Volume Displacement	7,7 cc
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,9 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: LOKD8DN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N

 D 50 psi (3,5 bar)
 N Buna-N

V Viton

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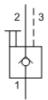


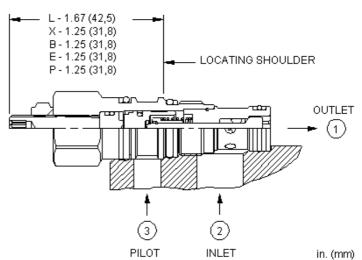
sunhydraulics.com/model/CKBD



MODEL

CKBD





This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990163007	
Seal kit - Cartridge	EPDM: 990163014	
Seal kit - Cartridge	Polyurethane: 990163002	
Seal kit - Cartridge	Viton: 990163006	

CONFIGURATION OPTIONS

Model Code Example: CKBDXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	E 75 psi (5 bar)	E EPDM	/AP Stainless Steel, Passivated
		V Viton	/LH Mild Steel, Zinc-Nickel

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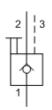
SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A

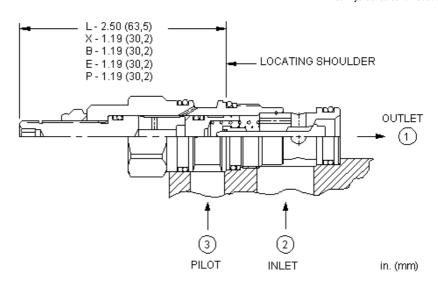












This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

G 150 psi (10,5 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CKCDXCN

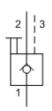
CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C 30 psi (2 bar)	N Buna-N	Standard Material/Coating
L Manual Load Release	A 4 psi (0,3 bar)	E EPDM	/AP Stainless Steel, Passivated
	B 15 psi (1 bar)	V Viton	/LH Mild Steel, Zinc-Nickel
	D 50 psi (3,5 bar)		
	E 75 psi (5 bar)		
	F 100 psi (7 bar)		

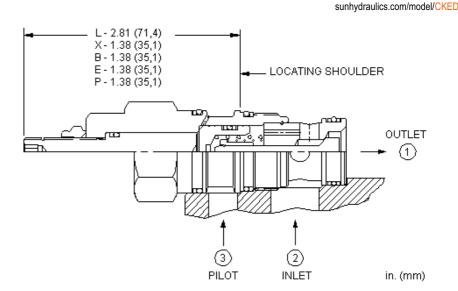
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This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

Model Code Example: CKEDXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING

X Standard Pilot

C 30 psi (2 bar)

N Buna-N

L Manual Load Release

A 4 psi (0,3 bar) **B** 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar) **F** 100 psi (7 bar) V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

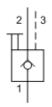
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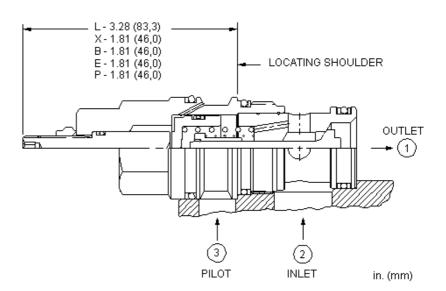


sunhydraulics.com/model/CKGD









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

F 100 psi (7 bar)

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1		
Maximum Operating Pressure	350 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.		
Seal kit - Cartridge	Buna: 990017007		
Seal kit - Cartridge	EPDM: 990017014		
Seal kit - Cartridge	Polyurethane: 990017002		
Seal kit - Cartridge	Viton: 990017006		

CONFIGURATION OPTIONS

Model Code Example: CKGDXCN

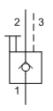
CONTROL	(X)	CRACKING PRESSURE	(C)	SEAL MATERIAL	(N)	MATERIAL/COATING	
X Standard Pilot		C 30 psi (2 bar)		N Buna-N		Standard Material/Coating	
L Manual Load Release		A 4 psi (0,3 bar)		E EPDM		/AP Stainless Steel, Passivated	
		B 15 psi (1 bar)		V Viton		/LH Mild Steel, Zinc-Nickel	
		D 50 psi (3,5 bar)					
		E 75 psi (5 bar)					

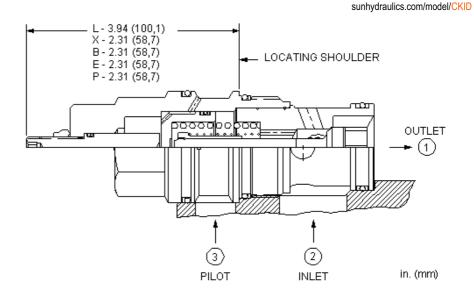
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This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CKIDXCN

CONTROL	(X) CR	ACKING PRESSURE	(C) SEAL MATERIAL	(N)	MATERIAL/COATING
---------	--------	-----------------	-------------------	-----	------------------

X Standard Pilot

L Manual Load Release

C 30 psi (2 bar) **A** 4 psi (0,3 bar) N Buna-N

V Viton

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

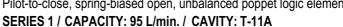
F 100 psi (7 bar)

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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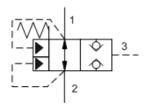


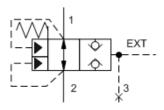
MODEL LODO

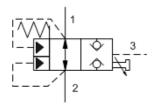


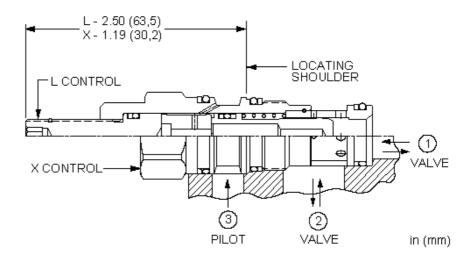












These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

(V) MINIMUM DILOT DDESCUDE

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

(NI) MATERIAL (COATING

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	0,66 cc
Pilot Passage into Valve	0,8 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

CONTROL

Model Code Example: LODOXDN

(D) CEAL MATERIAL

CONTROL	(X) WIINIWOW FILOT PRESSURE	(D) SEAL WATERIAL	(N) WATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating

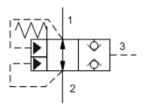
E EPDM /AP Stainless Steel, Passivated V Viton /LH Mild Steel, Zinc-Nickel

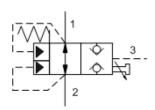
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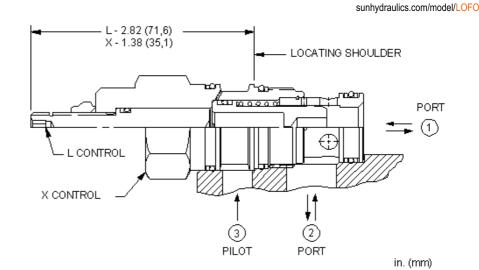
SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A











These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

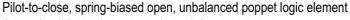
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	1,1 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFOXDN

CONTROL	(X) MINIMUM PILOT PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
•		V Viton	/AP Stainless Steel, Passivated

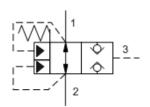
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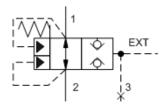
SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A

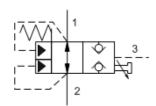


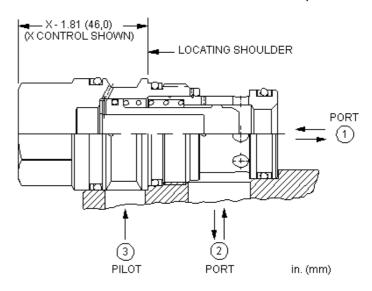




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These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	4,1 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHOXDN

V Viton

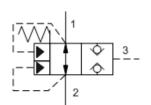
CONTROL (X) MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating E EPDM /AP Stainless Steel, Passivated

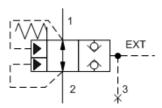
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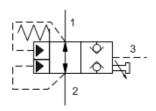


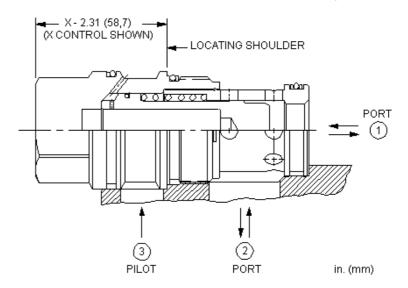
sunhydraulics.com/model/LOJO



<mark>sun</mark> hydraulics







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	6,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJOXDN

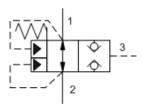
CONTROL	(X)	MINIMUM PILOT PRESSURE	(D)	SEAL MATERIAL	(N)	MATERIAL/COATING
X Not Adjustable		D 50 psi (3.5 bar)		N Buna-N		Standard Material/Coating

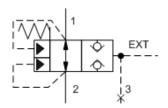
E EPDM /AP Stainless Steel, Passivated **V** Viton /LH Mild Steel, Zinc-Nickel

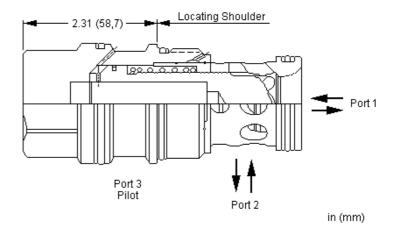
© 2021 Sun Hydraulics 193 of 356 SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU



sunhydraulics.com/model/LOKO







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Pilot Volume Displacement	7,7 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKOXDN

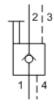
CONTROL	(X) MINIMUM PILOT PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
_	·	V Viton	/AP Stainless Steel, Passivated

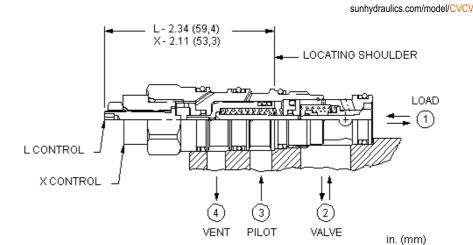
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SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced to the vent (port 4).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990021007	
Seal kit - Cartridge	EPDM: 990021014	
Seal kit - Cartridge	Polyurethane: 990021002	
Seal kit - Cartridge	Viton: 990021006	

CONFIGURATION OPTIONS

Model Code Example: CVCVXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X	Stand	dard	Pilo	nt

L Manual Load Release

C 30 psi (2 bar)

A 4 psi (0,3 bar) **B** 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar) **F** 100 psi (7 bar)

N Buna-NE EPDMV Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

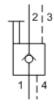
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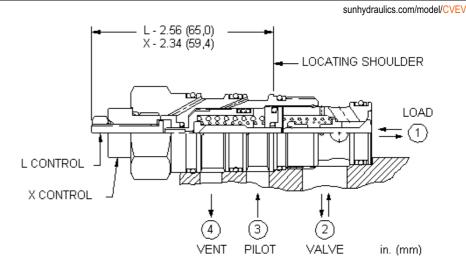
Vented pilot-to-open check valve

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced to the vent (port 4).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990022007	
Seal kit - Cartridge	Polyurethane: 990022002	
Seal kit - Cartridge	Viton: 990022006	

CONFIGURATION OPTIONS

Model Code Example: CVEVXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
CONTROL	(A) CRACKING PRESSURE	(C) SEAL WATERIAL	(IN) WATERIAL/COATING

X Standard Pilot

L Manual Load Release

C 30 psi (2 bar)

- **A** 4 psi (0,3 bar) **B** 15 psi (1 bar)
- **D** 50 psi (3,5 bar)
- **E** 75 psi (5,5 bar)
- = 10 psi (5 bai)
- F 100 psi (7 bar)

N Buna-N
E EPDM

V Viton

Standard Material/Coating

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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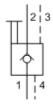
Vented pilot-to-open check valve

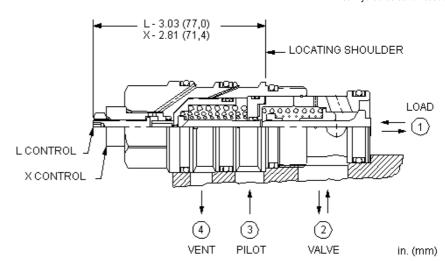
SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/CVGV







This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced to the vent (port

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990023007	
Seal kit - Cartridge	Polyurethane: 990023002	
Seal kit - Cartridge	Viton: 990023006	

CONFIGURATION OPTIONS

Model Code Example: CVGVXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL

C 30 psi (2 bar)

(N) MATERIAL/COATING

V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

L Manual Load Release

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

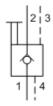
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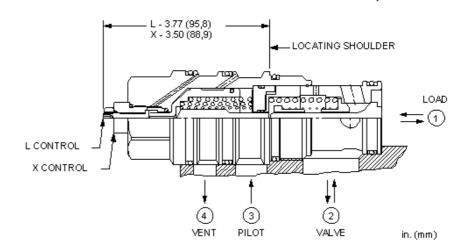
SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A











This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced to the vent (port 4).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Pilot Volume Displacement	4,9 cc	
Pilot Passage into Valve	2,3 mm	
Seal kit - Cartridge	Buna: 990024007	
Seal kit - Cartridge	EPDM: 990024014	
Seal kit - Cartridge	Polyurethane: 990024002	
Seal kit - Cartridge	Viton: 990024006	

CONFIGURATION OPTIONS

Model Code Example: CVIVXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
---------	-----------------------	-------------------	----------------------

X Standard Pilot

L Manual Load Release

C 30 psi (2 bar)

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N V Viton

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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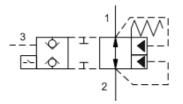


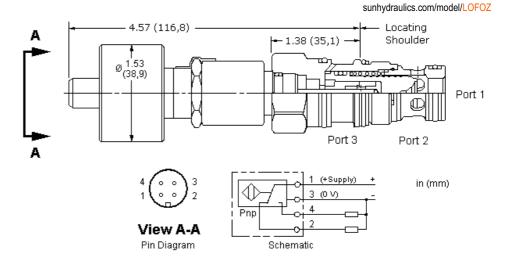
MODEL LOFOZ

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	1,1 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFOZDN

D 50 psi (3,5 bar)

(D) SEAL MATERIAL

N Buna-N

V Viton

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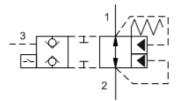


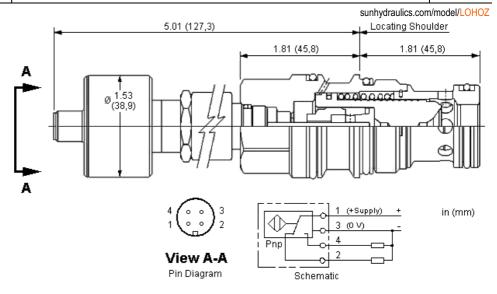
MODEL LOHOZ

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	4,1 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990117006

CONFIGURATION OPTIONS

Model Code Example: LOHOZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N)

 D 50 psi (3,5 bar)
 N Buna-N

 V Viton

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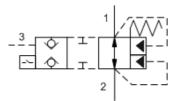


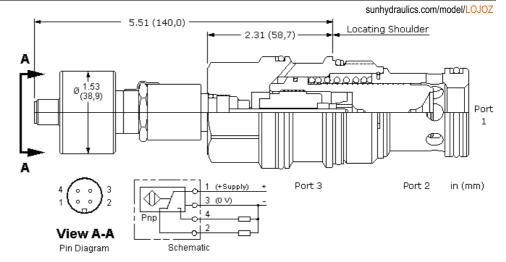
MODEL LOJOZ

Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	6,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJOZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N)

 D 50 psi (3,5 bar)
 N Buna-N

 V Viton

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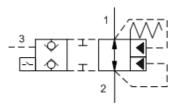


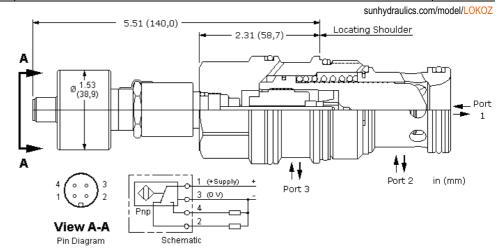


Pilot-to-close, spring-biased open, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased open. Pressure at either work port 1 or 2 will tend to keep the valve open while pressure at port 3 will tend to close it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to close. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is spring biased to the fully open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	7,7 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKOZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N

 D 50 psi (3,5 bar)
 N Buna-N

V Viton

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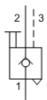


Vented pilot-to-open check valve - atmospherically referenced SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A

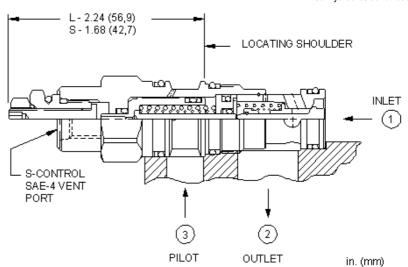


sunhydraulics.com/model/CKCV









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) pilot port will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced out the back of the hex body.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990311007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990311006

CONFIGURATION OPTIONS

Model Code Example: CKCVXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Standard Pilot, Atmospheric VentS External 4-SAE Vent Port

C 30 psi (2 bar)A 4 psi (0,3 bar)B 15 psi (1 bar)

i (2 bar) N Buna-N

V Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

D 50 psi (3,5 bar)
 E 75 psi (5 bar)
 F 100 psi (7 bar)

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SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A

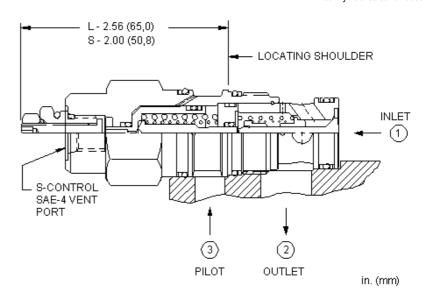


sunhydraulics.com/model/CKEV









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) pilot port will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced out the back of the hex body.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: CKEVXCN

 CONTROL
 (X)
 CRACKING PRESSURE
 (C)
 SEAL MATERIAL
 (N)

 X Standard Pilot, Atmospheric Vent
 C 30 psi (2 bar)
 N Buna-N

S External 4-SAE Vent Port

A 4 psi (0,3 bar) **B** 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N
V Viton

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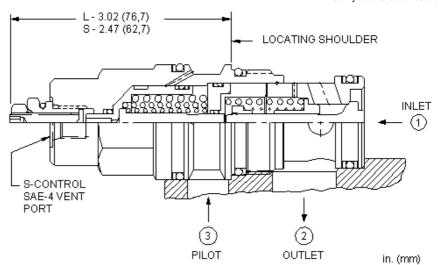


sunhydraulics.com/model/CKGV









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) pilot port will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced out the back of the hex body.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: CKGVXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Standard Pilot, Atmospheric Vent

C 30 psi (2 bar)

V Viton

N Buna-N

Standard Material/Coating /AP Stainless Steel, Passivated

S External 4-SAE Vent Port

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

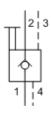
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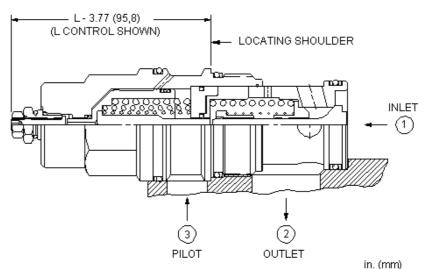


sunhydraulics.com/model/CKIV









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) pilot port will open the valve from port 1 to port 2. Pilot pressure needed to open the valve is directly proportional to the load pressure at port 1. The valve is insensitive to pressure at port 2 because the spring chamber is referenced out the back of the hex body.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: CKIVXCN

V Viton

CONTROL (C) SEAL MATERIAL (X) CRACKING PRESSURE (N) MATERIAL/COATING

S External 4-SAE Vent Port

C 30 psi (2 bar)

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

/AP Stainless Steel, Passivated

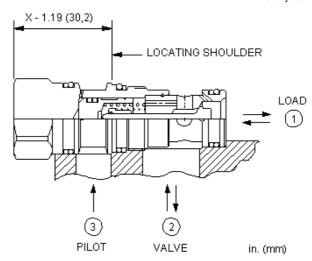
© 2021 Sun Hydraulics 206 of 356 Pilot-to-open check valve with bypass orifice

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-11A



sunhydraulics.com/model/CNCE





This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 3,9 mm	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CNCEXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 .153 in. (0,4 - 3,9 mm)

A 4 psi (0,3 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

B 15 psi (1 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

D 50 psi (3,5 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

E 75 psi (5 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

F 100 psi (7 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

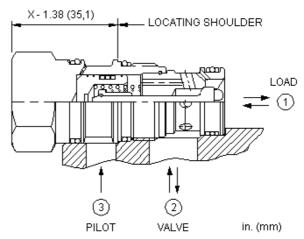
Buna-N Standard Material/Coating
Viton /AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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sunhydraulics.com/model/CNEE





This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 3,4 mm	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

CONTROL

Model Code Example: CNEEXCN

X Not Adjustable C 30 psi (2 bar) Cracking Pressure, .016 -

(X) SETTING RANGE

(C) SEAL MATERIAL N Buna-N **V** Viton

.135 in. (0,4 - 3,4 mm)

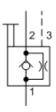
- A 4 psi (0,3 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.135 in. (0,4 - 3,4 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.135 in. (0,4 - 3,4 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)

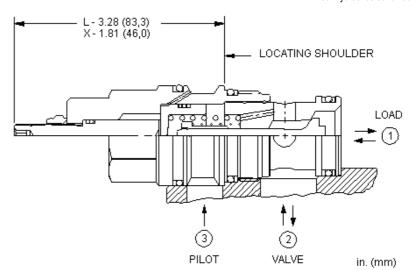
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sunhydraulics.com/model/CNGE







This valve is a pilot to open check valve with a bypass orifice. It incorporates a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and restricts flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. The pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range. An 'L' control option is available to manually release the load. See Option Selection below.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1	
Maximum Operating Pressure	350 bar	
Orifice Range	0,4 - 5,5 mm	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

(N)

CONFIGURATION OPTIONS

Model Code Example: CNGEXCN

N Buna-N

V Viton

CONTROL (X) SETTING RANGE

(C) SEAL MATERIAL

X Not Adjustable

30 psi (2 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)

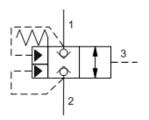
- 4 psi (0,3 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- B 15 psi (1 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- E 75 psi (5 bar) Cracking Pressure, .016 -.218 in. (0,4 - 5,5 mm)
- F 100 psi (7 bar) Cracking Pressure, .016

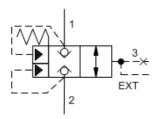
- .218 in. (0,4 - 5,5 mm)

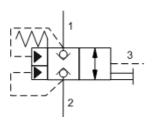
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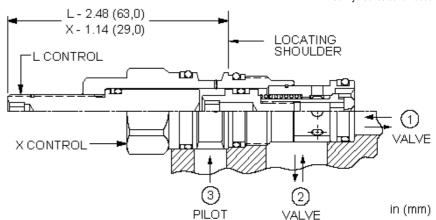


sunhydraulics.com/model/LKDC









These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Pilot Passage into Valve	0,8 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LKDCXDN

CONTROL (X) MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable

D 50 psi (3,5 bar)

N Buna-N

V Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

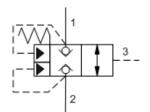
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SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-2A

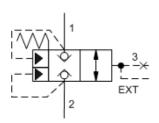


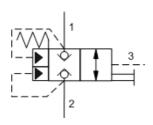


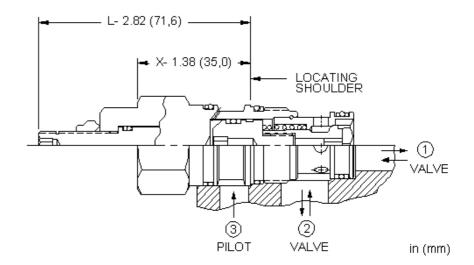


MODEL

LKFC







These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@70 bar
Pilot Volume Displacement	0,98 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

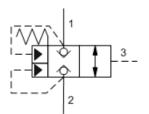
Model Code Example: LKFCXDN

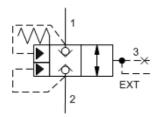
CONTROL	(X) MINIMUM PILOT PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	D 50 psi (3,5 bar)	N Buna-N	Standard Material/Coating
		E EPDM	/AP Stainless Steel, Passivated
		V Viton	/LH Mild Steel, Zinc-Nickel

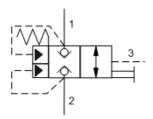
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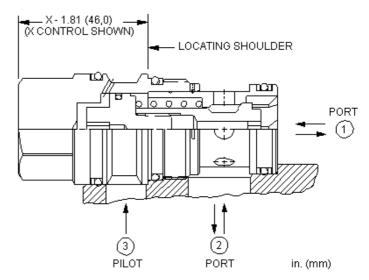












These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@70 bar
Pilot Volume Displacement	2,5 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LKHCXDN

CONTROL (X) MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

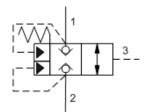
X Not Adjustable D 50 psi (3,5 bar) N Buna-N Standard Material/Coating E EPDM /AP Stainless Steel, Passivated

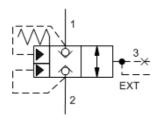
V Viton

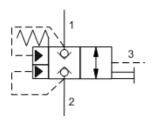
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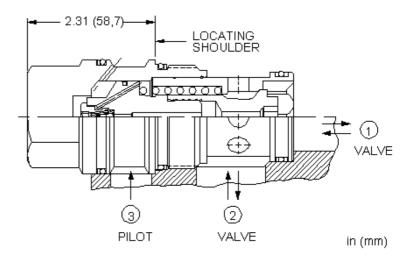


sunhydraulics.com/model/LKJC









These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@70 bar
Pilot Volume Displacement	4,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LKJCXDN

CONTROL (X) MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable

D 50 psi (3,5 bar)

N Buna-N

E EPDM

V Viton

Standard Material/Coating

/AP Stainless Steel, Passivated

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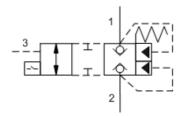


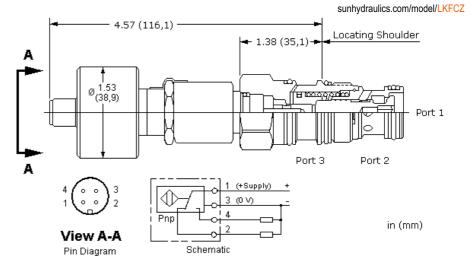


Pilot-to-open, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-2A







These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	0,98 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LKFCZDN

MINIMUM PILOT PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N

E EPDM

V Viton

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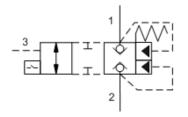


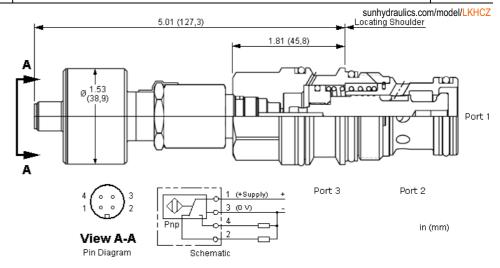


Pilot-to-open, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-17A







These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	2,5 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LKHCZDN

MINIMUM PILOT PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N E EPDM

V Viton

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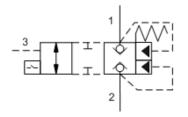


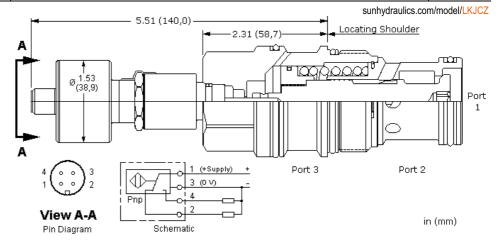


Pilot-to-open, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-19A







These unbalanced poppet, logic valves are 2-way switching elements that are spring-biased closed. Pressure at either work port 1 or 2 will further bias the valve to the closed position while pressure at port 3 will tend to open it. The force generated at port 3 must be greater than the sum of the forces acting at port 1 and port 2 plus the spring force for the valve to open. NOTE: The pilot area (port 3) is 1.8 times the area at port 1 and 2.25 times the area at port 2.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	4,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LKJCZDN

MINIMUM PILOT PRESSURE

(D) SEAL MATERIAL

(N)

D 50 psi (3,5 bar)

N Buna-N V Viton

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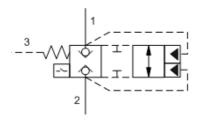


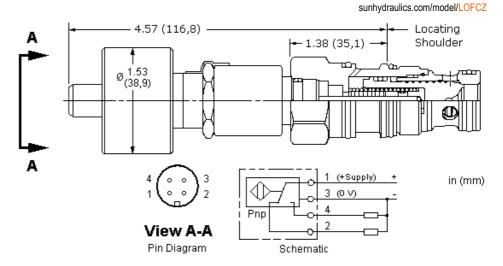


Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 2 / CAPACITY: 200 L/min. / CAVITY: T-2A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	1,1 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOFCZDN

NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL

D 50 psi (3,5 bar)

N Buna-N **V** Viton

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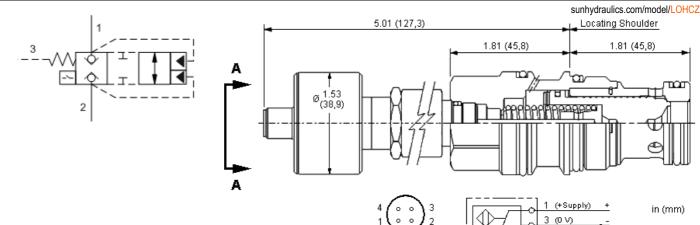




Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 3 / CAPACITY: 380 L/min. / CAVITY: T-17A





These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

Pin Diagram

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Schematic

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	4,1 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOHCZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N)

 D 50 psi (3,5 bar)
 N Buna-N
 V Viton

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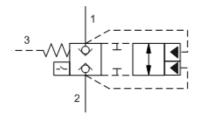


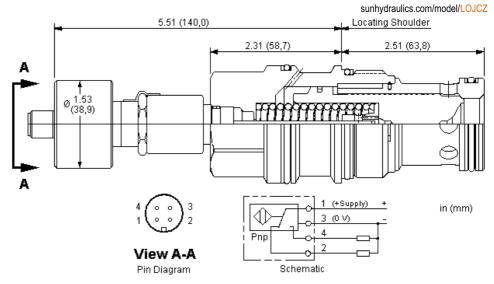


Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 760 L/min. / CAVITY: T-19A







These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	6,9 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOJCZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N

 D 50 psi (3,5 bar)
 N Buna-N

 V Viton

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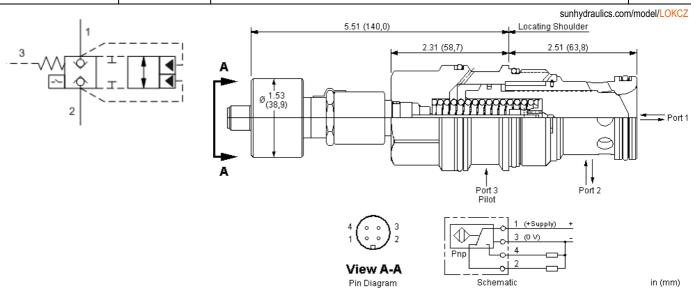




Pilot-to-close, spring-biased closed, unbalanced poppet logic element with position switch

SERIES 4 / CAPACITY: 1100 L/min. / CAVITY: T-19AU





These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	7,7 cc
Pilot Passage into Valve	2,3 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LOKCZDN

 CRACKING PRESSURE
 (D)
 SEAL MATERIAL
 (N

 D 50 psi (3,5 bar)
 N Buna-N

 V Viton

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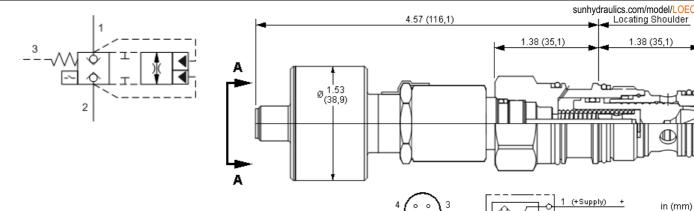




Pilot-to-close, spring-biased closed, unbalanced poppet logic element with metering notches and position switch

SERIES 2 / CAPACITY: 45 L/min. / CAVITY: T-2A





These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

View A-A Pin Diagram

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

3 (0 V)

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	1,1 cc
Pilot Passage into Valve	0,9 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LOECZDN

NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL

D 50 psi (3,5 bar)

Viton

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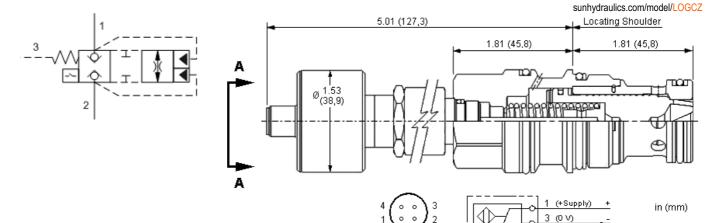


MODEL LOGCZ

Pilot-to-close, spring-biased closed, unbalanced poppet logic element with metering notches and position switch

SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-17A





These unbalanced, pilot-to-close logic valves are 2-way switching elements that are spring biased closed. Pressure at either work port 1 or 2 will oppose the spring and tend to open the valve while pressure at port 3 will tend to close it. The force generated by the pressure at port 3, plus the spring force, must be greater than the sum of the forces generated by the pressures at ports 1 and 2 for the valve to remain closed.

This valve incorporates a position switch to provide confirmation that the valve is closed.

Pin Diagram

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Schematic

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Pilot Volume Displacement	4,1 cc
Pilot Passage into Valve	1,50 mm
Area Ratio, A3 to A1	1.8:1
Area Ratio, A3 to A2	2.25:1
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LOGCZDN

NOMINAL CONTROL PRESSURE (D) SEAL MATERIAL

D 50 psi (3,5 bar) SEAL MATERIAL

N Buna-N

N Buna-N V Viton

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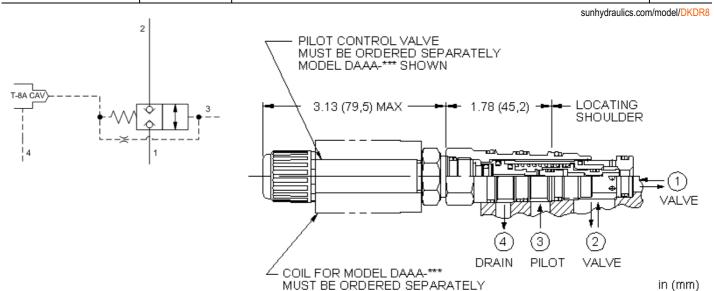


MODEL DKDR8

Normally closed, balanced poppet, logic element with integral T-8A control cavity - vent-to-open

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A





This is a normally closed, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains closed. Opening the 2-way valve shifts the poppet to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DKDR8HN

MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N)
H 400 psi (28 bar)
N Buna-N
V Viton

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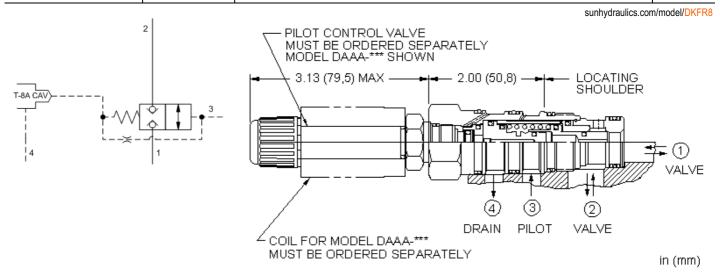




Normally closed, balanced poppet, logic element with integral T-8A control cavity - vent-to-open

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A





This is a normally closed, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains closed. Opening the 2-way valve shifts the poppet to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DKFR8HN

MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N

H 300 psi (20 bar)

N Buna-N

E EPDM
V Viton

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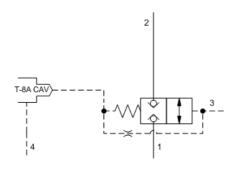


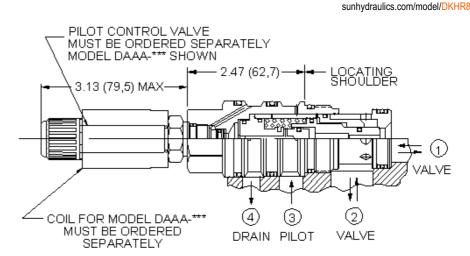
MODEL **DKHR8**

Normally closed, balanced poppet, logic element with integral T-8A control cavity - vent-to-open

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A







This is a normally closed, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains closed. Opening the 2-way valve shifts the poppet to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DKHR8HN

MINIMUM CONTROL PRESSURE (H) SEAL MATERIAL

(N)

H 300 psi (20 bar)

N Buna-N V Viton

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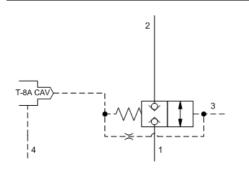


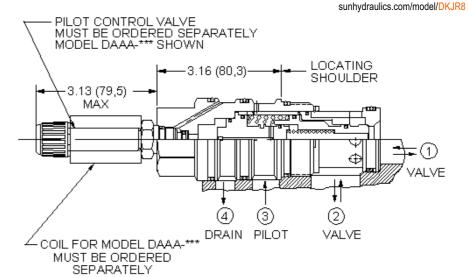


Normally closed, balanced poppet, logic element with integral T-8A control cavity - vent-to-open

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A







This is a normally closed, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains closed. Opening the 2-way valve shifts the poppet to the open position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DKJR8HN

MINIMUM CONTROL PRESSURE (H) SEAL MATERIAL

(N)

H 300 psi (20 bar)

N Buna-N

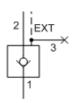
V Viton

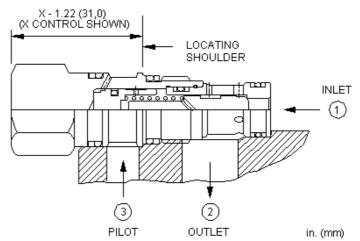
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sunhydraulics.com/model/COBA







This valve is a spring biased closed, pilot-to-close check cartridge that has a 3:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 3:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	EPDM: 990163014
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: COBAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING

X Standard Pilot
 B External 1/4 BSPP Pilot Port, Port 3 blocked

C 30 psi (2 bar)D 50 psi (3,5 bar)E 75 psi (5 bar)F 100 psi (7 bar)

N Buna-NE EPDMV Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

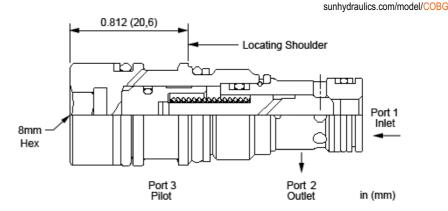
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MODEL COBG Pilot-to-close check valve

CAPACITY: 40 L/min. / CAVITY: T-163A







This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	3.4:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: COBGXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adustable, Standard Hydraulic Pilot

C 30 psi (2 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N **V** Viton

Standard Material/Coating /AP Stainless Steel, Passivated

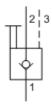
© 2021 Sun Hydraulics 228 of 356 Pilot-to-close check valve

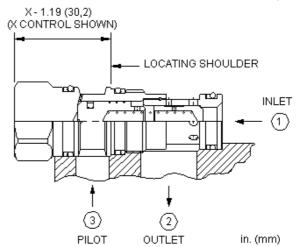
SERIES 1 / CAPACITY: 80 L/min. / CAVITY: T-11A



sunhydraulics.com/model/CODA







This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CODAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
---------	-----------------------	-------------------	----------------------

X Standard Pilot	C 30 psi (2 bar)
	A 4 psi (0,3 bar)
	B 15 psi (1 bar)

N Buna-N
E EPDM
V Viton

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

	,
Ε	75 psi (5 bar)
F	100 psi (7 bar)
G	150 psi (10,5 ba

D 50 psi (3,5 bar)

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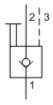
Pilot-to-close check valve

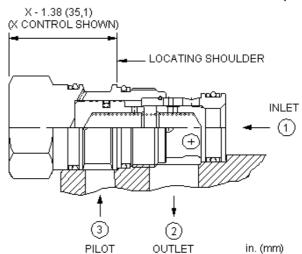
SERIES 2 / CAPACITY: 160 L/min. / CAVITY: T-2A



sunhydraulics.com/model/COFA







This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	EPDM: 990202014	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

Model Code Example: COFAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
---------	-----------------------	-------------------	----------------------

X Standard Pilot		C	30	psi	(2	ba	Ì
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A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

Ε 75 psi (5 bar)

100 psi (7 bar)

J 135 psi (9,5 bar)

N Buna-N

E EPDM **V** Viton

Standard Material/Coating

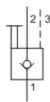
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

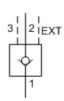
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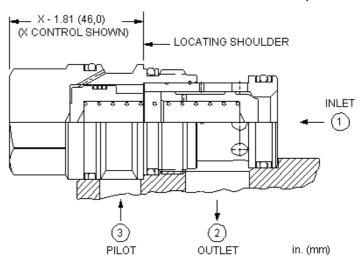


sunhydraulics.com/model/COHA









This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: COHAXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N) MATERIAL/COATING

X Standard Pilot

C 30 psi (2 bar)
A 4 psi (0,3 bar)

B 15 psi (1 bar) **D** 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar) **G** 150 psi (10,5 bar)

N Buna-N
E EPDM
V Viton

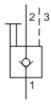
Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

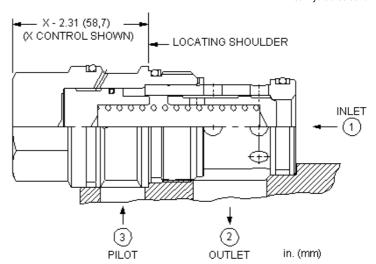
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sunhydraulics.com/model/COJA







This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: COJAXCN

CONTROL	(X) CRACKING PRESSURE	(C) SEAL MATERIAL	(N) MATERIAL/COATING
•			

C 30 psi (2 bar)

A 4 psi (0,3 bar)

B 15 psi (1 bar)

D 50 psi (3,5 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

G 150 psi (10,5 bar)

E EPDM V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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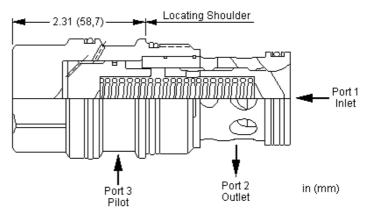
Pilot-to-close check valve

SERIES 4 / CAPACITY: 900 L/min. / CAVITY: T-19AU



sunhydraulics.com/model/COKA





This valve is a spring biased closed, pilot-to-close check cartridge that has a 1.8:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot port opposes pressure at port 1 at a ratio of 1.8:1. This valve is most often used in regeneration circuits.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: COKAXAN

V Viton

CONTROL (X) CRACKING PRESSURE (A) SEAL MATERIAL (N) MATERIAL/COATING

- **B** 15 psi (1 bar)
- C 30 psi (2 bar)
- **D** 50 psi (3,5 bar)
- **E** 75 psi (5 bar)
- F 100 psi (7 bar)

/LH Mild Steel, Zinc-Nickel

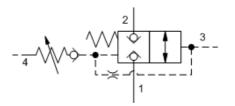
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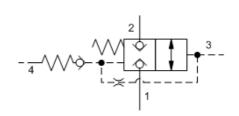


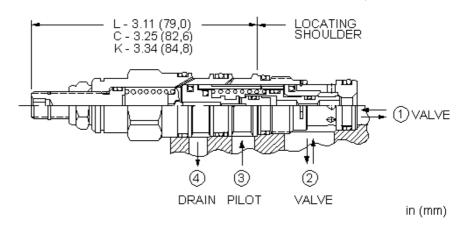
Normally closed, balanced poppet, logic element - pressure adjustable SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A



sunhydraulics.com/model/DKDP







This is a normally closed, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains closed until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DKDPLAN

CONTROL

(L) ADJUSTMENT RANGE

(A) SEAL MATERIAL

osi N Buna-N

V Viton

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

A 400 - 3000 psi (28 - 210 bar), 1000 psi (70 bar) Standard Setting

B 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

W 400 - 4500 psi (28 - 315 bar), 1000 psi (70 bar) Standard Setting

/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

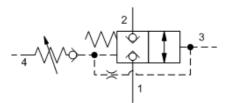
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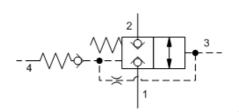


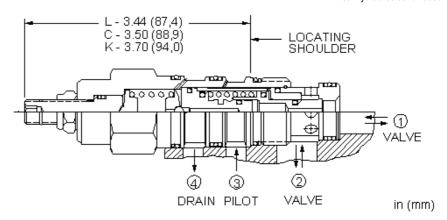
Normally closed, balanced poppet, logic element - pressure adjustable SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DKFP







This is a normally closed, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains closed until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DKFPLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N)

Standard Screw Adjustment

C Tamper Resistant - Factory Set

A 250 - 3000 psi (18 - 210 bar), 1000 psi (70 bar) Standard Setting

3 250 - 1500 psi (18 - 105 bar), 1000 psi (70 bar) Standard Setting

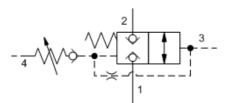
W 250 - 4500 psi (18 - 315 bar), 1000 psi (70 bar) Standard Setting

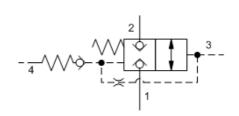
N Buna-N V Viton

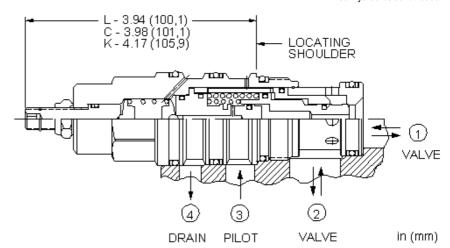
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sunhydraulics.com/model/DKHP







This is a normally closed, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains closed until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

C Tamper Resistant - Factory Set

K Handknob

Model Code Example: DKHPLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL

A 200 - 3000 psi (14 - 210 bar), 1000 ps (70 bar) Standard Setting

- **B** 200 1500 psi (14 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 200 800 psi (14 55 bar), 400 psi (28 bar) Standard Setting
- **W** 200 4500 psi (14 315 bar), 1000 psi (70 bar) Standard Setting

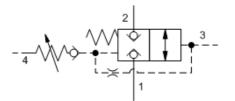
N Buna-N
V Viton

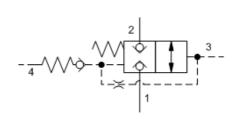
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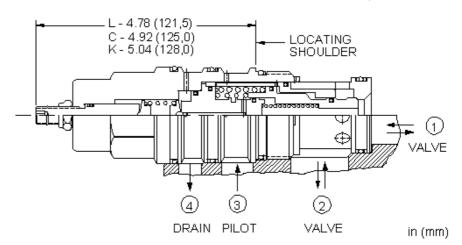
SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A



sunhydraulics.com/model/DKJP







This is a normally closed, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains closed until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the open position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: DKJPLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

A 200 - 3000 psi (14 - 210 bar), 1000 ps (70 bar) Standard Setting

B 200 - 1500 psi (14 - 105 bar), 1000 psi (70 bar) Standard Setting

W 200 - 4500 psi (14 - 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton Standard Material/Coating

/AP Stainless Steel, Passivated

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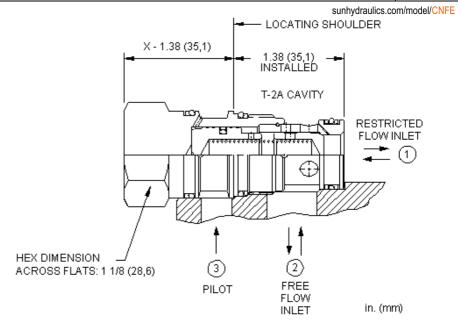


Pilot-to-close check valve with bypass orifice

SERIES 2 / CAPACITY: 160 L/min. / CAVITY: T-2A







This valve is a spring biased closed, pilot-to-close check cartridge with a bypass orifice. It incorporates a steel seat and is non-vented. The valve allows flow from port 1 to port 2 and restricts flow from port 2 to port 1. Pressure at the pilot (port 3) opposes pressure at port 1 at a ratio of 1.8:1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	1.8:1	
Orifice Range	0,4 - 3,2 mm	
Seal kit - Cartridge	Buna: 990202007	
Seal kit - Cartridge	Polyurethane: 990002002	
Seal kit - Cartridge	Viton: 990202006	

CONFIGURATION OPTIONS

Model Code Example: CNFEXCN

CONTROL (X) SETTING RANGE (C) SEAL MATERIAL X Not Adjustable

C 30 psi (2 bar) Cracking Pressure, .016 -.127 in. (0,4 - 3,2 mm)

A 4 psi (0,3 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)

B 15 psi (1 bar) Cracking Pressure, .016 -.127 in. (0,4 - 3,2 mm)

D 50 psi (3,5 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)

E 75 psi (5 bar) Cracking Pressure, .016 -.127 in. (0,4 - 3,2 mm)

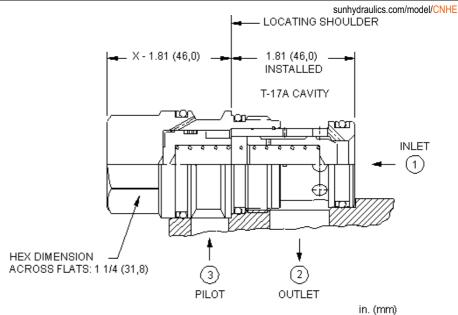
F 100 psi (7 bar) Cracking Pressure, .016 - .127 in. (0,4 - 3,2 mm)

N Buna-N V Viton

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This valve is a spring biased closed, pilot-to-close check cartridge with a bypass orifice. It incorporates a steel seat and is non-vented. The valve allows flow from port 1 to port 2 and restricts flow from port 2 to port 1. Pressure at the pilot (port 3) opposes pressure at port 1 at a ratio of 1.8:1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Orifice Range	0,4 - 6,4 mm	
Seal kit - Cartridge	Buna: 990017007	
Seal kit - Cartridge	Polyurethane: 990017002	
Seal kit - Cartridge	Viton: 990017006	

(N)

CONFIGURATION OPTIONS

Model Code Example: CNHEXCN

 CONTROL
 (X)
 SETTING RANGE
 (C)
 SEAL MATERIAL

 X Not Adjustable
 C 30 psi (2 bar) Cracking Pressure, .016 - N Buna-N
 N Buna-N

C 30 psi (2 bar) Cracking Pressure, .016 .252 in. (0,4 - 6,4 mm)

- **A** 4 psi (0,3 bar) Cracking Pressure, .016 .252 in. (0,4 6,4 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 .252 in. (0,4 6,4 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 .252 in. (0,4 6,4 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 .252 in. (0,4 6,4 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 .252 in. (0,4 6,4 mm)

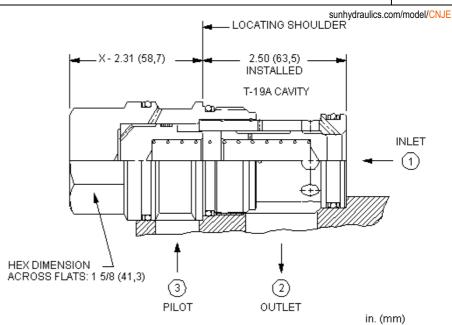
N Buna-N V Viton

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SERIES 4 / CAPACITY: 610 L/min. / CAVITY: T-19A







This valve is a spring biased closed, pilot-to-close check cartridge with a bypass orifice. It incorporates a steel seat and is non-vented. The valve allows flow from port 1 to port 2 and restricts flow from port 2 to port 1. Pressure at the pilot (port 3) opposes pressure at port 1 at a ratio of 1.8:1. Pressure at port 2 directly opposes the pilot pressure. Note: The bypass orifice diameter is specified by the customer. See Technical Data below for the allowable orifice range.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Orifice Range	0,4 - 9 mm	
Seal kit - Cartridge	Buna: 990019007	
Seal kit - Cartridge	Polyurethane: 990019002	
Seal kit - Cartridge	Viton: 990019006	

CONFIGURATION OPTIONS

Model Code Example: CNJEXCN

CONTROL	(X)	SETTING RANGE	(C)	SEAL MATERIAL	(N

X Not Adjustable

- .354 in. (0,4 9 mm)

 A 4 psi (0,3 bar) Cracking Pressure, .016
- .354 in. (0,4 9 mm) **B** 15 psi (1 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 .354 in. (0,4 9 mm)
- F 100 psi (7 bar) Cracking Pressure, .016 - .354 in. (0,4 - 9 mm)

N Buna-l

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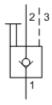
20:1 ratio, pilot-to-close check valve

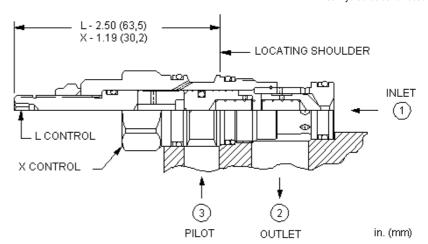
SERIES 1 / CAPACITY: 2,8 mm / CAVITY: T-11A



sunhydraulics.com/model/CODD







This valve is a spring biased closed, pilot-to-close check cartridge that has a 20:1 pilot ratio. The valve allows flow from port 1 to port 2 and blocks reverse flow. Pressure at the pilot (port 3) opposes pressure at port 1 at a ratio of 20:1.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.	
Seal kit - Cartridge	Buna: 990011007	
Seal kit - Cartridge	EPDM: 990011014	
Seal kit - Cartridge	Polyurethane: 990011002	
Seal kit - Cartridge	Viton: 990011006	

CONFIGURATION OPTIONS

Model Code Example: CODDXDN

CONTROL	(X) CRACKING PRESSURE	(D) SEAL MATERIAL	(N) MATERIAL/COATING
		· ·	•
V Standard Dilot	D 50 pci /3 5 bor)	N. Puna N	Standard Material/Coating

Standard Pilot

D 50 psi (3,5 bar)

N Buna-N

Standard Material/Coating

H 200 psi (14 bar)

E EPDM

V Viton

IAP Stainless Steel, Passivated

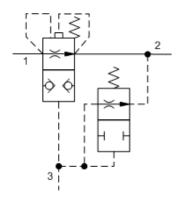
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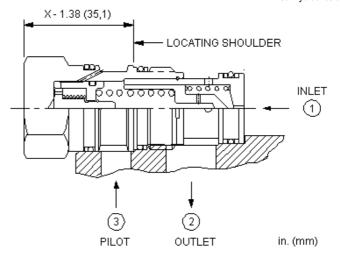
120:1 ratio, pilot-to-close check valve

SERIES 2 / CAPACITY: 4 L/min. (1,3 mm) / CAVITY: T-2A



sunhydraulics.com/model/COFO





This valve is a pilot-to-close check cartridge that has a 120:1 pilot ratio. The valve is designed specifically to discharge an accumulator when the pump is turned off. With no pressure at the pump port (port 3), the valve is open between the accumulator (port 1) and tank (port 2). 60 psi (4 bar) at port 3 will close the valve for accumulator pressures up to 5000 psi (350 bar). When pump pressure at port 3 is below 300 psi (20 bar) there is a leak path from port 3 to tank (port 2) to ensure accumulator discharge when the pump is turned off. When pump pressure is above 300 psi (20 bar) the leak path closes for efficiency.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: COFOXDN

CONTROL (X) MINIMUM PILOT PRESSURE (D) SEAL MATERIAL (N)

X Standard Pilot D 60 psi (4 bar) N Buna-N

V Viton

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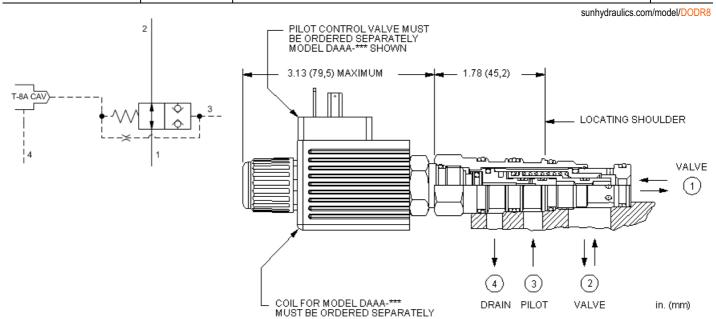


MODEL DODR8

Normally open, balanced poppet, logic element with integral T-8A control cavity - vent-to-close

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-21A





This is a normally open, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains open. Opening the 2-way valve shifts the poppet to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DODR8HN

MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N
H 400 psi (28 bar) N Buna-N
V Viton

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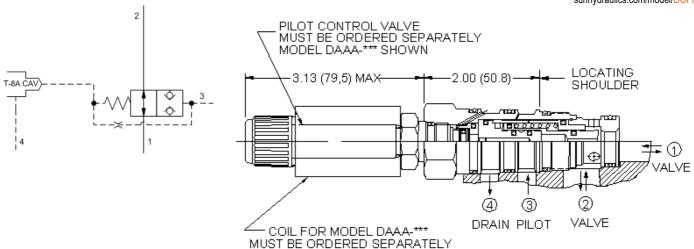
MODEL DOFR8

Normally open, balanced poppet, logic element with integral T-8A control cavity - vent-to-close

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DOFR8



This is a normally open, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains open. Opening the 2-way valve shifts the poppet to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DOFR8HN

MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N)

H 300 psi (20 bar) N Buna-N

V Viton

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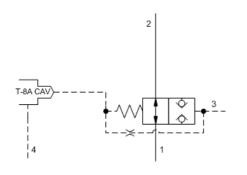


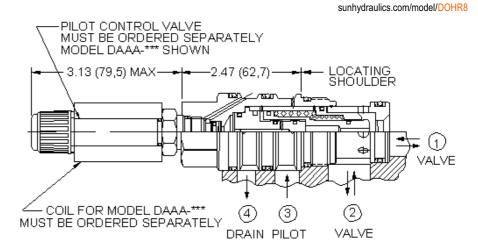
MODEL DOHR8

Normally open, balanced poppet, logic element with integral T-8A control cavity - vent-to-close

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A







This is a normally open, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains open. Opening the 2-way valve shifts the poppet to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve 20 bar	
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DOHR8HN

MINIMUM PILOT PRESSURE (H) SEAL MATERIAL (N)

H 200 psi (14 bar) N Buna-N
V Viton

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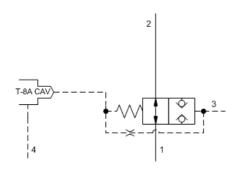


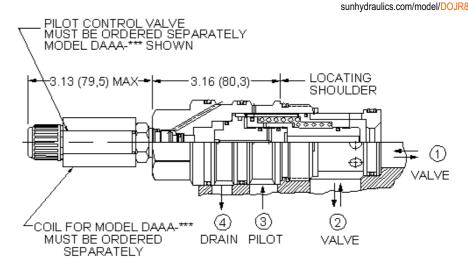
MODEL DOJR8

Normally open, balanced poppet, logic element with integral T-8A control cavity - vent-to-close

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-24A







This is a normally open, balanced poppet, switching element with an integral T-8A control cavity. With a 2-way valve in the closed position installed in the T-8A control cavity, the poppet remains open. Opening the 2-way valve shifts the poppet to the closed position, provided there is sufficient pressure at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DOJR8HN

MINIMUM PILOT PRESSURE

(H) SEAL MATERIAL

(N)

H 300 psi (20 bar)

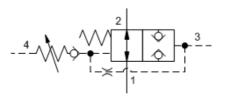
N Buna-N

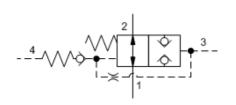
E EPDM
V Viton

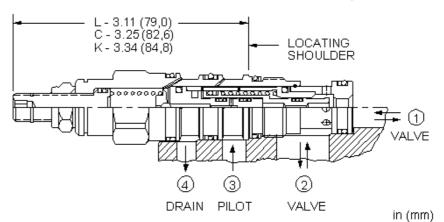
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sunhydraulics.com/model/DODP







This is a normally open, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains open until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	28 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DODPLAN

(L) ADJUSTMENT RANGE (A) SEAL MATERIAL CONTROL (N) **A** 400 - 3000 psi (28 - 210 bar), 1000 psi L Standard Screw Adjustment N Buna-N

C Tamper Resistant - Factory Set

K Handknob

(70 bar) Standard Setting 400 - 1500 psi (28 - 105 bar), 1000 psi (70 bar) Standard Setting

W 400 - 4500 psi (28 - 315 bar), 1000 psi (70 bar) Standard Setting

V Viton

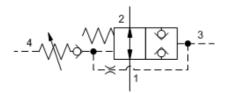
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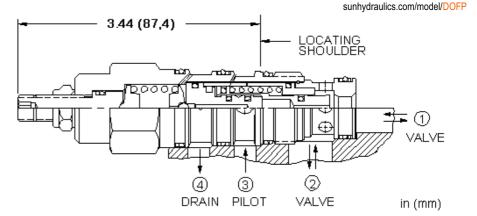


Normally open, balanced poppet, logic element - pressure adjustable

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-22A







This is a normally open, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains open until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve 20 bar	
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DOFPLAN

V Viton

(N) MATERIAL/COATING CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL L Standard Screw Adjustment

A 200 - 3000 psi (14 - 210 bar), 1000 psi (70 bar) Standard Setting

B 200 - 1500 psi (14 - 105 bar), 1000 psi (70 bar) Standard Setting

W 200 - 4500 psi (14 - 315 bar), 1000 psi (70 bar) Standard Setting

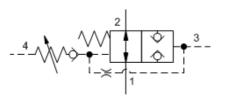
N Buna-N Standard Material/Coating

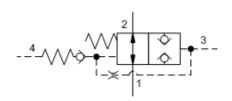
/AP Stainless Steel, Passivated

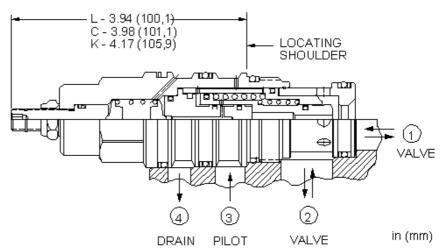
© 2021 Sun Hydraulics 248 of 356 SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-23A



sunhydraulics.com/model/DOHP







This is a normally open, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains open until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: DOHPLAN

L Standard Screw Adjustment

(L) ADJUSTMENT RANGE

N Buna-N **V** Viton

(A) SEAL MATERIAL

(N) MATERIAL/COATING

C Tamper Resistant - Factory Set

K Handknob

CONTROL

A 200 - 3000 psi (14 - 210 bar), 1000 psi (70 bar) Standard Setting

B 200 - 1500 psi (14 - 105 bar), 1000 psi (70 bar) Standard Setting

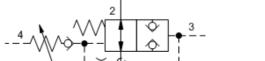
W 200 - 4500 psi (14 - 315 bar), 1000 psi (70 bar) Standard Setting

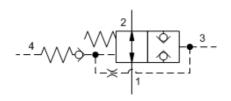
Standard Material/Coating /AP Stainless Steel, Passivated

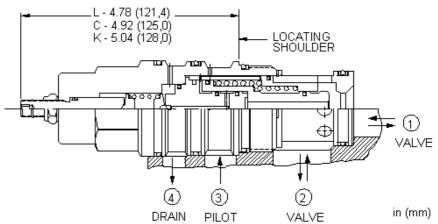
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sunhydraulics.com/model/DOJP







This is a normally open, balanced poppet, switching element. When pilot pressure is applied to port 3, the poppet remains open until the pilot pressure reaches the setting established by the integral pilot relief stage, at which point the poppet shifts to the closed position.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve 20 bar	
Maximum Operating Pressure	350 bar
Control Pilot Flow	See Performance Data
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: DOJPLAN

CONTROL (L) ADJUSTMENT RANGE

(A) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

A 200 - 3000 psi (14 - 210 bar), 1000 psi (70 bar) Standard Setting

B 200 - 1500 psi (14 - 105 bar), 1000 psi (70 bar) Standard Setting

D 200 - 800 psi (14 - 55 bar)

W 200 - 4500 psi (14 - 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-NStandard Material/CoatingV Viton/AP Stainless Steel, Passivated

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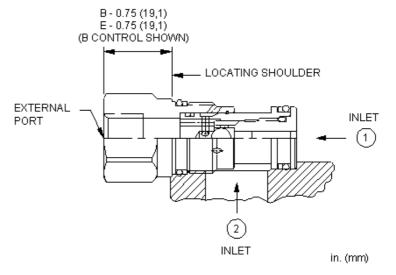
Single ball shuttle valve with signal external

SERIES 1 / CAPACITY: 10 L/min. / CAVITY: T-13A



sunhydraulics.com/model/CSAA





The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at an external port located in the hex-end of the cartridge.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CSAAEXN

CONTROL (E) ADJUSTMENT RANGE (X) SEAL MATERIAL (N) MATERIAL/COATING

E External 4-SAE Port

B External 1/4 BSPP Port

V Viton

MATERIAL/COATING

Standard Material/Coating

AP Stainless Steel, Passivated

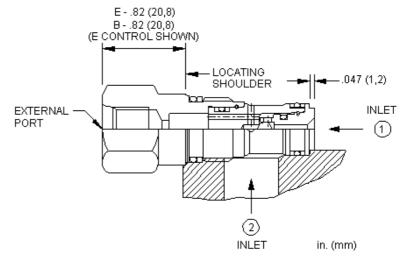
/LH Mild Steel, Zinc-Nickel

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The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at an external port located in the hex-end of the cartridge.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CSAWBXN

CONTROL	(B) ADJUSTMENT RANGE	(X)	SEAL MATERIAL (N	MATERIAL/COATING
B External 1/4 BSPP Port	X -		N Buna-N	Standard Material/Coating
E External 4-SAE Port	-		V Viton	/AP Stainless Steel, Passivated

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MODEL CSAC

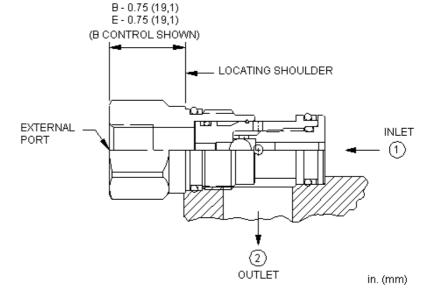
Single ball shuttle valve with signal at port 2

SERIES 1 / CAPACITY: 10 L/min. / CAVITY: T-13A



-1 EXT





The single ball shuttle connects the higher of two work ports to the signal or common port. It features an external load port located in the hex-end of the cartridge and the signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS Model Code Example: CSACBXN

CONTROL (B) ADJUSTMENT RANGE (X) SEAL MATERIAL (N) MATERIAL/COATING

B. Evtorpol 1/4 BSDD Port

Y. Standard Material/Coating

B External 1/4 BSPP Port X - N Buna-N Standard Material/Coating
E External 4-SAE Port V Viton /AP Stainless Steel, Passivated

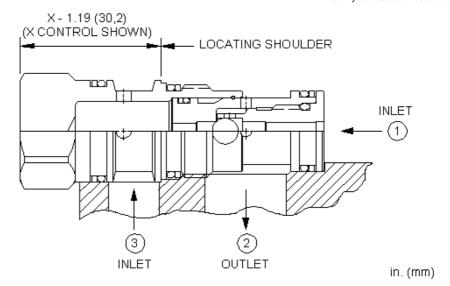
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sunhydraulics.com/model/CSAD







The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

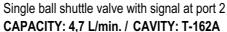
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CSADXXN

CONTROL	(X) ADJUSTMENT RANGE	(X) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	X -	N Buna-N	Standard Material/Coating
A Auxiliary External -4 SAE Port		E EPDM	/AP Stainless Steel, Passivated
B Auxiliary External 1/4 BSPP Port		V Viton	/LH Mild Steel, Zinc-Nickel

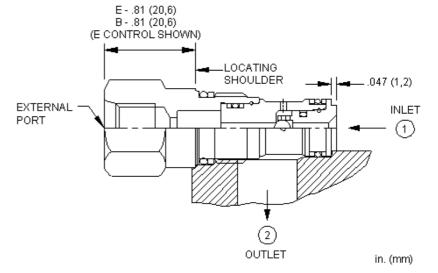
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sunhydraulics.com/model/CSAY





The single ball shuttle connects the higher of two work ports to the signal or common port. It features an external load port located in the hex-end of the cartridge and the signal is sensed at port 2.

TECHNICAL DATA

(B) AD HISTMENT DANCE

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

(N) MATERIAL/COATING

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

CONTROL

Model Code Example: CSAYBXN

(Y) SEAL MATERIAL

	ONTROL	(0)	ADJUSTINIENT NAME (A)	<u>, 56</u>		(''')	MATERIAL/OUATING	_
I	B External 1/4 BSPP Port		X -	N	Buna-N		Standard Material/Coating	l
Ī	E External 4-SAE Port			٧	Viton		/AP Stainless Steel, Passivated	

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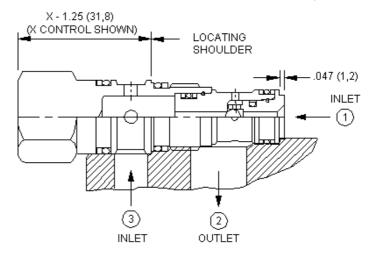


sunhydraulics.com/model/C



sun hydraulics





in. (mm)

The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: CSAZXXN

CONTROL (X) ADJUSTMENT RANGE (X) SEAL MATERIAL (N) MATERIAL/COATING X Not Adjustable N Buna-N V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

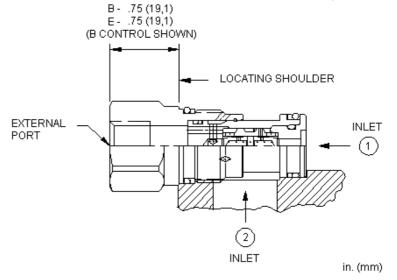
© 2021 Sun Hydraulics 256 of 356 **MODEL CDAA**

Back-to-back check/shuttle valve with signal external SERIES 1 / CAPACITY: 10 L/min. / CAVITY: T-13A



sunhydraulics.com/model/CDAA





The back-to-back check valve combines two simple check valves into a single cartridge. It connects the higher of two work ports to the signal or common port. The signal is sensed at an external port located in the hex-end of the cartridge.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CDAABBN

CONTROL	(B)	CRACKING PRESSURE	(B)	SEAL MATERIAL (I	N)	MATERIAL/COATING
B External 1/4 BSPP Port		B 15 psi (1 bar)		N Buna-N		Standard Material/Coating
E External 4-SAE Port				V Viton		/AP Stainless Steel, Passivated

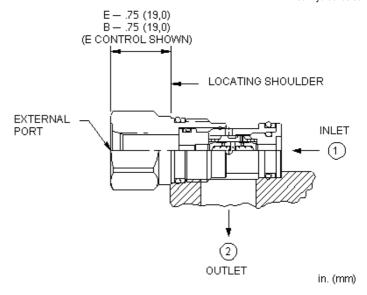
© 2021 Sun Hydraulics 257 of 356 MODEL CDAC

Back-to-back check/shuttle valve with signal at port 2 SERIES 1 / CAPACITY: 10 L/min. / CAVITY: T-13A



sunhydraulics.com/model/CDAC





The back-to-back check valve combines two simple check valves into a single cartridge. It connects the higher of two work ports to the signal or common port. It features an external load port located in the hex-end of the cartridge and the signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CDACBBN

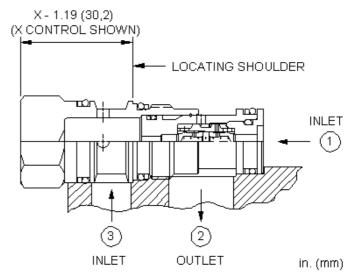
CONTROL	(B) CRACKING PRESSURE	(B) SEAL MATERIAL	(N) MATERIAL/COATING
B External 1/4 BSPP Port	B 15 psi (1 bar)	N Buna-N	Standard Material/Coating
E External 4-SAF Port	· ·	V Viton	/AP Stainless Steel, Passivated

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sunhydraulics.com/model/CDAD





The back-to-back check valve combines two simple check valves into a single cartridge. It connects the work port with the higher pressure to the signal or common port. The signal is sensed at port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CDADXBN

CONTROL	(X) CRACKING PRESSURE	(B)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	B 15 psi (1 bar)		N Buna-N	Standard Material/Coating
	-		V Viton	/AP Stainless Steel, Passivated

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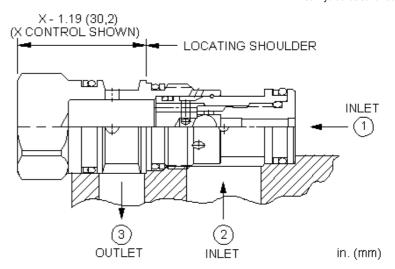


sunhydraulics.com/model/CSAB









The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CSABXXN

CONTROL	(X) ADJUSTMENT RANGE	(X) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	X -	N Buna-N	Standard Material/Coating
A Auxiliary External -4 SAE Port		E EPDM	/AP Stainless Steel, Passivated
B Auxiliary External 1/4 BSPP Port		V Viton	/LH Mild Steel, Zinc-Nickel

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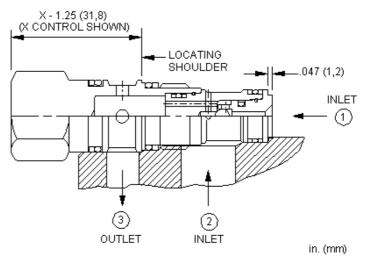


sunhydraulics.com/model/CSAX









The single ball shuttle connects the higher of two work ports to the signal or common port. The signal is sensed at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: CSAXXXN

CONTROL (X) ADJUSTMENT RANGE (X) SEAL MATERIAL (N) MATERIAL/COATING

X Not Adjustable X - N Buna-N Standard Material/Coating
V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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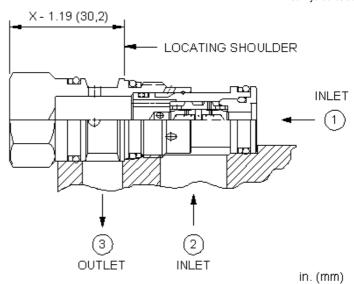


sunhydraulics.com/model/CDAB









The back-to-back check valve combines two simple check valves into a single cartridge. It connects the work port with the higher pressure to the signal or common port. The signal is sensed at port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CDABXBN

CONTROL	(X) CRACKING PRESSURE	(B) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	B 15 psi (1 bar)	N Buna-N	Standard Material/Coating
A Auxiliary External -4 SAE Port		V Viton	/AP Stainless Steel, Passivated

B Auxiliary External 1/4 BSPP Port

/LH Mild Steel, Zinc-Nickel

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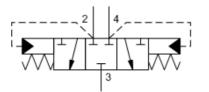


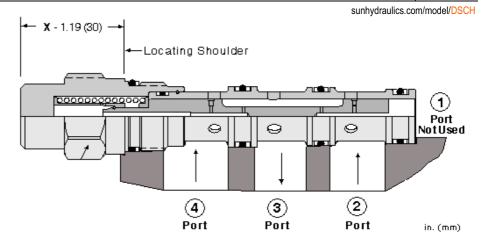


Low side, 3-position, hot oil shuttle valve

SERIES 1 / CAPACITY: 40 L/min. / CAVITY: T-31A







Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: DSCHXHN

CONTROL	(X) SHIFTING PRESSURE	(H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	H 200 psi (14 bar)		N Buna-N	Standard Material/Coating
	G 150 psi (10,5 bar)		V Viton	/LH Mild Steel, Zinc-Nickel

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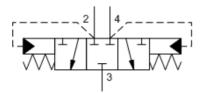


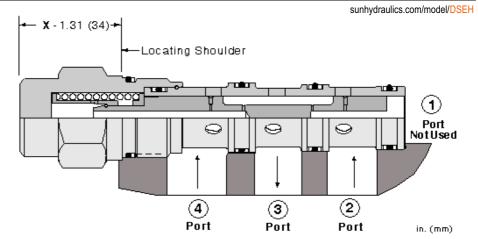


Low side, 3-position, hot oil shuttle valve

SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-32A







Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSEHXHN

CONTROL (X)	SHIFTING PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	H 200 psi (14 bar)G 150 psi (10,5 bar)	N Buna-N V Viton	Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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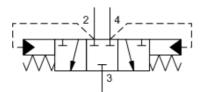


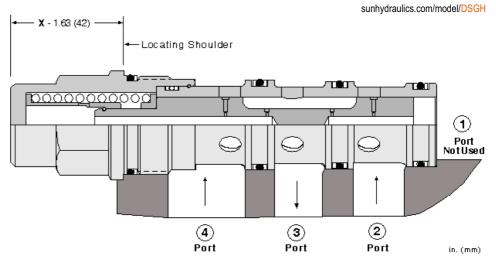
MODEL **DSGH**

Low side, 3-position, hot oil shuttle valve

SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-33A







Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,75 L/min.
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSGHXHN

CONTROL	(X) SHIFTING PRESSURE	(H) SEAL MATERIAL	(N) MATERIAL/COATING	
X Not Adjustable	H 200 psi (14 bar)	N Buna-N	Standard Material/Coating	
	G 150 psi (10,5 bar)	V Viton	/LH Mild Steel, Zinc-Nickel	

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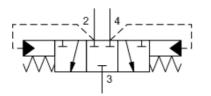


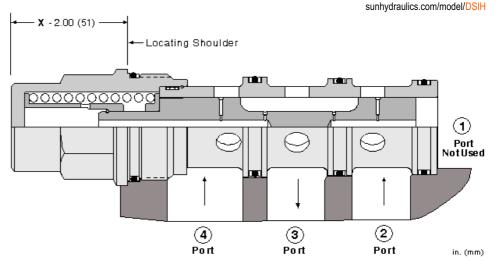


Low side, 3-position, hot oil shuttle valve

SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-34A







Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,75 L/min.
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: DSIHXHN

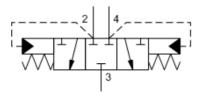
CONTROL	(X) SHIFTING PRESSURE	(H) SE/	AL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	H 200 psi (14 bar)	N	Buna-N	Standard Material/Coating
	G 150 psi (10,5 bar)	V	Viton	/LH Mild Steel, Zinc-Nickel

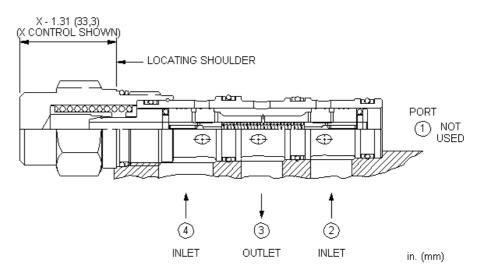
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Low side, 3-position, hot oil shuttle valve with delayed shift SERIES 2 / CAPACITY: 80 L/min. / CAVITY: T-32A



sunhydraulics.com/model/DSDD





Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3). The delay shift shuttle prevents flow transients downstream of the hot oil circuit.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSDDXEN

CONTROL	(X) MINIMUM CONTROL PRESS	URE (E) SEAL MATERIAL	(N) MATERIAL/COATING	
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating	
	-	V Viton	/AP Stainless Steel, Passivated	

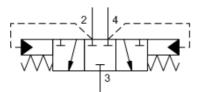
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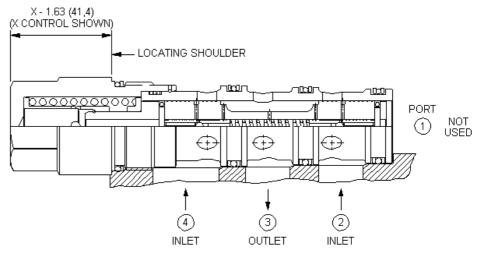
MODEL DSFD

Low side, 3-position, hot oil shuttle valve with delayed shift SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-33A



sunhydraulics.com/model/DSFD





in. (mm)

Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3). The delay shift shuttle prevents flow transients downstream of the hot oil circuit.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Pilot Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSFDXEN

CONTROL	(X) SHIFTING PRESSURE	(E) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating
•	· ·	V Viton	/LH Mild Steel. Zinc-Nickel

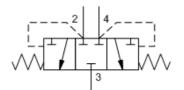
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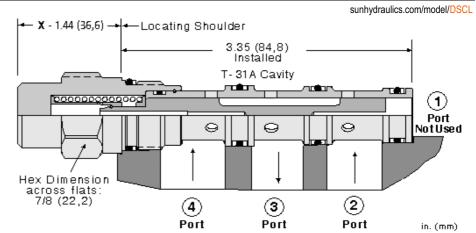




Direct-acting, low side, 3-position, shuttle valve SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-31A







Low-side (hot oil) shuttle cartridges allow hot oil to be diverted from the low pressure side of a closed loop system. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure the opposite work port is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: DSCLXGN

V Viton

(X) SHIFTING PRESSURE (N) MATERIAL/COATING CONTROL (G) SEAL MATERIAL

X Not Adjustable G 150 psi (10,5 bar

C 30 psi (2 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N

/LH Mild Steel, Zinc-Nickel

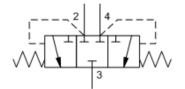
© 2021 Sun Hydraulics 269 of 356 MODEL DSCS

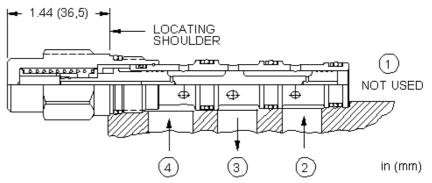
High side, 3-position, shuttle valve

SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-31A



sunhydraulics.com/model/DSCS





High-side shuttle cartridges are most often used in full-time regeneration circuits. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure it is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

X Not Adjustable

Model Code Example: DSCSXGN

CONTROL (X) SHIFTING PRESSURE (G) SEAL MATERIAL (N)

G 150 psi (10,5 bar) **C** 30 psi (2 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

N Buna-N V Viton

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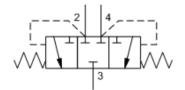


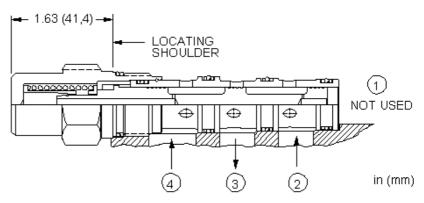
High side, 3-position, shuttle valve

SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-32A



sunhydraulics.com/model/DSES





 $High-side\ shuttle\ cartridges\ are\ most\ often\ used\ in\ full-time\ regeneration\ circuits.\ When\ both\ work\ ports\ (ports\ 2$ and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure it is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSESXGN

(X) SHIFTING PRESSURE CONTROL (G) SEAL MATERIAL (N) X Not Adjustable

C 30 psi (2 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

V Viton

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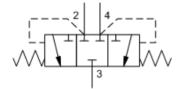


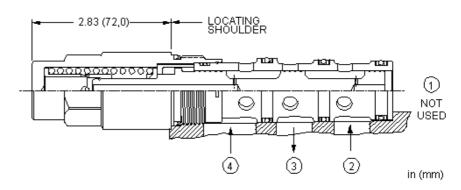
High side, 3-position, shuttle valve

SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-33A



sunhydraulics.com/model/DSGS





High-side shuttle cartridges are most often used in full-time regeneration circuits. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure it is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	EPDM: 990033014
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSGSXGN

CONTROL	(X) SHIFTING PRESSURE	(G) SEAL MATERIAL	(N)
X Not Adjustable	G 150 psi (10,5 bar)	N Buna-N	
	C 30 psi (2 bar)	E EPDM	
	E 75 psi (5 bar)	V Viton	
	F 100 psi (7 bar)		

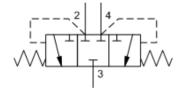
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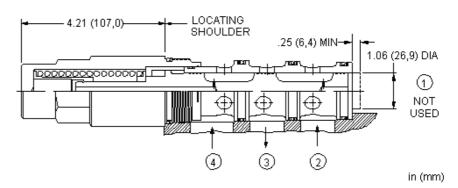
High side, 3-position, shuttle valve

SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-34A



sunhydraulics.com/model/DSIS





High-side shuttle cartridges are most often used in full-time regeneration circuits. When both work ports (ports 2 and 4) are at equal pressures the valve is spring-centered to an all-ports-blocked position. When one of the work ports (port 2 or 4) sees a higher pressure it is connected to the common port (port 3).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: DSISXGN

CONTROL (X) SHIFTING PRESSURE (G) SEAL MATERIAL (N) X Not Adjustable N Buna-N **G** 150 psi (10,5 bar)

C 30 psi (2 bar)

E 75 psi (5 bar)

F 100 psi (7 bar)

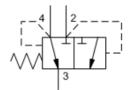
V Viton

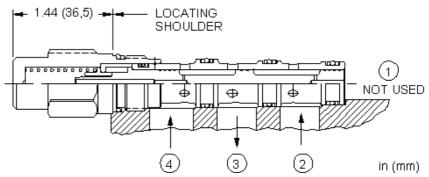
© 2021 Sun Hydraulics 273 of 356 **MODEL DSCO**

Spring offset, 2-position, high side shuttle valve SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-31A



sunhydraulics.com/model/DSCO





Spring-offset, high-side shuttle cartridges are 2-position valves that have a normal (offset) position that connects the common port (port 3) to work port 4, with work port 2 blocked. When the pressure at port 2 rises above the pressure at port 4, the cartridge shifts to connect the common port to port 2 with port 4 then blocked.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: DSCOXEN

CONTROL	(X) MINIMUM CONTROL PRESSU	RE (E) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating
_	C 30 psi (2 bar)	V Viton	/AP Stainless Steel, Passivated

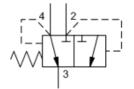
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

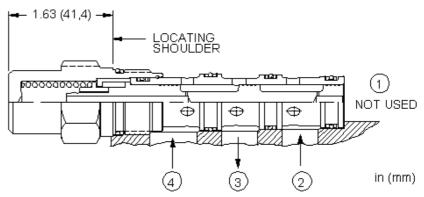
© 2021 Sun Hydraulics 274 of 356 MODEL DSEO

Spring offset, 2-position, high side shuttle valve SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-32A



sunhydraulics.com/model/DSEO





Spring-offset, high-side shuttle cartridges are 2-position valves that have a normal (offset) position that connects the common port (port 3) to work port 4, with work port 2 blocked. When the pressure at port 2 rises above the pressure at port 4, the cartridge shifts to connect the common port to port 2 with port 4 then blocked.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSEOXEN

CONTROL	(X) MINIMUM CONTROL PRESS	URE (E) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating
	C 30 psi (2 bar)	V Viton	/AP Stainless Steel, Passivated

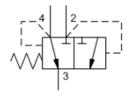
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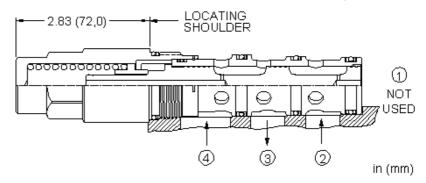
MODEL **DSGO**

Spring offset, 2-position, high side shuttle valve
SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-33A



sunhydraulics.com/model/DSGO





Spring-offset, high-side shuttle cartridges are 2-position valves that have a normal (offset) position that connects the common port (port 3) to work port 4, with work port 2 blocked. When the pressure at port 2 rises above the pressure at port 4, the cartridge shifts to connect the common port to port 2 with port 4 then blocked.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSGOXEN

 CONTROL
 (X)
 MINIMUM CONTROL PRESSURE
 (E)
 SEAL MATERIAL
 (N)
 MATERIAL/COATING

 X
 Not Adjustable
 E
 75 psi (5 bar)
 N
 Buna-N
 Standard Material/Coating

 C
 30 psi (2 bar)
 V
 V Viton
 /LH Mild Steel, Zinc-Nickel

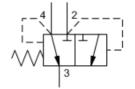
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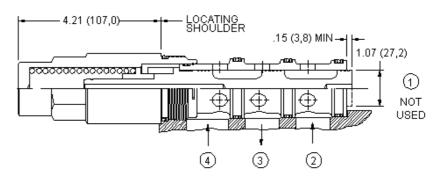
MODEL DSIO

Spring offset, 2-position, high side shuttle valve SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-34A



sunhydraulics.com/model/DSIO





Spring-offset, high-side shuttle cartridges are 2-position valves that have a normal (offset) position that connects the common port (port 3) to work port 4, with work port 2 blocked. When the pressure at port 2 rises above the pressure at port 4, the cartridge shifts to connect the common port to port 2 with port 4 then blocked.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: DSIOXEN

CONTROL	(X)	MINIMUM CONTROL PRESSURE	(E)	SEAL MATERIAL	(N)
X Not Adjustable		E 75 psi (5 bar)		N Buna-N	
		C 30 psi (2 bar)		V Viton	

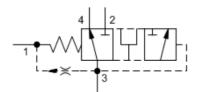
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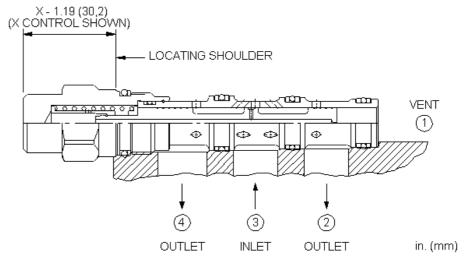


3-way, 2-position, vent-to-shift diverter valve, normally open SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-31A



sunhydraulics.com/model/DSCY





This vent-to-shift diverter valve is a 2-position, 3-way cartridge that is normally open from port 3 to port 4. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 to port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: DSCYXEN

CONTROL	(X) MINIMUM CONTROL P	RESSURE (E) SEAL MATERIAL	(N)
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	

C 30 psi (2 bar)

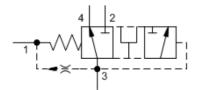
V Viton

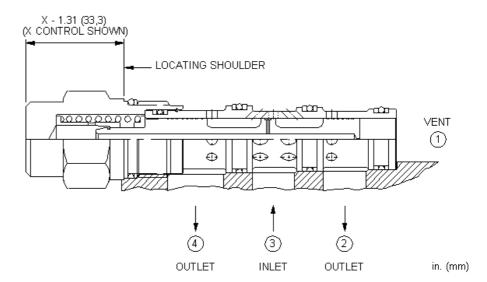
D 50 psi (3,5 bar)

© 2021 Sun Hydraulics 278 of 356 3-way, 2-position, vent-to-shift diverter valve, normally open SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-32A



sunhydraulics.com/model/DSEY





This vent-to-shift diverter valve is a 2-position, 3-way cartridge that is normally open from port 3 to port 4. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 to port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSEYXEN

CONTROL	(X) MINIMUM CONTROL PRESSURE (E) SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating

C 30 psi (2 bar) **D** 50 psi (3,5 bar) **V** Viton

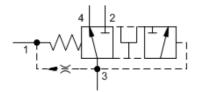
/AP Stainless Steel, Passivated

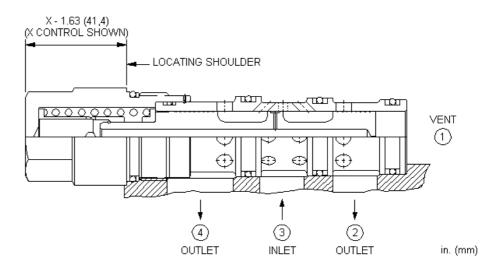
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3-way, 2-position, vent-to-shift diverter valve, normally open SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-33A



sunhydraulics.com/model/DSGY





This vent-to-shift diverter valve is a 2-position, 3-way cartridge that is normally open from port 3 to port 4. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 to port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,60 L/min.
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSGYXEN

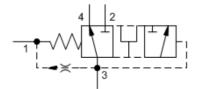
CONTROL (X) MINIMUM CONTROL PRESSURE (E) SEAL MATERIAL (N) X Not Adjustable C 30 psi (2 bar) **V** Viton

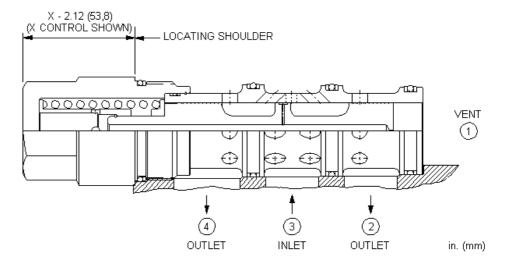
D 50 psi (3,5 bar)

© 2021 Sun Hydraulics 280 of 356 3-way, 2-position, vent-to-shift diverter valve, normally open SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-34A



sunhydraulics.com/model/DSIY





This vent-to-shift diverter valve is a 2-position, 3-way cartridge that is normally open from port 3 to port 4. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 to port 2.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,60 L/min.
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: DSIYXEN

CONTROL	(X) MINIMUM CONTROL PRESS	SURE (E) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	Standard Material/Coating
	C 30 psi (2 bar)	V Viton	/AP Stainless Steel, Passivated

D 50 psi (3,5 bar)

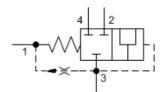
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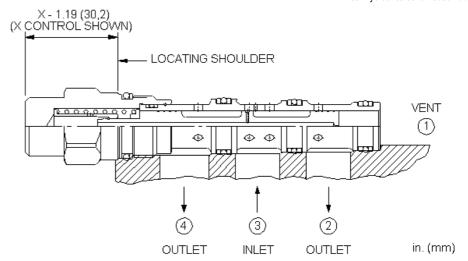


3-way, 2-position, vent-to-shift diverter valve, normally closed SERIES 1 / CAPACITY: 60 L/min. / CAVITY: T-31A



sunhydraulics.com/model/DSCX





This is a vent-to-shift, 2-position, diverter valve that is normally closed. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 with ports 2 and 4.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: DSCXXEN

CONTROL (X) MINIMUM CONTROL PRESSURE (E) SEAL MATERIAL X Not Adjustable E 75 psi (5 bar) **C** 30 psi (2 bar) **V** Viton

D 50 psi (3,5 bar)

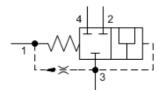
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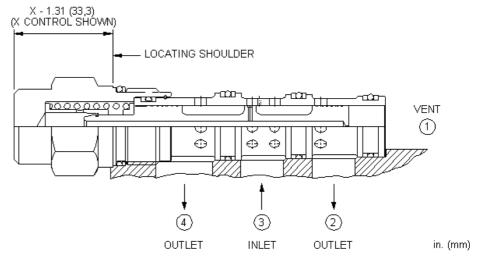


3-way, 2-position, vent-to-shift diverter valve, normally closed SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-32A



sunhydraulics.com/model/DSEX





This is a vent-to-shift, 2-position, diverter valve that is normally closed. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 with ports 2 and 4.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,38 L/min.
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: DSEXXEN

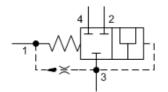
CONTROL	(X) MINIMUM CONTROL PRESSURE	(E) SEAL MATERIAL	(N)
X Not Adjustable	E 75 psi (5 bar)	N Buna-N	
<u> </u>	C 30 psi (2 bar)	V Viton	
	D 50 psi (3.5 bar)		

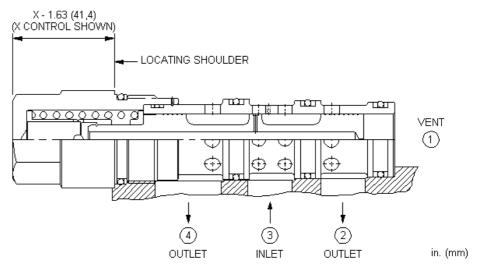
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3-way, 2-position, vent-to-shift diverter valve, normally closed SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-33A



sunhydraulics.com/model/DSGX





This is a vent-to-shift, 2-position, diverter valve that is normally closed. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 with ports 2 and 4.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,60 L/min.
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: DSGXXEN

CONTROL (X) MINIMUM CONTROL PRESSURE (E) SEAL MATERIAL

X Not Adjustable

C 30 psi (2 bar)

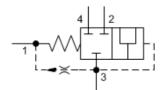
V Viton

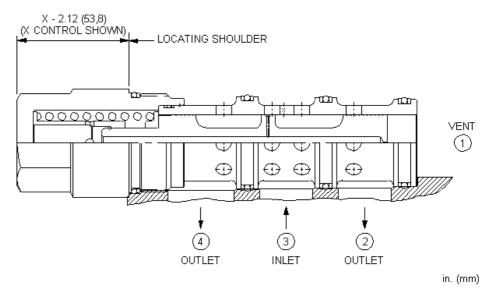
D 50 psi (3,5 bar)

© 2021 Sun Hydraulics 284 of 356 3-way, 2-position, vent-to-shift diverter valve, normally closed SERIES 4 / CAPACITY: 480 L/min. / CAVITY: T-34A



sunhydraulics.com/model/DSIX





This is a vent-to-shift, 2-position, diverter valve that is normally closed. When port 1 is vented, the pressure differential between port 3 and port 1 exceeds the spring force causing the valve to shift, thereby connecting port 3 with ports 2 and 4.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,60 L/min.
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

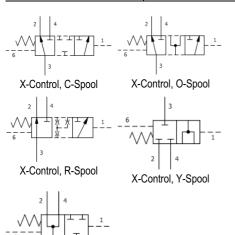
CONFIGURATION OPTIONS

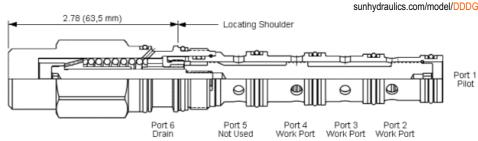
Model Code Example: DSIXXEN

CONTROL	(X) MINIMUM CONTROL PRESSURE (E)	SEAL MATERIAL (N)
X Not Adjustable	E 75 psi (5 bar)	N Buna-N
<u> </u>	C 30 psi (2 bar)	V Viton
	D 50 psi (3,5 bar)	

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Two-position, 3-way directional cartridges are 6-port (port 5 is not used) directional valves that can be configured with up to 5 different spool configurations. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	10 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990052007
Seal kit - Cartridge	Viton: 990052006

CONFIGURATION OPTIONS

X-Control, Z-Spool

Model Code Example: DDDGXCN

(X) SPOOL CONFIGURATION (C) SEAL MATERIAL (N) MATERIAL/COATING CONTROL

O Open Crossover

V Viton

R Restricted Crossover Y All Ports Blocked

Z All Ports Open

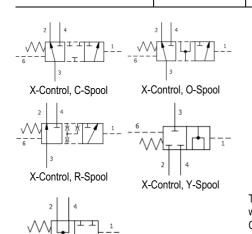
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

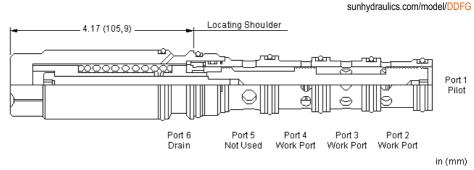
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3-way, 2-position, pilot-to-shift, directional valve SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-53A









Two-position, 3-way directional cartridges are 6-port (port 5 is not used) directional valves that can be configured with up to 5 different spool configurations. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	11 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	2,1 cc
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

CONFIGURATION OPTIONS

X-Control, Z-Spool

Model Code Example: DDFGXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	C Closed Crossover	N Buna-N	Standard Material/Coating
•	O Open Crossover	V Viton	/AP Stainless Steel, Passivated

- R Restricted Crossover
- Y All Ports Blocked
- Z All Ports Open

/LH Mild Steel, Zinc-Nickel

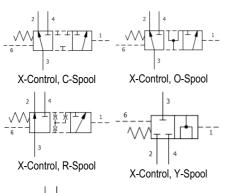
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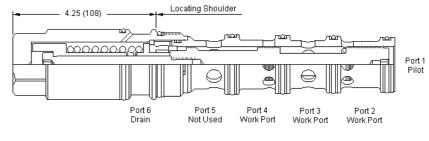


3-way, 2-position, pilot-to-shift, directional valve SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-54A

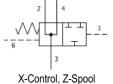


sunhydraulics.com/model/DDHG





in (mm)



Two-position, 3-way directional cartridges are 6-port (port 5 is not used) directional valves that can be configured with up to 5 different spool configurations. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	20 bar
Pilot Pressure Required for Full Shift at Rated Flow	24 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Pilot Volume Displacement	4,4 cc
Seal kit - Cartridge	Buna: 990054007
Seal kit - Cartridge	Polyurethane: 990054002
Seal kit - Cartridge	Viton: 990054006

CONFIGURATION OPTIONS

X Not Adjustable

Model Code Example: DDHGXCN

(X) SPOOL CONFIGURATION CONTROL (C) SEAL MATERIAL N Buna-N

C Closed Crossover

V Viton O Open Crossover

R Restricted Crossover

Y All Ports Blocked

Z All Ports Open

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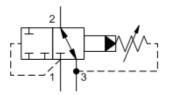


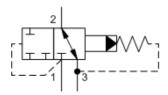


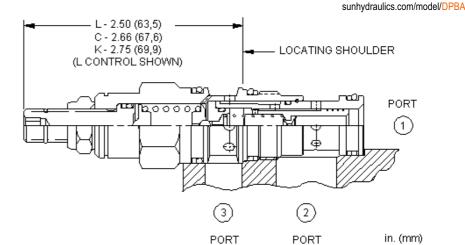
2-way, pilot-operated, directional valve with internal drain to port 3 - normally open

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A









Normally open, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DPBALAN

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- **K** Handknob

- A 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting

(L) ADJUSTMENT RANGE

- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL

N Buna-N
V Viton

(N) MATERIAL/COATING

Standard Material/Coat

Standard Material/Coating
/AP Stainless Steel, Passivated
/LH Mild Steel, Zinc-Nickel

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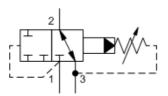


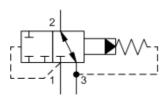


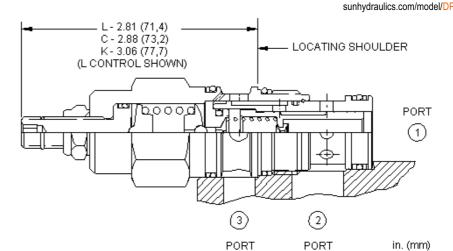
2-way, pilot-operated, directional valve with internal drain to port 3 - normally open

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A









Normally open, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DPCALAN

I Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

O Handknob with Panel Mount

A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

(L) ADJUSTMENT RANGE

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 150 6000 psi (10,5 420 bar), 3000 psi (210 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 100 4500 psi (7 315 bar), 1000 psi (70 bar) Standard Setting

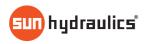
SEAL MATERIAL

N Buna-N
V Viton

Standard Material/Coating /AP Stainless Steel, Passivated

(N) MATERIAL/COATING

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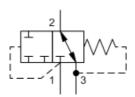


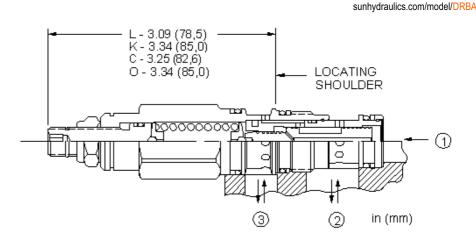
MODEL DRBA

2-way, direct-acting, directional valve with internal drain to port 3 - normally

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A







Normally open, direct-acting, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel. **NOTES**

CONFIGURATION OPTIONS

Model Code Example: DRBALAN

(L) ADJUSTMENT RANGE

(A) SEAL MATERIAL N Buna-N

V Viton

(N) MATERIAL/COATING

- C Tamper Resistant Factory Set
- K Handknob

CONTROL

A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- W 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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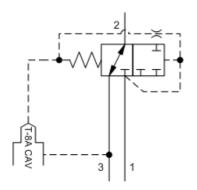
MODEL **DVBA**

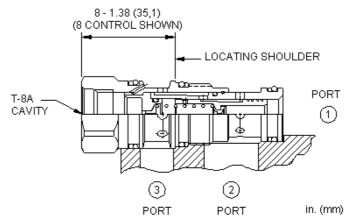
2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity - normally open

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DVBA





This valve is a normally open, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBA8FN

CONTROL (8) MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N)

T-8A Cavity

F 100 psi (7 bar)

N Buna-N V Viton

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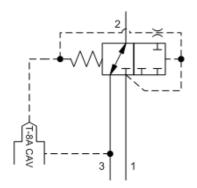
MODEL DVCA

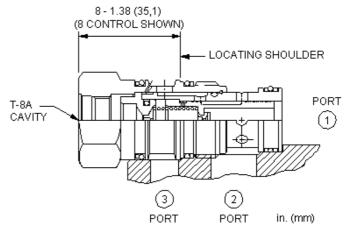
2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity - normally open

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DVCA





This valve is a normally open, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

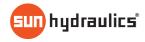
CONFIGURATION OPTIONS

Model Code Example: DVCA8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

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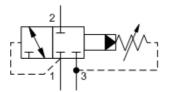


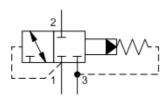
2-way, pilot-operated, directional valve with internal drain to port 3 - normally closed

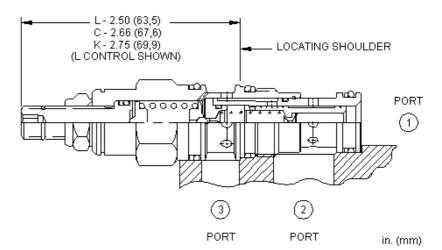
SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DPBB







Normally closed, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DPBBLAN

(L) ADJUSTMENT RANGE

(A) SEAL MATERIAL N Buna-N

V Viton

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set K Handknob

100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting

D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting

W 150 - 4500 psi (10,5 - 315 bar), 1000

Standard Material/Coating /AP Stainless Steel, Passivated

psi (70 bar) Standard Setting

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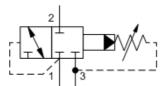
MODEL DPCB

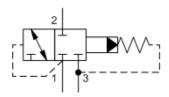
2-way, pilot-operated, directional valve with internal drain to port 3 - normally closed

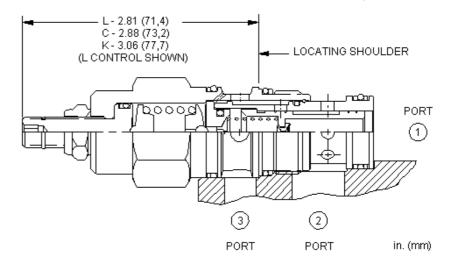
SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DPCB







Normally closed, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel. **NOTES**

CONFIGURATION OPTIONS

Model Code Example: DPCBLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

- 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N Viton

/AP Stainless Steel, Passivated

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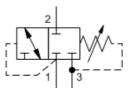


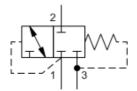
2-way, direct-acting, directional valve with internal drain to port 3 - normally closed

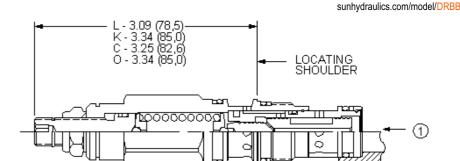
SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



in (mm)







Normally closed, direct-acting, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

3

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

2

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBBLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- **A** 500 3000 psi (35 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- **W** 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N

V Viton

Standard Material/Coating

(N) MATERIAL/COATING

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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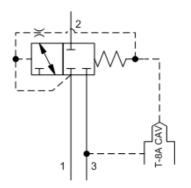
MODEL DVBB

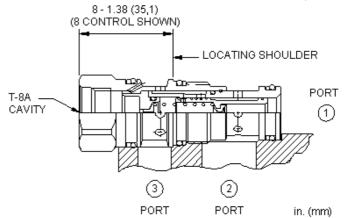
2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity - normally closed

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DVBB





This valve is a normally closed, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

V Viton

CONFIGURATION OPTIONS

Model Code Example: DVBB8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

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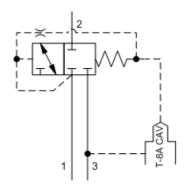
MODEL DVCB

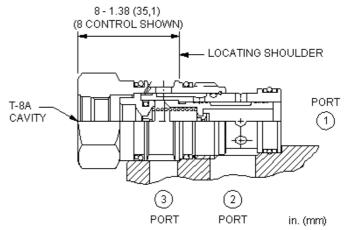
2-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity - normally closed

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DVCB





This valve is a normally closed, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVCB8FN

CONTROL	(8) MINIMUM CO	NIROL PRESSURE	(F) SEAL MATERI	AL (N)
8 T-8A Cavity	F 100 psi (7	bar)	N Buna-N	
			V \/iton	

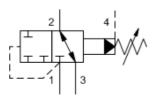
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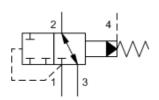
2-way, pilot-operated, directional valve with drain to port 4 - normally open

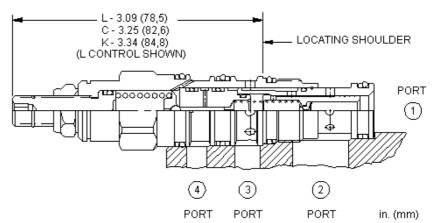
SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A



sunhydraulics.com/model/DPBM







Normally open, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DPBMLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

- C Tamper Resistant Factory Set
- K Handknob

- 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

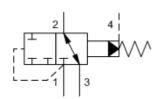
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

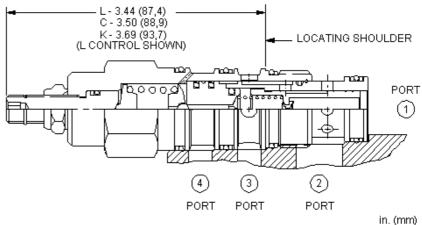
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sunhydraulics.com/model/DPCM







Normally open, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DPCMLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

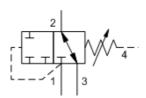
- 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

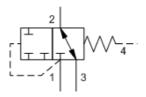
N Buna-N V Viton Standard Material/Coating

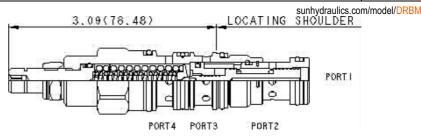
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SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Normally open, direct-acting, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBMLAN

CONTROL (L) ADJUSTMENT RANGE

A 500 - 3000 psi (35 - 210 bar), 1000 psi

(A) SEAL MATERIAL

(N)

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob
- O Handknob with Panel Mount

(70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- \$ 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- **W** 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton

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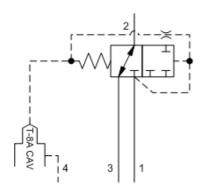


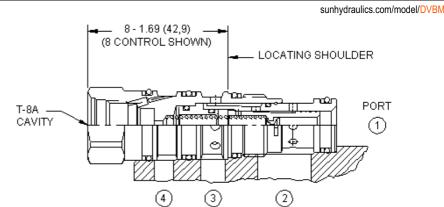
MODEL

2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity - normally open

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







This valve is a normally open, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

PORT

PORT

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

PORT

in. (mm)

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBM8FN

CONTROL MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N)

8 T-8A Cavity

V Viton

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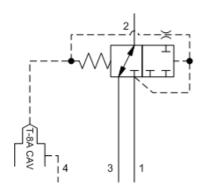
MODEL DVCM

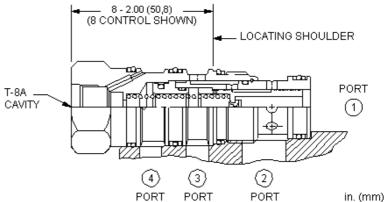
2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity - normally open

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A









This valve is a normally open, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVCM8FN

CONTROL (8) MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N)

8 T-8A Cavity

F 100 psi (7 bar)

N Buna-N V Viton

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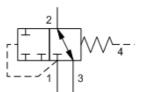


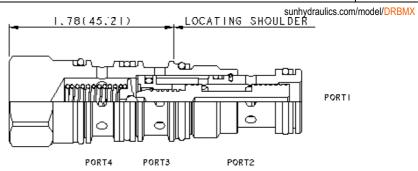


2-way, direct-acting, fixed setting, directional valve with drain to port 4 - normally open

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Normally open, direct-acting, 2-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBMXFN

 SHIFTING PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 F 100 psi (7 bar)
 N Buna-N

 V Viton

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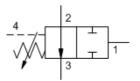


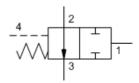
2-way, pilot-to-shift directional valve with drain to port 4 - normally open

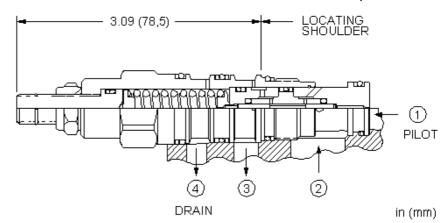
SERIES 1 / CAPACITY: 2 L/min. / CAVITY: T-21A











The normally-open, direct-acting 2-way directional cartridge with external drain is a pilot unloading valve used to sense pressure in one circuit to switch or unload a valve in a different circuit. When pressure at port 1 exceeds the setting of the valve, the spool shifts to block port 2 from port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	20 drops/min.
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRAYLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

1000 - 3000 psi (70 - 210 bar), 1000 psi (70 bar) Standard Setting

C 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting

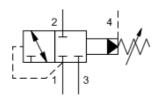
N Buna-N
V Viton

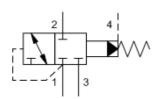
Standard Material/Coating
/AP Stainless Steel, Passivated

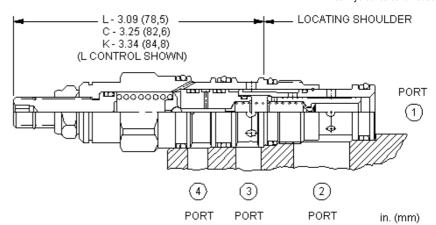
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sunhydraulics.com/model/DPBN







Normally closed, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DPBNLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (I

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- J 25 1500 psi (1,7 105 bar), 1000 psi (70 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

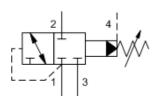
N Buna-N V Viton

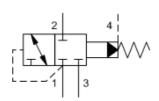
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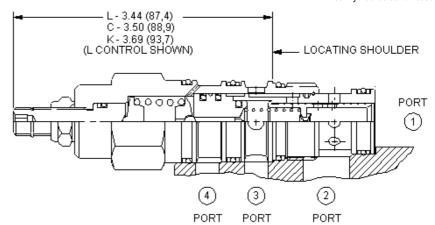
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sunhydraulics.com/model/DPCN







in. (mm)

Normally closed, pilot-operated, 2-way directional cartridges are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DPCNLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N)

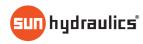
L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- **A** 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N
V Viton

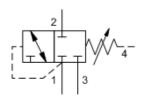
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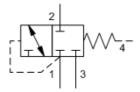


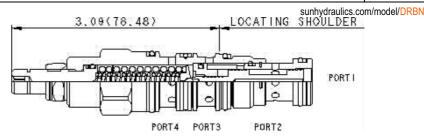


3-way, direct-acting, directional valve with drain to port 4 - normally closed SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Normally closed, direct-acting, 3-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBNLAN

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

O Handknob with Panel Mount

A 500 - 3000 psi (35 - 210 bar), 1000 psi

(L) ADJUSTMENT RANGE

(70 bar) Standard Setting **B** 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting

D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting

\$ 25 - 200 psi (1,7 - 14 bar), 100 psi (7

W 750 - 4500 psi (50 - 315 bar), 1000 psi

(A) SEAL MATERIAL N Buna-N

V Viton

Standard Material/Coating

/AP Stainless Steel, Passivated

MATERIAL/COATING

(N)

bar) Standard Setting

(70 bar) Standard Setting

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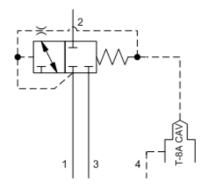
MODEL DVBN

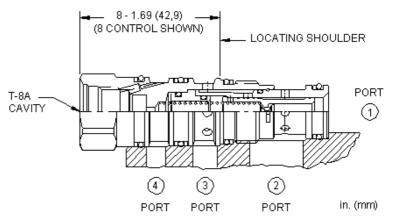
2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity - normally closed

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A



sunhydraulics.com/model/DVBN





This valve is a normally closed, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

V Viton

CONFIGURATION OPTIONS

Model Code Example: DVBN8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

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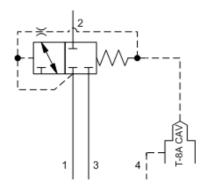


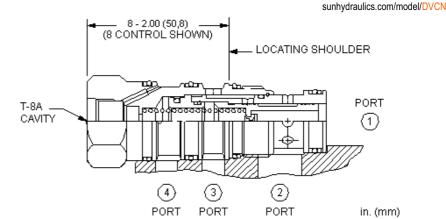
MODEL

2-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity - normally closed

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A







This valve is a normally closed, 2-way directional cartridge that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVCN8FN

CONTROL (8) MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N) N Buna-N 8 T-8A Cavity

V Viton

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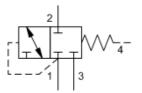


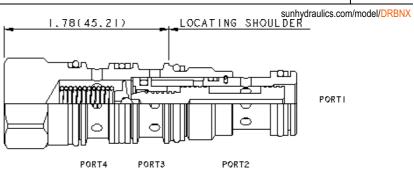


2-way, direct-acting, fixed setting, directional valve with drain to port 4 - normally closed

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Normally closed, direct-acting, 3-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBNXFN

 SHIFTING PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 F 100 psi (7 bar)
 N Buna-N

 V Viton

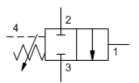
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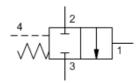


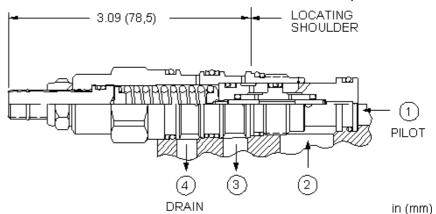
2-way, pilot-to-shift directional valve with drain to port 4 - normally closed SERIES 1 / CAPACITY: 2 L/min. / CAVITY: T-21A











The normally-closed, direct-acting 2-way directional cartridge with external drain is a pilot unloading valve used to sense pressure in one circuit to switch or unload a valve in a different circuit. When pressure at port 1 exceeds the setting of the valve, the spool shifts to connect port 2 to port 3.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	20 drops/min.
Reseat	>85% of setting
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRAXLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

A 1000 - 3000 psi (70 - 210 bar), 1000 psi (70 bar) Standard Setting

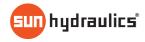
C 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting

N Buna-N V Viton

Standard Material/Coating

/AP Stainless Steel, Passivated

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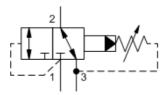


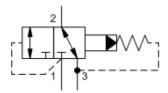
3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open)

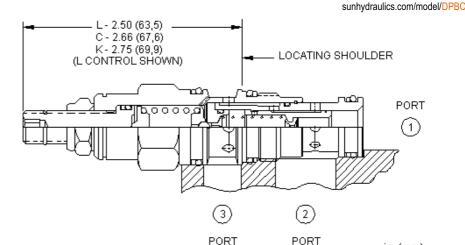
SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



in. (mm)







Pilot-operated, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DPBCLAN

	Adjustment

- C Tamper Resistant Factory Set
- K Handknob

100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

(L) ADJUSTMENT RANGE

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

(A) SEAL MATERIAL

N Buna-N

V Viton

Standard Material/Coating

AP Stainless Steel, Passivated

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

(N) MATERIAL/COATING

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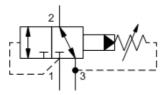


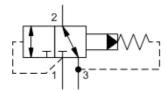
MODEL DPCC

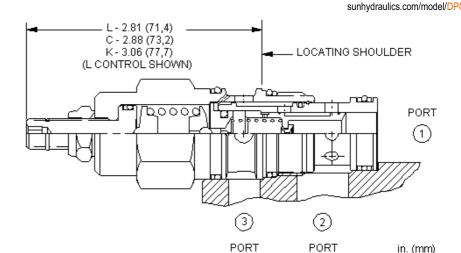
3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A









Pilot-operated, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DPCCLAN

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

(L) ADJUSTMENT RANGE

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **H** 35 3000 psi (2,4 210 bar), 1000 psi (70 bar) Standard Setting
- **W** 100 4500 psi (7 315 bar), 1000 psi (70 bar) Standard Setting

(A) SEAL MATERIAL N Buna-N

V Viton

(N) MATERIAL/COATING

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

(70 bar) Standard Setting

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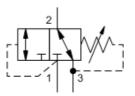
MODEL DRBC

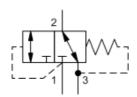
3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open)

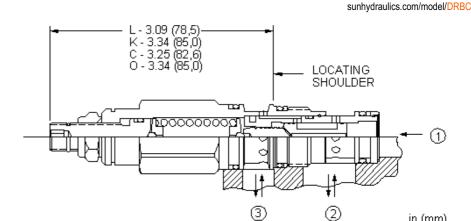
SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



in (mm)







Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel. **NOTES**

CONFIGURATION OPTIONS

Model Code Example: DRBCLAN

CONTROL

(L) ADJUSTMENT RANGE

(A) SEAL MATERIAL N Buna-N

V Viton

(N) MATERIAL/COATING

C Tamper Resistant - Factory Set

K Handknob

A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- W 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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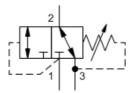


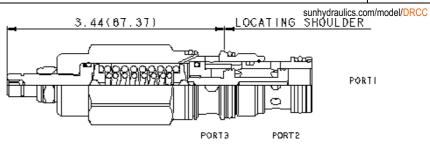


3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A







Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Polyurethane: 990002002

CONFIGURATION OPTIONS

Model Code Example: DRCCLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

A 750 - 3000 psi (50 - 210 bar), 1000 psi (70 bar) Standard Setting

- **B** 300 1500 psi (20 105 bar), 500 psi (35 bar) Standard Setting
- **D** 200 800 psi (14 55 bar), 400 psi (28 bar) Standard Setting
- E 100 400 psi (7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 50 200 psi (3,5 14 bar), 100 psi (7 bar) Standard Setting

N Buna-N V Viton Standard Material/Coating

/LH Mild Steel, Zinc-Nickel

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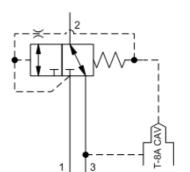
MODEL DVBC

3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 blocked, 2 to 3 open)

8 - 1.38 (35,1) (8 CONTROL SHOWN)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A







PORT

①



It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

T-8A = CAVITY

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

LOCATING SHOULDER

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBC8FN

CONTROL	(8)	MINIMUM CONTROL PRESSURE	(F)	SEAL MATERIAL	(N)
8 T-8A Cavity		F 100 psi (7 bar)		N Buna-N	
				V Viton	

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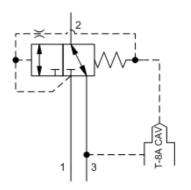
MODEL DVCC

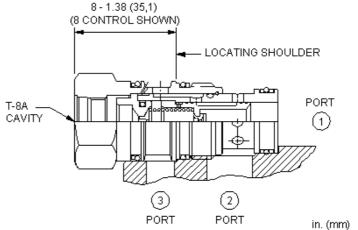
3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 blocked, 2 to 3 open)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DVCC





This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

V Viton

CONFIGURATION OPTIONS

Model Code Example: DVCC8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N

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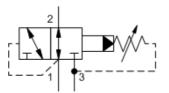


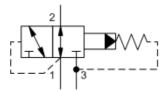
MODEL **DPBD**

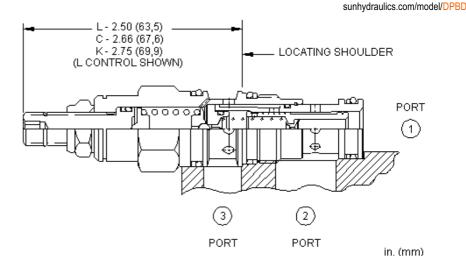
3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A









Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: DPBDLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- . 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **K** 75 1500 psi (5 105 bar), 1000 psi (70 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N V Viton Standard Material/Coatin

/AP Stainless Steel, Passivated

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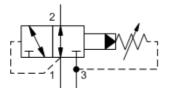
MODEL DPCD

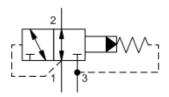
3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked)

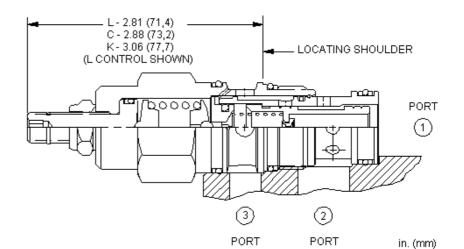
SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DPCD







Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: DPCDLAN

(N) MATERIAL/COATING CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- E 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000

N Buna-N V Viton

/AP Stainless Steel, Passivated

psi (70 bar) Standard Setting

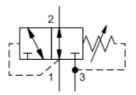
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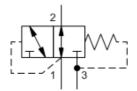


MODEL DRBD

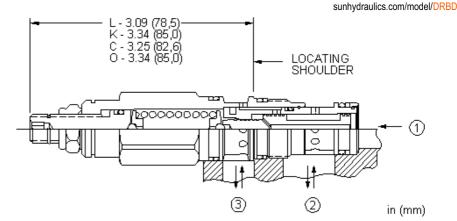
3-way, direct-acting, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked)







SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBDLAN

V Viton

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL

Standard Screw Adjustment

- C Tamper Resistant Factory Set
- K Handknob

- A 500 3000 psi (35 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 200 psi (14 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 200 psi (14 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- **W** 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N) MATERIAL/COATING

N Buna-N Standard Material/C

/AP Stainless Steel, Passivated

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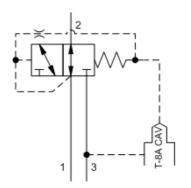
MODEL DVBD

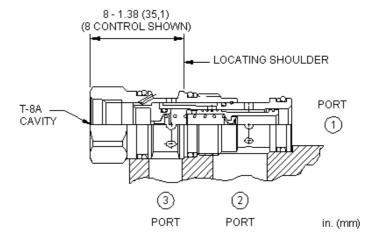
3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 to 2 open, 3 blocked)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DVBD





This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBD8FN

CONTROL (8) MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N)

8 T-8A Cavity

F 100 psi (7 bar)

N Buna-N V Viton

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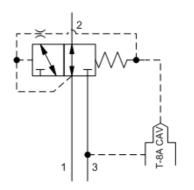
MODEL DVCD

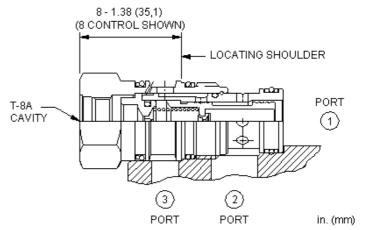
3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 to 2 open, 3 blocked)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DVCD





This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVCD8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N
 V Viton

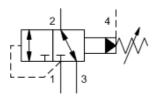
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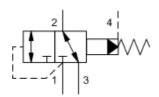


MODEL DPBO

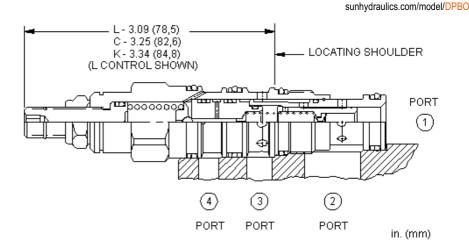
3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 open)







SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A



Pilot-operated, 3-way directional cartridges (1 blocked, 2-to-3 open) are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DPBOLAN

CONTROL

(L) ADJUSTMENT RANGE

(A) SEAL MATERIAL

(N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting

- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **J** 25 1500 psi (1,7 105 bar), 1000 psi (70 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 1000

N Buna-N Standard Material/Coating V Viton /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

psi (70 bar) Standard Setting

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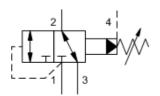


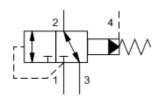
MODEL DPCO

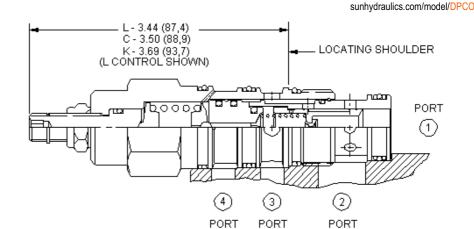
3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 open)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A









in. (mm)

Pilot-operated, 3-way directional cartridges (1 blocked, 2-to-3 open) are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DPCOLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

- **A** 100 3000 psi (7 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 1500 psi (3,5 105 bar), 1000 psi (70 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

N Buna-N Standard Material/Coating
V Viton /AP Stainless Steel, Passivated

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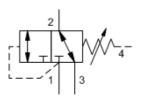


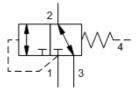
MODEL DRBO

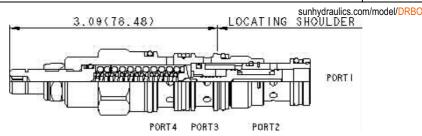
3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

(N)

NOTES

CONTROL

For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: DRBOLAN

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

K Handknob

O Handknob with Panel Mount

A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting

(L) ADJUSTMENT RANGE

B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting

D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting

S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting

W 750 - 4500 psi (50 - 315 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL

SSI N Buna-N
V Viton

Standard Material/Coating

MATERIAL/COATING

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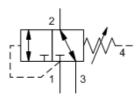
MODEL DRCO

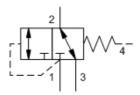
3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)

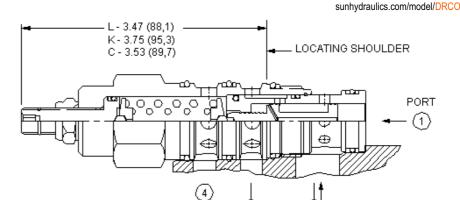
SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



in. (mm)







Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

PORT

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

(2)

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: DRCOLAN

CONTROL (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N)

L Standard Screw Adjustment

- C Tamper Resistant Factory Set
- **K** Handknob

- **A** 750 3000 psi (50 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 300 1500 psi (20 105 bar), 500 psi (35 bar) Standard Setting
- **D** 25 800 psi (1,7 55 bar), 400 psi (28 bar) Standard Setting
- **E** 25 400 psi (1,7 28 bar), 200 psi (14 bar) Standard Setting
- **S** 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting

N Buna-N

V Viton

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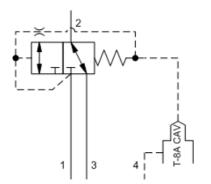


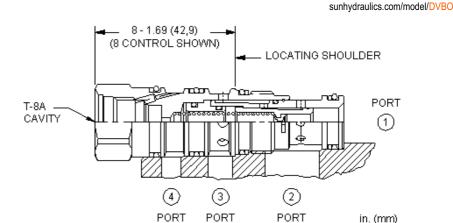
MODEL DVBO

3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 blocked, 2 to 3 open)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVBO8FN

 CONTROL
 (8)
 MINIMUM CONTROL PRESSURE
 (F)
 SEAL MATERIAL
 (N)

 8
 T-8A Cavity
 F 100 psi (7 bar)
 N Buna-N
 V Viton

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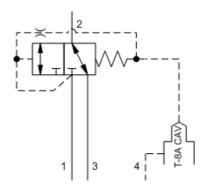
MODEL DVCO

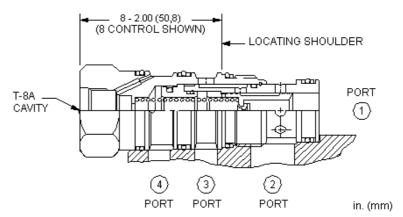
3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A control cavity (1 blocked, 2 to 3 open)

SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DVCO





This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

NOTES

Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

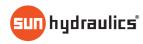
CONFIGURATION OPTIONS

Model Code Example: DVCO8FN

CONTROL (8) MINIMUM CONTROL PRESSURE (F) SEAL MATERIAL (N)

8 T-8A Cavity F 100 psi (7 bar) N Buna-N
E EPDM
V Viton

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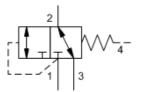


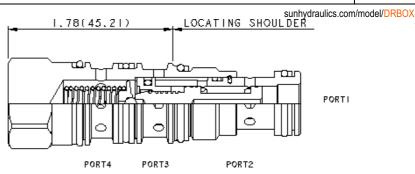


3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 blocked, 2 to 3 open)

SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: DRBOXFN

SHIFTING PRESSURE (F) SEAL MATERIAL (N) MATERIAL/COATING

100 psi (7 bar)

N Buna-N V Viton Standard Material/Coati

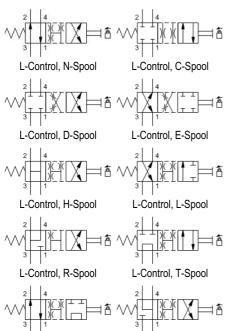
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

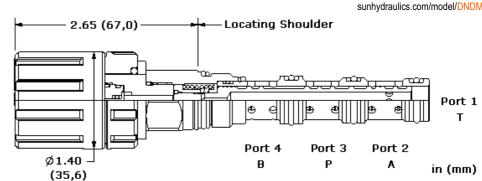
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L-Control, Y-Spool









This manually operated, 2-position, 4-way directional cartridge is a direct-acting, balanced spool valve used to control the direction of flow in a hydraulic circuit. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar			
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@210 bar			
Operating Torque	1,2 Nm			
Seal kit - Cartridge	Buna: 990431007			
Seal kit - Cartridge	EPDM: 990431014			
Seal kit - Cartridge	Viton: 990431006			

CONFIGURATION OPTIONS

L-Control, U-Spool

Model Code Example: DNDMLNN

CONTROL	(L)	SPOOL CONFIGURATION	(N)	SEAL MATERIAL	(N)
L Twist/Lock (Detent) Manual Override		N Through Shift to Cross		N Buna-N	

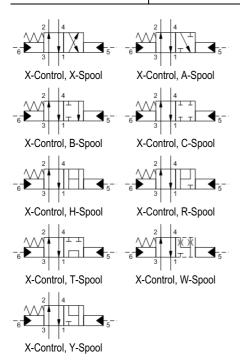
- D Twist/Lock (Dual) Manual Override
- T Twist (Momentary) Manual Override
- C Closed, Shift to Through
- D Closed, Shift to Cross
- E Cross, Shift to Closed
- H Open, Shift to Cross
- Cross, Shift to P to A, B and T Blocked
- R Regen, Shift to Cross
- T Tandem, Shift to Through
- U Through, Shift to Tandem
- Y Motor, Shift to Cross

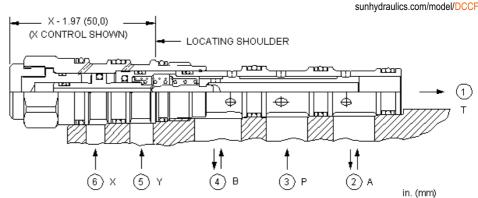
E EPDM V Viton

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SERIES 1 / CAPACITY: 28 - 40 L/min. / CAVITY: T-61A







Two-position, 4-way directional cartridges are spring-offset, 6-port directional valves that can be configured from a choice of 9 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	12 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Seal kit - Cartridge	Buna: 990061007
Seal kit - Cartridge	Polyurethane: 990061002
Seal kit - Cartridge	Viton: 990061006

CONFIGURATION OPTIONS

Model Code Example: DCCFXXN

CONTROL (X) SPOOL CONFIGURATION (X) SEAL MATERIAL (N) MATERIAL/COATING

X Standard Pilo

X P to A and B to T Center

N Buna-N V Viton

MATERIAE/OUATING

A A to T Center

B B to T Center

C Blocked Center

H Open Center

R Regen Center

T Tandem Center

W A and B Bleed to T Center

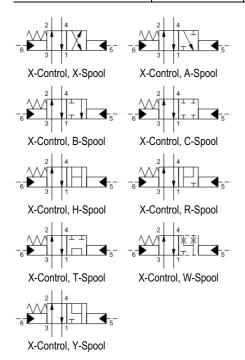
Y A and B to T Center

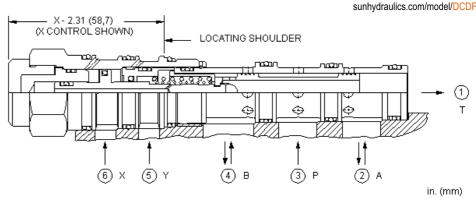
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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SERIES 2 / CAPACITY: 38 - 120 L/min. / CAVITY: T-62A







Two-position, 4-way directional cartridges are spring-offset, 6-port directional valves that can be configured from a choice of 9 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	10,5 bar		
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar		
Pilot Volume Displacement	0,98 cc		
Seal kit - Cartridge	Buna: 990062007		
Seal kit - Cartridge	Polyurethane: 990062002		
Seal kit - Cartridge Viton: 990062006			

CONFIGURATION OPTIONS

X Not Adjustable

Model Code Example: DCDFXXN

N Buna-N

E EPDM

V Viton

CONTROL (X) SPOOL CONFIGURATION (X) SEAL MATERIAL (N) MATERIAL/COATING

Х	Ρt	to A	and	В	to	Τ	Cen	ter

- A A to T Center
- B B to T Center
- C Blocked Crossover
- H Open Crossover
- R Regen Center
- T Tandem Center
- W A and B Bleed to T Center
- Y A and B to T Center

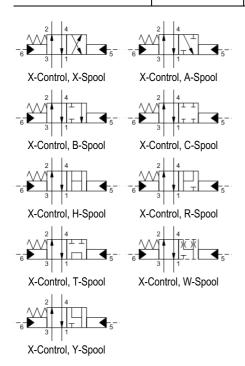
Standard Material/Coating

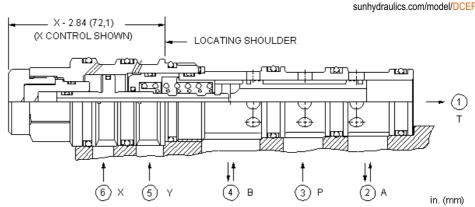
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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SERIES 3 / CAPACITY: 95 - 380 L/min. / CAVITY: T-63A







Two-position, 4-way directional cartridges are spring-offset, 6-port directional valves that can be configured from a choice of 9 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	2,8 cc
Seal kit - Cartridge	Buna: 990063007
Seal kit - Cartridge	EPDM: 990063014
Seal kit - Cartridge	Polyurethane: 990063002
Seal kit - Cartridge	Viton: 990063006

CONFIGURATION OPTIONS

Model Code Example: DCEFXXN

CONTROL (X) SPOOL CONFIGURATION (X) SEAL MATERIAL (N)

X Standard Pilot	Х
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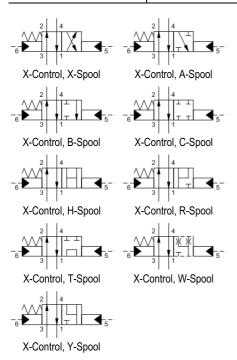
- N Buna-N
- A to T Center
- B B to T Center
- C Blocked Center
- H Open Center
- R Regen Center
- T Tandem Center
- W A and B Bleed to T Center
- Y A and B to T Center

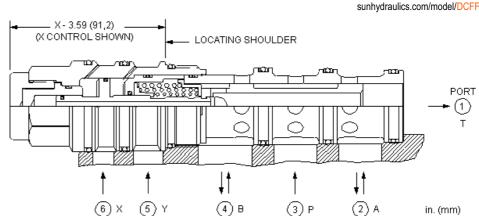
E EPDM V Viton

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SERIES 4 / CAPACITY: 200 - 760 L/min. / CAVITY: T-64A







Two-position, 4-way directional cartridges are spring-offset, 6-port directional valves that can be configured from a choice of 9 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	6,9 cc
Seal kit - Cartridge	Buna: 990064007
Seal kit - Cartridge	Polyurethane: 990064002
Seal kit - Cartridge	Viton: 990064006

CONFIGURATION OPTIONS

Model Code Example: DCFFXXN

CONTROL (X) SPOOL CONFIGURATION (X) SEAL MATERIAL

X Standard Pilo

P to A and B to T Cer

V Viton

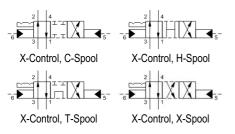
A A to T Center

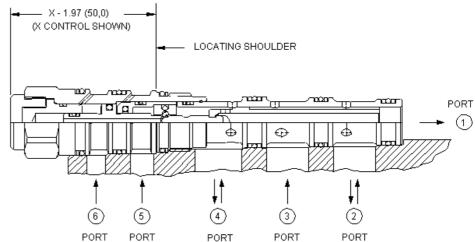
- B B to T Center
- C Blocked Center
- H Open Center
- R Regen Center
- T Tandem Center
- $\boldsymbol{W}\,$ A and B Bleed to T Center
- Y A and B to T Center

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sunhydraulics.com/model/DCCD





in. (mm)

Two-position, detented, 4-way directional cartridges are 6-port directional valves that can be configured with up to 3 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

X P to B and A to T Crossover

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	12 bar			
Maximum Operating Pressure	350 bar			
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar			
Pilot Volume Displacement	0,82 cc			
Seal kit - Cartridge	Buna: 990061007			
Seal kit - Cartridge	Polyurethane: 990061002			
Seal kit - Cartridge Viton: 990061006				

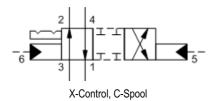
CONFIGURATION OPTIONS

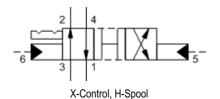
Model Code Example: DCCDXCN

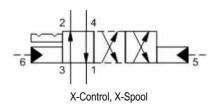
CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING	
X Standard Pilot	C Blocked Crossover	N Buna-N	Standard Material/Coating	
	H Open Crossover	V Viton	/AP Stainless Steel, Passivated	
	T Tandem Crossover		/I H Mild Steel Zinc-Nickel	

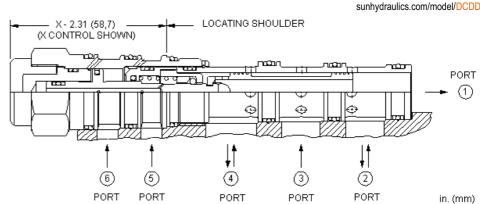
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Two-position, detented, 4-way directional cartridges are 6-port directional valves that can be configured with up to 3 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilotto-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	10,5 bar	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar	
Pilot Volume Displacement	2,0 cc	
Seal kit - Cartridge	Buna: 990062007	
Seal kit - Cartridge	Polyurethane: 990062002	
Seal kit - Cartridge	Viton: 990062006	

CONFIGURATION OPTIONS

Model Code Example: DCDDXCN

X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING

X Standard Pilot H Open Crossover **V** Viton

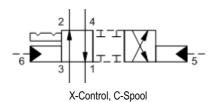
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

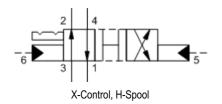
X P to B and A to T Crossover

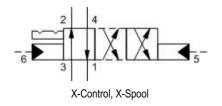
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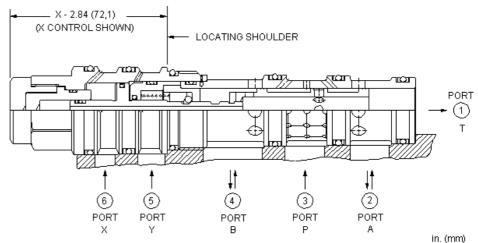












Two-position, detented, 4-way directional cartridges are 6-port directional valves that can be configured with up to 3 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilotto-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	5,6 cc
Seal kit - Cartridge	Buna: 990063007
Seal kit - Cartridge	Polyurethane: 990063002
Seal kit - Cartridge	Viton: 990063006

CONFIGURATION OPTIONS

Model Code Example: DCEDXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL (N) MATERIAL/COATING
X Standard Pilot	C Blocked Crossover	N Buna-N	Standard Material/Coating
	H Open Crossover	V Viton	/AP Stainless Steel, Passivated

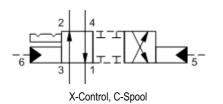
X P to B and A to T Crossover

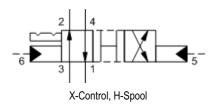
/LH Mild Steel, Zinc-Nickel

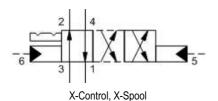
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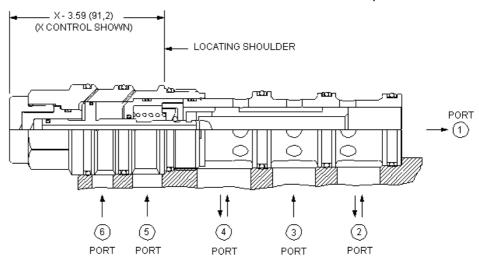












in. (mm)

Two-position, detented, 4-way directional cartridges are 6-port directional valves that can be configured with up to 3 different spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilotto-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	14 cc
Seal kit - Cartridge	Buna: 990064007
Seal kit - Cartridge	Polyurethane: 990064002
Seal kit - Cartridge	Viton: 990064006

CONFIGURATION OPTIONS

Model Code Example: DCFDXCN

CONTROL (X) SPOOL CONFIGURATION (C) SEAL MATERIAL

H Open Crossover

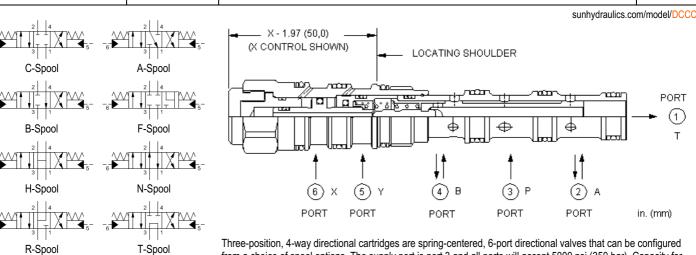
X P to B and A to T Crossover

V Viton

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SERIES 1 / CAPACITY: 28 - 40 L/min. / CAVITY: T-61A





Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	12 bar	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar	
Pilot Volume Displacement	0,33 cc	
Seal kit - Cartridge	Buna: 990061007	
Seal kit - Cartridge	Polyurethane: 990061002	
Seal kit - Cartridge	Viton: 990061006	

CONFIGURATION OPTIONS

W-Spool

Y-Spool

Model Code Example: DCCCXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C Blocked Center	N Buna-N	Standard Material/Coating
	A A to T Center	V Viton	/AP Stainless Steel, Passivated
	B B to T Center		/LH Mild Steel, Zinc-Nickel
	F Closed Center, A and B to T		

N P to A and B to T Center
 R Regen Center
 T Tandem Center
 W A and B Bleed to T Center

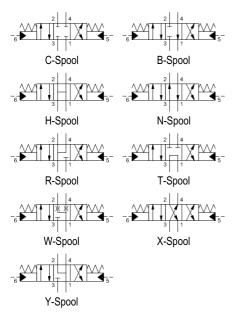
X-Spool

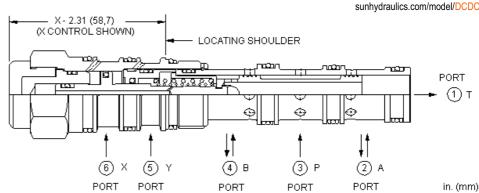
Y A and B to T Center

H Open Center

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Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	10,5 bar	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar	
Pilot Volume Displacement 0,98 cc		
Seal kit - Cartridge	Buna: 990062007	
Seal kit - Cartridge Polyurethane: 990062002		
Seal kit - Cartridge	Viton: 990062006	

CONFIGURATION OPTIONS

Model Code Example: DCDCXCN

V Viton

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C Blocked Center	N Buna-N	Standard Material/Coating
	A A to T Center	E EPDM	/AP Stainless Steel, Passivated

B B to T Center

H Open Center

N P to A and B to T Center

R Regen Center

Tandem Center

W A and B Bleed to T Center

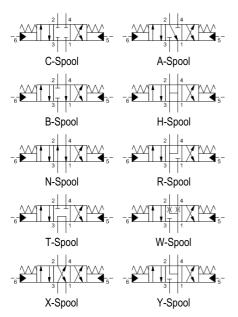
Y A and B to T Center

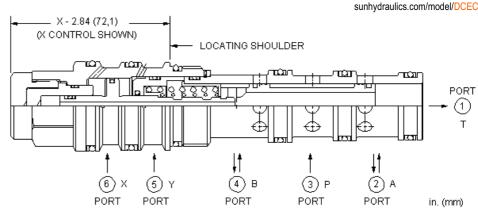
/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

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SERIES 3 / CAPACITY: 95 - 380 L/min. / CAVITY: T-63A







Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar	
Maximum Operating Pressure	350 bar	
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar	
Pilot Volume Displacement	2,8 cc	
Seal kit - Cartridge	Buna: 990063007	
Seal kit - Cartridge	EPDM: 990063014	
Seal kit - Cartridge Polyurethane: 990063002		
Seal kit - Cartridge	Viton: 990063006	

CONFIGURATION OPTIONS

Model Code Example: DCECXCN

E EPDM

V Viton

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N) MATERIAL/COATING
X Standard Pilot	C Blocked Center	N Buna-N	Standard Material/Coati

X Standard Pilot

C Blocked Center A A to T Center

B B to T Center

H Open Center

N P to A and B to T Center

R Regen Center

T Tandem Center

W A and B Bleed to T Center

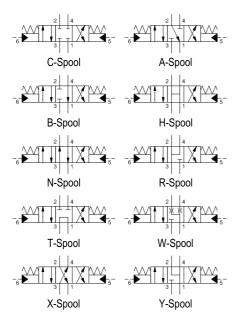
Y A and B to T Center

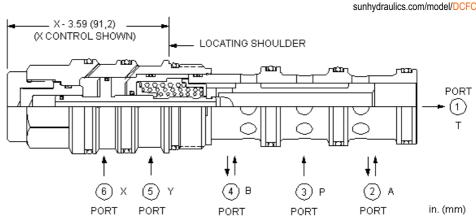
Standard Material/Coating /AP Stainless Steel, Passivated

© 2021 Sun Hydraulics 342 of 356 4-way, 3-position, pilot-to-shift directional valve

SERIES 4 / CAPACITY: 200 - 760 L/min. / CAVITY: T-64A







Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	9 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	6,9 cc
Seal kit - Cartridge	Buna: 990064007
Seal kit - Cartridge	EPDM: 990064014
Seal kit - Cartridge	Polyurethane: 990064002
Seal kit - Cartridge	Viton: 990064006

CONFIGURATION OPTIONS

Model Code Example: DCFCXCN

(X) SPOOL CONFIGURATION (N) MATERIAL/COATING CONTROL (C) SEAL MATERIAL

X Standard Pilot

C Blocked Center A A to T Center

B B to T Center

H Open Center

N P to A and B to T Center

R Regen Center

Tandem Center

W A and B Bleed to T Center

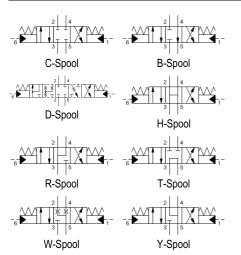
Y A and B to T Center

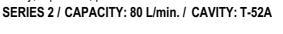
N Buna-N **E** EPDM V Viton

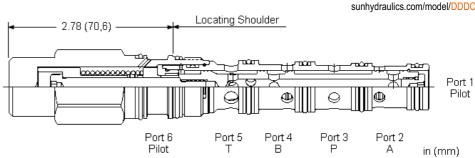
Standard Material/Coating /AP Stainless Steel, Passivated

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Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	10,5 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990052007
Seal kit - Cartridge	Viton: 990052006

CONFIGURATION OPTIONS

Model Code Example: DDDCXCN

V Viton

(X) SPOOL CONFIGURATION CONTROL (C) SEAL MATERIAL (N) MATERIAL/COATING X Not Adjustable

B B to T Center $\boldsymbol{\mathsf{D}}\ \, \mathsf{Blocked}\,\,\mathsf{Center},\,\mathsf{Regen},\,\mathsf{P}\,\mathsf{to}\,\,\mathsf{B}\,\,\mathsf{and}\,\,\mathsf{A}\,\mathsf{to}\,\,$

H Open Center

R Regen Center

T Tandem Center

W A and B Bleed to T Center, Restrictive

Y A and B to T Center

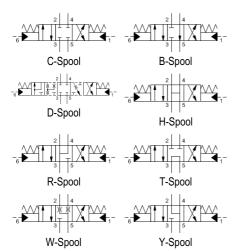
/AP Stainless Steel, Passivated

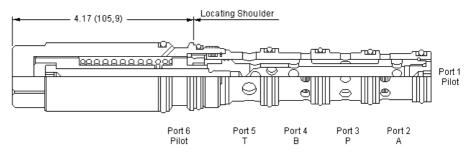
© 2021 Sun Hydraulics 344 of 356 4-way, 3-position, pilot-to-shift directional valve

SERIES 3 / CAPACITY: 160 L/min. / CAVITY: T-53A









in (mm)

Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	14 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@70 bar
Pilot Volume Displacement	1,8 cc
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

CONFIGURATION OPTIONS

X Not Adjustable

Model Code Example: DDFCXCN

(X) SPOOL CONFIGURATION CONTROL (C) SEAL MATERIAL (N) MATERIAL/COATING

> C Blocked Cente B B to T Center

N Buna-N V Viton

Standard Material/Coating /AP Stainless Steel, Passivated

D Blocked Center, Regen, P to B and A to

H Open Center R Regen Center

T Tandem Center

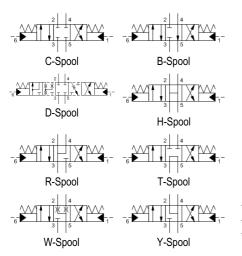
W A and B Bleed to T Center, Restrictive

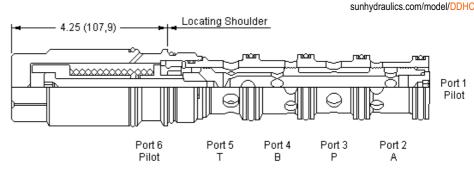
Y A and B Bleed to T Center

© 2021 Sun Hydraulics 345 of 356 4-way, 3-position, pilot-to-shift directional valve

SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-54A







in (mm)

Three-position, 4-way directional cartridges are spring-centered, 6-port directional valves that can be configured from a choice of spool options. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Minimum Pilot Pressure Required to Shift Valve	14 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Pilot Volume Displacement	4,3 cc
Seal kit - Cartridge	Buna: 990054007
Seal kit - Cartridge	Viton: 990054006

CONFIGURATION OPTIONS

Model Code Example: DDHCXCN

CONTROL	(X) SPOOL CONFIGURATION	(C) SEAL MATERIAL	(N)
X Not Adjustable	C Blocked Center	N Buna-N	
	B B to T Center	V Viton	
	D Blocked Center Regen P to B and	A to	

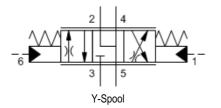
- H Open Center
- R Regen Center
- T Tandem Center
- $\boldsymbol{W}\,$ A and B Bleed to T Center, Restrictive
- Y A and B Bleed to T Center

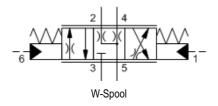
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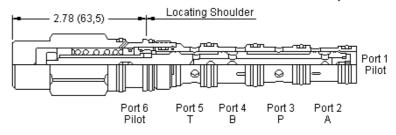
4-way, 3-position, meter in proportional directional valve SERIES 2 / CAPACITY: 28 L/min. / CAVITY: T-52A



sunhydraulics.com/model/FTC0







in (mm)

This valve is a 4-way, 3-position proportional directional valve. Work ports 2 and 4 are drained to 5 in the center position and port 3 is closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between ports 3 and 4 that is proportional to the pressure at 1. Piloting 6 opens 3 to 2. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at ports 1 and 6 directly oppose each other.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Pressure Required for Full Shift at Rated Flow	20 - 23 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	90 cc/min.@70 bar
Pilot Volume Displacement	0,66 cc
Seal kit - Cartridge	Buna: 990052007
Seal kit - Cartridge	Viton: 990052006

CONFIGURATION OPTIONS

Model Code Example: FTCCXYN

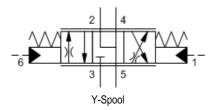
CONTROL	(X) SPOOL CONFIGURATION	(Y) SEAL MATERIAL	(N) MATERIAL/COATING
X Not Adjustable	Y A and B to T Center	N Buna-N	Standard Material/Coating
	W A and B Bleed to T Center	V Viton	/AP Stainless Steel Passivated

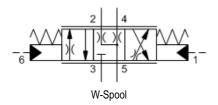
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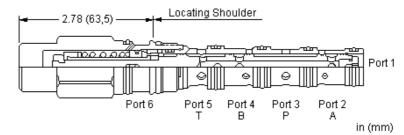
4-way, 3-position, meter in proportional directional valve SERIES 2 / CAPACITY: 70 L/min. / CAVITY: T-52A



sunhydraulics.com/model/FTD0







This valve is a 4-way, 3-position proportional directional valve. Work ports 2 and 4 are drained to 5 in the center position and port 3 is closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between ports 3 and 4 that is proportional to the pressure at 1. Piloting 6 opens 3 to 2. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at ports 1 and 6 directly oppose each other.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Pressure Required for Full Shift at Rated Flow	20 - 23 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	44 cc/min.@35 bar
Pilot Volume Displacement	0,66 cc
Seal kit - Cartridge	Buna: 990052007
Seal kit - Cartridge	Viton: 990052006

CONFIGURATION OPTIONS

Model Code Example: FTDCXYN

CONTROL (X)	SPOOL CONFIGURATION (Y)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	Y A and B to T Center	N Buna-N	Standard Material/Coating

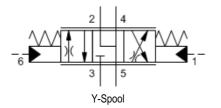
W A and B Bleed to T Center V Viton /AP Stainless Steel, Passivated

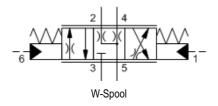
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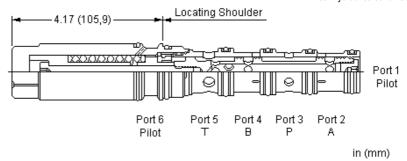
4-way, 3-position, meter in proportional directional valve SERIES 3 / CAPACITY: 45 L/min. / CAVITY: T-53A



sunhydraulics.com/model/FTEC







This valve is a 4-way, 3-position proportional directional valve. Work ports 2 and 4 are drained to 5 in the center position and port 3 is closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between ports 3 and 4 that is proportional to the pressure at 1. Piloting 6 opens 3 to 2. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at ports 1 and 6 directly oppose each other.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Pressure Required for Full Shift at Rated Flow	20 - 23 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	131 cc/min.@70 bar
Pilot Volume Displacement	1,8 cc
Hysteresis	35 %
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

CONFIGURATION OPTIONS

Model Code Example: FTECXYN

CONTROL (X) SPOOL CONFIGURATION (Y) SEAL MATERIAL (N) MATERIAL/COATING

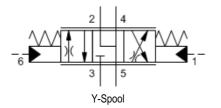
X Not Adjustable
Y A and B to T Center
N Buna-N
Standard Material/Coating
W A and B Bleed to T Center
V Viton
/AP Stainless Steel, Passivated

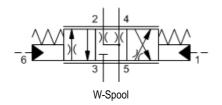
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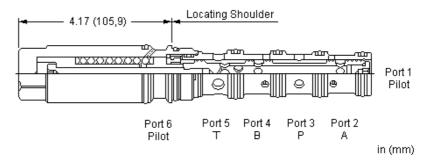
4-way, 3-position, meter in proportional directional valve SERIES 3 / CAPACITY: 140 L/min. / CAVITY: T-53A



sunhydraulics.com/model/FTFC







This valve is a 4-way, 3-position proportional directional valve. Work ports 2 and 4 are drained to 5 in the center position and port 3 is closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between ports 3 and 4 that is proportional to the pressure at 1. Piloting 6 opens 3 to 2. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at ports 1 and 6 directly oppose each other.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Pressure Required for Full Shift at Rated Flow	20 - 23 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	131 cc/min.@70 bar
Pilot Volume Displacement	1,8 cc
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

CONFIGURATION OPTIONS

Model Code Example: FTFCXYN

CONTROL (X) SPOOL CONFIGURATION (Y) SEAL MATERIAL (N) MATERIAL/COATING

 X
 Not Adjustable
 Y
 A and B to T Center
 N
 Buna-N
 Standard Material/Coating

 W
 A and B Bleed to T Center
 V
 Viton
 /AP Stainless Steel, Passivated

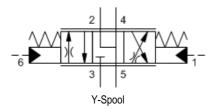
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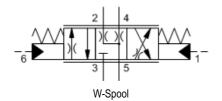


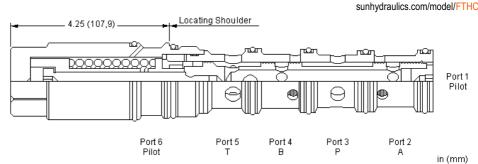


4-way, 3-position, meter in proportional directional valve SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-54A









This valve is a 4-way, 3-position proportional directional valve. Work ports 2 and 4 are drained to 5 in the center position and port 3 is closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between ports 3 and 4 that is proportional to the pressure at 1. Piloting 6 opens 3 to 2. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at ports 1 and 6 directly oppose each other.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	229 cc/min.@70 bar
Pilot Volume Displacement	4,3 cc
Maximum Pilot Pressure	35 bar
Seal kit - Cartridge	Buna: 990054007
Seal kit - Cartridge	Polyurethane: 990054002
Seal kit - Cartridge	Viton: 990054006

CONFIGURATION OPTIONS

Model Code Example: FTHCXYN

CONTROL (X) SPOOL CONFIGURATION (Y) SEAL MATERIAL (N) MATERIAL/COATING

 X
 Not Adjustable
 Y
 A and B to T Center
 N
 Buna-N
 Standard Material/Coating

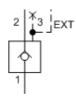
 W
 A and B Bleed to T Center
 V
 V Viton
 /AP Stainless Steel, Passivated

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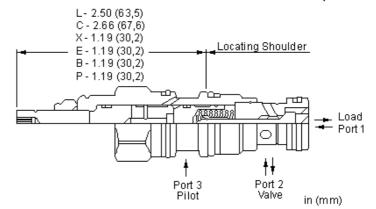


sunhydraulics.com/model/CKCR









This valve is a pilot to open check valve. It has a non-sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	5:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CKCRXCN

(X) CRACKING PRESSURE (C) SEAL MATERIAL CONTROL (N) MATERIAL/COATING

X	Stand	ard	Pilo	t

- B External 1/4 BSPP Pilot Port, Port 3
- C Manual Load Release Tamper Resistant
- E External 4-SAE Pilot Port, Port 3 Blocked
- L Manual Load Release
- P External 1/4 NPTF Pilot Port, Port 3 Blocked
- C 30 psi (2 bar)
- **A** 4 psi (0,3 bar) **B** 15 psi (1 bar)
- **D** 50 psi (3,5 bar) E 75 psi (5 bar)
- **F** 100 psi (7 bar)
- **Z** 1 psi (0,07 bar)
- N Buna-N V Viton

Standard Material/Coating

/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel

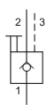
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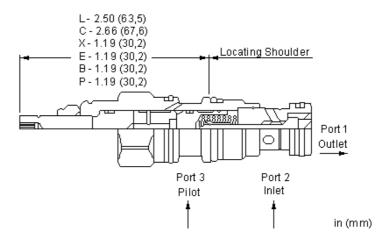


sunhydraulics.com/model/CKC









This valve is a pilot to open check valve. It has a sealed pilot, a steel seat, and is non-vented. It allows free flow from the valve (port 2) to the load (port 1) and blocks flow in the opposite direction. Pressure at the pilot (port 3) will open the valve from port 1 to port 2. Pilot pressure needed at port 3 to open the valve is directly proportional to the load pressure at port 1. Pressure at port 2 directly opposes pilot pressure.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Pilot Ratio	5:1
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: CKCSXCN

CONTROL (X) CRACKING PRESSURE (C) SEAL MATERIAL (N

X Standard Pilot

- **B** External 1/4 BSPP Pilot Port, Port 3 blocked
- C Manual Load Release Tamper Resistant
- E External 4-SAE Pilot Port, Port 3 Blocked
- L Manual Load Release
- P External 1/4 NPTF Port, Port 3 blocked
- **C** 30 psi (2 bar)
- **A** 4 psi (0,3 bar)
- **B** 15 psi (1 bar)
- **D** 50 psi (3,5 bar)
- **E** 75 psi (5 bar)
- F 100 psi (7 bar)
- Z 1 psi (0,07 bar)

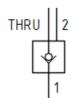
V Viton

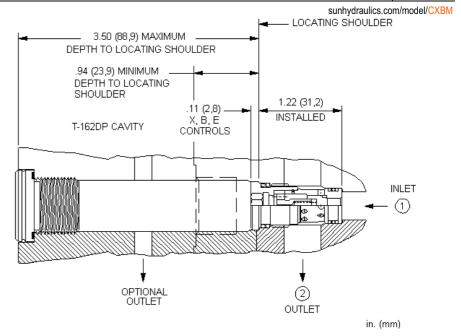
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Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: CXBMXAN

CONTROL	(X) CRACKING PRESSURE	(A) SEAL MATERIAL	(N)
X Not Adjustable	A 4 psi (0,3 bar)	N Buna-N	
	B 15 psi (1 bar)	E EPDM	
	C 30 psi (2 bar)	V Viton	

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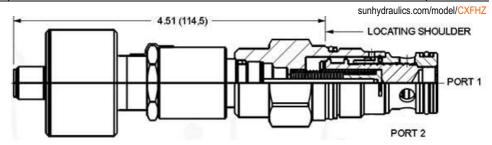


MODEL CXFHZ

Free flow nose to side check valve with position switch SERIES 2 / CAPACITY: 120 L/min. / CAVITY: T-5A







Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: CXFHZCN

CRACKING PRESSURE	(C) SEAL MATERIAL	(N)
C 30 psi (2 bar)	N Buna-N	
A 4 psi (0,3 bar)	V Viton	

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MODEL CXHHZ

Free flow nose to side check valve with position switch SERIES 3 / CAPACITY: 240 L/min. / CAVITY: T-16A



sunhydraulics.com/model/CXHHZ

2 | V1

Free-flow, nose-to-side check valves are on/off circuit components that allow free flow from the inlet (port 1) to the outlet (port 2) and block flow in the opposite direction.

This valve incorporates a position switch to provide confirmation that the valve is in the transition position or seated (closed).

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,07 cc/min.
Transition leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CXHHZCN

CRACKING PRESSURE	(C) SEAL MATERIAL	(N)
C 30 psi (2 bar)	N Buna-N	
A 4 psi (0,3 bar)	V Viton	

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