

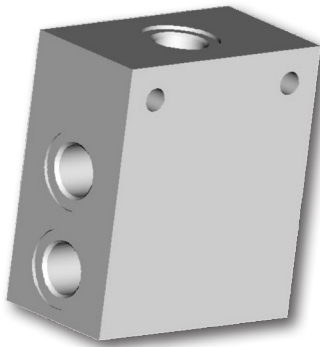
Содержание

Гидравлические блоки с присоединением в линию_Argo-Hytos	2
Гидравлические блоки с присоединением под СЕТОР клапана_Argo-Hytos	20
1 DA-0604, 1006	21
2 DK1-04 (06, 10)	23
3 DM04 (06,10)	25
4 DP-04 (06, 10)	29
5 DP6	37
6 DR1-04	39
7 DR2-06	41
8 PD04	43
9 PD06	49
10 PD10	55
11 SB-04 (06, 10)	61
12 ZB06	73
13 ZB10	77

In-Line Bodies for Screw-In Cartridge Valves

SB

p_{max} (AL) 250 bar (3600 PSI) • p_{max} (G) 350 bar (5080 PSI) • p_{max} (ST) 420 bar (6100 PSI)



Technical Features

- › In-line bodies designed to accommodate different cartridge valves and thus provide highly versatile solutions to hydraulic control functions
- › Different valve functions in the same body are possible due to standardised cavities and valve housings across a wide range of cartridge valves
- › Various cavities with SAE and ISO metric threads available
- › Connecting ports for pipes with SAE and BSP threads available
- › Bodies are available in aluminium, steel and cast iron. In the standard version, aluminium bodies are without surface treatment, steel bodies are zinc-coated for 240 h protection acc. to ISO 9227 and cast iron bodies are phosphated
- › Cast iron body versions additionally feature a gauge port

Ordering Code

SB - [] - [] [] [] [] [] [] [] - []

In-Line Bodies for Screw-In Cartridge Valves

Cavity*

3/4-16 UNF-2B, 2-Way	(C-8-2)	A2
3/4-16 UNF-2B, 3-Way	(C-8-3)	A3
3/4-16 UNF-2B, 4-Way	(C-8-4)	A4
7/8-14 UNF-2B, 2-Way	(C-10-2)	B2
7/8-14 UNF-2B, 3-Way	(C-10-3)	B3
7/8-14 UNF-2B, 4-Way	(C-10-4)	B4
7/8-14 UNF-2B, 3-Way	(C-10-3S)	BP3
7/8-14 UNF-2B, 4-Way		BPY3
1-1/16 UN-2B, 2-Way	(C-12-2)	C2
1-1/16 UN-2B, 3-Way	(C-12-3)	C3
1-1/16 UN-2B, 3-Way	(C-12-3S)	CP3
1-1/16 UN-2B, 4-Way		CPY3
1-1/8-12 UNF-2B, 3-Way		U3
1-1/8-12 UNF-2B, 4-Way		U4
1-5/16-12 UNF-2B, 3-Way	(C-16-3S)	S3
1-5/16-12 UN-2B, 4-Way		V4
1-5/16-12 UN-2B, 4-Way	(C-16-4)	D4
M20x1.5, 3-Way		Q3
M22x1.5, 2-Way		QG2
M22x1.5, 3-Way		QF3
M27x1.5, 3-Way		R3
M27x2, 2-Way		QK2
M27x2, 2-Way		K2
M27x2, 3-Way		K3
M27x2, 3-Way		QL3
M30x1.5 S,SX 2-Way		RB2
M30x1.5 SX 3-Way		RB3
M38x2, 3-Way		T3
SLIP-IN, 3-Way		W3, X3,Y3
SLIP-IN, 4-Way		Z4

*For more details on cavities and suitable valve types please see the SMT catalogue 0019.

Body configuration

Single body	01
Dual body	02
Triple body	03

Not all combination of features are available as actual products. The standard versions are listed on pages 2 and 3. For the identification and feasibility of other body versions consult our technical department.

No designation	Surface treatment
P	without treatment*
A	phosphated**
B	240 h salt spray test (ISO 9227)***
E1	520 h salt spray test (ISO 9227)*** elox transparent *

*only for aluminium bodies
**only for cast iron bodies
***only for steel bodies

No designation	Material seals - only for Plugs
N	NBR
V	FPM (Viton)

No designation	Body material
AL	aluminium
ST	steel
G	cast iron

No designation	Gauge port
M	without gauge port gauge port

No designation	Control port
XY	without control port drain for valve type VPN2-10, VPN1-20 version SX and SY

No designation	Number of „P“-ports*
P	single port „P1“ *dual port „P1“ and „P2“

*only for cavity QG2, QK2, QL3, RB2,RB3

	Connecting port
01	G1/4
02	SAE6, (9/6-18 UNF-2B)
03	G3/8
04	SAE8, (3/4-16 UNF-2B)
05	G1/2
06	SAE10, (7/8-14 UNF-2B)
07	G3/4
08	SAE12, (1-1/16-12 UN-2B)
09	G1
10	SAE16 (1-5/16-12 UN-2B)
11	G3/4 (A,P), G1/2 (T)

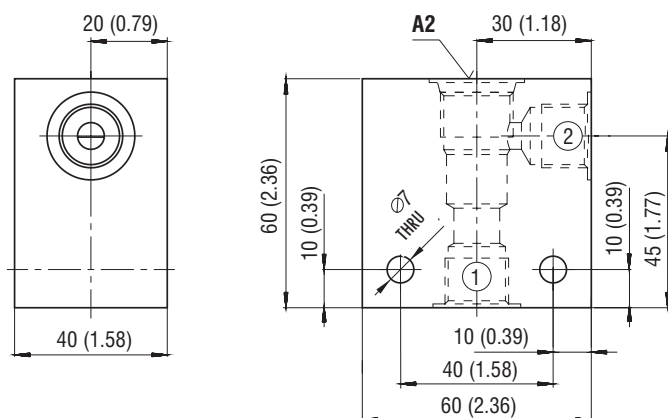
List of Bodies According to Cavity Types

Cavity	Connecting thread	Material	Ordering code	Pressure bar (PSI)	Weight kg (lbs)	Dimensions	Ordering No.		
A2 (C-8-2) 3/4-16 UNF-2B 2-Way	G1/4	Aluminium	SB-A2-0101AL	250 (3626)	0.56 (1.23)	Page 5	28129501		
		Steel	SB-A2-0101ST-A	420 (6091)	1.27 (3.46)		27308300		
	SAE6, 9/6-18	Aluminium	SB-A2-0102AL	250 (3626)	0.56 (1.23)		24365800		
		Steel	SB-A2-0102ST-A	420 (6091)	1.27 (3.46)		24365700		
	G3/8	Aluminium	SB-A2-0103AL	250 (3626)	0.56 (1.23)		40152100		
		Steel	SB-A2-0103ST-A	420 (6091)	1.27 (3.46)		15662001		
	SAE8, 3/4-16	Aluminium	SB-A2-0104AL	250 (3626)	0.56 (1.23)		33969000		
	G1/2	Aluminium	SB-A2-0105AL	250 (3626)	0.56 (1.23)		19569000		
		Steel	SB-A2-0105ST-A	420 (6091)	1.27 (3.46)		19569100		
	A3 (C-8-3) 3/4-16 UNF-2B 3-Way	G1/4	Aluminium	SB-A3-0101AL	250 (3626)		0,63 (1.39)	Page 5	24365901
Steel			SB-A3-0101ST-A	420 (6091)	1,36 (3.00)	28649300			
SAE6, 9/6-18		Aluminium	SB-A3-0102AL	250 (3626)	0,63 (1.39)	15662300			
		Steel	SB-A3-0102ST-A	420 (6091)	1,36 (3.00)	29888000			
G3/8		Aluminium	SB-A3-0103AL	250 (3626)	0,63 (1.39)	40186200			
		Steel	SB-A3-0103ST-A	420 (6091)	1,36 (3.00)	17031300			
SAE8, 3/4-16		Aluminium	SB-A3-0104AL	250 (3626)	0,63 (1.39)	33979700			
A4 (C-8-4) 3/4-16 UNF-2B 4-Way		G1/4	Aluminium	SB-A4-0101AL	250 (3626)	0.76 (1.68)	Page 5		20786001
	SAE6, 9/6-18	Steel	SB-A4-0102ST-A	420 (6091)	2.14 (4.72)	34277800			
		Aluminium	SB-A4-0103AL	250 (3626)	0.76 (1.68)	15662700			
	G3/8	Steel	SB-A4-0103ST-A	420 (6091)	2.14 (4.72)	15662600			
		Aluminium	SB-B2-0103AL	250 (3626)	0.54 (1.19)	Page 6		19430701	
	SAE8, 3/4-16	Steel	SB-B2-0103ST-A	420 (6091)	1.50 (3.31)			19937600	
G1/2		Aluminium	SB-B2-0104AL	250 (3626)	0.54 (1.19)		27744700		
	SAE10, 7/8-14	Steel	SB-B2-0105AL	250 (3626)	0.54 (1.19)		19569201		
Steel		SB-B2-0105ST-A	420 (6091)	1.50 (3.31)	19696400				
	Steel	SB-B2-0106ST-A	420 (6091)	1.50 (3.31)	34293000				
B3 (C-10-3) 7/8-14 UNF-2B 3-Way		G3/8	Aluminium	SB-B3-0103AL	250 (3626)	0.60 (1.32)	Page 6	19965001	
	Steel		SB-B3-0103ST-A	420 (6091)	1.68 (3.70)	19964800			
	SAE8, 3/4-16	Steel	SB-B3-0104ST-A	420 (6091)	1.68 (3.70)	34048700			
		Aluminium	SB-B3-0105AL	250 (3626)	0.60 (1.32)	31033500			
	G1/2	Steel	SB-B3-0105ST-A	420 (6091)	1.68 (3.70)	27673100			
		Steel	SB-B3-0106ST-A	420 (6091)	1.68 (3.70)	28199100			
	B4 (C-10-4) 7/8-14 UNF-2B 4-Way	G3/8	Aluminium	SB-B4-0103AL	250 (3626)	0.71 (1.57)		Page 6	27461000
			Steel	SB-B4-0103ST-A	420 (6091)	1.99 (4.39)			27567600
SAE8, 3/4-16		Steel	SB-B4-0104ST-A	420 (6091)	1.99 (4.39)	34277600			
		Aluminium	SB-B4-0105AL	250 (3626)	0.71 (1.57)	33054100			
G1/2		Steel	SB-B4-0105ST-A	420 (6091)	1.99 (4.39)	27567500			
		Aluminium	SB-B4-0106AL	250 (3626)	0.71 (1.57)	19965400			
SAE10, 7/8-14		Steel	SB-B4-0106ST-A	420 (6091)	1.99 (4.39)	19965200			
		BP3-01 (C-10-3S) 7/8-14 UNF-2B 3-Way	G3/8	Steel	SB-BP3-0103ST-B	420 (6091)	1,77 (3.90)		Page 7
SAE8, 3/4-16	Steel		SB-BP3-0104ST-B	420 (6091)	1,74 (3.84)	40954700			
	Steel		SB-BP3-0105ST-B	420 (6091)	1,75 (3,86)	40950900			
SAE10, 7/8-14	Steel		SB-BP3-0106ST-B	420 (6091)	1,71 (3.79)	40956800			
BP3-02 (C-10-3S) 7/8-14 UNF-2B 3-Way	G3/8	Steel	SB-BP3-0203ST-B	420 (6091)	2.35 (5.18)	Page 7	42628700		
	SAE8, 3/4-16	Steel	SB-BP3-0204ST-B	420 (6091)	2.29 (5.05)		42800900		
		Steel	SB-BP3-0205ST-B	420 (6091)	2.28 (5.03)		42801000		
	SAE10, 7/8-14	Steel	SB-BP3-0206ST-B	420 (6091)	2.21 (4.87)		42801100		
BPY3-01 7/8-14 UNF-2B 4-Way	G3/8	Steel	SB-BYP3-0103ST-B	420 (6091)	1,96 (4.32)	Page 8	40952800		
	SAE8, 3/4-16	Steel	SB-BYP3-0104ST-B	420 (6091)	1,92 (4.23)		40957000		
		Steel	SB-BYP3-0105ST-B	420 (6091)	1,93 (4.25)		40953300		
	SAE10, 7/8-14	Steel	SB-BYP3-0106ST-B	420 (6091)	1,88 (4.14)		40958100		
BPY3-02 7/8-14 UNF-2B 4-Way	G3/8	Steel	SB-BPY3-0203ST-B	420 (6091)	2,74 (6.04)	Page 8	43444400		
	SAE8, 3/4-16	Steel	SB-BPY3-0204ST-B	420 (6091)	2,67 (5.89)		43444900		
		Steel	SB-BPY3-0205ST-B	420 (6091)	2,67 (5.89)		43444600		
	SAE10, 7/8-14	Steel	SB-BPY3-0206ST-B	420 (6091)	2,59 (5.71)		43443900		
C2 (C-12-2) 1-1/16-12 UN-2B 2-Way	SAE12, 1-1/16-12	Steel	SB-C2-0108ST-A	420 (6091)	2,30 (5.07)	Page 8	40222200		

Cavity	Connecting thread	Material	Ordering code	Pressure bar (PSI)	Weight kg (lbs)	Dimensions	Ordering No.
C3 (C-12-3) 1-1/16-12 UN-2B 3-Way	G3/4	hlinik	SB-C3-0107AL	250 (3626)	1.23 (2.71)	Page 8	43334300
		ocel	SB-C3-0107ST-B	420 (6091)	3.39 (7.47)		43333900
	SAE12, 1-1/16-12	hlinik	SB-C3-0108AL	250 (3626)	1.21 (2.67)		43385400
		ocel	SB-C3-0108ST-B	420 (6091)	3.32 (7.32)		43385000
	G1	hlinik	SB-C3-0109AL	250 (3626)	1.16 (2.56)		43333800
		ocel	SB-C3-0109ST-B	420 (6091)	3.20 (7.05)		43331200
	SAE16, 1-5/16-12	hlinik	SB-C3-0110AL	250 (3626)	1.14 (2.51)		43385300
		ocel	SB-C3-0110ST-B	420 (6091)	3.15 (6.94)		43383400
CP3-01 (C-12-3S) 1-1/16-12 UN-2B 3-Way	G1/2	Steel	SB-CP3-0105ST-B	420 (6091)	2,61 (5.75)	Page 9	41586400
	SAE10,7/8-14	Steel	SB-CP3-0106ST-B	420 (6091)	2,57 (5.67)		41578800
	G3/4	Steel	SB-CP3-0107ST-B	420 (6091)	2,54 (5.60)		41586700
	SAE12, 1-1/16-12	Steel	SB-CP3-0108ST-B	420 (6091)	2.49 (5.49)		41577600
CP3-02 (C-12-3S) 1-1/16-12 UN-2B 3-Way	G1/2	Steel	SB-CP3-0205ST-B	420 (6091)	3.70 (8.16)	Page 9	42806100
	SAE10,7/8-14	Steel	SB-CP3-0206ST-B	420 (6091)	3,63 (8.00)		42806200
	G3/4	Steel	SB-CP3-0207ST-B	420 (6091)	3.55 (7.83)		42806300
	SAE12, 1-1/16-12	Steel	SB-CP3-0208ST-B	420 (6091)	3.48 (7.67)		42806400
CPY3-01 1-1/16-12 UN-2B 4-Way	G1/2	Steel	SB-CYP3-0105ST-B	420 (6091)	2,99 (6.59)	Page 10	41605700
	SAE10,7/8-14	Steel	SB-CYP3-0106ST-B	420 (6091)	2,94 (6.48)		41598400
	G3/4	Steel	SB-CYP3-0107ST-B	420 (6091)	2,91 (6.42)		41601300
	SAE12, 1-1/16-12	Steel	SB-CYP3-0108ST-B	420 (6091)	2,86 (6.30)		41592700
CPY3-02 1-1/16-12 UN-2B 4-Way	G1/2	Steel	SB-CPY3-0205ST-B	420 (6091)	4.22 (9.30)	Page 10	43451200
	SAE10,7/8-14	Steel	SB-CPY3-0206ST-B	420 (6091)	4.15 (9.15)		43451600
	G3/4	Steel	SB-CPY3-0207ST-B	420 (6091)	4.07 (8.97)		43451300
	SAE12, 1-1/16-12	Steel	SB-CPY3-0208ST-B	420 (6091)	3.98 (8.77)		43448200
S3 (C-16-3S) 1-5/16-12 UNF-2B 3-Way	G3/4	Aluminium	SB-S3-0107AL	250 (3626)	0.95 (2.09)	Page 11	24296100
		Steel	SB-S3-0107ST-A	420 (6091)	1.30 (2.87)		28018500
	G3/4	Aluminium	SB-S3-0207AL	250 (3626)	1.91 (4.21)		24296200
		Steel	SB-S3-0207ST-A	420 (6091)	3.00 (6.61)		28769200
D4 (C-16-4) 1-5/16-12 UN-2B 4-Way	G1/2	Aluminium	SB-D4-0105AL	250 (3626)	1.50 (3.31)	Page 11	27955800
		Steel	SB-D4-0105ST-A	420 (6091)	4.35 (9.59)		31976800
U3 1-1/8-12 UNF-2B 3-Way	G1/2	Aluminium	SB-U3-0105AL	250 (3626)	0.81 (1.79)	Page 12	24296700
		Steel	SB-U3-0105ST-A	420 (6091)	2.07 (4.56)		24296800
U4 1-1/8-12 UNF-2B 4-Way	G1/2	Aluminium	SB-U4-0105AL	250 (3626)	0.80 (1.76)	Page 12	19296500
		Steel	SB-U4-0105ST-A	420 (6091)	2.05 (4.52)		18839000
V4 1-5/16-12 UN-2B 4-Way	G1	Steel	SB-V4-0109ST-A	420 (6091)	4.30 (9.47)	Page 12	27418100
Q3 M20x1.5 3-Way	G3/8	Aluminium	SB-Q3-0103AL	250 (3626)	0.27 (0.60)	Page 13	15628000
		Steel	SB-Q3-0103ST-A	420 (6091)	0.75 (1.65)		24295600
	G3/8	Aluminium	SB-Q3-0203AL	250 (3626)	0.46 (1.01)		17236700
		Steel	SB-Q3-0203ST-A	420 (6091)	1.28 (2.82)		24295700
		Aluminium	SB-Q3-0303AL	250 (3626)	0.47 (1.04)		15628100
QF3 M22x1.5, 3-Way	G3/8	Cast iron	SB-QF3-0103MGN-P	350 (5080)	1.10 (2.43)	Page 14	16002700
R3 M27x1.5 3-Way	G1/2	Aluminium	SB-R3-0105AL	250 (3626)	0.44 (0.97)	Page 14	16947300
		Steel	SB-R3-0105ST-A	420 (6091)	1.20 (2.65)		24295800
		Aluminium	SB-R3-0205AL	250 (3626)	0.78 (1.72)		24295900
		Steel	SB-R3-0205ST-A	420 (6091)	2.15 (4.74)		24296000

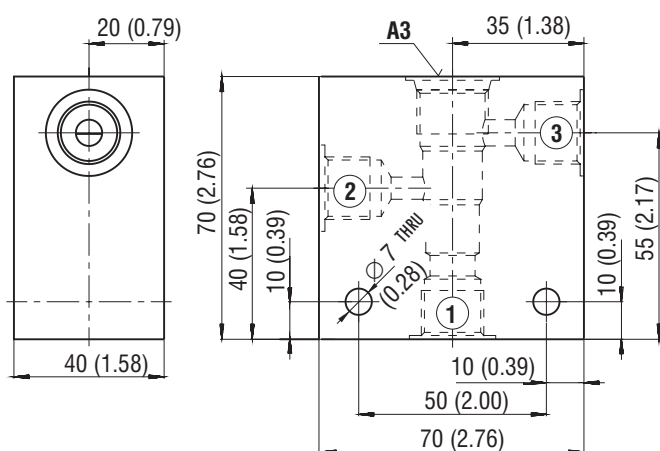
Cavity	Connecting thread	Material	Ordering code	Pressure bar (PSI)	Weight kg (lbs)	Dimensions	Ordering No.	
QG2 M22x1.5 2-Way	G3/8	Cast iron	SB-QG2-0103MGN-P	350 (5080)	1.17 (2.58)	Page 15	15989600	
			SB-QG2-0103PMGN-P	350 (5080)	1.17 (2.58)		15989400	
			SB-QG2-0103PMGV-P	350 (5080)	1.17 (2.58)		22950200	
			SB-QG2-0103MGV-P	350 (5080)	1.17 (2.58)		22950400	
			SB-QG2-0103G-P	350 (5080)	1.05 (2.31)		15653400	
	SAE8, 3/4-16	Cast iron	SB-QG2-0104MGN-P	350 (5080)	1.17 (2.58)		15990000	
			SB-QG2-0104MGV-P	350 (5080)	1.17 (2.58)		22939400	
			SB-QG2-0104PMGN-A	350 (5080)	1.17 (2.58)		18748500	
			SB-QG2-0104PMGN-P	350 (5080)	1.17 (2.58)		15989800	
			SB-QG2-0104PMGV-P	350 (5080)	1.17 (2.58)		22939200	
	G1/2	Cast iron	SB-QG2-0104G-P	350 (5080)	1.00 (2.20)		15653600	
			SB-QG2-0105MGN-P	350 (5080)	1.17 (2.58)		15989700	
			SB-QG2-0105PMGN-P	350 (5080)	1.17 (2.58)		15989500	
			SB-QG2-0105PMGV-P	350 (5080)	1.17 (2.58)		22950300	
			SB-QG2-0105MGV-P	350 (5080)	1.17 (2.58)		22950500	
	SAE10, 7/8-14	Cast iron	SB-QG2-0105G-P	350 (5080)	1.00 (2.20)		15653500	
			SB-QG2-0106MGN-P	350 (5080)	1.17 (2.58)		15990100	
			SB-QG2-0106MGV-P	350 (5080)	1.17 (2.58)		22939500	
			SB-QG2-0106PMGV-P	350 (5080)	1.17 (2.58)		22939300	
			SB-QG2-0106PMGN-P	350 (5080)	1.17 (2.58)		15989900	
W3, X3 D20, 3-Way	G3/8	Aluminium	SB-W3-0103AL	250 (3626)	0.56 (1.23)	Page 15	18737300	
	SAE8, 3/4-16		SB-W3-0104AL	250 (3626)	0.56 (1.23)		30945900	
Y3 D17, 3-Way	G3/8	Aluminium	SB-Y3-0103AL	250 (3626)	0.55 (1.21)	Page 15	18737200	
QK2, M27x2 2-Way	G3/4	Cast iron	SB-QK2-0107MGN-P	350 (5080)	2.70 (5.95)	Page 16	15996300	
			SB-QK2-0107MGN-A	350 (5080)	2.70 (5.95)		24510200	
			SB-QK2-0107MGV-P	350 (5081)	2.70 (5.95)		22976300	
			SB-QK2-0107PMGN-P	350 (5080)	2.70 (5.95)		15996500	
			SB-QK2-0107PMGV-A	350 (5080)	2.70 (5.95)		19002800	
	SAE12, 1-1/16	Cast iron	SB-QK2-0107PMGV-P	350 (5080)	2.70 (5.95)		22976600	
			SB-QK2-0108PMGN-P	350 (5080)	2.70 (5.95)		15996600	
			SB-QK2-0108PMGV-P	350 (5080)	2.70 (5.95)		22980100	
QL3 M27x2, 2-Way	G3/4	Cast iron	SB-QL3-0107XYMGN-P	350 (5080)	2.70 (5.95)	Page 16	15996400	
			SB-QL3-0107XYMGV-P	350 (5080)	2.70 (5.95)		22976400	
K2 M27x2 2-Way	G1/2	Aluminium	SB-K2-0105AL	250 (3626)	0.40 (0.88)	Page 16	16991600	
		Steel	SB-K2-0105ST-A	420 (6091)	1.50 (3.31)		18953400	
K3 M27x2 2-Way	G1/2	Aluminium	SB-K3-0105AL	250 (3626)	0.65 (1.43)	Page 16	27135800	
		Steel	SB-K3-0105ST-A	420 (6091)	1.59 (3.51)		24296400	
	SAE10, 7/8-14	Aluminium	SB-K3-0106AL	250 (3626)	0.57 (1.26)		24296300	
		G3/4, G1/2	Aluminium	SB-K3-0111AL	250 (3626)		0,87 (1.92)	42505300
			Steel	SB-K3-0111ST-B	420 (6091)		2,39 (5.27)	42499100
T3 M38x2 3-Way	G1	Aluminium	SB-T3-0109AL	250 (3626)	1.47 (3.24)	On request	27871900	
		Steel	SB-T3-0109ST-A	420 (6091)	4.00 (8.82)		27135700	
			SB-T3-0209ST-A	420 (6091)	6.20 (13.7)		30547100	
RB2 M30x1.5 2-Way Valve S, SY	G1	Steel	SB-RB2-0109XYMST-B	420 (6091)	3.98 (8.77)	Page 17	40793100	
			SB-RB2-0109PXYMST-B		4.20 (9.26)		40792500	
RB3 M30x1.5 2-Way Valve SX	G1	Steel	SB-RB3-0109XYMST-B	420 (6091)	4.20 (9.26)	Page 17	40783900	
			SB-RB3-0109PXYMST-B		4.18 (9.22)		40777500	
Z4 7/8-14 UNF-2B 4-Way	G3/8	Aluminium	SB-Z4-0103AL	250 (3626)	2.14 (4.72)	Page 18	34095800	

Body for 2-Way SIC Valve



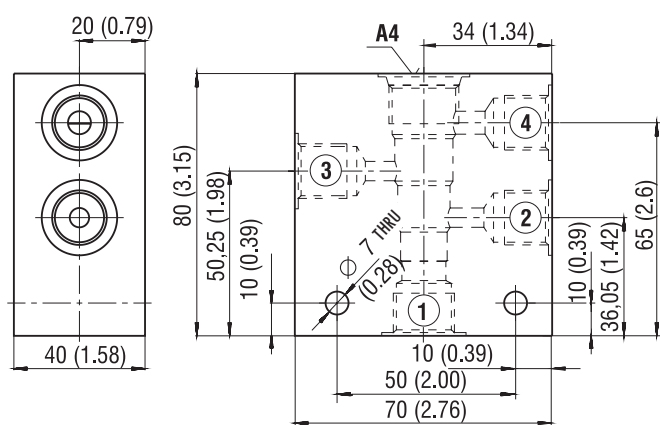
Model A2	Connecting port
	1, 2
SB-A2-0101*	G1/4
SB-A2-0102*	SAE6, 9/16-18
SB-A2-0103*	G3/8
SB-A2-0104*	SAE8, 3/4-16

Body for 3-Way SIC Valve



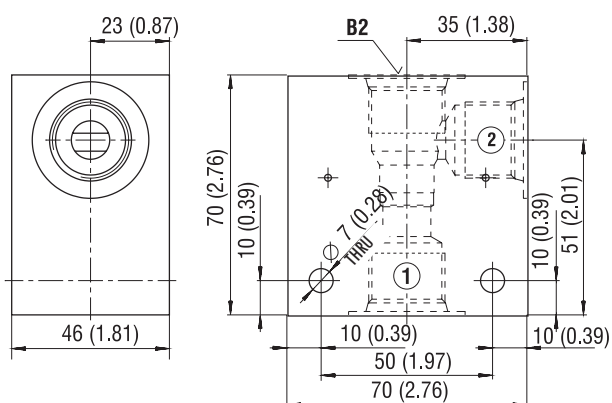
Model A3	Connecting port
	1, 2, 3
SB-A3-0101*	G1/4
SB-A3-0102*	SAE6, 9/16-18
SB-A3-0103*	G3/8
SB-A3-0104*	SAE8, 3/4-16

Body for 4-Way SIC Valve



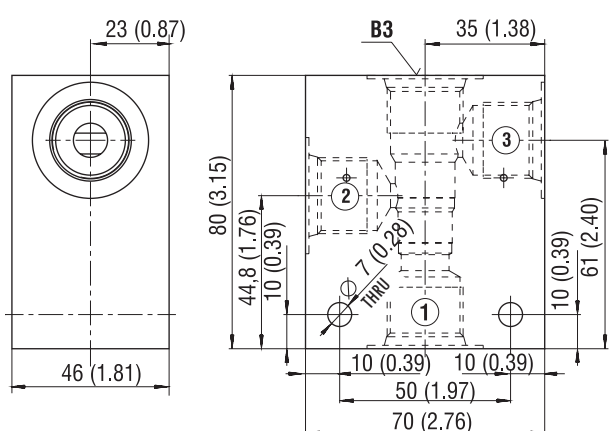
Model A4	Connecting port
	1, 2, 3, 4
SB-A4-0101*	G1/4
SB-A4-0102*	SAE6, 9/16-18
SB-A4-0103*	G3/8
SB-A4-0104*	SAE8, 3/4-16

Body for 2-Way SIC Valve



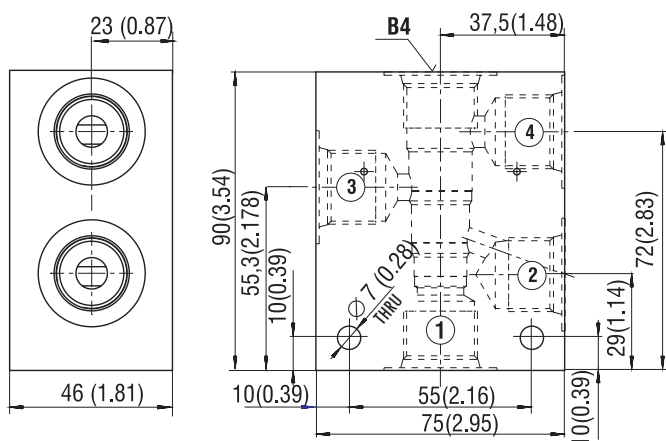
Model B2	Connecting port
	1, 2
SB-B2-0103*	G3/8
SB-B2-0104*	SAE8, 3/4-16
SB-B2-0105*	G1/2
SB-B2-0106*	SAE10, 7/8-14

Body for 3-Way SIC Valve

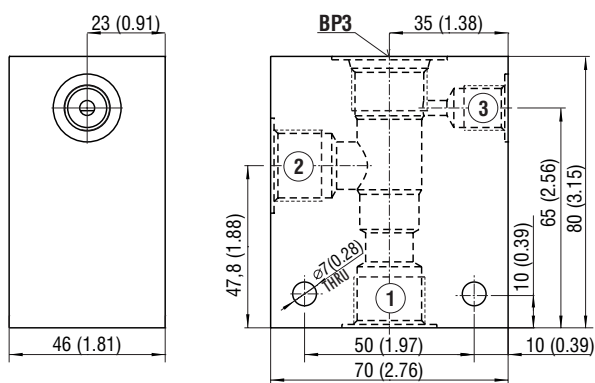


Model B3	Connecting port
	1, 2, 3
SB-B3-0103*	G3/8
SB-B3-0104*	SAE8, 3/4-16
SB-B3-0105*	G1/2
SB-B3-0106*	SAE10, 7/8-14

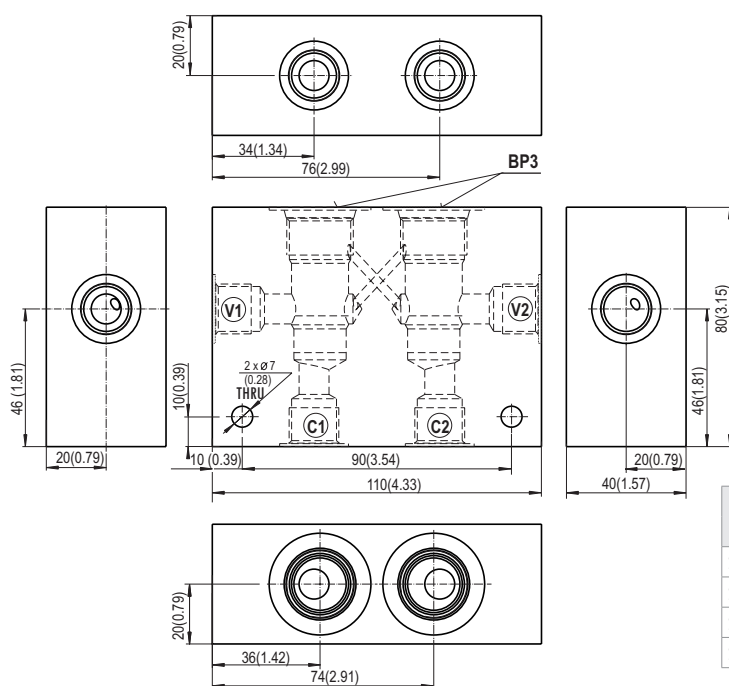
Body for 4-Way SIC Valve



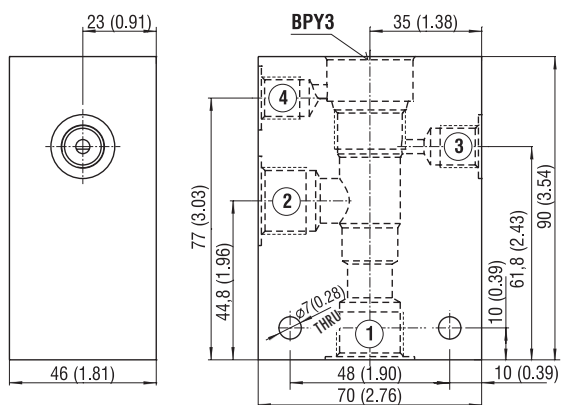
Model B4	Connecting port
	1, 2, 3, 4
SB-B4-0103*	G3/8
SB-B4-0104*	SAE8, 3/4-16
SB-B4-0105*	G1/2
SB-B4-0106*	SAE10, 7/8-14

Body for 3-Way SIC Valve


Model BP3	Connecting port	
	1, 2	3
SB-BP3-0103*	G3/8	G1/4
SB-BP3-0104*	SAE8, 3/4-16	SAE6, 9/16-18
SB-BP3-0105*	G1/2	G1/4
SB-BP3-0106*	SAE10, 7/8-14	SAE6, 9/16-18

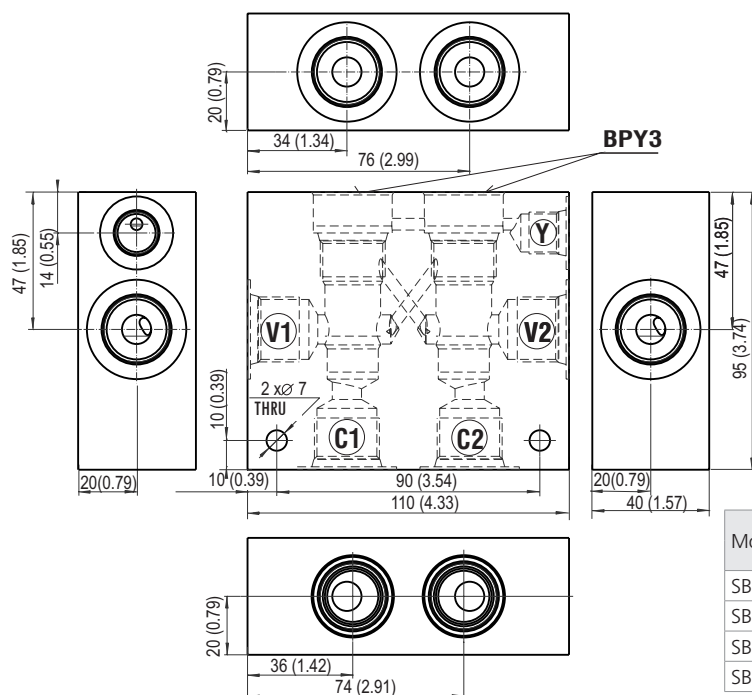
Body for 3-Way SIC Valve - Body configuration 02


Model BP3	Connecting port	
	V1, V2, C1, C2	
SB-BP3-0203*	G3/8	
SB-BP3-0204*	SAE8, 3/4-16	
SB-BP3-0205*	G1/2	
SB-BP3-0206*	SAE10, 7/8-14	

Body for 4-Way SIC Valve


Model BPY3	Connecting port	
	1, 2	3, 4
SB-BPY3-0103*	G3/8	G1/4
SB-BPY3-0104*	SAE8, 3/4-16	SAE6, 9/16-18
SB-BPY3-0105*	G1/2	G1/4
SB-BPY3-0106*	SAE10, 7/8-14	SAE6, 9/16-18

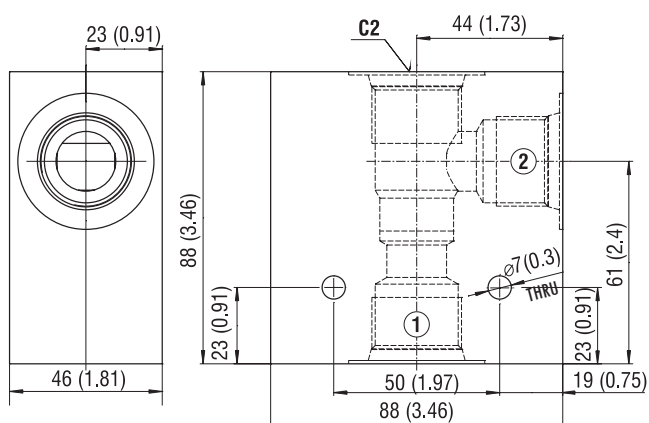
Body for 4-Way SIC Valve - Body configuration 02



Model BPY3	Connecting port	
	V1, V2, C1, C2	Y
SB-BPY3-0203*	G3/8	G1/4
SB-BPY3-0204*	SAE8, 3/4-16	SAE6, 9/16-18
SB-BPY3-0205*	G1/2	G1/4
SB-BPY3-0206*	SAE10, 7/8-14	SAE6, 9/16-18

C2 - 1-1/16-12 UN-2B

Body for 2-Way SIC Valve

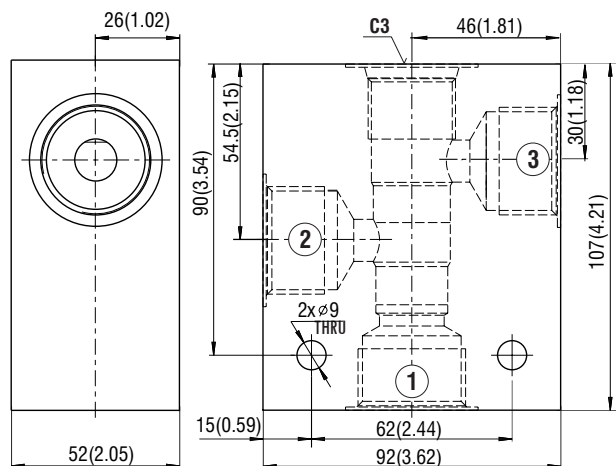


Model C2	Connecting port	
	1, 2	
SB-C2-0108*	SAE12, 1-1/16-12	

C3 - 1-1/16-12 UN-2B

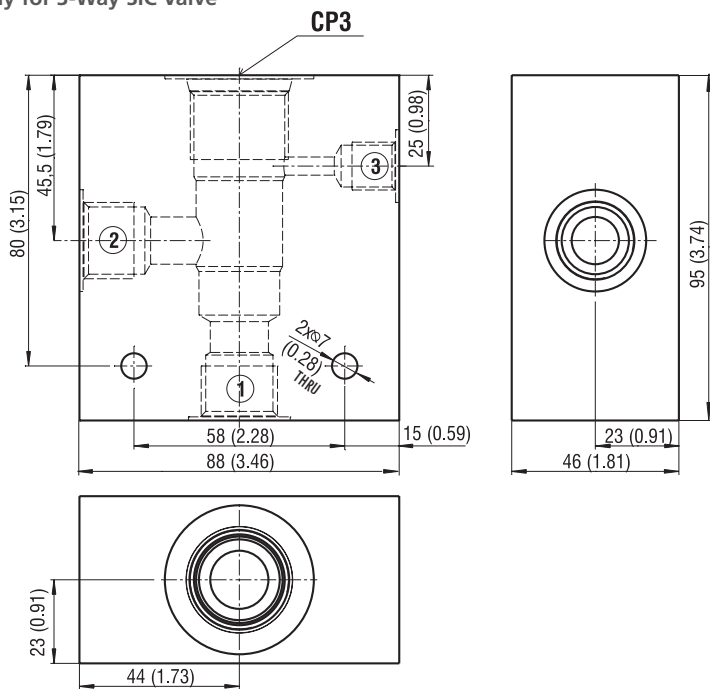
Dimensions in millimeters (inches)

Body for 3-Way SIC Valve



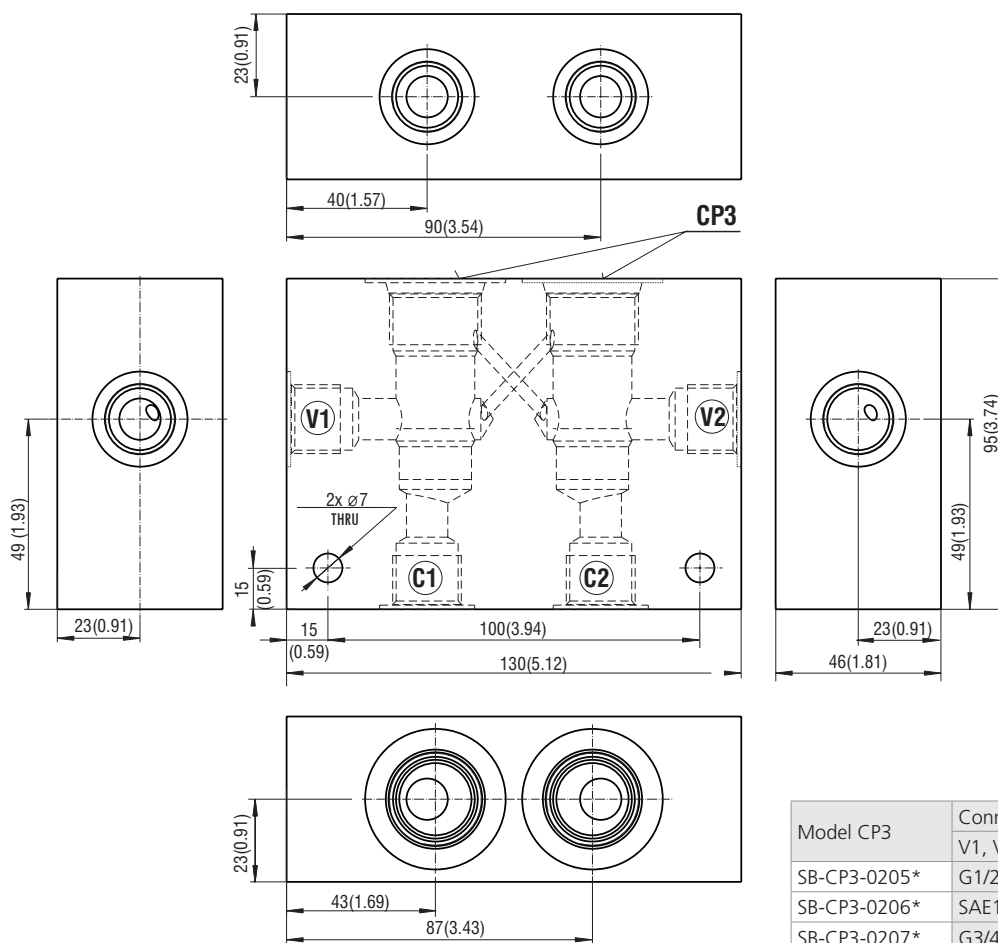
Model C3	Connecting port	
	1, 2, 3	
SB-C3-0107*	G3/4	
SB-C2-0108*	SAE12, 1-1/16-12	
SB-C3-0109*	G1	
SB-C3-0110*	SAE16, 1-5/16-12	

Body for 3-Way SIC Valve



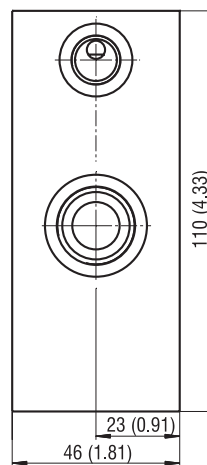
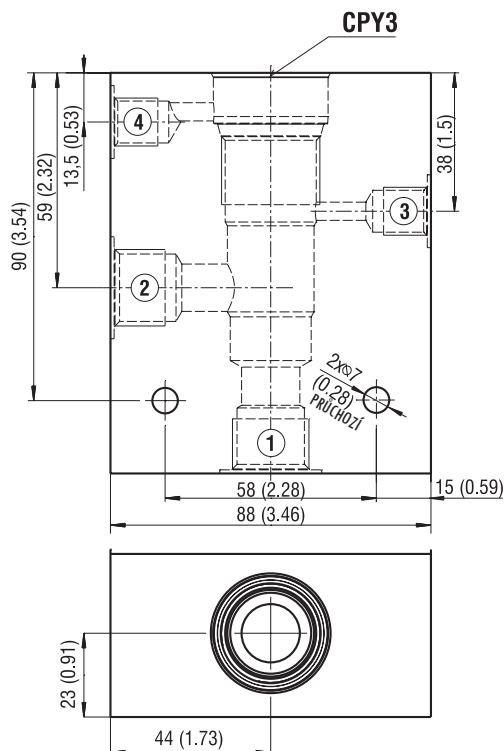
Model CP3	Connecting port	
	1, 2	3
SB-CP3-0105*	G1/2	G1/4
SB-CP3-0106*	SAE10, 7/8-14	SAE6, 9/16-18
SB-CP3-0107*	G3/4	G1/4
SB-CP3-0108*	SAE12, 1-1/16-12	SAE6, 9/16-18

Body for 3-Way SIC Valve - Body configuration 02



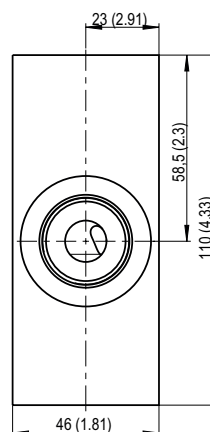
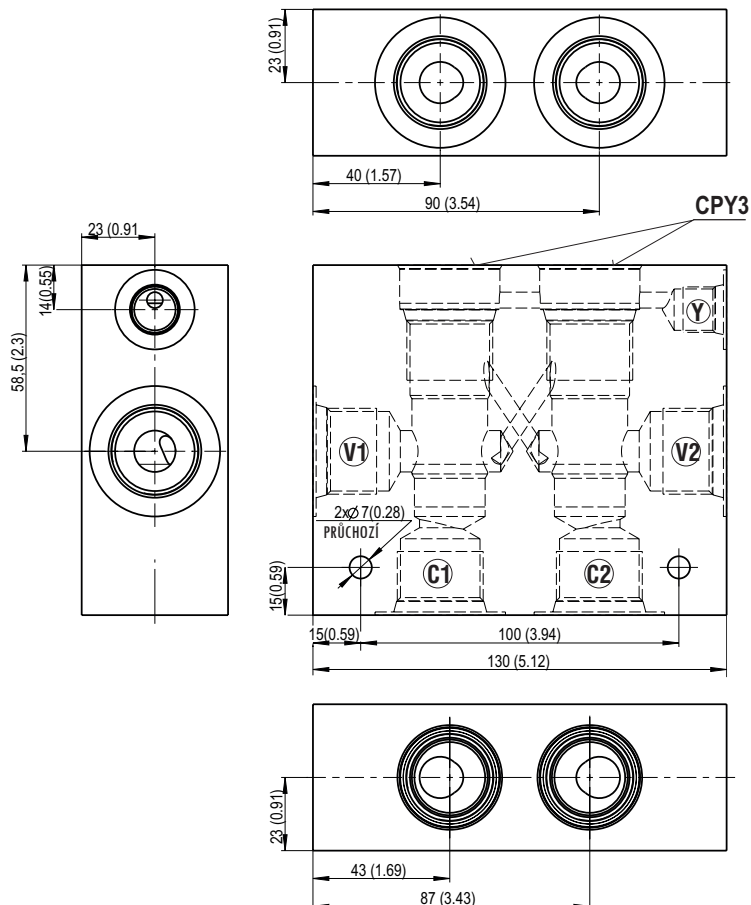
Model CP3	Connecting port	
	V1, V2, C1, C2	
SB-CP3-0205*	G1/2	
SB-CP3-0206*	SAE10, 7/8-14	
SB-CP3-0207*	G3/4	
SB-CP3-0208*	SAE12, 1-1/16	

Body for 4-Way SIC Valve



Model CPY3	Connecting port	
	1, 2	3, 4
SB-CPY3-0105*	G1/2	G1/4
SB-CPY3-0106*	SAE10, 7/8-14	SAE6, 9/16-18
SB-CPY3-0107*	G3/4	G1/4
SB-CPY3-0108*	SAE12, 1-1/16-12	SAE6, 9/16-18

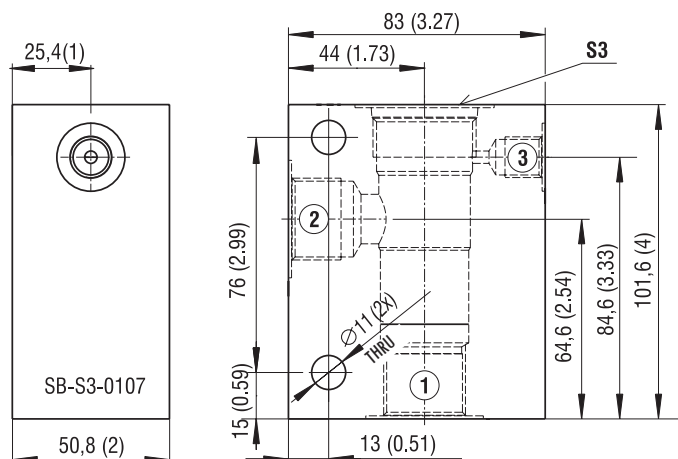
Body for 4-Way SIC Valve - Body configuration 02



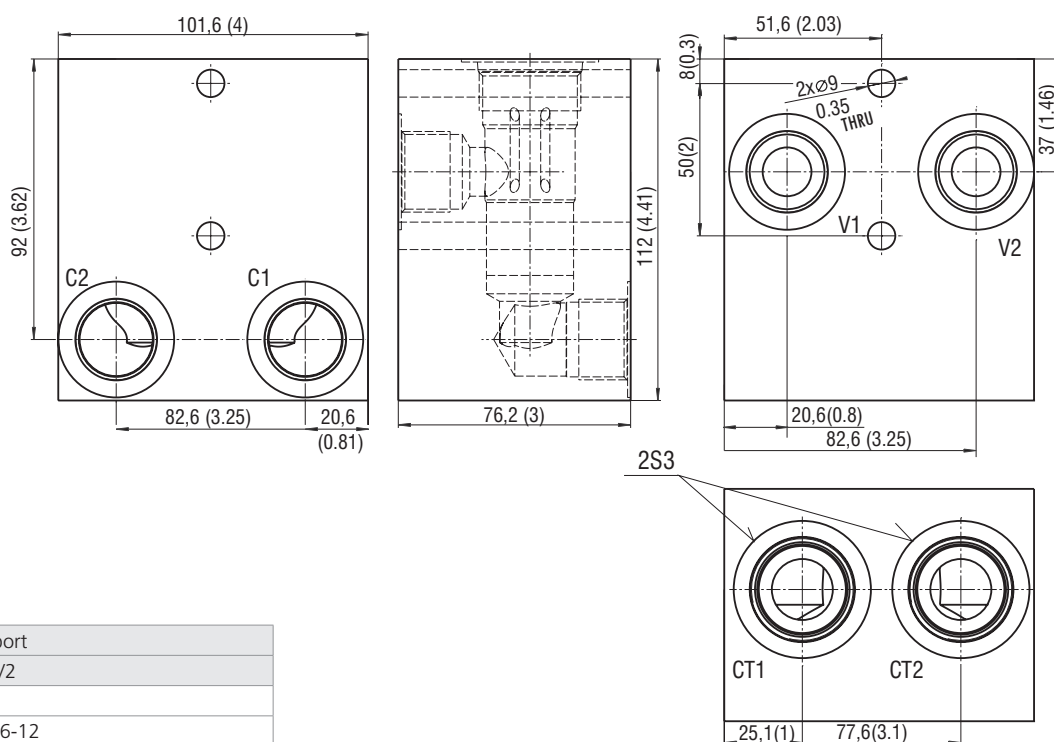
Model CPY3	Connecting port	
	V1, V2, C1, C2	Y
SB-CPY3-0205*	G1/2	G1/4
SB-CPY3-0206*	SAE10, 7/8-14	SAE6, 9/16-18
SB-CPY3-0207*	G3/4	G1/4
SB-CPY3-0208*	SAE12, 1-1/16-12	SAE6, 9/16-18

S3 - 1-5/16-12 UNF-2B

Dimensions in millimeters (inches)

Body for 3-Way SIC Valve - Body configuration 01


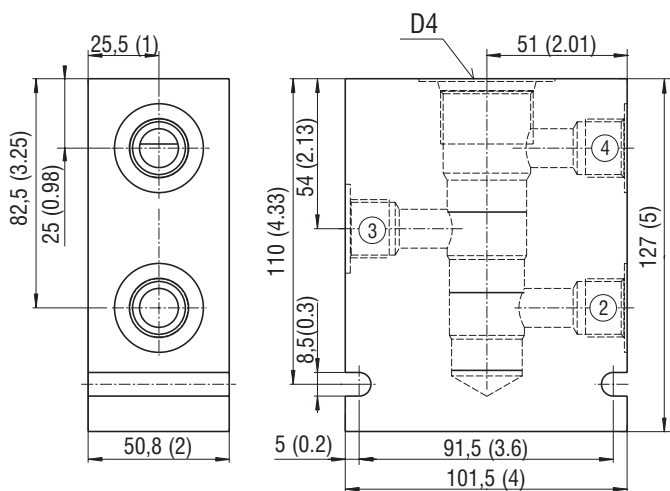
Model S3	Connecting port	
	1, 2	3
SB-S3-0107*	G3/4	G1/4
SB-S3-0108*	SAE12, 1-1/16-12	SAE6, 9/16-18

Body for 3-Way SIC Valve - Body configuration 02


Model S3	Connecting port
	C1, C2, V1, V2
SB-S3-0207*	G3/4
SB-S3-0208*	SAE12, 1-1/16-12

D4 - 1-5/16-12 UN-2B

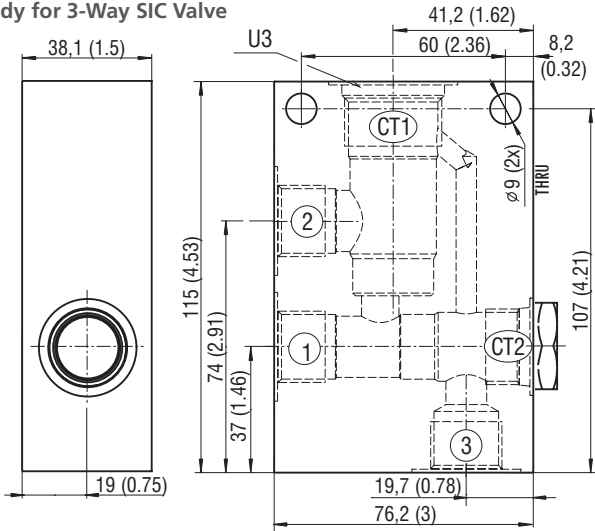
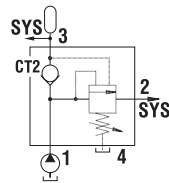
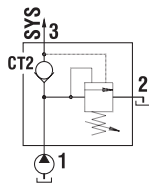
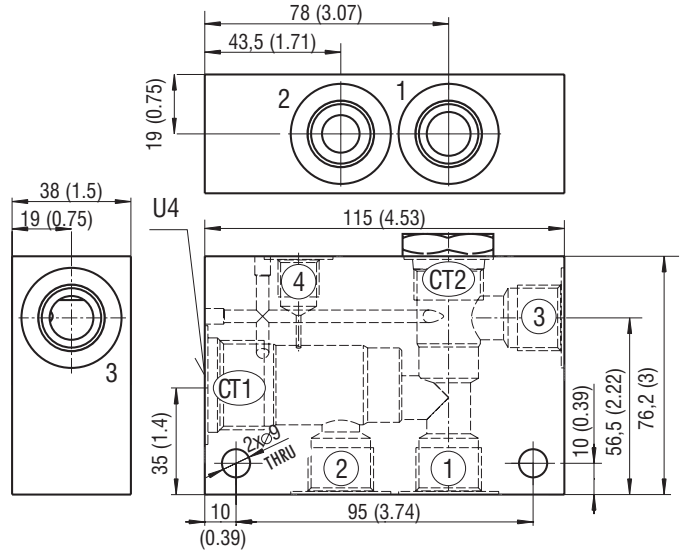
Dimensions in millimeters (inches)

Body for 4-Way SIC Valve


Model D4	Connecting port
	2, 3, 4
SB-D4-0105*	G1/2
SB-D4-0106*	SAE10, 7/8-14

U3, U4 - 1-1/8-12 UNF-2B

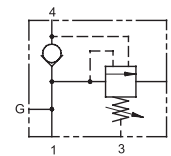
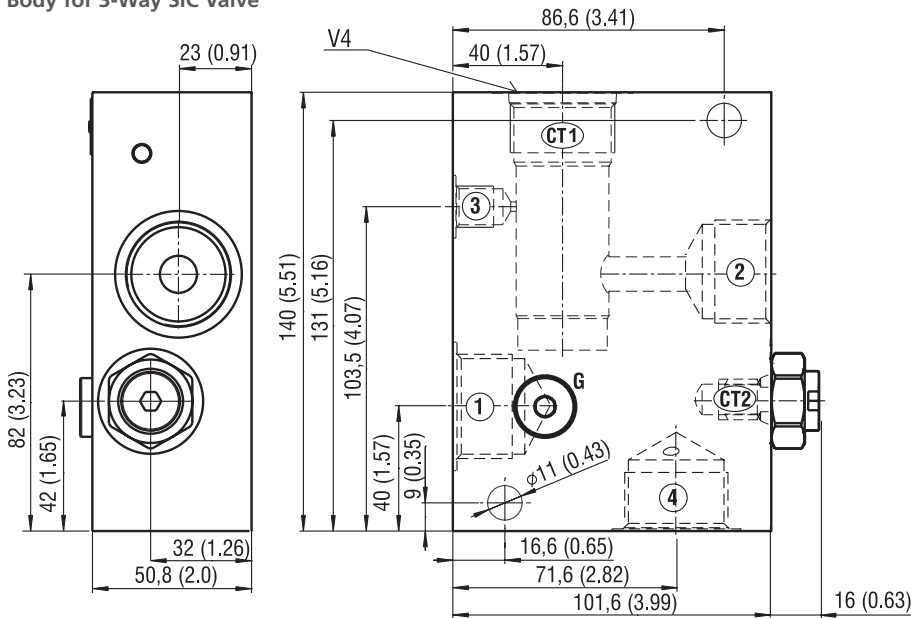
Dimensions in millimeters (inches)

Body for 3-Way SIC Valve

Body for 4-Way SIC Valve


Model U3, U4	Connecting port	
	1, 2, 3	4
SB-U3-0105*	G1/2	-
SB-U3-0106*	SAE10, 7/8-14	-
SB-U4-0105*	G1/2	G1/4
SB-U4-0106*	SAE10, 7/8-14	SAE6, 9/16-18

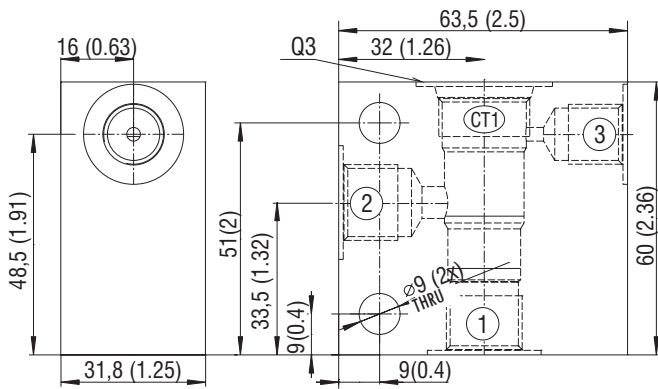
V4 - 1-5/16-12 UN-2B

Dimensions in millimeters (inches)

Body for 3-Way SIC Valve


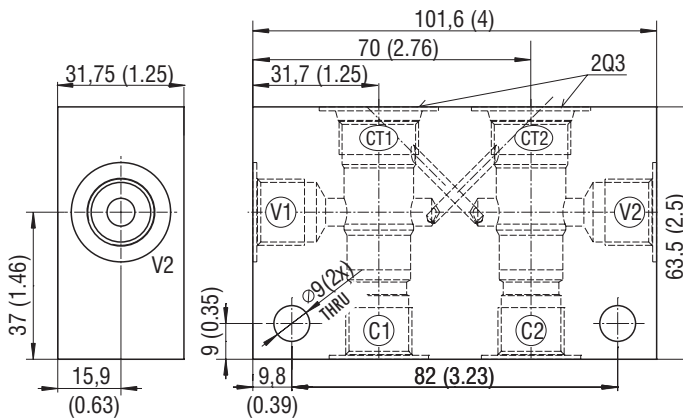
Model V4	Connecting port	
	1, 2, 4	3, G
SB-V4-0109*	G1	G1/4

Body for 3-Way SIC Valve - Body configuration 01



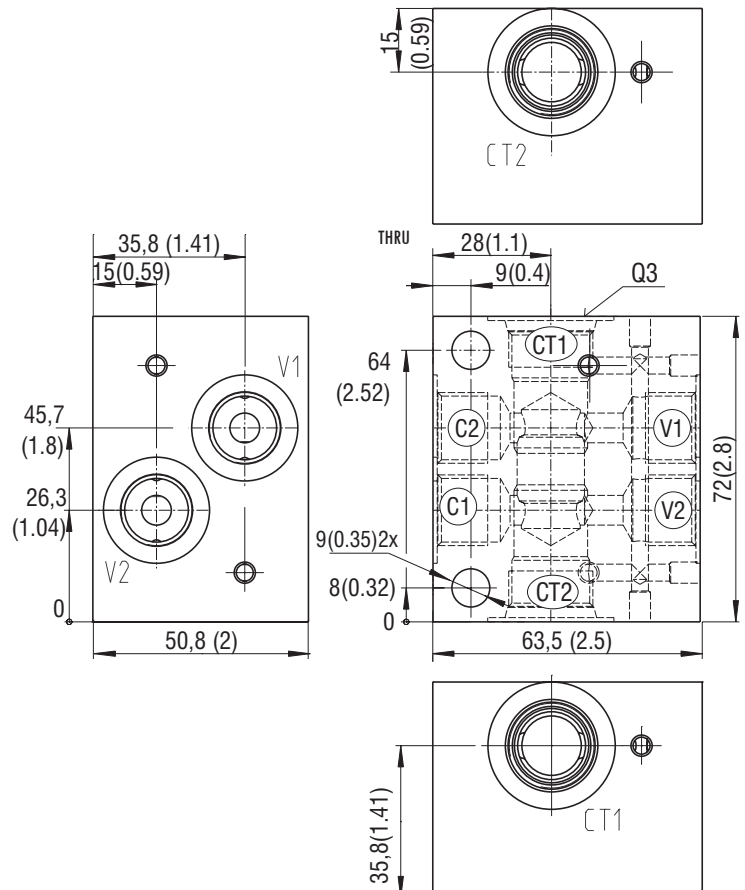
Model Q3	Connecting port	
	1, 2	3
SB-Q3-0103*	G3/8	G1/4
SB-Q3-0104*	SAE8, 3/4-16	SAE6, 9/16-18

Body for 3-Way SIC Valve - Body configuration 02



Model Q3	Connecting port	
	C1, C2, V1, V2	
SB-Q3-0203*	G3/8	
SB-Q3-0204*	SAE8, 3/4-16	

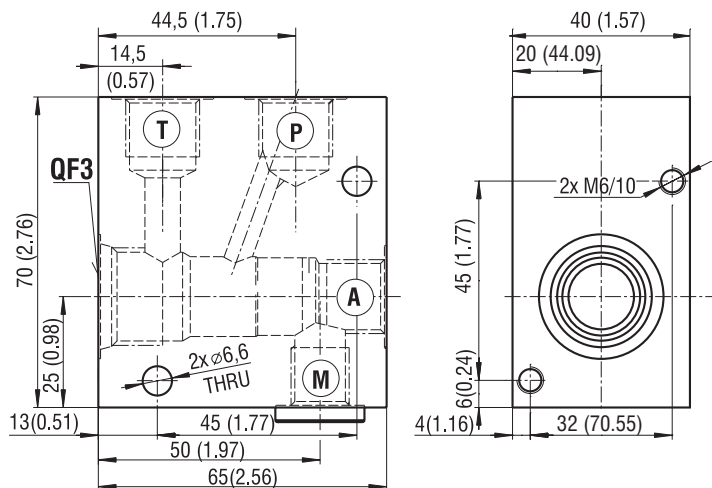
Body for 3-Way SIC Valve - Body configuration 03



Model Q3	Connecting port	
	C1, C2, V1, V2	
SB-Q3-0303*	G3/8	

QF3 - M22x1.5

Dimensions in millimeters (inches)

Body for 3-Way SIC Valve


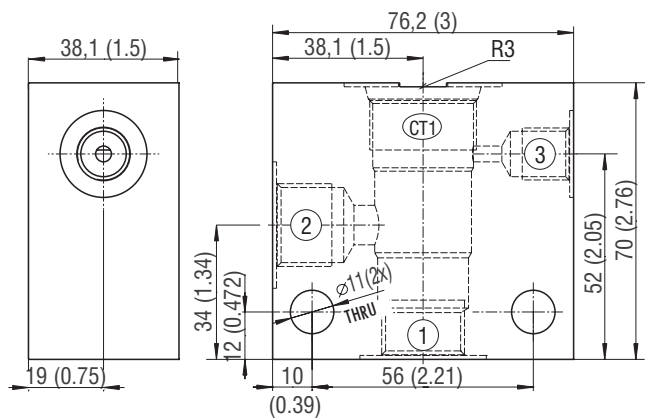
i The steel end plugs are screwed into port M. The sealing material on these end plugs is either NBR or Viton, see the ordering code.

Model QF3	Former name
SB-QF3-0103G*	RRA1-06

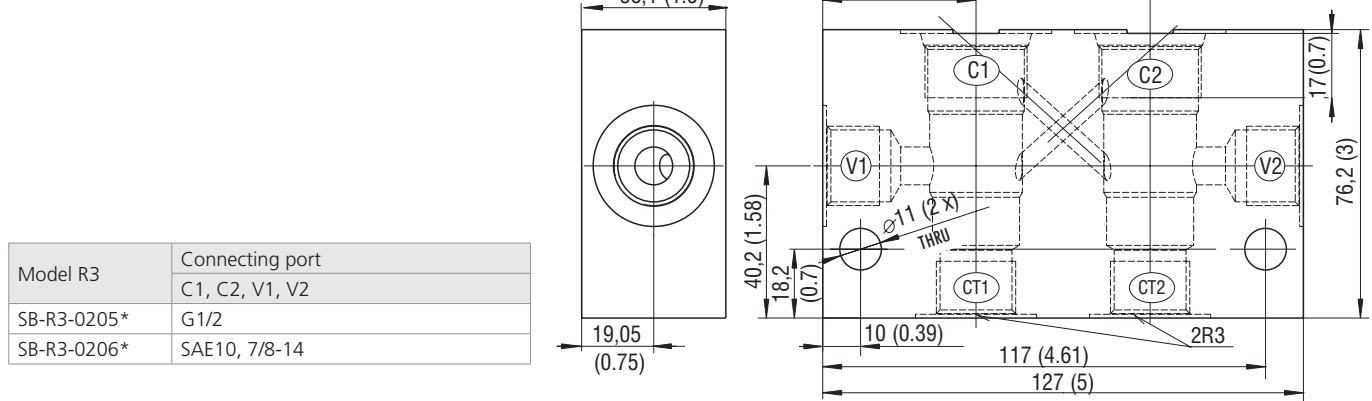
Model QF3	Connecting port	
	P, T, A	M
SB-QF3-0103G*	G3/8	G1/4

R3 - M27x1.5

Dimensions in millimeters (inches)

Body for 3-Way SIC Valve - Body configuration 01


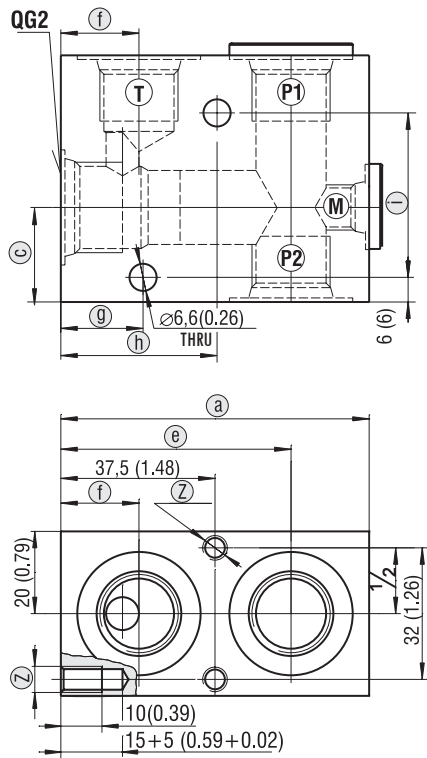
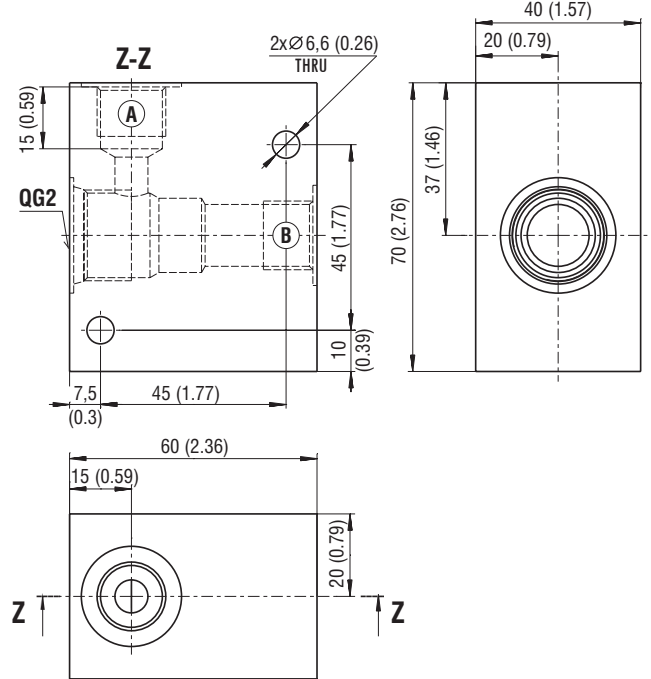
Model R3	Connecting port	
	1, 2	3
SB-R3-0105*	G1/2	G1/4
SB-R3-0106*	SAE10, 7/8-14	SAE6, 9/16-18

Body for 3-Way SIC Valve - Body configuration 02


Model R3	Connecting port
	C1, C2, V1, V2
SB-R3-0205*	G1/2
SB-R3-0206*	SAE10, 7/8-14

QG2 - M22x1.5

Dimensions in millimeters (inches)

Body for 2-Way SIC Valve
Body with gauge port M

Body without gauge port M


The steel end plugs are screwed into ports M and P1. The sealing material on these end plugs is either NBR or Viton, see the ordering code.

Body with gauge port M

Model QG2	Former name	Connecting thread	Model QG2	Former name	Connecting thread
SB-QG2-0103PMG*	RA1-06	G3/8	SB-QG2-0105PMG*	RA2-06	G1/2
SB-QG2-0103MG*	RB1-06		SB-QG2-0105MG*	RB2-06	
SB-QG2-0104PMG*	RA3-06	SAE8, 3/4-16	SB-QG2-0106PMG*	RA4-06	SAE10, 7/8-14
SB-QG2-0104MG*	RB3-06		SB-QG2-0106MG*	RB4-06	

Body without gauge port M

Model QG2	Former name	Connecting thread
SB-QG2-0103G*	R1-ROE3	G3/8
SB-QG2-0104G*	R3-ROE3	SAE8, 3/4-16
SB-QG2-0105G*	R2-ROE3	G1/2
SB-QG2-0106G*	R4-ROE3	SAE10, 7/8-14

Body with gauge port M

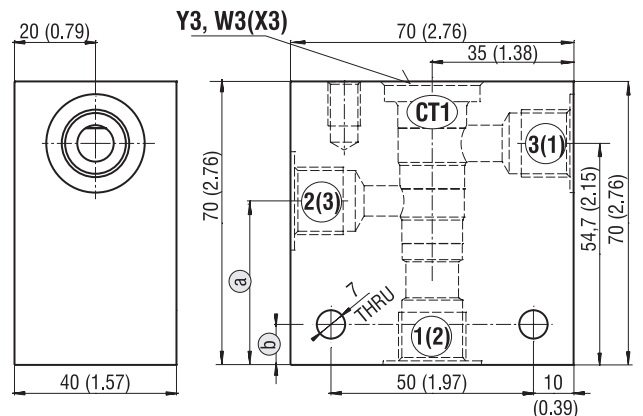
Model QG2	Connecting port					Dimensions in mm (in)									
	P1	P2	T	M	Z	a	b	c	d	e	f	g	h	i	
SB-QG2-0103PMG*	G3/8	G3/8	G3/8	G1/4	M6-6H	60 (2.36)	70 (2.76)	33 (1.30)	45 (1.77)	39 (1.54)	12.5 (0.49)	7.5 (0.30)	52.5 (2.07)	45 (1.77)	
SB-QG2-0103MG*	G3/8	-	G3/8	G1/4	M6-6H	60 (2.36)	70 (2.76)	33 (1.30)	60 (2.36)	38 (1.50)	15 (0.59)	7.5 (0.30)	38 (1.50)	45 (1.77)	
SB-QG2-0104PMG*	SAE8	SAE8	SAE8	SAE4	1/4-20UNC-2B	75 (2.95)	60 (2.36)	33 (1.30)	32 (1.26)	56 (2.20)	19 (0.75)	20 (0.78)	38 (1.50)	40 (1.57)	
SB-QG2-0104MG*	SAE8	-	SAE8	SAE4	1/4-20UNC-2B	60 (2.36)	60 (2.36)	23 (0.91)	32 (1.26)	40 (1.57)	19 (0.75)	20 (0.78)	38 (1.50)	40 (1.57)	
SB-QG2-0105PMG*	G1/2	G1/2	G1/2	G1/4	M6-6H	70 (2.76)	70 (2.76)	33 (1.30)	45 (1.77)	46 (1.81)	14 (0.55)	18 (0.70)	63 (2.48)	45 (1.77)	
SB-QG2-0105MG*	G1/2	-	G1/2	G1/4	M6-6H	60 (2.36)	70 (2.76)	33 (1.30)	45 (1.77)	38 (1.50)	16 (0.63)	7.5 (0.30)	38 (1.50)	45 (1.77)	
SB-QG2-0106PMG*	SAE10	SAE10	SAE10	SAE4	1/4-20UNC-2B	75 (2.95)	60 (2.36)	23 (0.91)	32 (1.26)	56 (2.20)	19 (0.75)	20 (0.79)	38 (1.50)	40 (1.57)	
SB-QG2-0106MG*	SAE10	-	SAE10	SAE4	1/4-20UNC-2B	60 (2.36)	60 (2.36)	23 (0.91)	32 (1.26)	40 (1.57)	19 (0.75)	20 (0.79)	38 (1.50)	40 (1.57)	

Y3, W3 (X3) - M27x2

Dimensions in millimeters (inches)

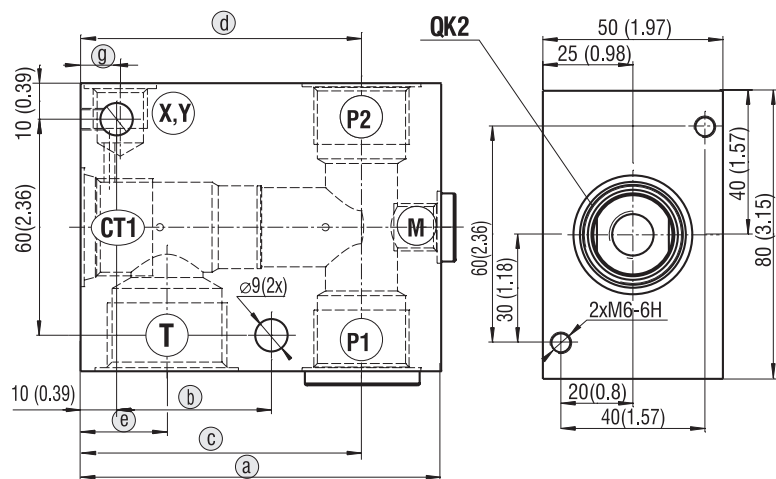
Body for 3-Way SIC Valve

Model	Connecting port 1, 2, 3	Dimensions in mm (in)	
		a	b
SB-Y3-0103*	G3/8	29.5 (1.16)	10 (0.39)
SB-W3-0103*	G3/8	37.7 (1.48)	10 (0.39)
SB-W3-0104*	SAE8, 3/4-16	37.7 (1.48)	20 (0.79)
SB-X3-0103*	G3/8	37.7 (1.48)	10 (0.39)
SB-X3-0104*	SAE8, 3/4-16	37.7 (1.48)	20 (0.79)



QK2, QL3 - M22x1.5

Dimensions in millimeters (inches)

Body for 2(3)-Way SIC Valve


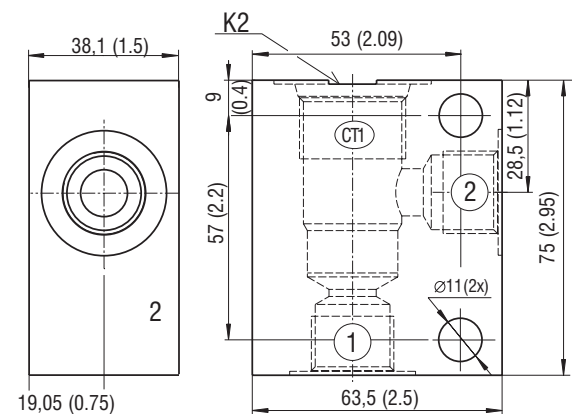
i The steel end plugs are screwed into ports M and P1. The sealing material on these end plugs is either NBR or Viton, see the ordering code.

Model	Former nam	Connecting thread
SB-QK2-0107PMG*	RA2-10	G3/4
SB-QK2-0107PMG*	RB2-10	
SB-QK2-0108PMG*	RA3-10	SAE12, 1-1/16
SB-QL3-0107XYMG*	RC2-10	G1/2

Model	Connecting port					Dimensions in mm (in)					
	P1	P2	T	M	X, Y	a	b	c	d	e	g
SB-QK2-0107PMG*	G3/4	G3/4	G1	G1/4	-	100 (3.94)	43 (1.69)	78 (3.07)	78 (3.07)	24 (0.94)	-
SB-QK2-0108PMG*	SAE12	SAE12	SAE16	SAE4	-	100 (3.94)	43 (1.69)	78 (3.07)	78 (3.07)	24 (0.94)	-
SB-QK2-0107MG*	G3/4	-	G1	G1/4	-	90 (3.54)	70 (2.76)	68 (2.68)	-	24 (0.94)	-
SB-QL3-0107XYMG*	G3/4	-	G1/2	G1/4	X-G1/4	100 (3.94)	70 (2.76)	68 (2.68)	-	35 (1.38)	11 (0.43)

K2 - M27x2

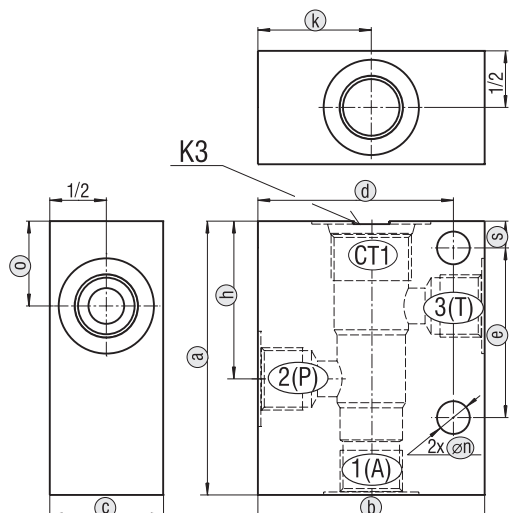
Dimensions in millimeters (inches)

Body for 3-Way SIC Valve


Model K2	Connecting port
	1, 2
SB-K2-0105*	G1/2
SB-K2-0106*	SAE10, 7/8-14

K3 - M27x2

Dimensions in millimeters (inches)

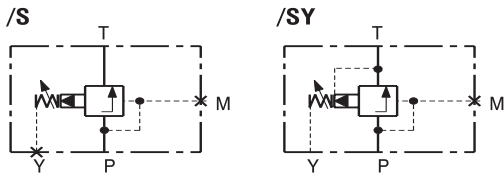
Body for 3-Way SIC Valve


Dimensions in mm (in)	a	b	c	d	e	s	o	h	k	n
SB-K3-0105*	92	76,2	38	65,7	57	9	28,5	53	38,1	10
SB-K3-0106*	(3.62)	(3.00)	(1.49)	(2.59)	(2.24)	(0.35)	(1.12)	(2.09)	(1.50)	(0.39)
SB-K3-0111*	105	80	45	70	85	10	54	24	35	11
	(4.13)	(3.15)	(1.77)	(2.76)	(3.35)	(0.39)	(2.13)	(0.94)	(1.38)	(0.43)

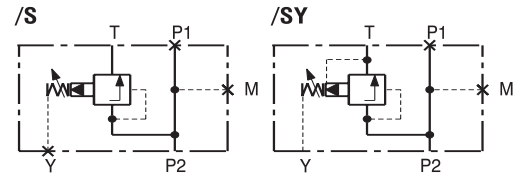
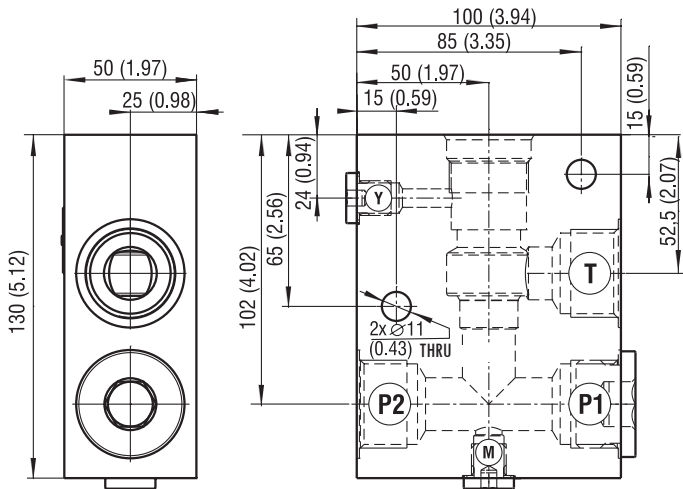
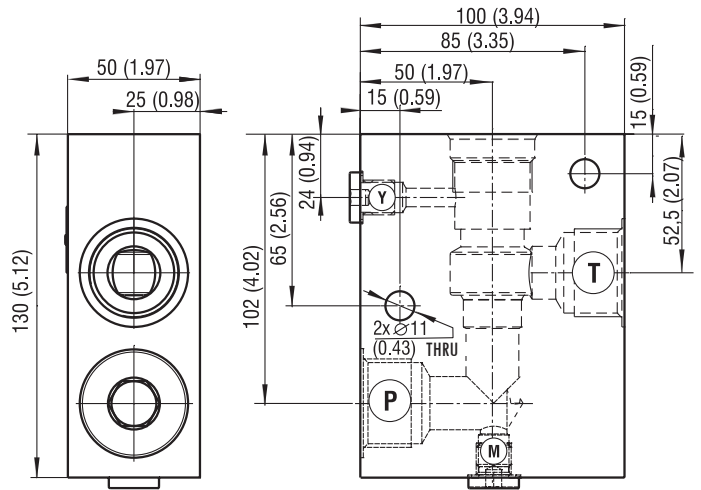
Model K3	Connecting port	
	1, 2 (A, P)	3 (T)
SB-K3-0105*	G1/2	G1/2
SB-K3-0106*	SAE10, 7/8-14	SAE10, 7/8-14
SB-K3-0111*	G3/4	G1/2

RB2 - M30x1.5

Dimensions in millimeters (inches)

 Valve VPN1-20/S plug in Y port
 Valve VPN1-20/SY without a the plug in the Y port


Model RB2	Connecting ports		
	P, T	Y	M
SB-RB2-0109XYMST-B	G1	G1/4	G1/4

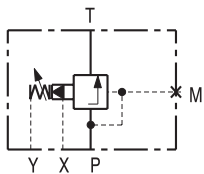


Model RB2	Connecting ports		
	P1, P2, T	Y	M
SB-RB2-0109PXYMST-B	G1	G1/4	G1/4

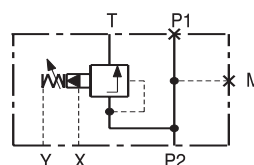
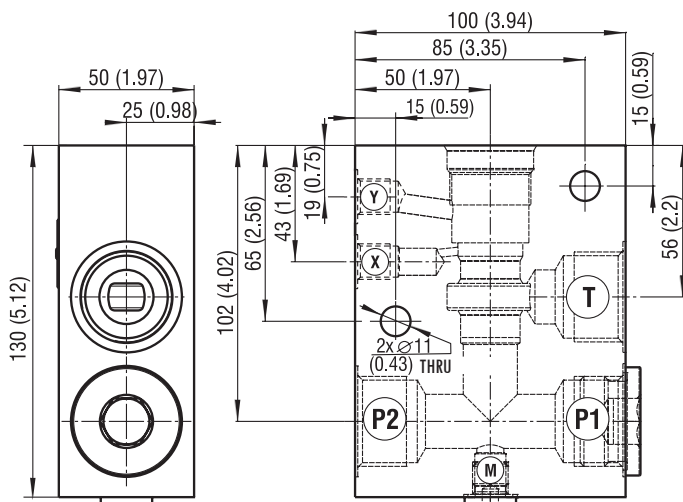
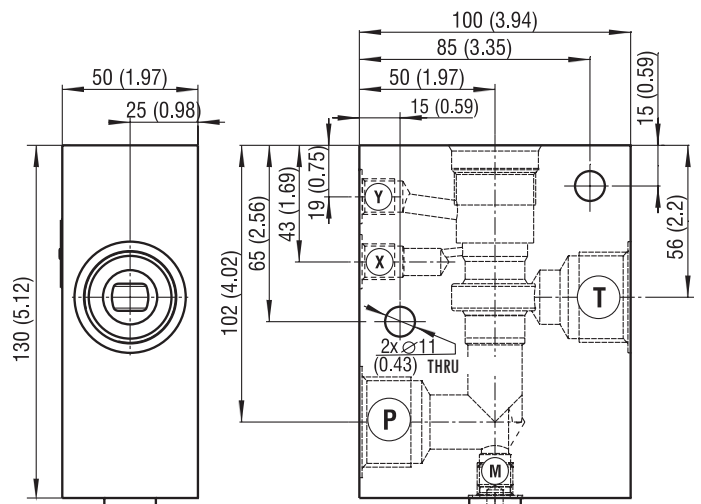
RB3 - M30x1.5

Dimensions in millimeters (inches)

Valve VPN1-20/SX without plugs in the X, Y ports

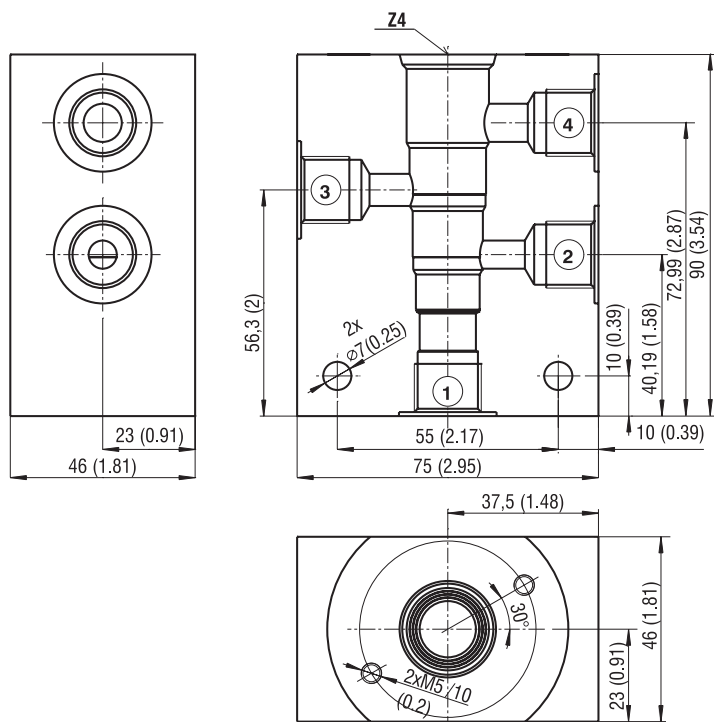


Model RB3	Connecting ports		
	P, T	X, Y	M
SB-RB3-0109XYMST-B	G1	G1/4	G1/4



Model RB3	Connecting ports		
	P1, P2, T	X, Y	M
SB-RB3-0109PXYMST-B	G1	G1/4	G1/4

Body for 4-Way SIC Valve



Model Z4	Connecting port
	1, 2, 3, 4
SB-Z4-0103AL	G3/8

Содержание

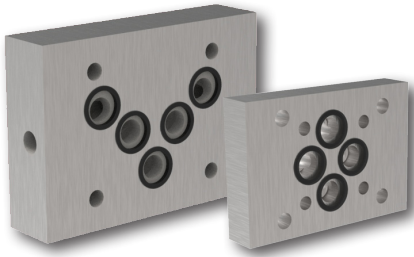
DA-0604, 1006	2
DK1-04 (06, 10)	4
DM04 (06,10)	6
DP-04 (06, 10)	10
DP6	18
DR1-04	20
DR2-06	22
PD04	24
PD06	30
PD10	36
SB-04 (06, 10)	42
ZB06	54
ZB10	58

Adaptor Plate

DA-06/04, 10/06

Size 06/04, 10/06 (D03/D02, D05/D03) • p_{max} 350 bar (5800 PSI)

Technical Features

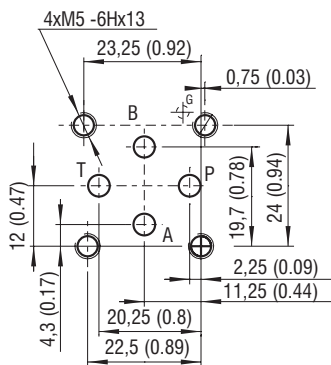


- › Adaptor plates Size 06 / Size 04 and Size 10 / Size 06 (manifold side / valve side)
- › NBR or Viton seal rings
- › Steel plates are zinc-coated for 520 h protection in NSS acc. to ISO 9227
- › Two types of adaptor plates Size 10 / Size 06
 - low cost type interchanges the channels A and B each other (Model No. 2)
 - standard type preserves the A-A and B-B connection (Model No. 3)

Modular valves mounting surface		06/04 (D03/D02)	10/06 (D05/D03)
Max. operating pressure	bar (PSI)	350 (5800)	
	Data Sheet	Type	
General information	GI_0060	Products and operating conditions	
Mounting interface	SMT_0019	Size 04, Size 06, Size 10	
Studs and nuts for vertical stacking assemblies	D02,D03,D05_0020		

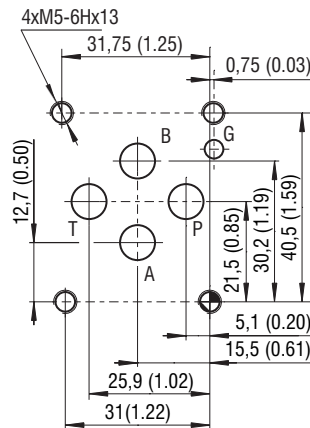
Mounting Interface ISO 4401

ISO 4401-02-01-0-05



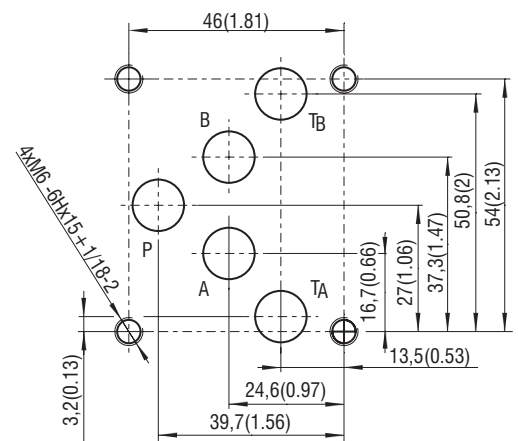
Ports P, A, B, T - max. \varnothing 4.5 mm (0.18 in)

ISO 4401-03-02-0-05



Ports P, A, B, T - max. \varnothing 7.5 mm (0.29 in)

ISO 4401-05-04-0-05



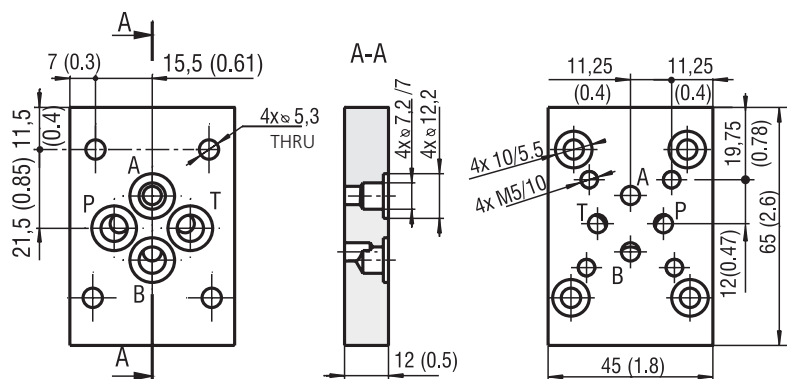
Ports P, A, B, T - max. \varnothing 11.2 mm (0.44 in)

Functional Symbols Available Model

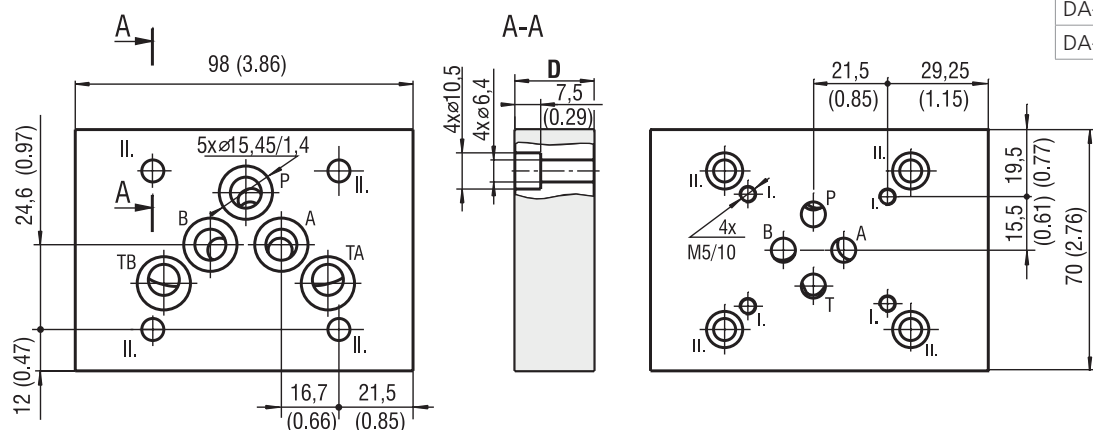
Adaptor plate size	06/04	10/06	10/06
Model No.	1	2	3
Size 04			
Size 06			

Dimensions in millimeters (inches)

DA-06/04-35-1-ST*



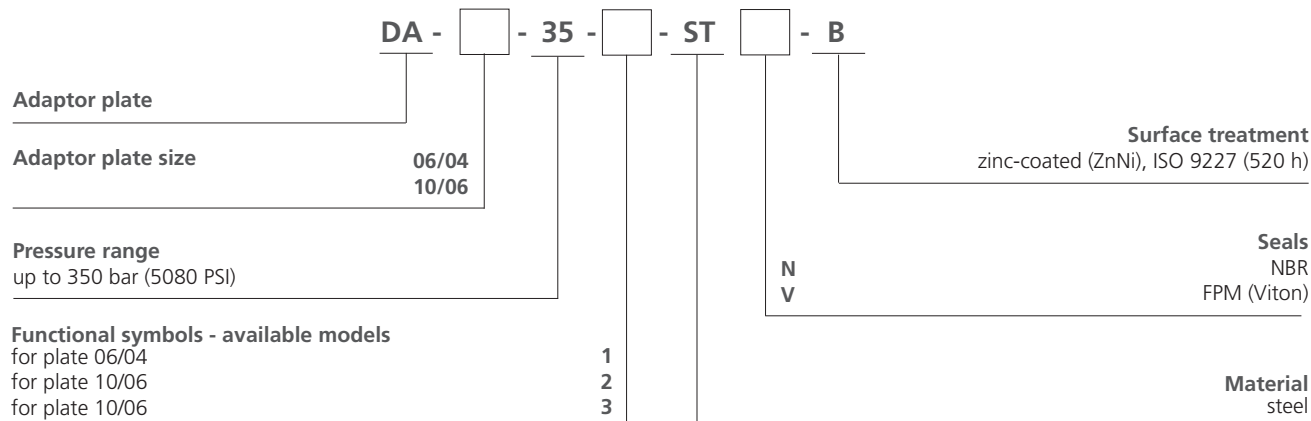
DA-10/06-35-2-ST*
DA-10/06-35-3-ST*



Ordering code	Dimension
	D mm (in)
DA-10/06-35-2-ST*	23 (0.91)
DA-10/06-35-3-ST*	46 (1.81)

Model	Ordering code	SAP No.	Weight kg (lbs)	Fixing screws	Pcs	SAP No.
1	DA-06/04-35-1-STN-B	16109000	0.24 (0.53)	M5x16	4	17060700
	DA-06/04-35-1-STV-B	41146500				
2	DA-10/06-35-2-STN-B	24601600	1.13 (2.49)	M6x25	4	20238400
	DA-10/06-35-2-STV-B	41143900				
3	DA-10/06-35-3-STN-B	41146700	2.30 (5.07)	M6x50	4	20239200
	DA-10/06-35-3-STV-B	41146600				

Ordering Code

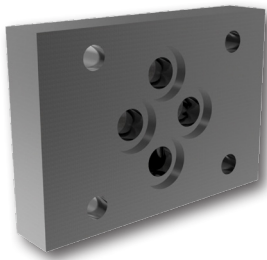


See Functional symbols, page 1

Blanking Plates for ISO 4401 Modular Valve

DK1-04 (06, 10)

Size 04, 06, 10 (D02, D03, D05) • p_{max} 320 bar (4700 PSI)



Technical Features

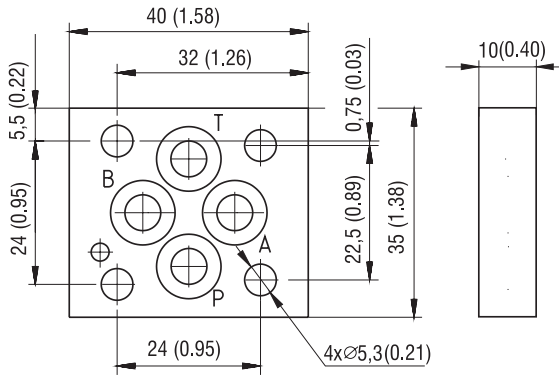
- › Mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02, 03, 05)
- › Wide range of hydraulic connections
- › NBR and Viton seals
- › Enhanced surface protection for mobile sector up to 520 h salt spray acc. to ISO 9227

Functional Symbols

DK1-04(06)/32-1	DK1-04(06)/32-2	DK1-04(06)/32-3	DK1-04(06)/32-4	DK1-04(06)/32-5	DK1-04(06)/32-6
DK1-04(06)/32-7	DK1-04(06)/32-8	DK1-04(06)/32-9	DK1-04(06)/32-10	DK1-04(06)/32-11	DK1-10/32-2

Dimensions in millimeters (inches)

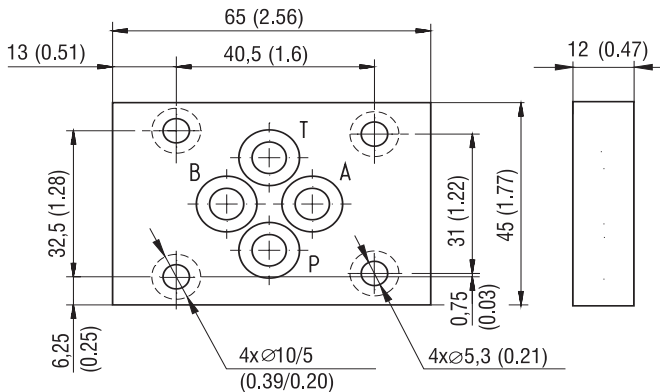
DK1-04/32*



Sealing rings NBR / FPM (Viton)	Weight plates [kg (lbs)]
4 pcs. square rings 7.65x1.68 NBR70	0.10 (0.22)
4 pcs. square rings 7.5x1.8 V75	

Sealing rings are delivered with each plate (quantity and dimensions see the table above).

DK1-06/32*

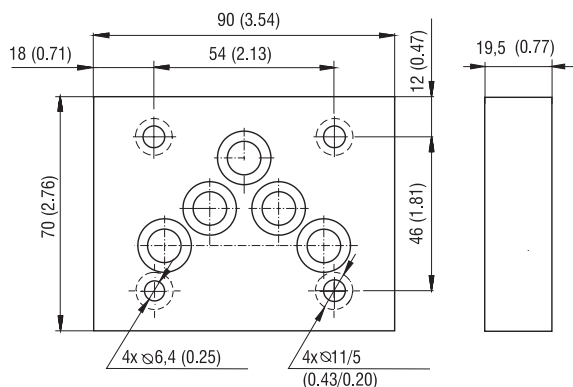


Sealing rings NBR / FPM (Viton)	Weight plates [kg (lbs)]
4 pcs. square rings 9.25x1.68 NBR70	0.32 (0.71)
4 pcs. square rings 9.25x1.78 V90	

Sealing rings are delivered with each plate (quantity and dimensions see the table above).

Dimensions in millimeters (inches)

DK1-10/32*



Sealing rings NBR / FPM (Viton)	Weight plates [kg (lbs)]
5 pcs. square rings 12.42x1.68 NBR70	1.00 (2.20)
5 pcs. square rings 12.42x1.68 V90	

Sealing rings are delivered with each plate (quantity and dimensions see the table above).

Ordering Code

DK1 - /32- - B

Blanking plates for ISO 4401 modular valves

Size, mounting interface acc. to

ISO 4401-02-01-0-05, DIN 24340 (CETOP 02)	04
ISO 4401-03-02-0-05, DIN 24340 (CETOP 03)	06
ISO 4401-05-04-0-05, DIN 24340 (CETOP 05)	10

Surface treatment
zinc-coated (ZnNi), ISO 9227 (520 h)

Functional symbol, port connections

A - B / P, T closed*	1
All ports closed	2
P - A / B, T closed*	3
P - A / B - T *	4
P - B / A, T closed*	5
P - B / A - T *	6
P - T / A, B closed*	7
A - B - T / P closed*	8
P - A - B / T closed*	9
A - T / P, B closed*	10
B - T / P, A closed*	11

N
V

Seals
NBR
FPM (Viton)

* only available for Sizes 04 / 06

DM04 (06,10)

Size 04 (06,10) • Al p_{max} 250 bar (3600 PSI)



Technical Features

- › Modular plate with side outlets for pressure sensing, pressure control signal or to connect individual parts to the circuit
- › Subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02, 03 and 05) Size 04, 06 and 10
- › Wide range of varied connection plates
- › Plate material – Aluminium, EN AW-7075 T4

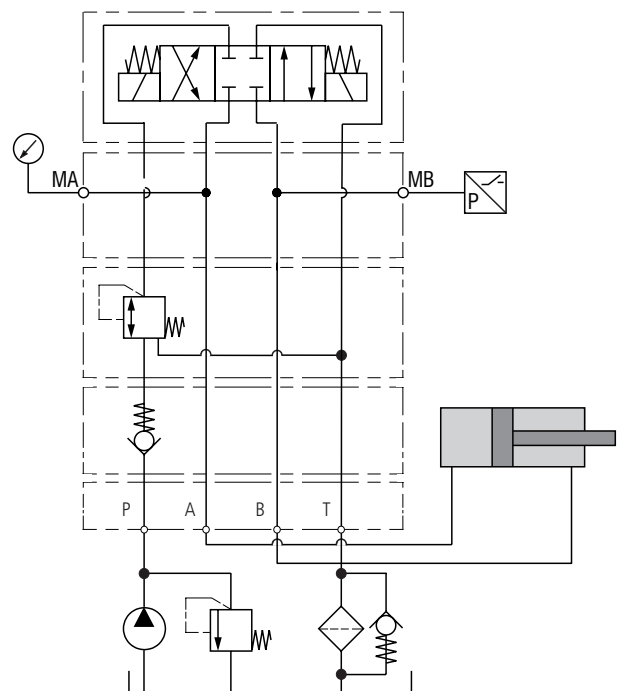
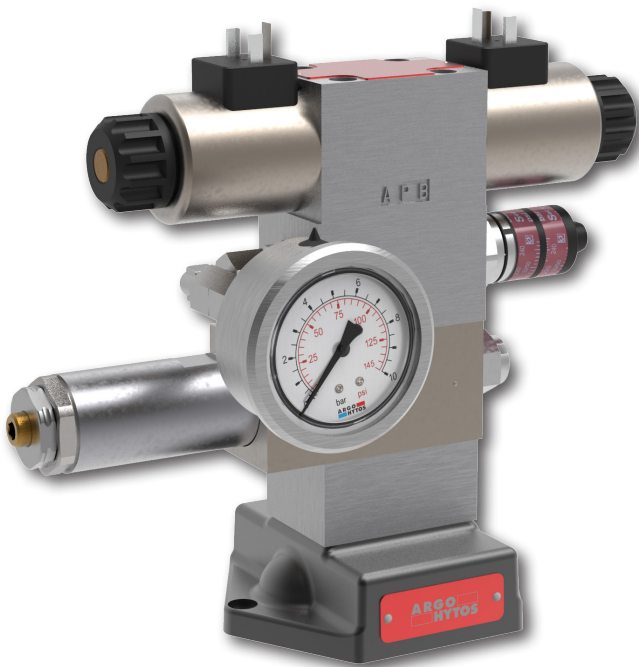
Technical Data

Valve size	04 (D02)	06 (D03)	10 (D05)
Max. operating pressure	bar (PSI)		
Weight	see Pages 3 - 4		

	Datasheet	Type
General information	GI_0060	Products and operating conditions
Stud kits for ISO 02 (03, 05) Sandwich Bodies D02, D03 and D05_HA 0020		

Screw sets - have to be ordered separately see datasheet Stud kits for ISO 02 (03, 05) Sandwich Bodies (D02, D03 and D05_HA 0020).

Example - block with measuring plate, manometer and a pressure switch



Ordering Code

Modular Measuring and Functional Plates

Size, mounting interface acc. to
 ISO 4401-02-01-0-05, (CETOP 02) **04**
 ISO 4401-03-02-0-05, (CETOP 03) **06**
 ISO 4401-05-04-0-05, (CETOP 05) **10**

Number of ports

Code of the Functional Symbol

DM - 2 - 1 AL N -

No designation

Surface treatment
without treatment

Seals
NBR

Material plate
Aluminium EN AW-7075 T4 (250 bar (3630 PSI))

Connecting thread
G1/4

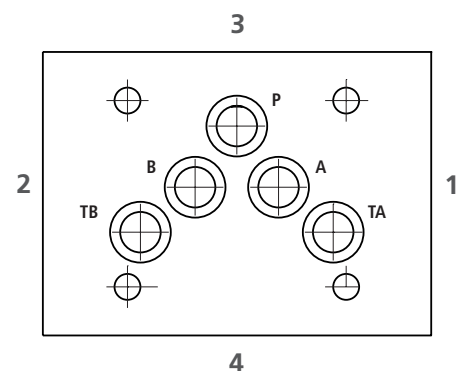
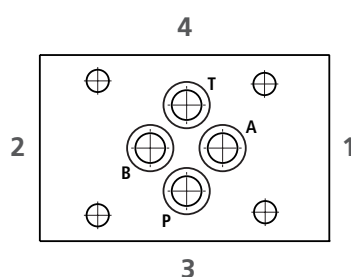
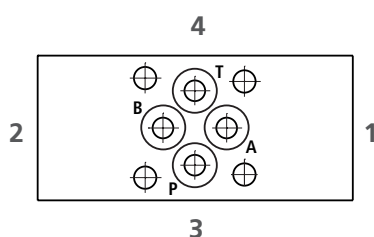
2	P1P2		Two connected P outputs on 1 and 2 side
2	P1T2		Output P on 1 side and output T on 2 side
2	P2T1		Output P on 2 side and output T on 1 side
2	P2A1		Output P on 2 side and output A on 1 side
2	P1B2		Output P on 1 side and output B on 2 side
2	A1B2		Output A on 1 side and output B on 2 side
2	AB12		Outputs A and B connected together
2	A1A2		Two connected A outputs on 1 and 2 side
2	B1B2		Two connected B outputs on 1 and 2 side

Meaning of numbers in the code of the functional symbol

Size 04 (D02)

Size 06 (D03)

Size 10 (D05)



Dimensions in millimeters (inches) - preferred types

Not all listed combinations of key types are produced as standard. A list of the preferred types are shown in the table. For the identification and verification of manufacturability of other versions, please contact our technical department.

DM04-* Illustration pictures

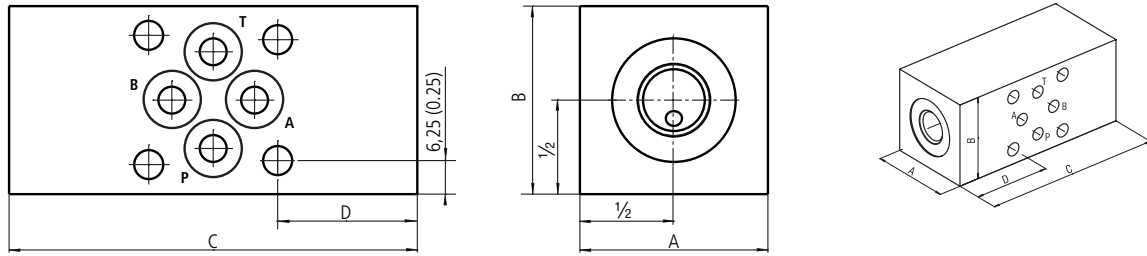


Plate size	Cavity thread	Ordering code	Dimensions AxBxC/D mm (in)	Weight kg (lbs)	Ordering Number
04	G1/4	DM04-2A1B2-1ALN	35x35x76/26 (1.38x1.38x2.99/1.02)	0.24 (0.53)	23651700
	G1/4	DM04-2P1P2-1ALN	35x35x76/26 (1.38x1.38x2.99/1.02)	0.24 (0.53)	40218700
	G1/4	DM04-2P2T1-1ALN	35x35x76/26 (1.38x1.38x2.99/1.02)	0.24 (0.53)	42168700
	G1/4	DM04-2P2A1-1ALN	35x35x76/26 (1.38x1.38x2.99/1.02)	0.24 (0.53)	42168800
	G1/4	DM04-2P1B2-1ALN	35x35x76/26 (1.38x1.38x2.99/1.02)	0.24 (0.53)	42169000

DM06-* Illustration pictures

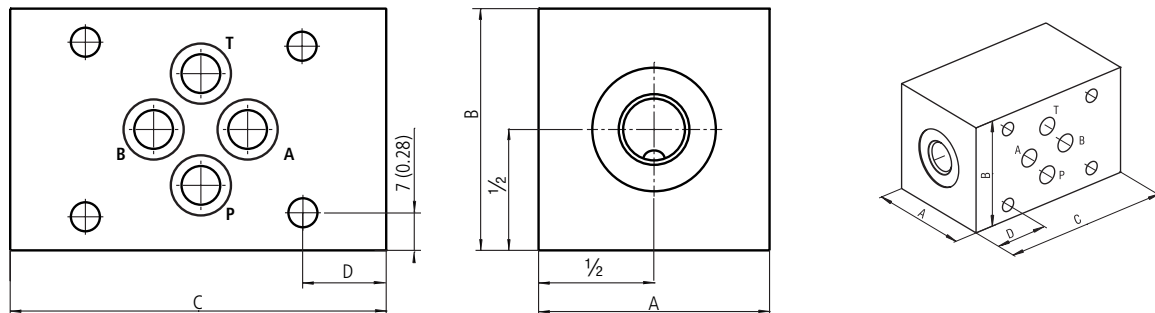


Plate size	Cavity thread	Ordering code	Dimensions AxBxC/D mm (in)	Weight kg (lbs)	Ordering Number
06	G1/4	DM06-2A1A2-1ALN	43x45x68/12,5 (1.69x1.77x2.68/0.49)	0.50 (1.10)	42170000
	G1/4	DM06-2A1B2-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	16771900
	G1/4	DM06-2AB12-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	42170200
	G1/4	DM06-2B1B2-1ALN	43x45x68/12,5 (1.69x1.77x2.68/0.49)	0.50 (1.10)	42170300
	G1/4	DM06-2P1P2-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	40218900
	G1/4	DM06-2P2T1-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	40219200
	G1/4	DM06-2P2A1-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	42170600
	G1/4	DM06-2P1B2-1ALN	43x45x70/14 (1.69x1.77x2.76/0.55)	0.53 (1.17)	42170700

DM10-* Illustration pictures

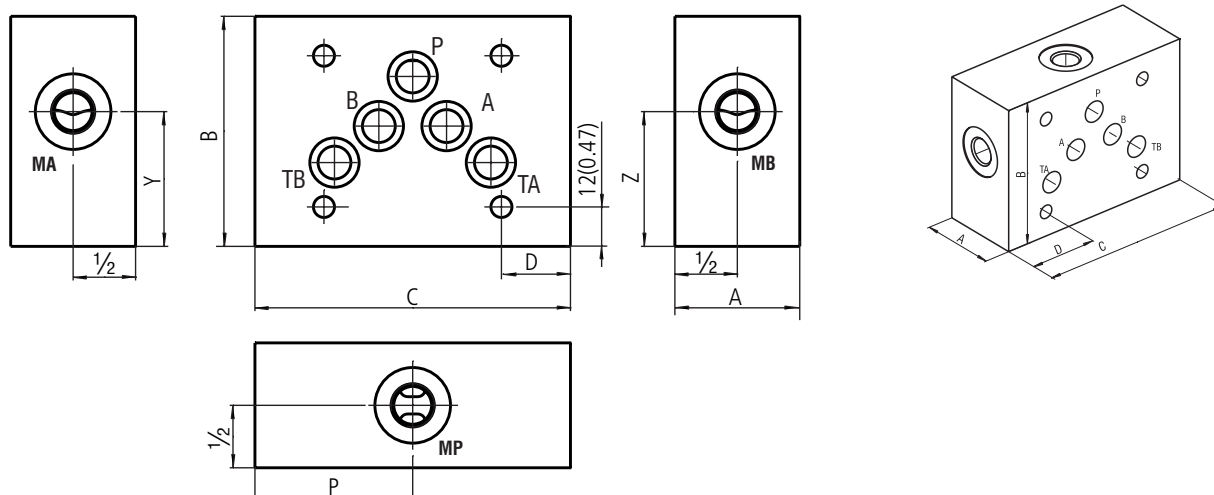
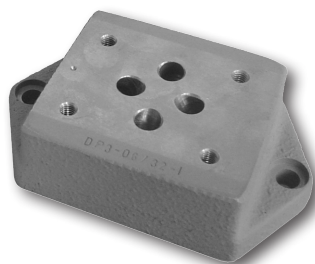


Plate size	Cavity thread	Ordering code	Port	Y mm (in)	Port	Z mm (in)	Port	P mm (in)	Dimensions AxBxC/D mm (in)	Weight kg (lbs)	Ordering Number
10	G1/4	DM10-2A1B2-1ALN	MA	41 (1.61)	MB	41 (1.61)	-	-	38x70x96/21 (1.50x2.76x3.78/0.83)	0.50 (1.10)	40219300
	G1/4	DM10-2P1P2-1ALN	MP	22.5 (0.86)	MP	22.5 (0.86)	-	-	43x70x96/21 (1.69x2.76x3.78/0.83)	0.74 (1.63)	42171100
	G1/4	DM10-2P1T2-1ALN	MP	47.5 (1.87)	MT	25.5 (1.00)	-	-	43x70x96/21 (1.69x2.76x3.78/0.83)	0.74 (1.63)	42171200
	G1/4	DM10-2P2A1-1ALN	MA	40.5 (1.59)	MP	47.5 (1.87)	-	-	43x70x96/21 (1.69x2.76x3.78/0.83)	0.74 (1.63)	42171300

DP-04 (06, 10)

Size 04, 06, 10 (D02, D03, D05) • p_{max} 350 bar (5100 PSI)



Technical Features

- › Subplates for individual mounting of hydraulic components in hydraulic circuits with connections realized by tubes or hoses
- › Universal subplates to connect any components with installation dimensions acc. to ISO 4401, (DIN 24340 and CETOP)
- › installation dimensions of Size 04: ISO 4401-02-01-0-05, (CETOP 02 - RP121H)
- › installation dimensions of Size 06: ISO 4401-03-02-0-05, (DIN 24340-A6)
- › installation dimensions of Size 10: ISO 4401-05-04-0-05, (DIN 24340-A10)
- › Special subplates - see survey of applications
- › The subplate surface is phosphated
- › The top ground surface with mounting pattern acc. to ISO 4401 is protected with a transport plate

Models overview	Rated pressure bar (PSI)	Mounting interface	Product example / Datasheet No.
DP1-04/32-A* DP1-04/32-B*	320 (4640)	ISO 4401-AA-02-4-A DIN 24340-A4	RPE2-04* / (4012)
DP3-04/32-A* DP4-04/32-A*	320 (4640)	ISO 4401-02-01-0-05 CETOP 02 - RP121H	RPE3-04* / (4014)
DP2-06/35-A* DP2-06/35-B* DP2-06/35-C*	350 (5080)	ISO 4401-03-02-0-05 DIN 24340-A6 CETOP 03	RPE3-06* / (4010)
DP1-10/35-A* DP1-10/35-B* DP1-10/35-C*	350 (5080)	ISO 4401-05-04-0-05 DIN 24340-A10 CETOP 05	RPE4-10* / (4039)

Ordering Code

DP* [] / [] - [] - []

Subplates for ISO 4401 modular valve

Design version, plate size mounting interface

ISO 4401-AA-02-4-A (DIN 24340-A4)	1 - 04
ISO 4401-02-01-0-05 (CETOP 02)	3 - 04
ISO 4401-02-01-0-05 (CETOP 02)	4 - 04
ISO 4401-03-02-0-05 (CETOP 03)	2 - 06
ISO 4401-03-02-0-05 (CETOP 03)	3 - 06
ISO 4401-05-04-0-05 (CETOP 05)	1 - 10

Rated pressure

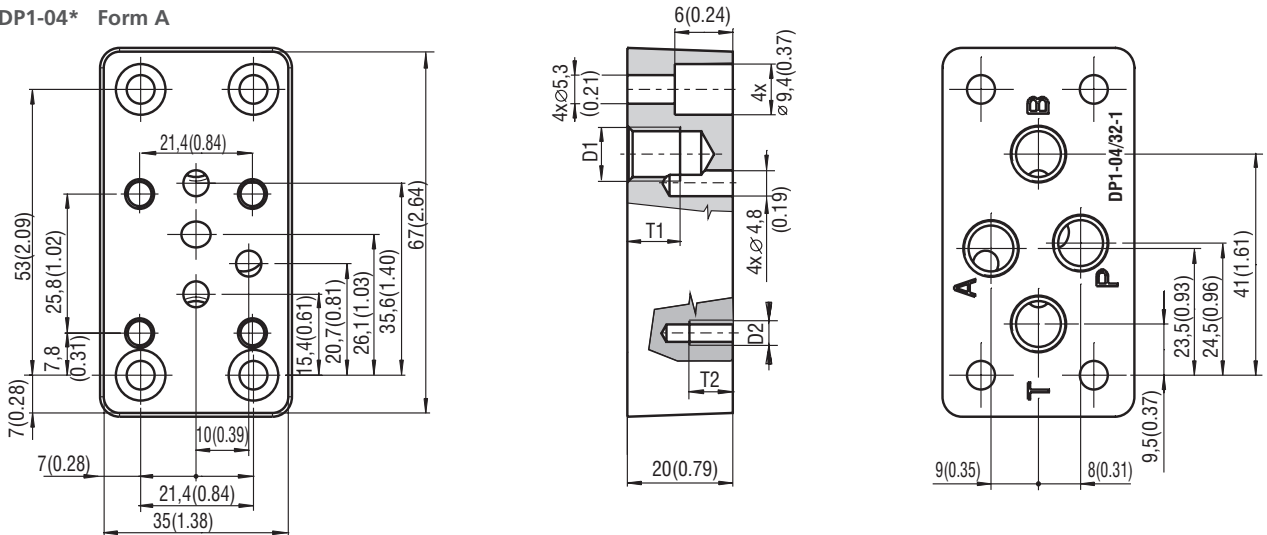
DP*04	320 bar (4640 PSI)	32
DP*06(10)	350 bar (5076 PSI)	35

Surface treatment
 No designation phosphated
 B zinc-coated (ZnNi), ISO 9227 (520 h)

Model	Thread size									
	M10x1.5	M12x1.5	M14x1.5	M16x1.5	M18x1.5	M22x1.5	G1/4	G3/8	G3/4	G1/2
	Designation of form (A-D) thread (1-22) (see dimensional drawing)									
DP1-04*	A1	B1								
DP3-04*								A10		
DP4-04*		A3					A4			
DP2-06*		A1		A2						
DP3-06*		A1	A2, D18	B3	B4	C5	A7	B8		C9, D19
DP1-10*					C6				B2	A1
	NPT 1/4	NPT 3/8	NPT 1/2	SAE-6; 9/16-18UNF		SAE-8; 3/4-16UNF		SAE-10; 7/8-14UNF		
DP1-04*										
DP3-04*						A21				
DP4-04*				A20						
DP2-06*				A20		A21				
DP3-06*	A15	B16	C17	A11		B12, C13		C22		

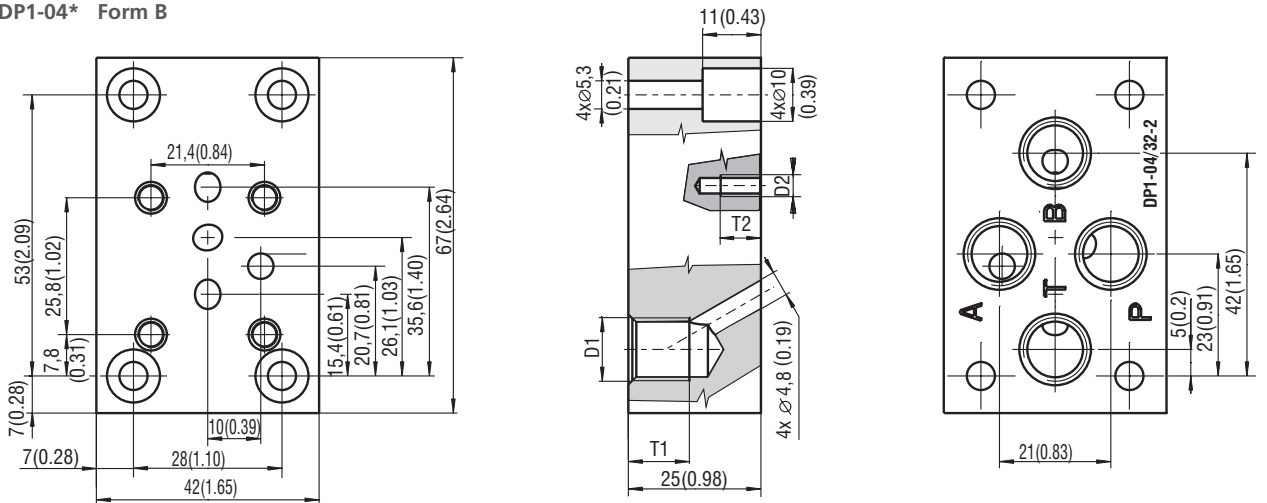
Subplates Size 04 Dimensions in millimeters (inches)

DP1-04* Form A



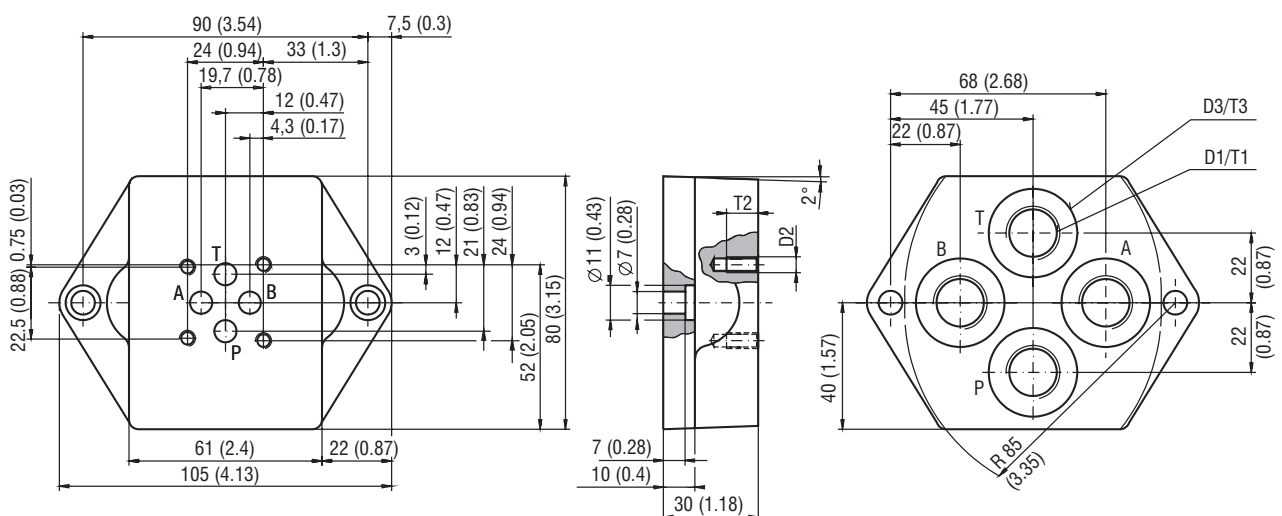
Ordering code	D1	T1	D2	T2	Mass [kg (lbs)]
DP1-04/32-A1	M10x1.5	10 (0.39)	M5	10 (0.39)	0.9 (1.98)

DP1-04* Form B



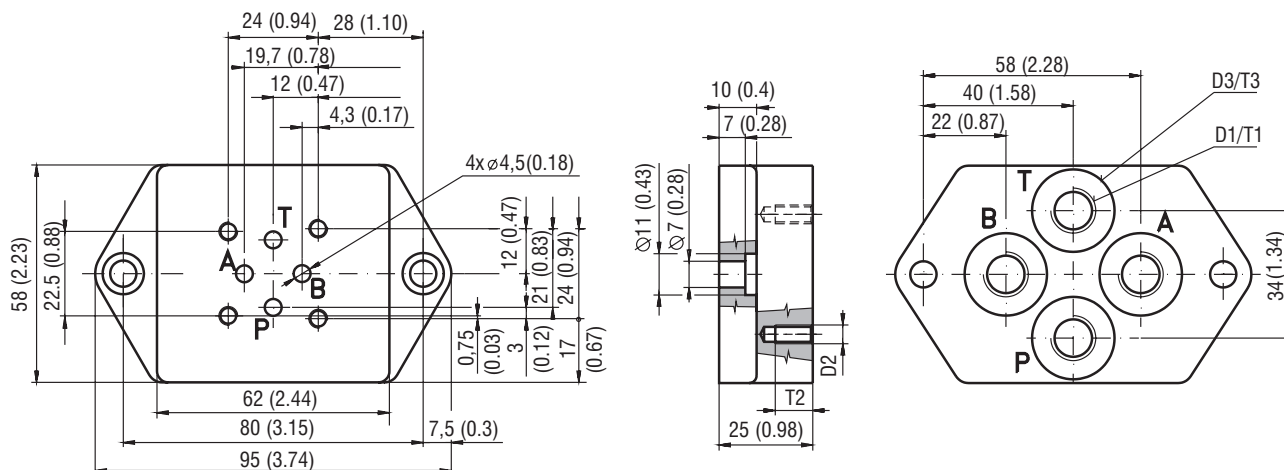
Ordering code	D1	T1	D2	T2	Mass [kg (lbs)]
DP1-04/32-B1	M12x1.5	11.5 (0.45)	M5	10 (0.39)	0.9 (1.98)

DP3-04* Form A



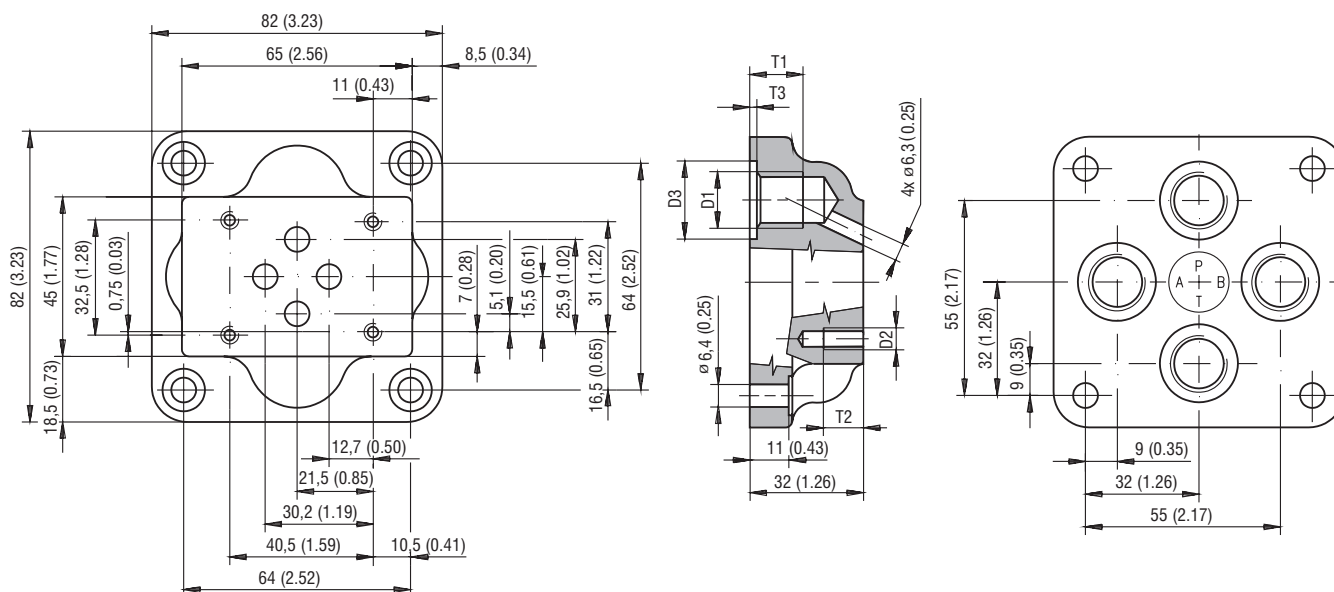
Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP3-04/32-A10	G3/8	12 (0.47)	M5	10 (0.39)	Ø28 (1.1)	1 (0.04)	0.9 (1.98)
DP3-04/32-A21	SAE-8; 3/4-16UNF	12 (0.47)	10-24 UNC	10 (0.39)	Ø28 (1.1)	1 (0.04)	

Subplates Size 04 Dimensions in millimeters (inches)

DP4-04* Form A


Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP4-04/32-A3	M12x1.5	13 (0.51)	M5	10 (0.39)	Ø22 (0.87)	1 (0.04)	0.6 (1.32)
DP4-04/32-A4	G1/4						
DP4-04/32-A20	SAE-6; 9/16-18UNF	13 (0.51)	10-24 UNC	10 (0.39)	Ø22 (0.87)	0.8 (0.31)	

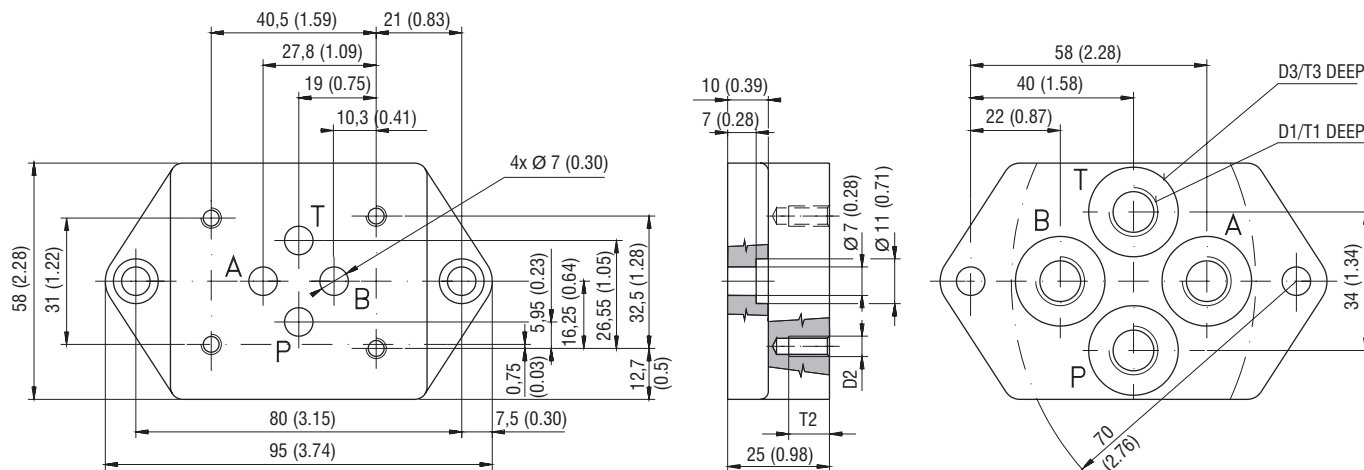
Subplates Size 06 Dimensions in millimeters (inches)

DP2-06* Form A


Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP2-06/35-A1	M12x1.5	15 (0.59)	M5	11 (0.43)	Ø18 (0.71)	2 (0.79)	0.95 (2.09)
DP2-06/35-A2	M16x1.5	17 (0.67)	M5	11 (0.43)	Ø22 (0.87)	2 (0.08)	
DP2-06/35-A20	SAE-6; 9/16-18UNF	13 (0.51)	10-24 UNC	10 (0.39)	Ø25 (0.98)	1.6 (0.06)	
DP2-06/35-A21	SAE-8; 3/4-16UNF	15 (0.59)	10-24 UNC	10 (0.39)	Ø30 (1.18)	2.4 (0.09)	

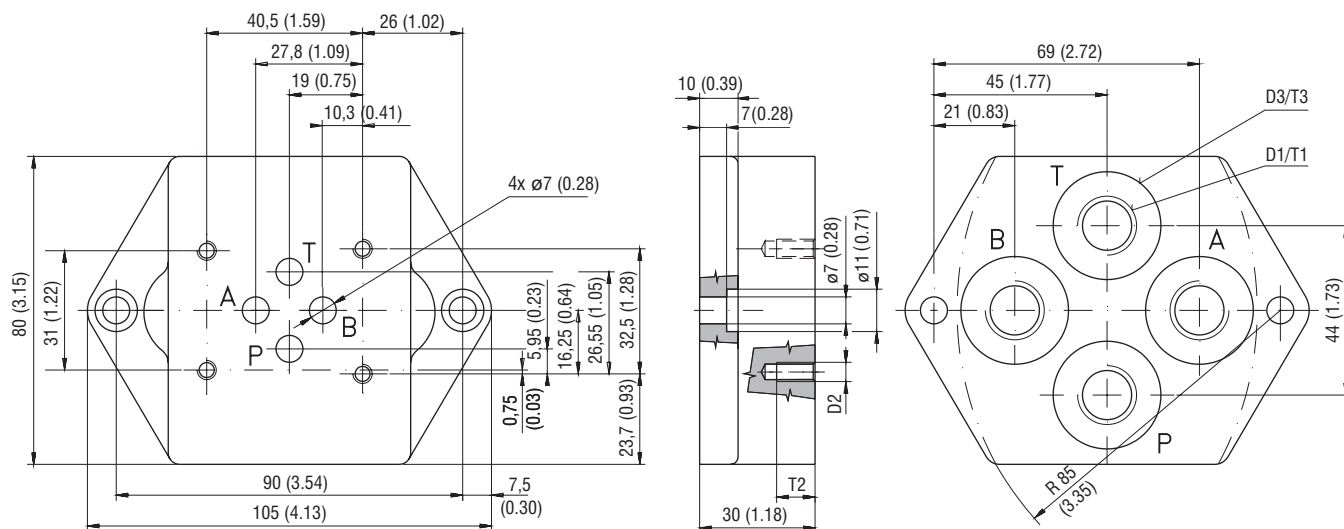
Subplates Size 06 Dimensions in millimeters (inches)

DP3-06* Form A



Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP3-06/35-A1	M12x1.5	13 (0.51)	M5	10 (0.39)	Ø22 (0.87)	1 (0.04)	0.6 (1.32)
DP3-06/35-A2	M14x1.5						
DP3-06/35-A7	G1/4						
DP3-06/35-A15	NPT 1/4	10 (0.39)	10-24 UNC	-	-		
DP3-06/35-A11	SAE-6; 9/16-18	13 (0.51)	10-24 UNC	Ø21 (0.83)	0.8 (0.03)		

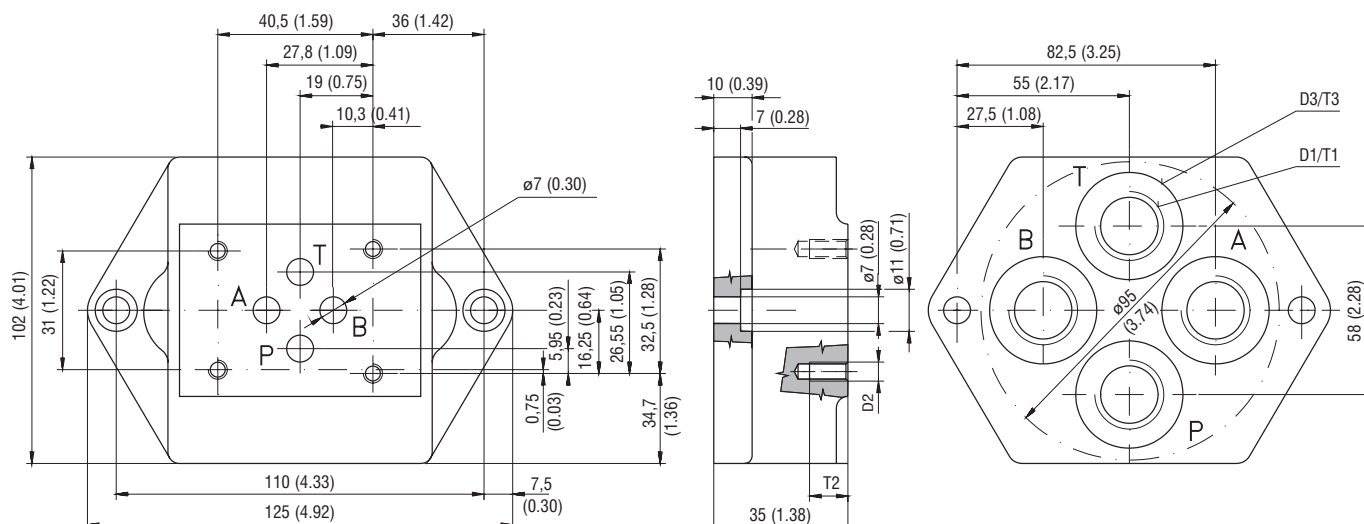
DP3-06* Form B



Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP3-06/35-B3	M16x1.5	13 (0.51)	M5	10 (0.39)	Ø28 (1.10)	1 (0.04)	1.1 (2.43)
DP3-06/35-B4	M18x1.5						
DP3-06/35-B8	G3/8						
DP3-06/35-B16	NPT 3/8	10.3 (0.41)	10-24 UNC	-	-		
DP3-06/35-B12	SAE-8; 3/4-16UNF	15 (0.59)	10-24 UNC	Ø25 (0.98)	0.8 (0.03)		

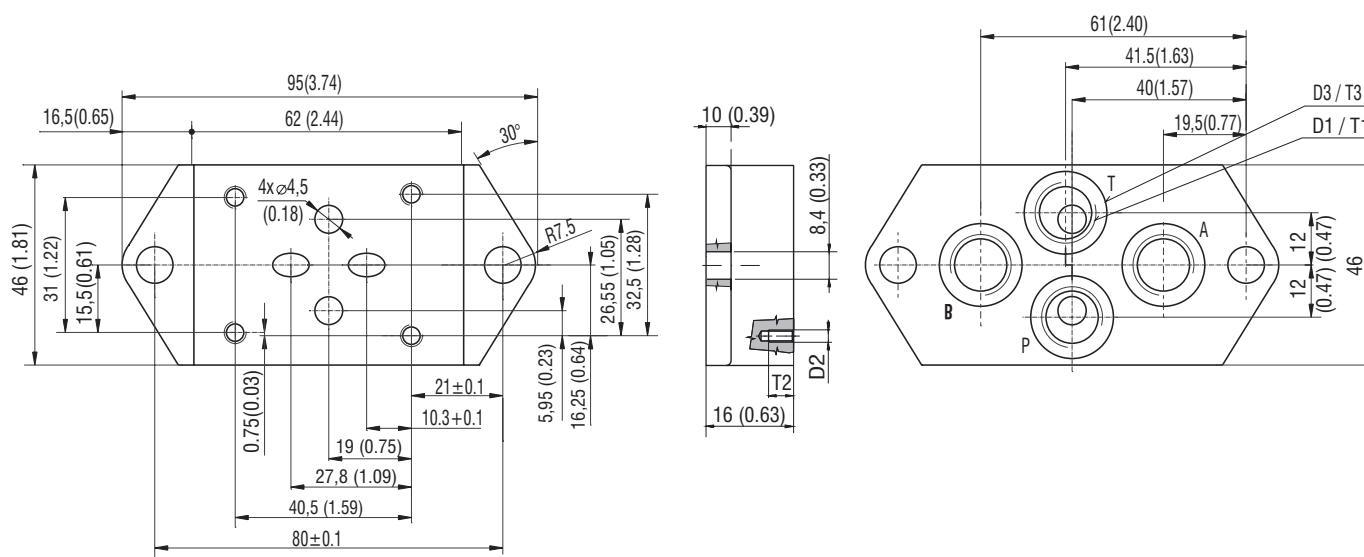
Subplates Size 06 Dimensions in millimeters (inches)

DP3-06* Form C



Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP3-06/35-C5	M22x1.5	14 (0.55)	M5	10 (0.39)	Ø34 (1.34)	1 (0.04)	1.9 (4.19)
DP3-06/35-C9	G1/2				-	-	
DP3-06/35-C17	NPT 1/2	15 (0.59)	10-24 UNC	10 (0.39)	Ø30 (1.18)	0.8 (0.03)	1.9 (4.19)
DP3-06/35-C13	SAE-8; 3/4-16UNF				Ø34 (1.34)	2.4 (0.09)	
DP3-06/35-C22	SAE-10; 7/8-14UNF	17 (0.67)			Ø34 (1.34)	2.4 (0.09)	

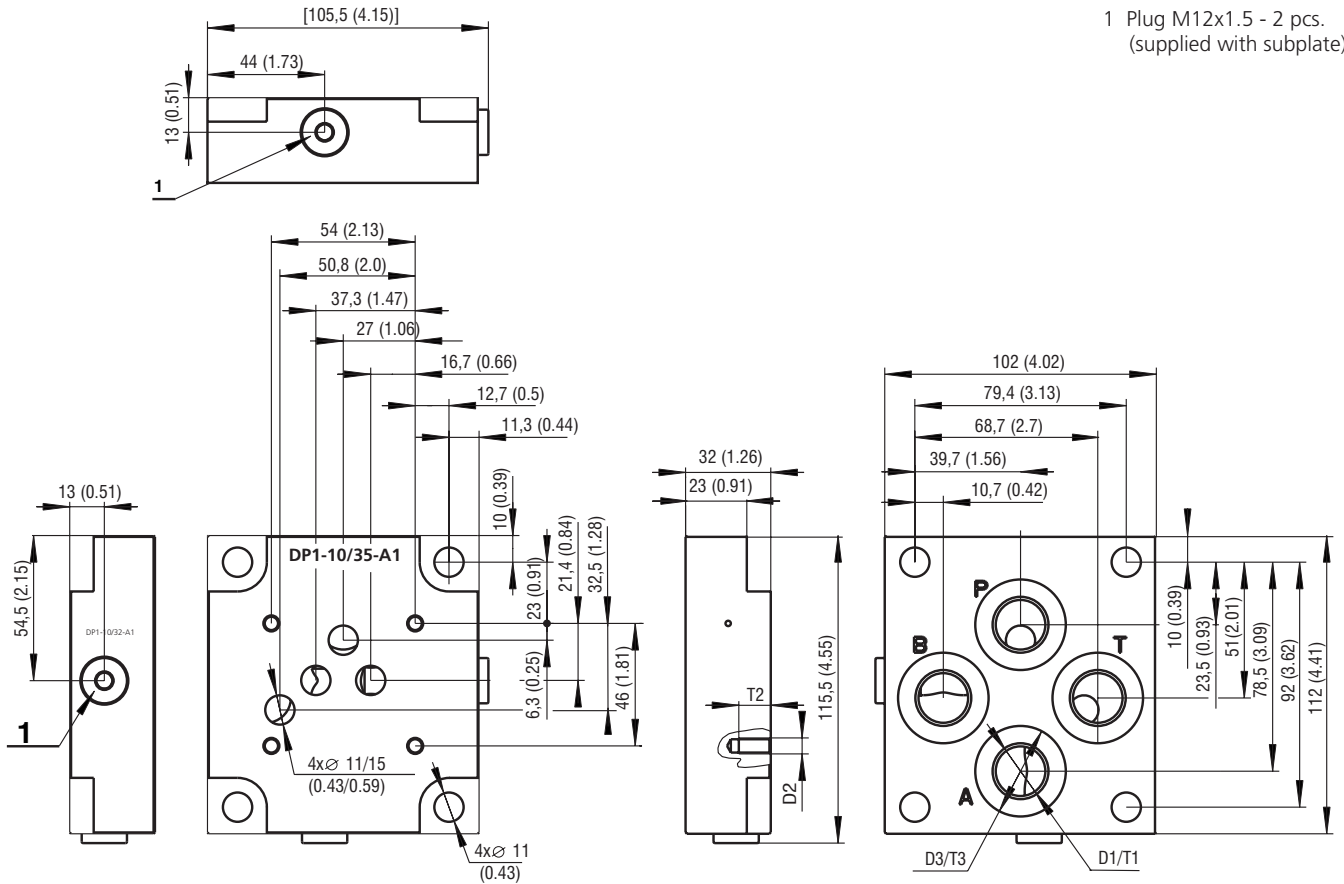
DP3-06* Form D



Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP3-06/35-D18	M14x1.5	13.5 (0.53)	M5	10 (0.39)	Ø19 (0.75)	0.5 (0.02)	1.8 (3.97)
DP3-06/35-D19	G1/2						

Subplates Size 10 Dimensions in millimeters (inches)

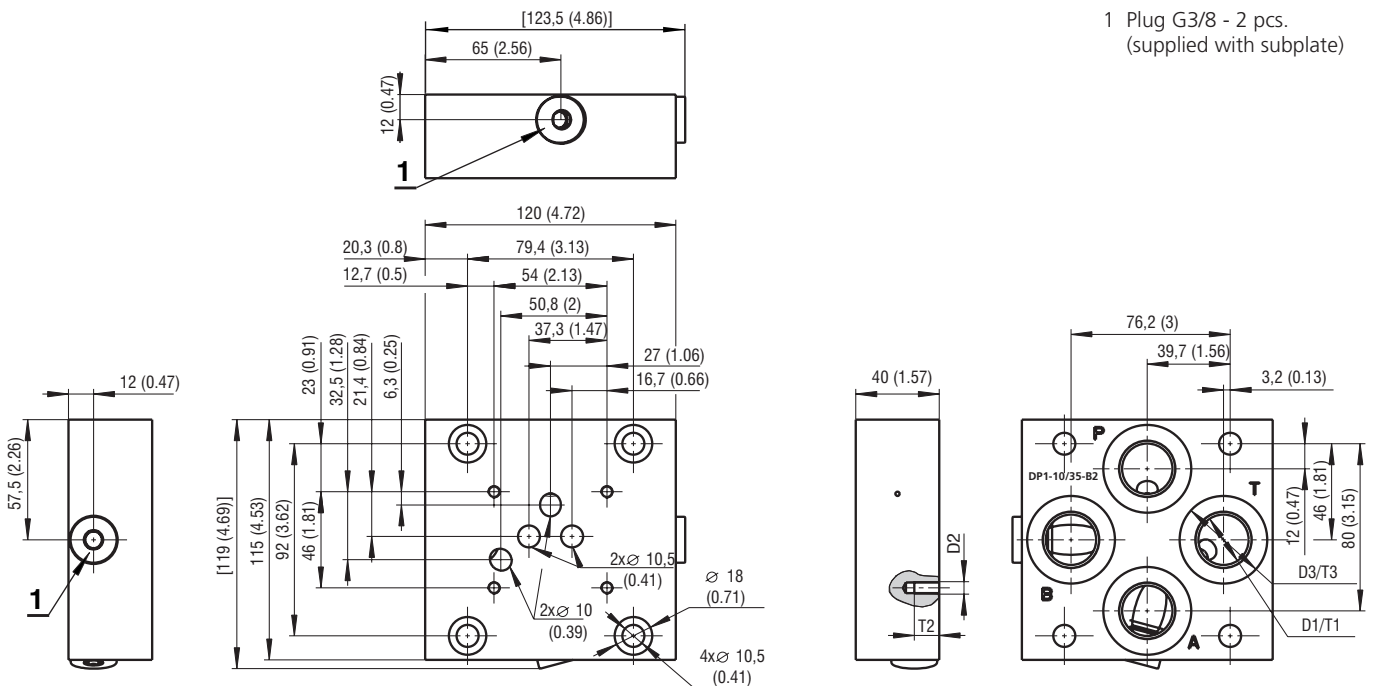
DP1-10* Form A



1 Plug M12x1.5 - 2 pcs.
(supplied with subplate)

Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP1-10/35-A1	BSPP 1/2	14 (0.55)	M6	12 (0.47)	Ø34 (1.34)	1 (0.04)	2.3 (5.07)

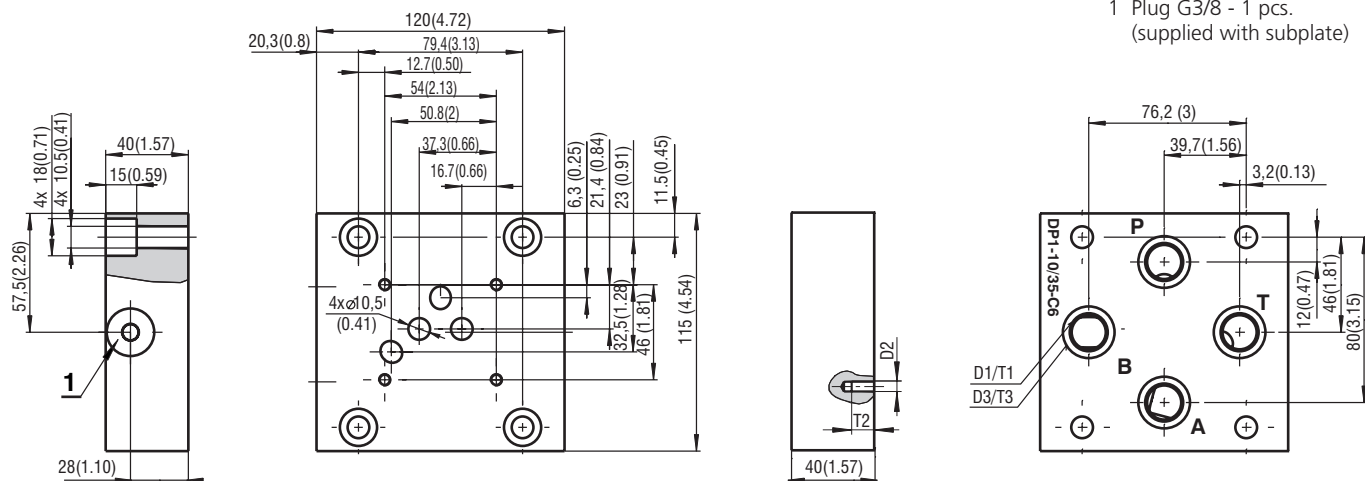
DP1-10* Form B



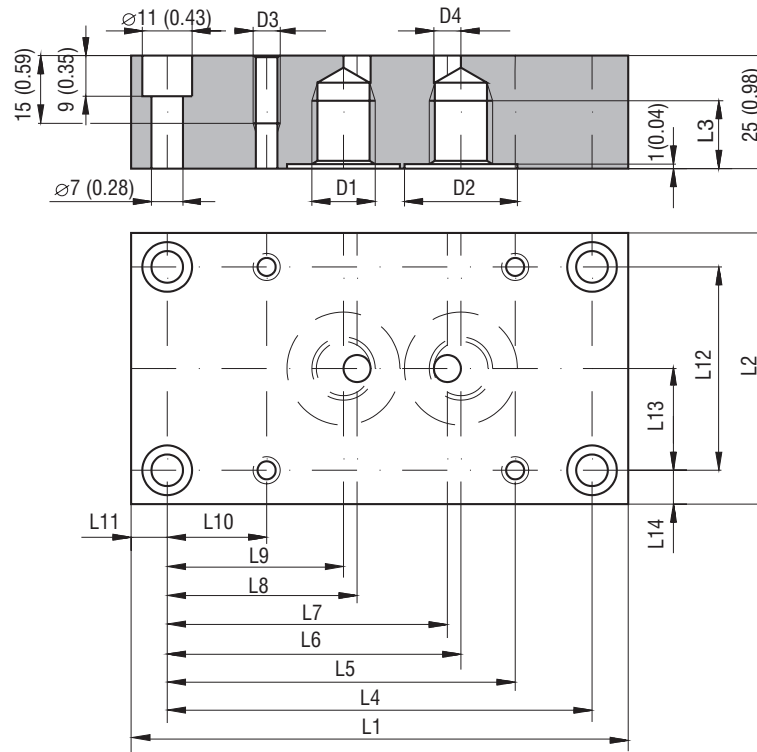
1 Plug G3/8 - 2 pcs.
(supplied with subplate)

Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP1-10/35-B2	BSPP 3/4	16 (0.63)	M6	12 (0.47)	Ø42 (1.65)	1 (0.04)	2.5 (5.51)

DP1-10* Form C



Ordering code	D1	T1	D2	T2	D3	T3	Mass [kg (lbs)]
DP1-10/35-C6	M18x1.5	12 (0.47)	M6	12 (0.47)	Ø25 (0.98)	1 (0.04)	2.5 (5.51)



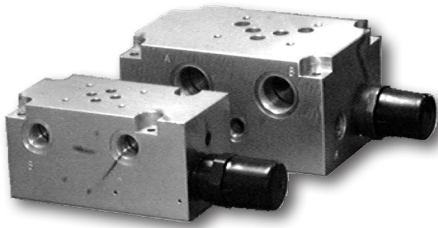
Ordering code	D1	ØD2	D3	ØD4	L1	L2	L3	L4	L5
D-06M/VPP1	M14x1.5	25 (0.98)	M6	6 (0.24)	110 (4.33)	60 (2.36)	15 (0.59)	94 (3.70)	77 (3.03)
D-06G/VPP1	G1/4		1/4-20 UNC				13 (0.51)		
D-06S/VPP1	9/16-18UNF-2B								
D-08M/VPP1	M18x1.5	28 (1.10)	M8	10 (0.39)	135 (5.32)	80 (3.15)	16 (0.63)	115 (4.53)	97.5 (3.84)
D-08G/VPP1	G3/8						17.5 (0.69)		
D-08S/VPP1	3/4-16 UNF-2B	30 (1.18)	5/16-18 UNC-2B				16 (0.63)		
D-10M/VPP1	M22x1.5	34 (1.34)	M8				17.5 (0.69)		
D-10G/VPP1	G1/2								
D-10S/VPP1	3/4-16 UNF-2B	30 (1.18)	5/16-18 UNC-2B				17.5 (0.69)		

Ordering code	L6	L7	L8	L9	L10	L11	L12	L13	L14
D-06M/VPP1	65 (2.56)	62 (2.44)	42 (1.65)	39 (1.54)	22 (0.87)	8 (0.31)	45 (1.77)	22.5 (0.89)	7.5 (0.29)
D-06G/VPP1									
D-06S/VPP1									
D-08M/VPP1	80.5 (3.17)	72.5 (2.85)	48.5 (1.91)	40.5 (1.60)	27.5 (1.08)	10 (0.39)	60 (2.36)	30 (1.18)	10 (0.39)
D-08G/VPP1									
D-08S/VPP1									
D-10M/VPP1									
D-10G/VPP1									
D-10S/VPP1									

Base Manifold with Pressure Relief Valve for ISO 4401-03 (05) Valves

DP6

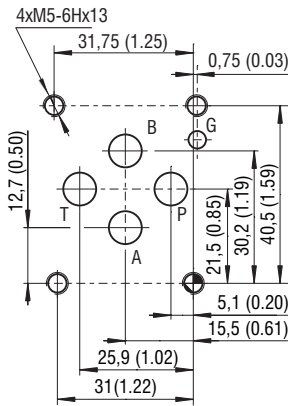
Size 06, 10 (D03, D05) • Q_{max} 50, 120 l/min (13, 32 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

- › Base manifolds used for hydraulic systems or power units which require only one directional valve assembly
- › Designed for two sizes of flange mounted valves with mounting interface acc. to ISO 4401-03 (CETOP 03) or ISO 4401-05 (CETOP 05)
- › Integrated direct operated pressure relief valve up to 120 l/min (32 GPM)
- › Suitable for horizontal mounting on the tank cover of the pump drive unit, or for vertical arrangement with the pump situated in the tank under the oil level
- › Wide pressure range up to 320 bar for both sizes of pressure relief valves
- › In the standard version, the plate is zinc-coated for 240 h protection acc. to ISO 9227 and the pressure valve is black-oxide coated

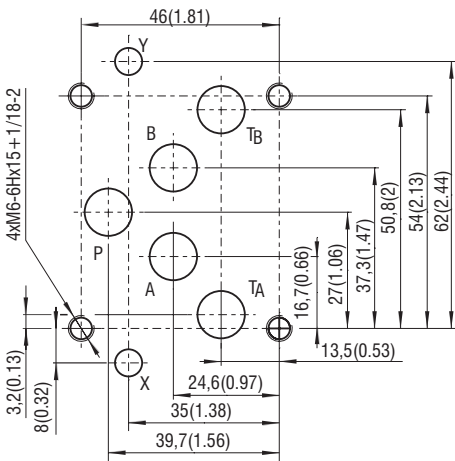
ISO 4401-03-02-0-05 (CETOP 03)



Ports P, A, B, T - max Ø 7.5 mm (0.29 in)

DP6-10-*-VPP1T*

ISO 4401-05-04-0-05 (CETOP 05)



Ports P, A, B, T - max Ø 11.2 mm (0.44 in)

Technical Data

Valve size		06 (D03)	10 (D05)
Max. operating pressure (steel)		bar (PSI) 350 (5080)	
Max. flow rate		l/min (GPM) 50 (13)	120 (32)
Weight with valve	DP6-06*	kg (lbs) 4.1 (9.0)	
	DP6-10*	7.7 (17.0)	

	Data Sheet	Type
General information	GL_0060	Products and operating conditions
Mounting interface / tolerances	SMT_0019	Size 06, 10 / CETOP 03, 05
Spare parts	SP_8010	

Ordering Code

DP6 - [] - [] - [] - [] - [] - [] - []

Base manifold for ISO 4401 modular valve

Size, mounting interface acc. to:
 ISO 4401-03-02-0-05, DIN 24340 (CETOP 03) **06**
 ISO 4401-05-04-0-05, DIN 24340 (CETOP 05) **10**

Pressure relief valve cavity
 M28 x 1.5 / QP2 **QP2**
 M35 x 1.5 / QT2 **QT2**

Port size
 P, T, A, B ... G 3/8, M ... G 1/4* **G1**
 P, T, A, B ... G 3/4, M ... G 1/4** **G2**
 P, T, A, B ... SAE-6, M ... SAE-4* **S1**
 *Only for size 06
 **Only for size 10

Pressure relief mode
 without pressure relief valve **No designation**
 VPP1-06, 10 **VPP1**
 VPP2-06 **VPP2**

Adjustment option
 allen key (hex. 6) with protective cap **T**
 hand knob, plastic **RP**

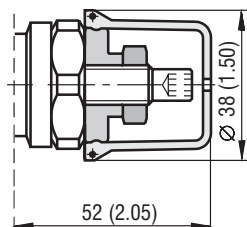
Surface treatment
No designation
 plate zinc-coated (ZnCr-3),
 ISO 9227 (240h),
 the pressure valve
 is black-oxide coated

Seals
N **No designation** **without seal rings**
NBR

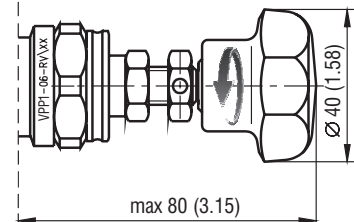
Pressure range
2.5 up to 25 bar (360 PSI)
6.3 up to 63 bar (910 PSI)
10 up to 100 bar (1450 PSI)
16 up to 160 bar (2320 PSI)
25 up to 250 bar (3630 PSI)
32 up to 320 bar (4640 PSI)

Adjustment Options dimensions in millimeters (inches)

DP6-06-*-VPP1T*
Model T

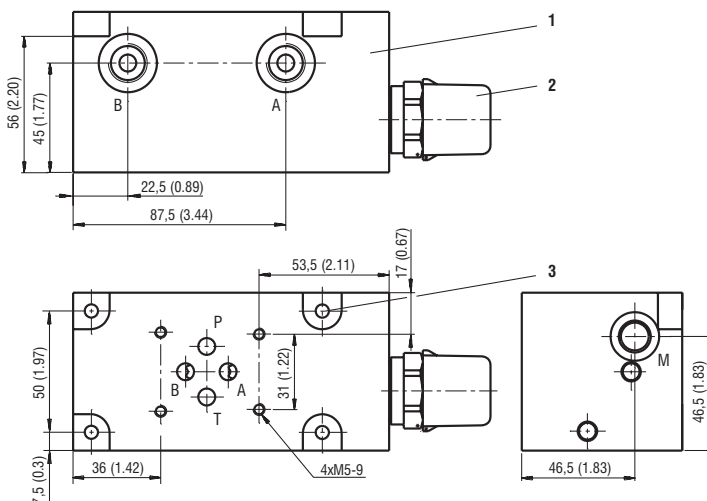
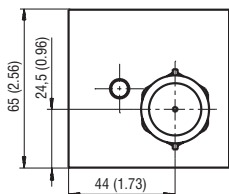
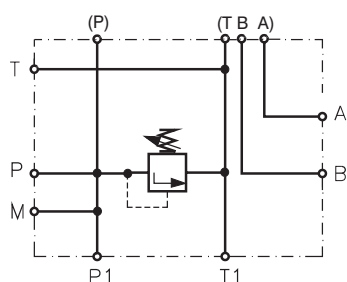


DP6-06-*-VPP1RP*
Model RP

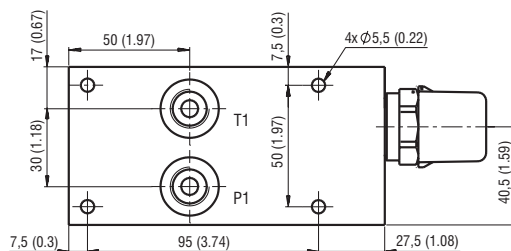
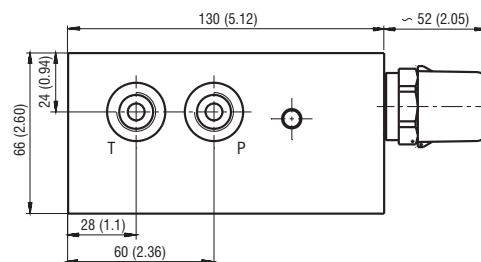


Dimensions in millimeters (inches)

DP6-06-*-VPP1T*

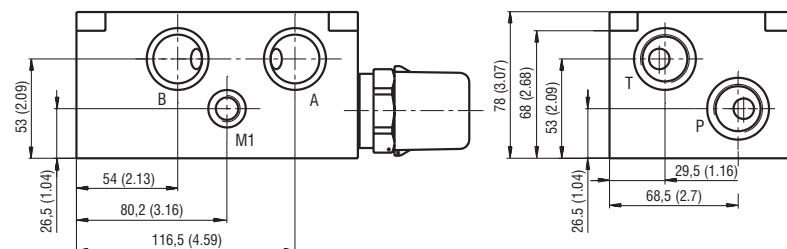
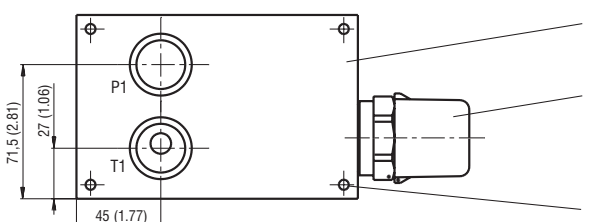
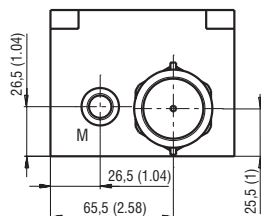
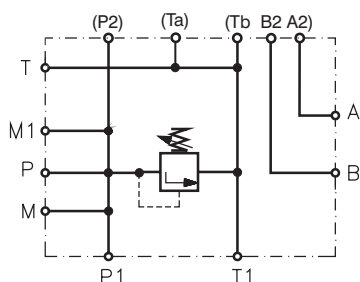


Port	Thread	Counterbore	Counterbore depth
A	G 3/8, SAE-6	Ø 24 (0.94)	1 (0.04)
B	G 3/8, SAE-6	Ø 24 (0.94)	1 (0.04)
P	G 3/8, SAE-6	Ø 24 (0.94)	1 (0.04)
T	G 3/8, SAE-6	Ø 24 (0.94)	1 (0.04)
P1	G 3/8, SAE-6	Ø 28 (1.1)	5.5 (0.22)
T1	G 3/8, SAE-6	Ø 28 (1.1)	5.5 (0.22)
M	G 1/4, SAE-4	Ø 20 (0.79)	1 (0.04)

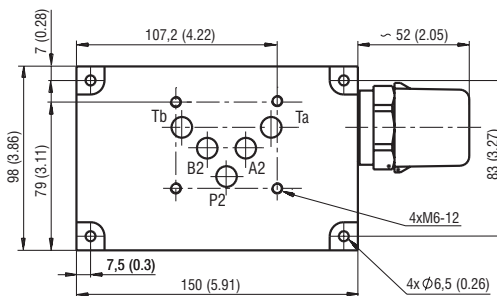


- 1 Base block
- 2 Pressure relief valve
- 3 4 mounting holes

DP6-10-*-VPP1T*



Port	Thread	Counterbore	Counterbore depth
A	G 3/4	Ø 33 (1.3)	1 (0.04)
B	G 3/4	Ø 33 (1.3)	1 (0.04)
P	G 3/4	Ø 33 (1.3)	1 (0.04)
T	G 3/4	Ø 33 (1.3)	1 (0.04)
P1	G 3/4	Ø 38 (1.5)	5.5 (0.22)
T1	G 3/4	Ø 38 (1.5)	5.5 (0.22)
M	G 1/4	Ø 20 (0.79)	1 (0.04)
M1	G 1/4	Ø 20 (0.79)	1 (0.04)

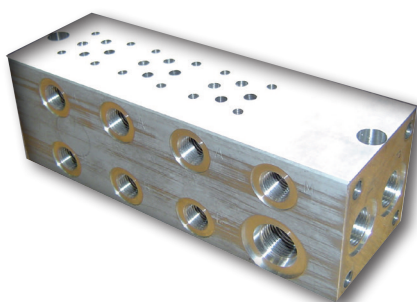


- 1 Base block
- 2 Pressure relief valve
- 3 4 mounting holes

Serial Plates for ISO 4401-02 Valve with Side Ports

DR1-04

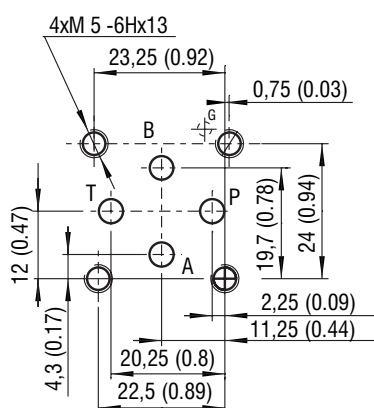
Size 04 (D02) • p_{max} 320 bar (4600 PSI)



Technical Features

- › Designed to connect in parallel two or more ISO 4401-02 (CETOP 02) valves with integrated unloading and pressure relief valve cavity with interface 3/4-16 UNF-2A
- › Compact design with reduced plate dimensions for production cost saving
- › Maximum 8 parallel modular valve sections
- › Consumer ports A and B positioned on the side of the sub-plate
- › Maximum flow rate can be increased up to twice the output if the sub-plates are powered at both ends
- › Serial plates are available in aluminium EN AW - 7075 T6
- › In the standard version, the aluminium serial plate is without surface protection

ISO 4401-02-01-0-05



Ports P, A, B, T - max \varnothing 4.5 mm (0.18 in)

Technical Data

Modular valves mounting surface		04 (D02)
Cartridge cavity		A2 (C-8-2)
Max. operating pressure (aluminium)	bar (PSI)	320 (4640)
Port dimensions P		G3/8
Port dimensions T		G3/8
Port dimensions A, B		G1/4
Port dimensions M		G1/4
Weight (model 0, 1, 2)	kg (lbs)	see table

	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details	SMT_0019	SMT_A2*
Mounting interface	SMT_0019	Size 04
Studs and nuts for vertical stacking assemblies	HA_0020	

Connection

DR1-04/ 0

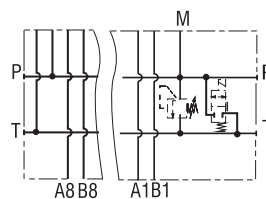
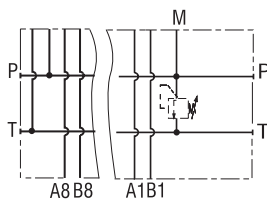
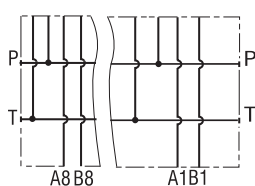
P, TG3/8
A, BG1/4

DR1-04/ 1

P, TG3/8
A, B, MG1/4
valve cavity 3/4-16 UNF

DR1-04/ 2

P, TG3/8
A, B, MG1/4
2 valve cavities 3/4-16 UNF



Port cavity A, B, P, T see page 2.

Ordering Code

DR1 - 04 / AL -

Serial plates for ISO 4401-02 valve with side ports

Nominal size

Number of sections

1 section	1
2 sections	2
3 sections	3
4 sections	4
5 sections	5
6 sections	6
7 sections	7
8 sections	8

No designation

Surface treatment
aluminium plate
without treatment

Material
aluminium EN AW - 7075 T6

Cartridge cavity
without cavities
with one cavity for pressure or unloading valve
with two cavities for pressure relief and unloading valve

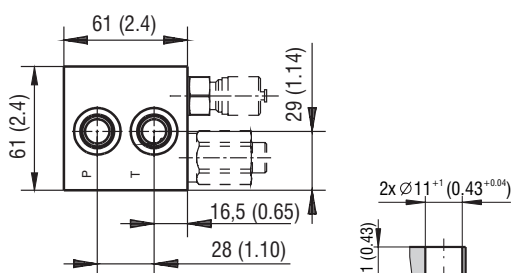
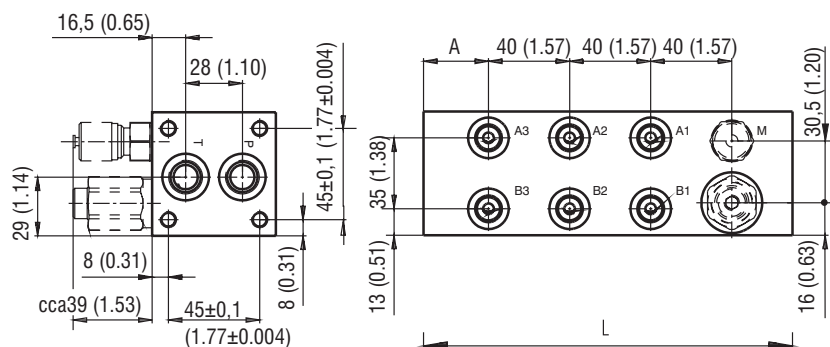
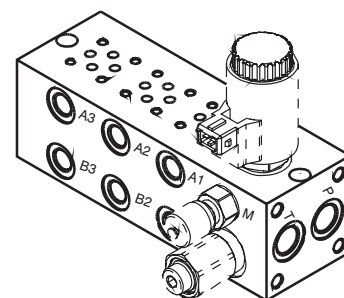
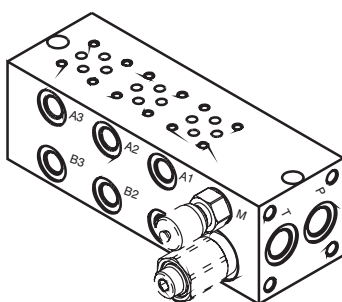
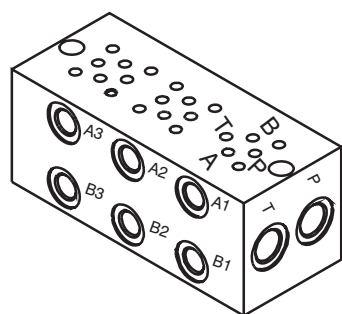
0
1
2

Dimensions in millimeters (inches)

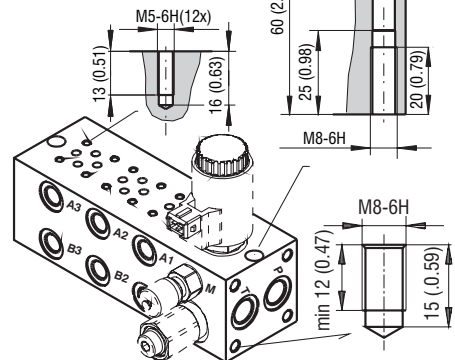
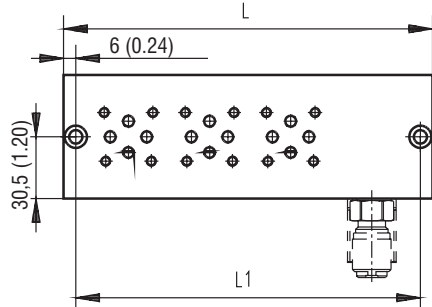
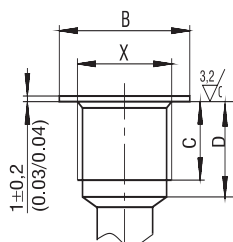
DR1-04/ 0

DR1-04/ 1

DR1-04/ 2



Port cavity A, B, P, T



X	B [mm (in)]	C [mm (in)]	D [mm (in)]
G1/4	∅20+0.5 (0.79/0.81)	12+0.1 (0.47/0.48)	15±0.2 (0.58/0.60)
G3/8	∅23+0.5 (0.91/0.93)	12+0.1 (0.47/0.48)	15±0.2 (0.58/0.60)
G1/2	∅28+0.5 (1.1/1.12)	14+0.1 (0.55/0.56)	17±0.2 (0.66/0.68)

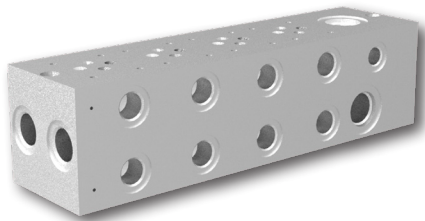
DR1-04	/*0		/*1(2)		/*0		/*1(2)	
Number of sec.	L [mm (in)]		L1 [mm (in)]		A [mm (in)]			
1	-	102 (4.02)	-	90 (3.54)	32.5 (1.28)		32 (1.26)	
2	105 (4.13)	142 (5.59)	91 (3.58)	130 (5.12)	32.5 (1.28)		32 (1.26)	
3	145 (5.71)	182 (7.17)	131 (5.16)	170 (6.69)	32.5 (1.28)		32 (1.26)	
4	185 (7.28)	222 (8.74)	171 (6.73)	210 (8.27)	32.5 (1.28)		32 (1.26)	
5	225 (8.86)	262 (10.31)	211 (8.31)	250 (9.84)	32.5 (1.28)		32 (1.26)	
6	265 (10.43)	302 (11.89)	251 (9.88)	290 (11.42)	32.5 (1.28)		32 (1.26)	
7	305 (12.01)	342 (13.46)	291 (11.46)	330 (12.99)	32.5 (1.28)		32 (1.26)	
8	345 (13.58)	382 (15.04)	331 (13.03)	370 (14.57)	32.5 (1.28)		32 (1.26)	

Number of sec.	DR1-04/*0		DR1-04/*1		DR1-04/*2	
	Ordering number	Weight [kg (lb)]	Ordering number	Weight [kg (lb)]	Ordering number	Weight [kg (lb)]
1	-	-	16113500	0.90 (2.0)	23693100	0.90 (2.0)
2	23714600	0.95 (2.1)	16113600	1.25 (2.8)	23693200	1.35 (3.0)
3	23714700	1.30 (2.9)	16113700	1.40 (3.1)	23693300	1.60 (3.5)
4	23714800	1.70 (3.8)	16113800	2.00 (4.4)	23693400	2.00 (4.4)
5	23714900	2.05 (4.5)	16113900	2.35 (5.2)	16772000	2.35 (5.2)
6	23715000	2.40 (5.3)	16114000	2.75 (6.1)	23693600	2.70 (6.0)
7	23715100	2.80 (6.2)	16114100	3.10 (6.8)	23693700	3.10 (6.8)
8	23715200	3.15 (6.9)	16114200	3.45 (7.6)	23693800	3.45 (7.6)

Serial Plates for ISO 4401-03 Valve with Side Ports

DR2-06

Size 06 (D03) • p_{max} (AL) 320 bar (4600 PSI) • p_{max} (ST) 350 bar (5100 PSI)



Technical Features

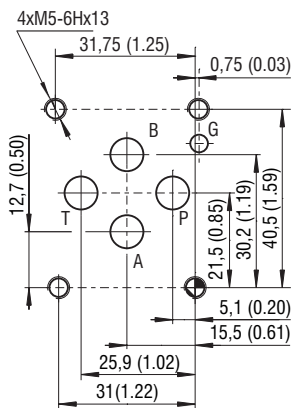
- › Designed to connect in parallel two or more ISO 4401-03 (CETOP 03) valves with integrated unloading and pressure relief valve cavity with interface 7/8-14-UNF-2A
- › Compact design with reduced plate dimensions for production cost saving
- › Maximum 10 parallel modular valve sections
- › Consumer ports A and B positioned on the side of the sub-plate
- › Maximum flow rate can be increased up to twice the output if the sub-plates are powered at both ends
- › Serial plates are available in aluminium EN AW - 7075 T6 and steel
- › In the standard version, the aluminium serial plate is without surface protection and the steel plate is zinc-coated for 520 h protection acc. to ISO 9227

Technical Data

Modular valves mounting surface		06 (D03)
Cartridge cavity		B2
Max. operating pressure (aluminium)	bar (PSI)	320 (4640)
Max. operating pressure (steel)	bar (PSI)	350 (5080)
Port dimensions P		G1/2
Port dimensions T		G1/2
Port dimensions A, B		G3/8
Port dimensions M		G1/4
Weight (model 0, 1, 2)	kg (lbs)	see table

	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details	SMT_0019	SMT_B2*
Mounting interface / tolerances	SMT_0019	Size 06
Studs and nuts for vertical stacking assemblies		HA_0020

ISO 4401-03-02-0-05



Ports P, A, B, T - max \varnothing 7.5 mm (0.29 in)

Connection

DR2-06/ 0

P, TG1/2
A, BG3/8

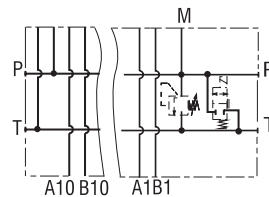
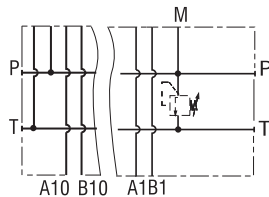
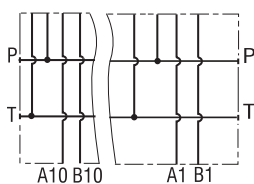
DR2-06/ 1

P, TG1/2
A, BG3/8
MG1/4
valve cavity 7/8-14 UNF

DR2-06/ 2

P, TG1/2
A, BG3/8
MG1/4
2 valve cavities 7/8-14 UNF

Port cavity A, B, P, T see page 2.



Ordering Code

DR2 - 06 / -

Serial plates for ISO 4401-03 valve with side ports

Nominal size

Number of sections

- 1 section
- 2 sections
- 3 sections
- 4 sections
- 5 sections
- 6 sections
- 7 sections
- 8 sections
- 9 sections
- 10 sections

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

No designation

B

Surface treatment
without treatment*
520 h salt spray test (ISO 9227)**
*only for aluminium plates
**only for steel plates

AL
ST

Material
aluminium EN AW - 7075 T6
steel

Cartridge cavity

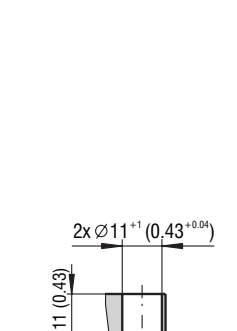
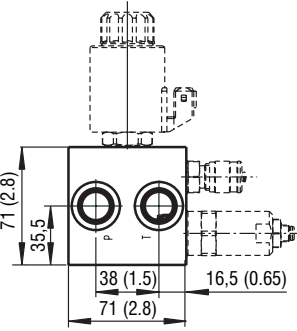
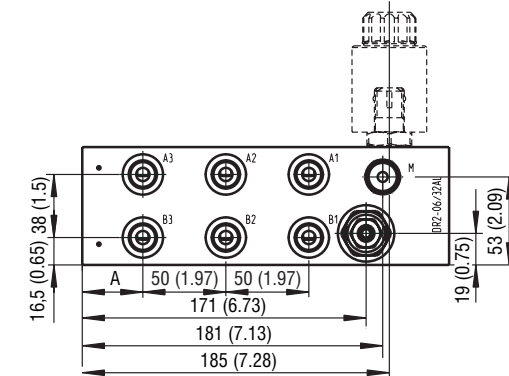
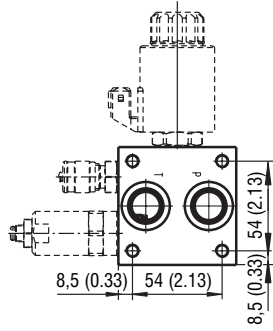
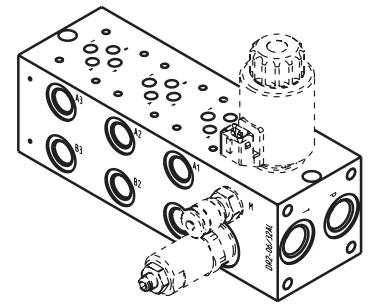
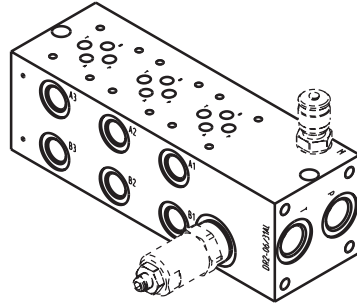
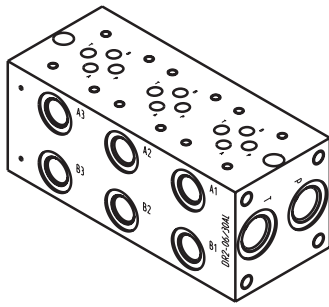
without cavities
with one cavity for pressure or unloading valve
with two cavities for pressure relief and unloading valve

Dimensions in millimeters (inches)

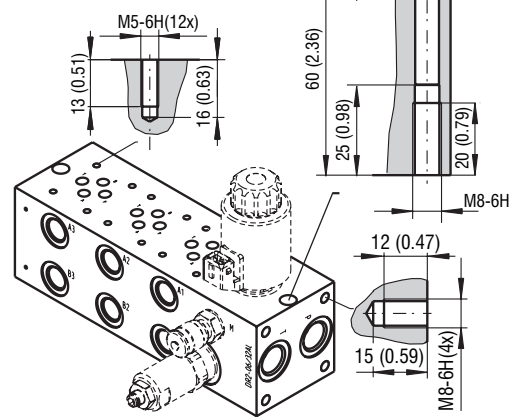
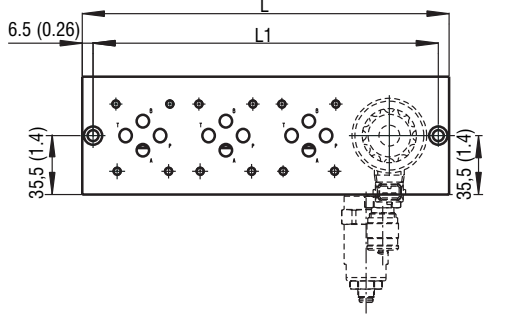
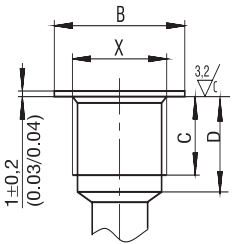
DR2-06/ 0

DR2-06/ 1

DR2-06/ 2



Port cavity A, B, P, T



	X	B [mm (in)]	C [mm (in)]	D [mm (in)]
G1/4	12±0.2 (0.47±0.01)	20±0.5 (0.79±0.02)	12±0.1 (0.47±0.01)	15±0.2 (0.58±0.01)
G3/8	12±0.2 (0.47±0.01)	23±0.5 (0.91±0.02)	12±0.1 (0.47±0.01)	15±0.2 (0.58±0.01)
G1/2	14±0.1 (0.55±0.01)	28±0.5 (1.11±0.02)	14±0.1 (0.55±0.01)	17±0.2 (0.66±0.01)

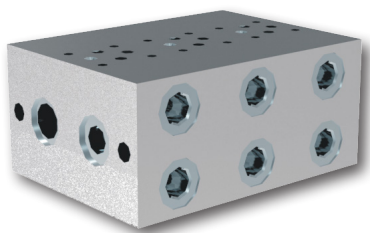
DR2-06	/ *0	/ *1(2)	/ *0	/ *1(2)	/ *0	/ *1(2)	AL - DR2-06/*0	ST - DR2-06/*0
Number of sec.	L [mm (in)]	L1 [mm (in)]	A [mm (in)]		Ordering number	Weight [kg (lb)]	Ordering number	Weight [kg (lb)]
1	71 (2.80)	121 (4.76)	58 (2.28)	108 (4.25)	27562600	0.83 (1.8)	28262900	2.33 (5.1)
2	121 (4.76)	171 (6.73)	108 (4.25)	158 (6.22)	27562700	1.43 (3.2)	28263000	4.15 (9.2)
3	171 (6.73)	221 (8.70)	158 (6.22)	208 (8.19)	27562800	2.03 (4.5)	28263100	5.70 (12.6)
4	221 (8.70)	271 (10.67)	208 (8.19)	258 (10.16)	27562900	2.63 (5.8)	28263200	7.38 (16.3)
5	271 (10.67)	321 (12.64)	258 (10.16)	308 (12.13)	27563000	3.23 (7.1)	28263300	9.07 (20.0)
6	321 (12.64)	371 (14.61)	308 (12.13)	358 (14.09)	27563100	3.83 (8.4)	28263400	10.75 (3.7)
7	371 (14.61)	421 (16.57)	358 (14.09)	408 (16.06)	27563200	4.43 (9.8)	28263500	12.43 (27.4)
8	421 (16.57)	471 (18.54)	408 (16.06)	458 (18.03)	27563400	5.03 (11.1)	28263600	14.12 (31.1)
9	471 (18.54)	521 (20.51)	458 (18.03)	508 (20.00)	40983800	5.66 (12.5)	40984400	15.80 (34.8)
10	521 (20.51)	571 (22.48)	508 (20.00)	558 (21.97)	40983900	6.26 (13.8)	40984600	17.49 (38.6)

Number of sec.	AL - DR2-06/*1		ST - DR2-06/*1	
	Ordering number	Weight [kg (lb)]	Ordering number	Weight [kg (lb)]
1	27563500	1.43 (3.2)	28263700	4.02 (8.9)
2	27563600	2.03 (4.5)	28263800	5.70 (12.6)
3	27563700	2.63 (5.8)	28263900	7.38 (16.3)
4	27563800	3.23 (7.1)	28264000	9.06 (20.0)
5	27563900	3.83 (8.4)	28264100	10.72 (23.6)
6	27564000	4.42 (9.7)	28264200	12.43 (27.4)
7	27564100	5.02 (11.1)	28264300	14.12 (31.1)
8	27564200	5.62 (12.4)	28264400	15.80 (34.8)
9	40984500	6.26 (13.8)	40984200	17.48 (38.5)
10	40984700	6.86 (15.1)	40984300	19.17 (42.3)

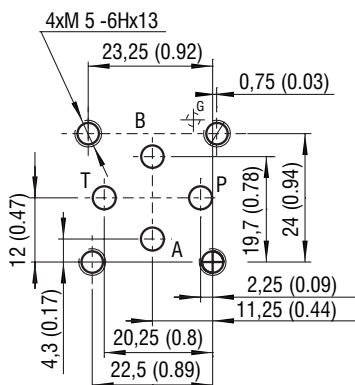
Number of sec.	AL - DR2-06/*2		ST - DR2-06/*2	
	Ordering number	Weight [kg (lb)]	Ordering number	Weight [kg (lb)]
1	27632300	1.38 (3.0)	28269600	3.88 (8.6)
2	27632500	1.98 (4.4)	28269700	5.57 (12.3)
3	27632600	2.58 (5.7)	28269800	7.25 (16.0)
4	27632700	3.18 (7.0)	28269900	8.94 (19.7)
5	27632800	3.78 (8.3)	28270000	10.62 (23.4)
6	27632900	4.38 (9.7)	28270100	12.30 (27.1)
7	27633000	4.98 (11.0)	28270200	13.99 (30.8)
8	27633100	5.58 (12.3)	28270300	15.67 (34.6)
9	40986500	6.18 (13.6)	40986400	17.36 (38.3)
10	40986600	6.78 (14.9)	40986300	19.05 (42.0)

PD04

Size 04 (D02) • p_{max} 250 bar (3600 PSI)



ISO 4401-02-01-0-05



Ports P, A, B, T - max \varnothing 4.5mm (0.18 in)

Technical Features

- › Designed to connect in parallel two or more ISO 4401-02 (CETOP 02) valves to build compact hydraulics on each axis vertically
- › Stackable models (Version S5) with mounting interface for SMA05 hydraulic power unit central block
- › Flexible design of various stackable plates enables simple creation of circuits without the use of pipes and fittings
- › Maximum 8 parallel modular valve sections may be installed. Optional selection for A and B consumer ports position
- › Maximum flow rate can be increased up to double the output if the sub-plates are powered at both ends
- › Serial plates are available in aluminium. For other materials consult our technical department for their identification and feasibility
- › Includes mounting stud kits for horizontal plate assembly
- › BSP and SAE porting
- › In the standard version, the aluminium serial plate is without surface protection

Technical Data

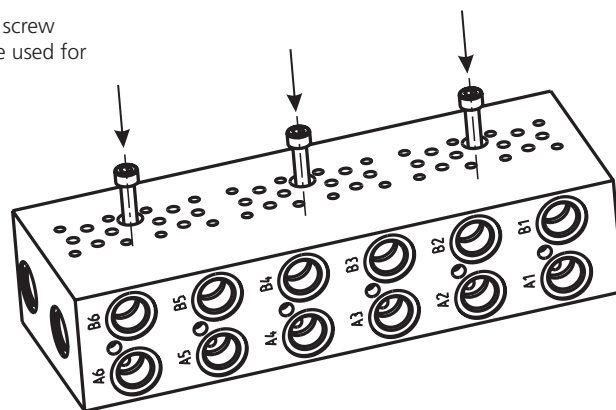
Modular valves mounting surface		04 (D02)
Max. operating pressure (aluminium)	bar (PSI)	250 (3630)
Port threads (depending on model)		see table
Mass (depending on model)	kg (lbs)	see table
	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Mounting surface	SMT_0019	Size 04 (D02)
Studs and nuts for vertical stacking assemblies		HA_0020

Functional Description

Design version NS (Not Stackable)

The plates of design version NS have from 1 up to 8 sections. They can be used only separately because they do not have any holes for studs. Outputs P1, T1, P, T on both sides have a countersink for a sealing ring.

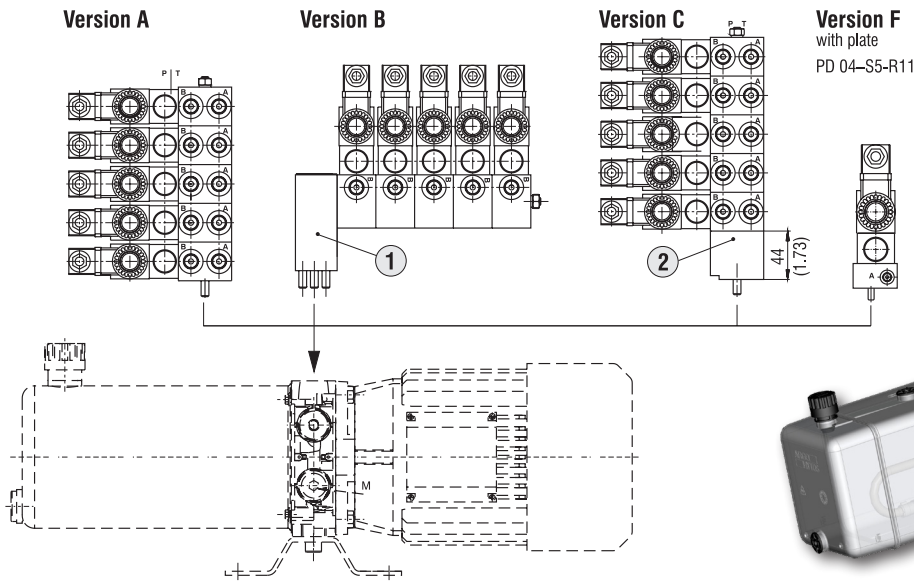
NS plates have vertical holes for M6 screws. The holes have a countersink for the screw head on one side and feature a connecting M8 thread on the other side. They are used for fixing the plates to a base or a frame.



Six-section plate PD04-NS-A6/G3AI. The plate can be fixed to a base or a frame with M6 or M8 screws.

Design version S5 (Stackable for SMA05)

The version S5 is intended for assembly onto the central manifold of power pack SMA05 to extend the control functions. Plates with 1 up to 5 sections have two horizontal through-holes of diameter D 8.4 mm for M8 studs. Side outputs P1, T1 (on the side of the 1st section) have a countersink for a sealing ring. There are four possibilities to connect to the SMA central block (for more details see SMA data sheet 7212). For some types of tanks it is necessary to use a connecting plate due to space requirements.



		SAP No.
1	Connecting plate B	16094500
2	Connecting plate C	16094700

Ordering Code

PD04 - [] - [] / [] - AL [] - []

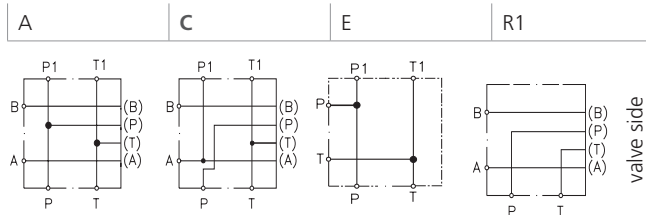
Serial plates for ISO 4401-02 (CETOP 02) valves

Nominal size

Design version

Non stackable NS
Stackable - for SMA05 power unit central block S5

Functional symbol (section)



Plates PD04-NS are produced only with functional symbol A.
Plates with functional symbols C, E and R1 are produced only as a one section plates. (PD04-S5-C1, PD04-S5-E1, PD04-S5-R11)

Number of sections

1 section	1
2 sections	2
3 sections	3
4 sections	4
5 sections	5
6 sections	6
7 sections	7
8 sections	8

Number of sections	Design version
1 - 8	NS
1 - 5	S5

Surface Treatment
aluminium plate without treatment

No designation

No designation
N

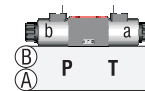
Seals
without seal rings
NBR

AL

Material
aluminium

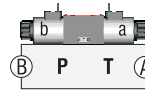
Side location for A and B consumer ports, and valve position

AI



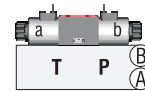
Design version
PD04-NS, PD04-S5

BI



PD04-S5

A



PD04-S5

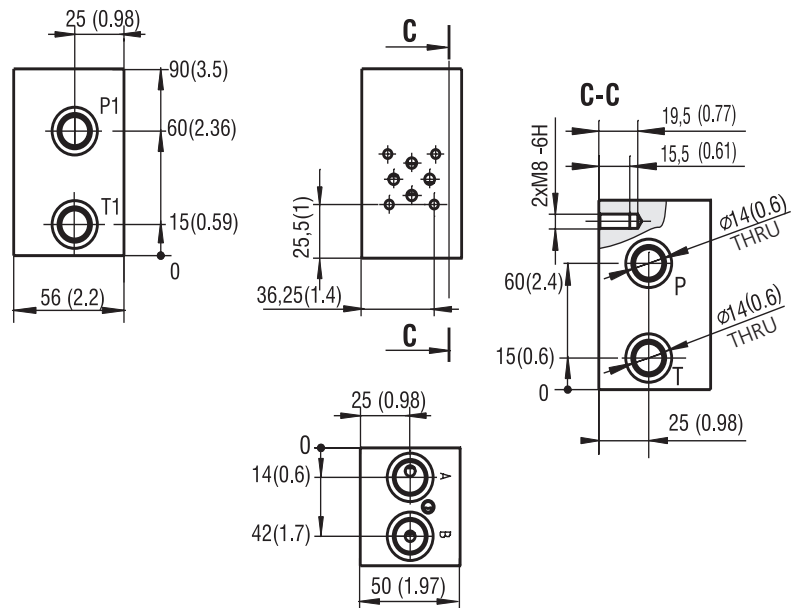
Port threads

Designation	P	T	A	B	Used for version
G1	G1/4	G1/4	G1/4	G1/4	S5
G2	G1/4	G1/4	G3/8	G3/8	S5
G3	G3/8	G3/8	G3/8	G3/8	NS 1-8 sections, S5-E1
U1	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF	S5

The standardised PD plates, listed in this data sheet, are available. For other plate versions contact our technical department for their identification and feasibility.

Dimensions in millimeters (inches)

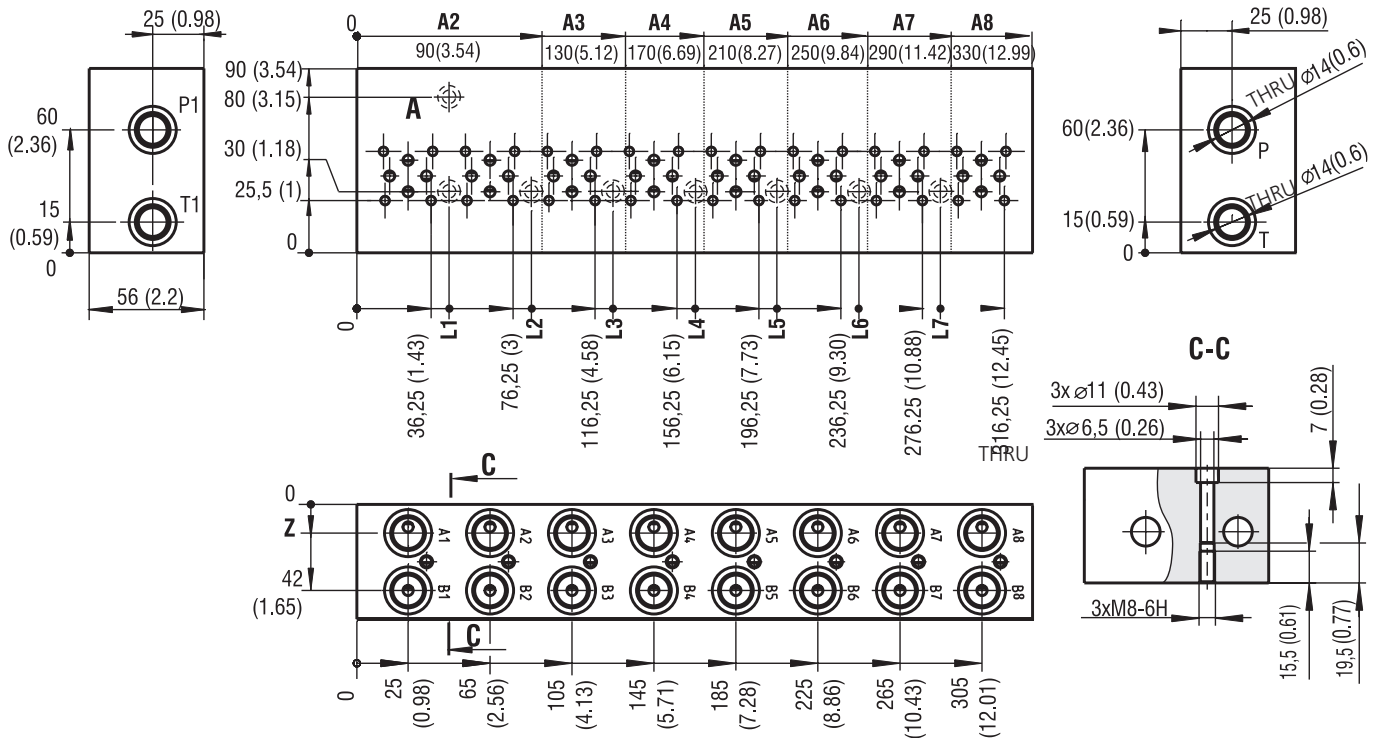
Plate PD04-NS-A1



List of standardised types

Design version	Plate - type	SAP
NS	PD04-NS-A1/G3AI-AL	16105700
	PD04-NS-A2/G3AI-AL	16105800
	PD04-NS-A3/G3AI-AL	16105900
	PD04-NS-A4/G3AI-AL	16106100
	PD04-NS-A5/G3AI-AL	16106300
	PD04-NS-A6/G3AI-AL	16106500
	PD04-NS-A7G3AI-AL	on request only
	PD04-NS-A8/G3AI-AL	16106600

Plates PD04-NS-A2 A8



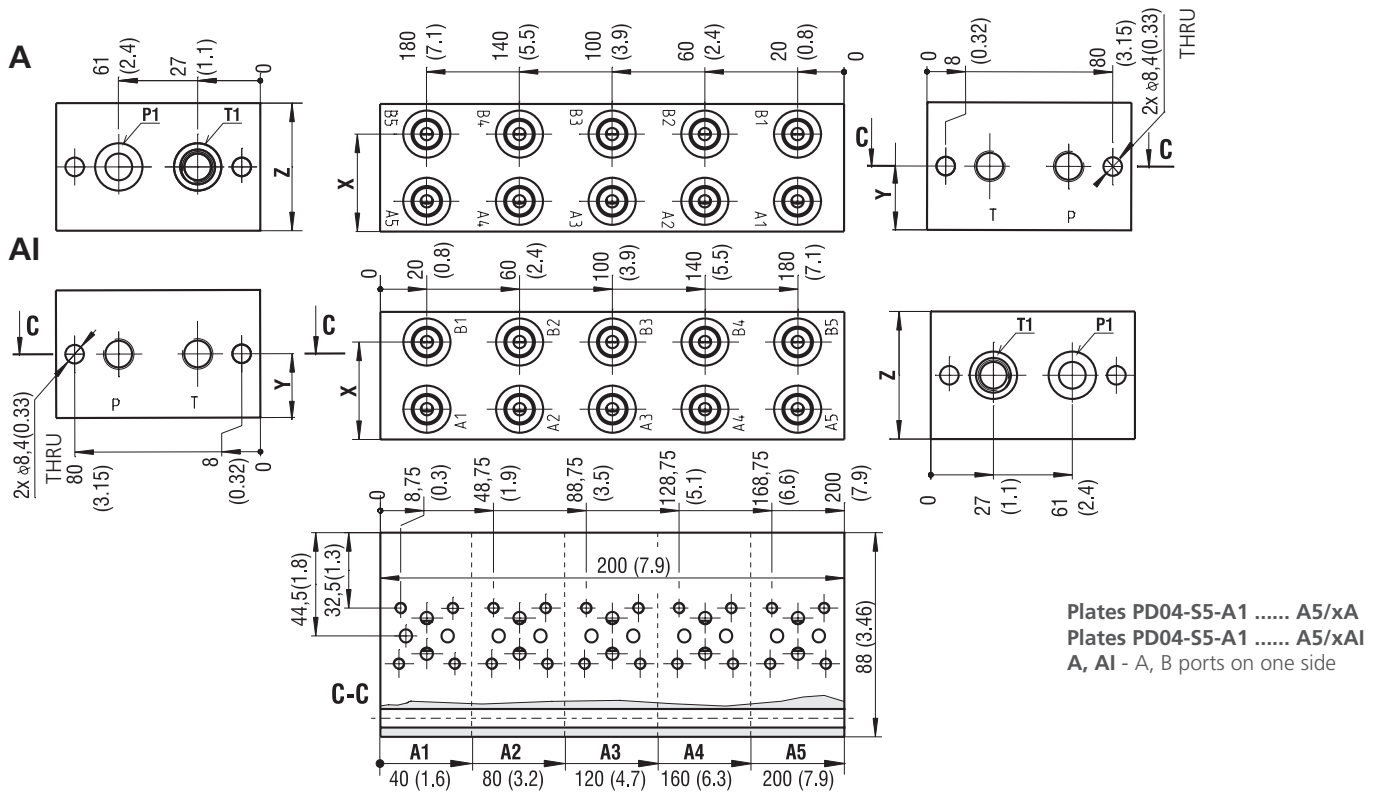
Plates with 1 ...8 sections Dimensions in millimeters (inches)

	L1	L2	L3	L4	L5	L6	L7	Z	Mass of Plates	kg (lbs)
A1	-	-	-	-	-	-	-	-	A1	0.6 (1.32)
A2	45 (1.77)	85 (3.35)	-	-	-	-	-	14 (0.55)	A2	1.4 (3.11)
A3		-	-	-	-	-	-	14 (0.55)	A3	2.1 (4.66)
A4		-	125 (4.92)	-	-	-	-	14 (0.55)	A4	2.8 (6.21)
A5		-	-	165 (6.50)	-	-	-	14 (0.55)	A5	3.5 (7.77)
A6		-	125 (4.92)	-	205 (8.07)	-	-	14 (0.55)	A6	4.2 (9.33)
A7		-	-	165 (6.50)	-	245 (9.65)	-	14 (0.55)	A7	4.9 (10.9)
A8		-	125 (4.92)	-	205 (8.07)	-	285 (11.22)	11 (0.43)	A8	5.6 (12.2)

Plates with 1 ...8 sections

Port threads - designation	G3
Port	A1...A7, B1...B7
Thread	G3/8
Depth of thread	12
Counterbore	Ø23
Depth of counterbore	1

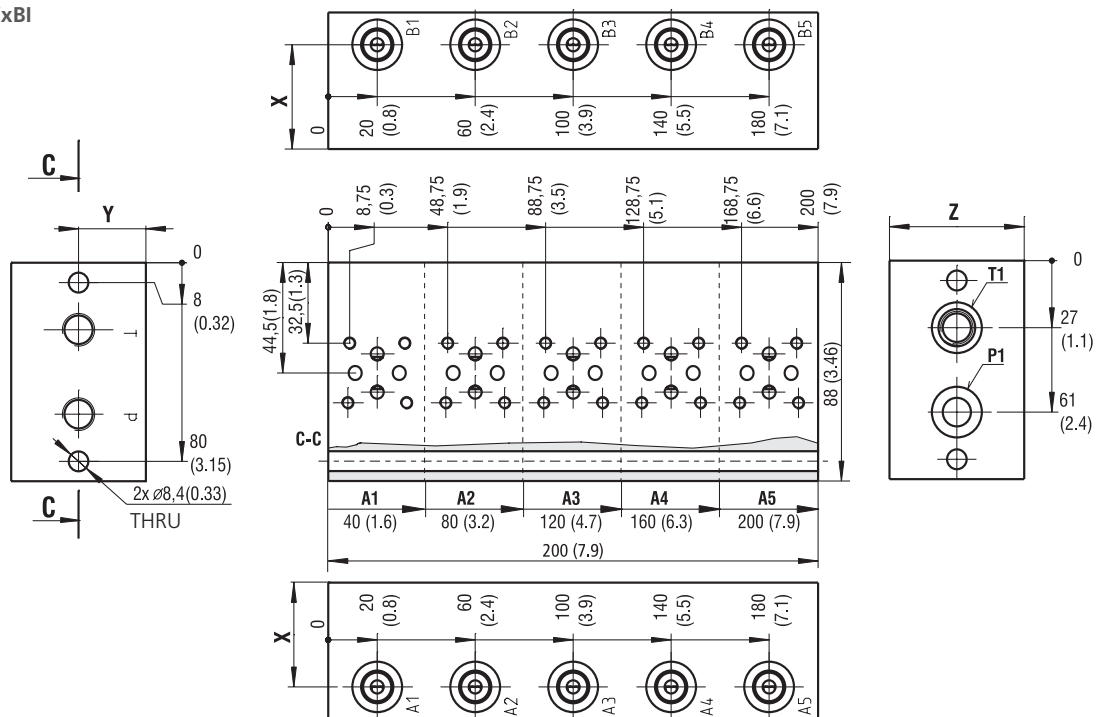
Dimensions in millimeters (inches)



Plates PD04-S5-A1 A5/xA
Plates PD04-S5-A1 A5/xAI
A, AI - A, B ports on one side

Plates PD04-S5-A1 A5/xBI

BI - A port on one side,
B port on other side



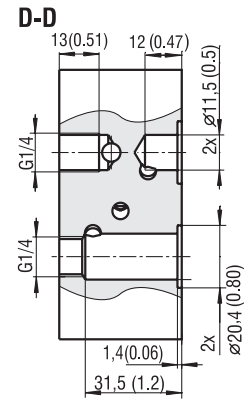
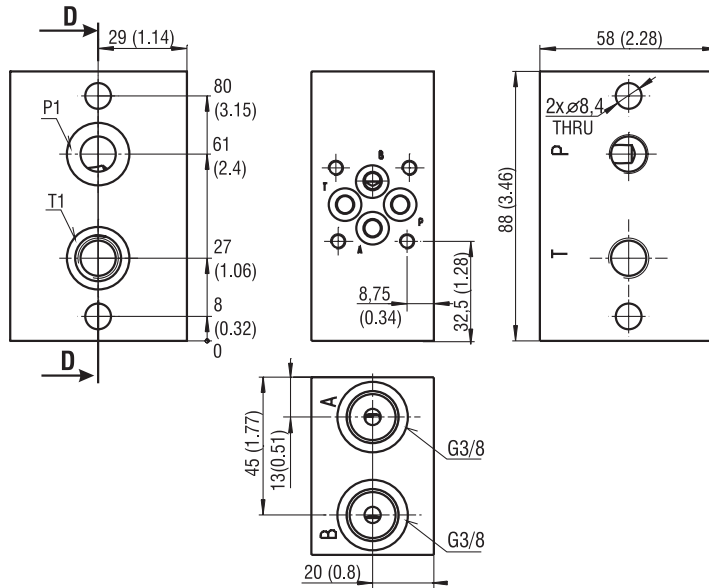
Y
27.5 (1.08)
29 (1.14)
27.5 (1.08)

A1 - A5 Port size (side location A, AI or BI)	Dimensions mm (in)			Mass of Plates kg (lbs)	
	Y	X	Z	A1	A4
G1	27.5 (1.08)	42 (1.65)	55 (2.17)	0.6 (1.32)	
G2	29 (1.14)	45 (1.77)	58 (2.28)	1.2 (2.65)	
U1	27.5 (1.08)	42 (1.65)	55 (2.17)	1.8 (3.96)	2.4 (5.29)

A1 - A5 (side location A, AI or BI)	Port size											
	A1...A5, B1...B5			P, T			P1, T1			A1... A5 B1... B5		
Thread	G 1/4			G 1/4			G 1/4			9/16-18		
Depth of thread	13.5 (0.53)			13 (0.51)			13.5 (0.53)			12.7		
Counterbore	Ø20			Ø20.4			Ø23			Ø25		
Depth of counterbore	0.5+0.5			1.4			0.5+0.5			0		
O-Ring [mm]	G1			17.17x1.68 NBR70			G2			U1		
										17.17x1.68 NBR70		

Dimensions in millimeters (inches)

Plate PD04-S5-C1



Mass of Block	kg (lbs)
PD04-S5-C1	0.49 (1.08)
PD04-S5-E1	0.49 (1.08)

Plate PD04-S5-E1

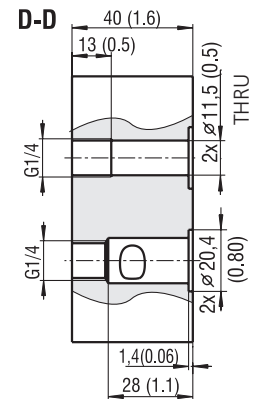
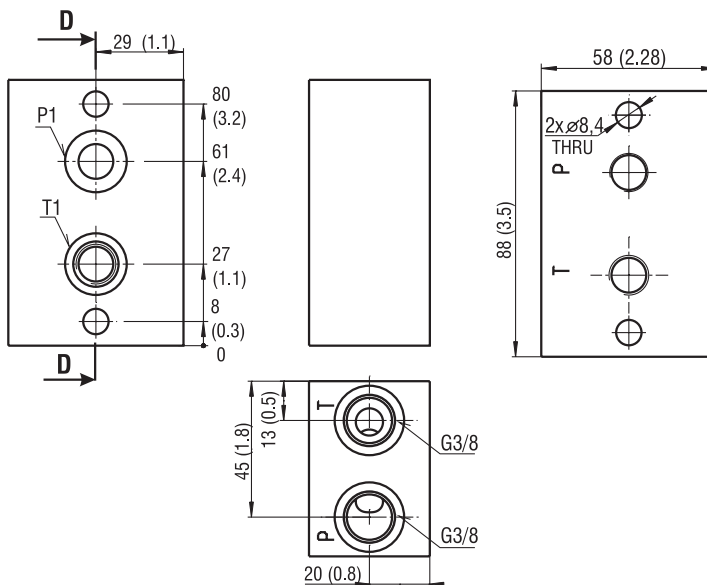
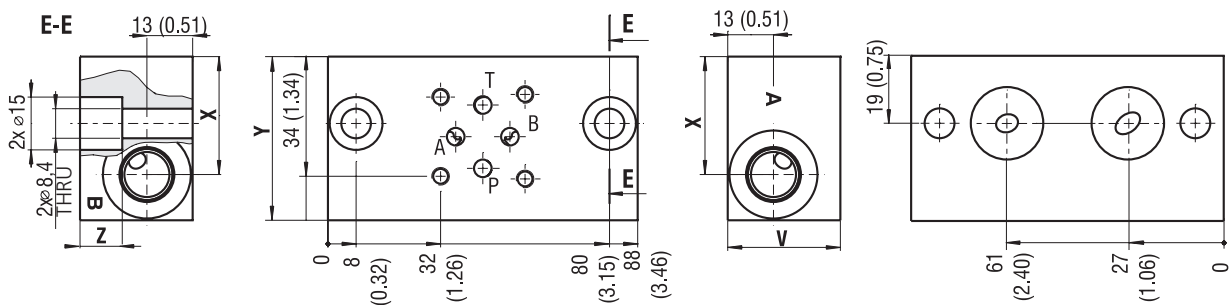


Plate PD04-S5-R11



R1 Port size	Dimensions mm (in)				Mass of Plates	kg (lbs)
	V	Y	X	Z		
G1	30 (1.18)	46 (1.81)	33 (1.30)	10 (0.39)	PD04-S5 R1	0.3 (0.66)
U1	32 (1.26)	46.5 (1.83)	33.5 (1.32)	12 (0.47)	PD04-S5 R1	0.3 (0.66)

R1 Port size	Port size			
	A, B	P, T	A, B	P, T
Thread	G 1/4		9/16-18	
Depth of thread	12 (0.47)		12.7	
Counterbore	Ø20	Ø20.4	Ø25	Ø20.4
Depth of counterbore	1	1.4	1	1.4
O-Ring [mm]	G1	17.17x1.68 NBR70	U1	17.17x1.68 NBR70

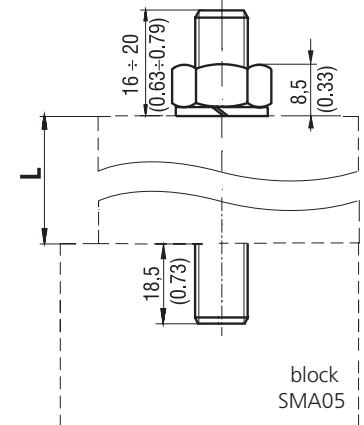
List of standardised types

Design version S5							
Plate - type		SAP		Plate - type		SAP	
PD04-S5-A1/G1AI-ALN	16095000	PD04-S5-A4/G1BI-ALN	23474900	PD04-S5-A2/U1BI-ALN	23484700		
PD04-S5-A2/G1AI-ALN	16095100	PD04-S5-A5/G1BI-ALN	23475000	PD04-S5-A3/U1BI-ALN	23484800		
PD04-S5-A3/G1AI-ALN	16095200	PD04-S5-A1/G2BI-ALN	16095300	PD04-S5-A4/U1BI-ALN	23484900		
PD04-S5-A4/G1AI-ALN	23473900	PD04-S5-A2/G2BI-ALN	23475200	PD04-S5-A5/U1BI-ALN	23485000		
PD04-S5-A5/G1AI-ALN	16770200	PD04-S5-A3/G2BI-ALN	23475300	PD04-S5-A1/G1A-AL	30672100		
PD04-S5-A1/G2AI-ALN	16666600	PD04-S5-A4/G2BI-ALN	23475400	PD04-S5-A2/G1A-AL	30670800		
PD04-S5-A2/G2AI-ALN	16666700	PD04-S5-A5/G2BI-ALN	23475500	PD04-S5-A3/G1A-AL	on request only		
PD04-S5-A3/G2AI-ALN	23474300	PD04-S5-A1/U1AI-ALN	23484100	PD04-S5-A4/G1A-AL	28618200		
PD04-S5-A4/G2AI-ALN	16666800	PD04-S5-A2/U1AI-ALN	23484200	PD04-S5-A5/G1A-AL	on request only		
PD04-S5-A5/G2AI-ALN	23474500	PD04-S5-A3/U1AI-ALN	23484300	PD04-S5-C1/G2AI-AL	32195200		
PD04-S5-A1/G1BI-ALN	23474600	PD04-S5-A4/U1AI-ALN	23484400	PD04-S5-E1/G3-AL	32195300		
PD04-S5-A2/G1BI-ALN	23474700	PD04-S5-A5/U1AI-ALN	23484500	PD04-S5-R11/G1-ALN	16666900		
PD04-S5-A3/G1BI-ALN	23474800	PD04-S5-A1/U1BI-ALN	23484600	PD04-S5-R11/U1-ALN	23476000		

Assembly of PD04-S5 plates

One threaded end of an M8 stud is screwed into the aluminium block, the plate is connected to the block with a nut and a washer. The set consists of two studs, spring washers and nuts. The torque for the nut is 18 Nm (13.3 ft-lbf).

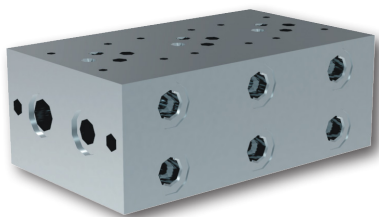
Number of section	Total block length L [mm (in)]	Version A and B		Version C	
		Stud	Set SAP No.	Stud	Set SAP No.
1	40	M8x73	16095900	M8x117	16096100
2	80	M8x113	16096000	M8x157	16667600
3	120	M8x153	16667300	M8x197	16667700
4	160	M8x193	16667400	M8x237	16667800
5	200	M8x233	16667500	M8x277	16667900



Serial Plates with Side Ports for ISO 4401-03 Valves

PD06

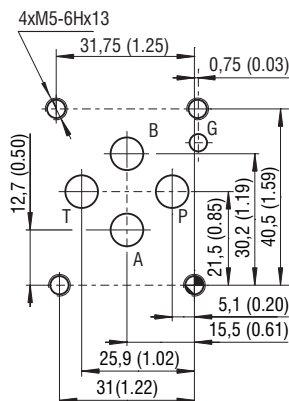
Size 06 (D03) • p_{max} 250 bar (3600 PSI)



Technical Features

- › Designed to connect in parallel two or more ISO 4401-03 (CETOP 03) valves to build compact hydraulics on each axis vertically
- › Stackable models (Version S5 and Z6) with mounting interface for SMA05 or ZB06 hydraulic power unit central block
- › Flexible design of various stackable plates enables simple creation of circuits without the use of pipes and fittings
- › Maximum 6 parallel modular valve sections may be installed. Optional selection for A and B consumer port positions
- › Maximum flow rate can be increased up to double the output if the sub-plates are powered at both ends
- › Serial plates are available in aluminium. For other material consult our technical department for their identification and feasibility.
- › Includes mounting stud kits for horizontal plate assembly
- › BSP and SAE porting
- › In the standard version, the aluminium serial plate is without surface protection

ISO 4401-03-02-0-05



Ports P, A, B, T - max Ø7.5 mm (0.29 in)

Technical Data

Modular valves mounting surface		06 (D03)
Max. operating pressure (aluminium)	bar (PSI)	250 (3630)
Port threads (according to model)		see table
Weight (according to model)	kg (lbs)	see table
	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 06
Studs and nuts for vertical stacking assemblies		HA_0020

Functional Description

Design version Z6 (Stackable for ZB06)

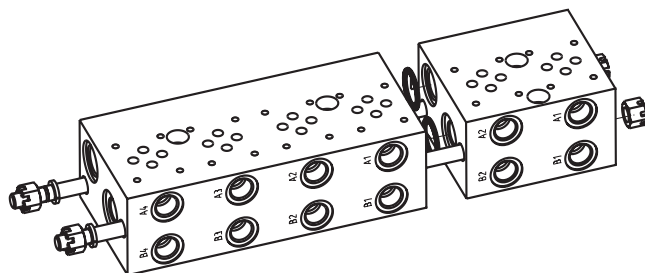
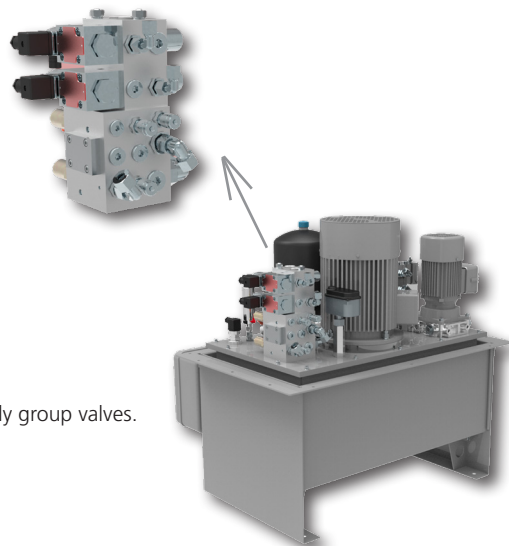
The plates of design version Z6 are intended for assembly on the top surface of the manifold ZB06 on power packs SA to extend the control functions or can be used as a separate manifold. Plates with 1 up to 4 sections are provided with two horizontal through-holes of diameter D 10.5 mm for studs M10. Plates of up to 10 sections can be created by horizontal grouping. Side outputs P1, T1 (on the side of the last section) have a countersink for a sealing ring.

Design version NS (Not Stackable)

The plates of design version NS are similar but with 5 or 6 sections. They can be used only separately because they do not have any holes for studs. Outputs P1, T1, P, T on both sides have a countersink for a sealing ring.

NS plates have 3 vertical holes (Z6 plates 2 holes) for M8 screws. The holes have a countersink for the screw head on one side and a connecting M10 thread on the second side. They are used for fixing the plates to a base or a frame.

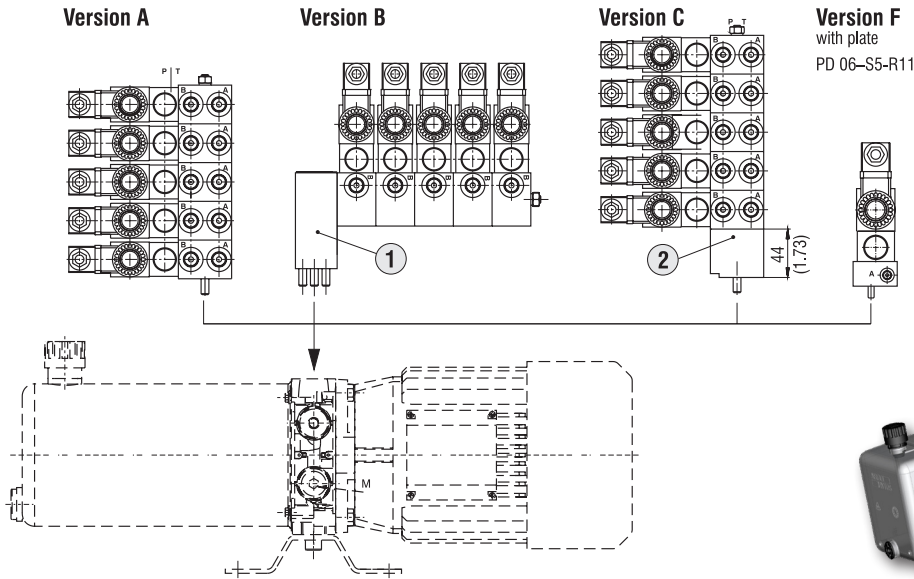
Control circuit of SA power pack extended by plate PD06-Z6-A2 with a possibility to vertically group valves.



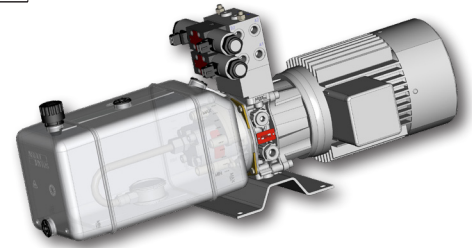
Separate six-section plate created by horizontal grouping of plates PD06-Z6-A4 and PD06-Z6-A2, connected by two studs M10. The plate can be fixed to a base or a frame with M8 or M10 screws.

Design version S5 (Stackable for SMA 05)

The version S5 is intended for assembly onto the central manifold of power pack SMA 05 to extend the control functions. Plates with 1 up to 5 sections have two horizontal through-holes of diameter D8.4 mm for M8 studs. Side outputs P1, T1 (here on the side of the 1st section) have a countersink for a sealing ring. There are four possibilities to connect to the SMA central block (for more details see SMA data sheet 7212). For some types of tanks it is necessary to use a connecting plate due to space requirements.



		SAP No.
1	Connecting plate B	16094500
2	Connecting plate C	16094700



Ordering Code

PD06 - [] - [] / [] [] - AL [] - []

Serial plates for ISO 4401-03 (CETOP 03) valves

Nominal size

Design version

Stackable – for ZB06 base plate

Non stackable

Stackable - for SMA 05 power unit central block

Z6

NS

S5

No designation

Surface Treatment
aluminium plate
without treatment

No designation
N

Seals
without seal rings
NBR

Material
aluminium

Functional symbol (section)

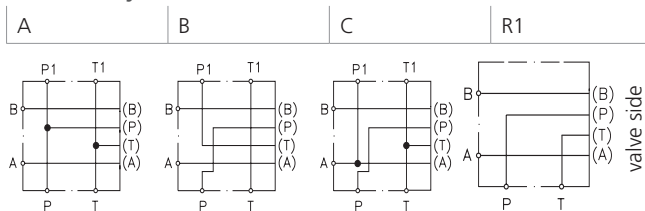


Plate with functional symbol R1 is produced only as a one section type PD06-S5-R11

Number of sections

1 section

2 sections

3 sections

4 sections

5 sections

6 sections

Number of sections	Design version
1 - 4	Z6
5 - 6	NS
1 - 5	S5

1

2

3

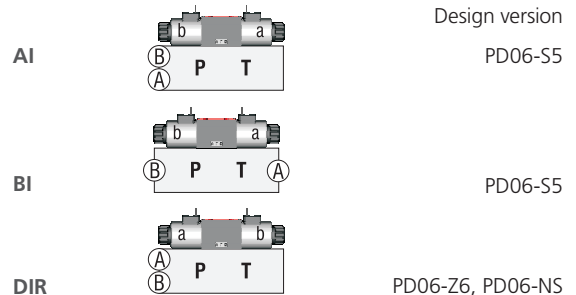
4

5

6

AL

Side location for A and B consumer ports, and valve position



Design version

PD06-S5

PD06-S5

PD06-Z6, PD06-NS

Port threads

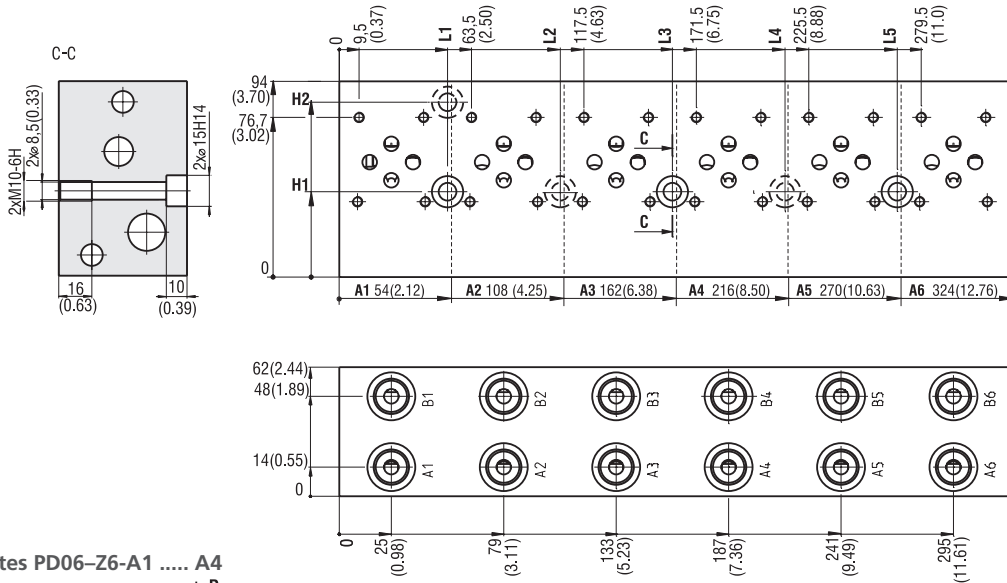
Designation	P	T	A	B	Used for version
G1	G1/4	G1/4	G1/4	G1/4	S5
G2	G1/4	G1/4	G3/8	G3/8	S5
G4	G3/8	G1/2	G3/8	G3/8	NS and Z6
G5	G1/2	G1/2	G3/8	G3/8	NS
U1	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF	9/16-18 UNF	S5

The standardised PD plates, listed in this data sheet, are available. For other plate versions contact our technical department for their identification and feasibility.

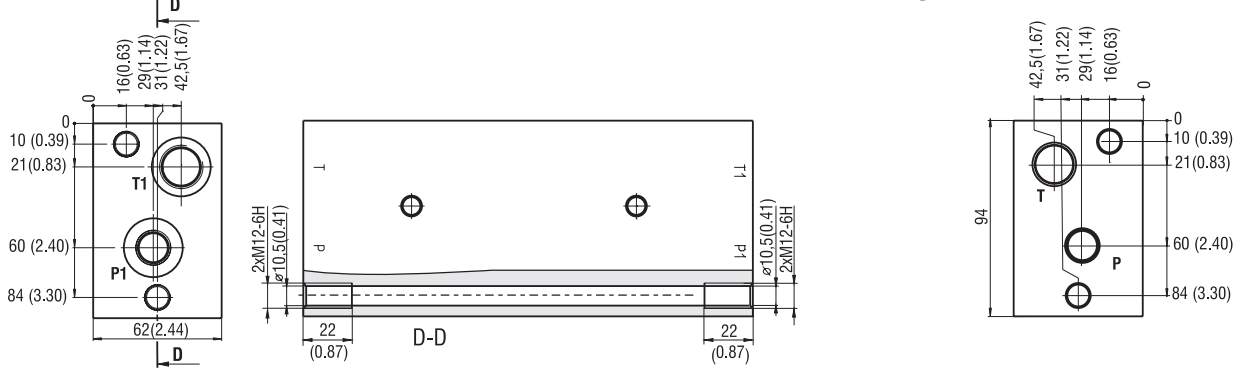
Dimensions in millimeters (inches)

Plates PD06-Z6 and PD06-NS

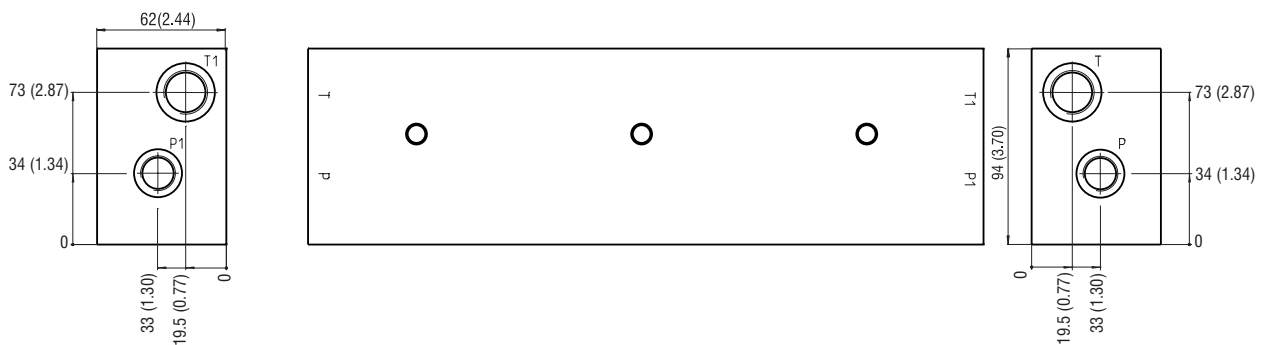
Plates with 1, 2, 3 and 4 sections enable combinations up to 10 sections



Plates PD06-Z6-A1 A4



Plates PD06-NS-A5 A6



Plates with 1 ...6 sections Dimensions in millimeters (inches)

	L1	L2	L3	L4	L5	H1	H2	Plate weight	kg (lbs)
A1								A1	0.7 (1.57)
A2							84 (3.31)	A2	1.4 (3.11)
A3		106 (4.17)						A3	2.1 (4.66)
A4	52 (2.04)					41 (1.61)		A4	2.8 (6.21)
A5			160 (6.30)	214 (8.43)				A5	3.5 (7.77)
A6					268(10.6)			A6	4.2 (9.33)

Plates with 1 ...6 sections Port size Dimensions in millimeters (inches)

Port threads - designation	G4					G4, G5		G4	G5
	A1...A4, B1...B4	P	T	P1	T1	A5...A6, B5...B6	T, T1	P, P1	P, P1
Thread	G 3/8	G 3/8	G 1/2	G 3/8	G 1/2	G 3/8	G 1/2	G 3/8	G 1/2
Depth of thread	12 (0.47)	12 (0.47)	14 (0.55)	12 (0.47)	14 (0.55)	12 (0.47)	14 (0.55)	14 (0.55)	14 (0.55)
Counterbore	Ø23			Ø28.4	Ø28.4	Ø23	Ø28	Ø23	Ø28
Depth of counterbore	1(0.03)			2.1 (0.8)	2.1 (0.8)	1(0.03)			
O-Ring [mm]				23.81x2.62	23.81x2.62				

List of standardised types

Design version	Plate - type	SAP	Design version	Plate - type	SAP
Z6	PD06-Z6-A1/G4DIR-ALN	16102300	NS	PD06-NS-A5/G4DIR-AL	16102700
	PD06-Z6-A2/G4DIR-ALN	16102400		PD06-NS-A6/G4DIR-AL	16102800
	PD06-Z6-A3/G4DIR-ALN	16102500			
	PD06-Z6-A4/G4DIR-ALN	16102600			
	PD06-Z6-B1/G4DIR-ALN	16102900			
	PD06-Z6-C1/G4DIR-ALN	16103000			

Assembly of PD06-Z6 plates

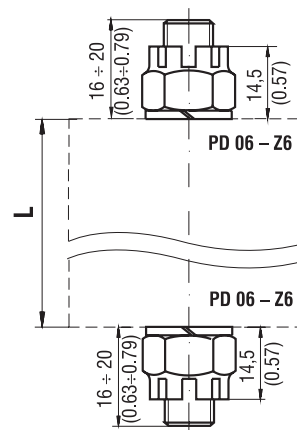
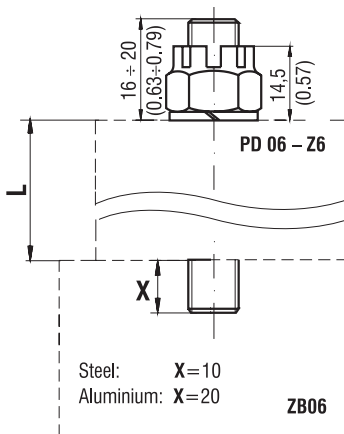
One threaded end of an M10 stud is screwed into the basic block, the plate is connected to the block with a nut and a washer. The connecting set consists of two studs, spring washers and crown nuts. For an assembly of separate plates use the stud set for aluminium basic block + nut set. The nut set consists of two nuts and spring washers. The torque of the nut is 35+3 Nm (25.8+2.2 lbf.ft).

Number of section	Total block length L [mm (in)]	Steel basic block		Aluminium basic block	
		Stud	Set SAP No.	Stud	Set SAP No.
1	54 (2.13)	M10x67	23676000	M10x70	23675900
2	108 (4.25)	M10x138	23676100	M10x143	23676800
3	162 (6.38)	M10x192	16103200	M10x199	23676900
4	216 (8.50)	M10x246	23676300	M10x259	23677000
5	270 (10.63)	M10x300	23676400	M10x314	23677100
6	324 (12.76)	M10x354	23676500	M10x374	23677200
7	378 (14.88)	M10x408	23676600	M10x424	16103300
8	432 (17.00)	M10x462	23676700	M10x474	16103400
9	486 (19.13)			M10x526	23677500
10	540 (21.26)			M10x584	23677600

Nut set	Set includes	Set SAP No.
	2x crown nut M10 + 2x spring washer 10.2	23440400

Plate / plates PD06-Z6 assembled to the basic block of an SA power pack.

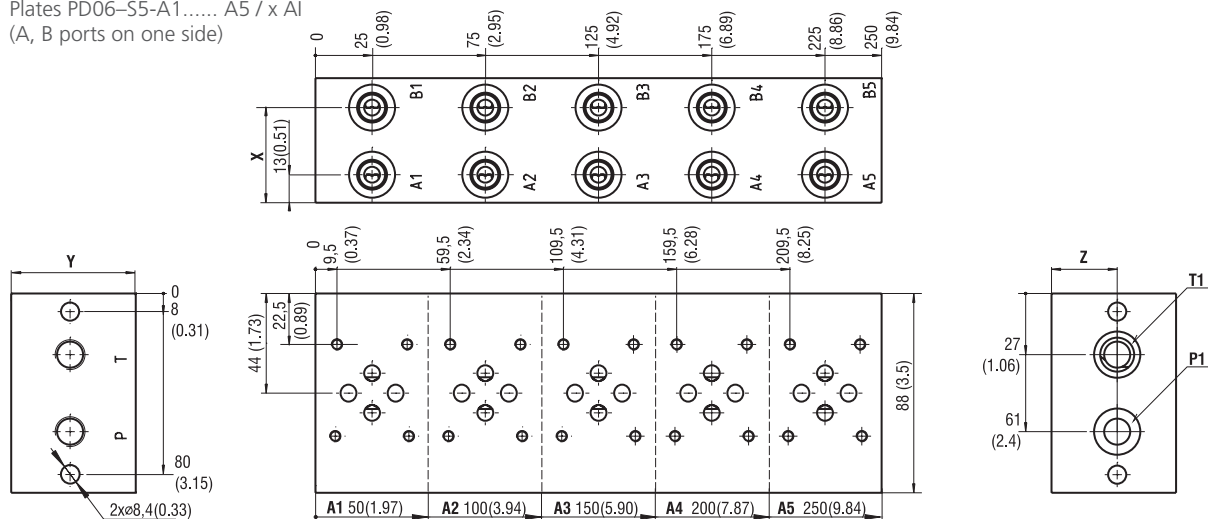
Grouped plates PD06-Z6 used as a separate compact block.



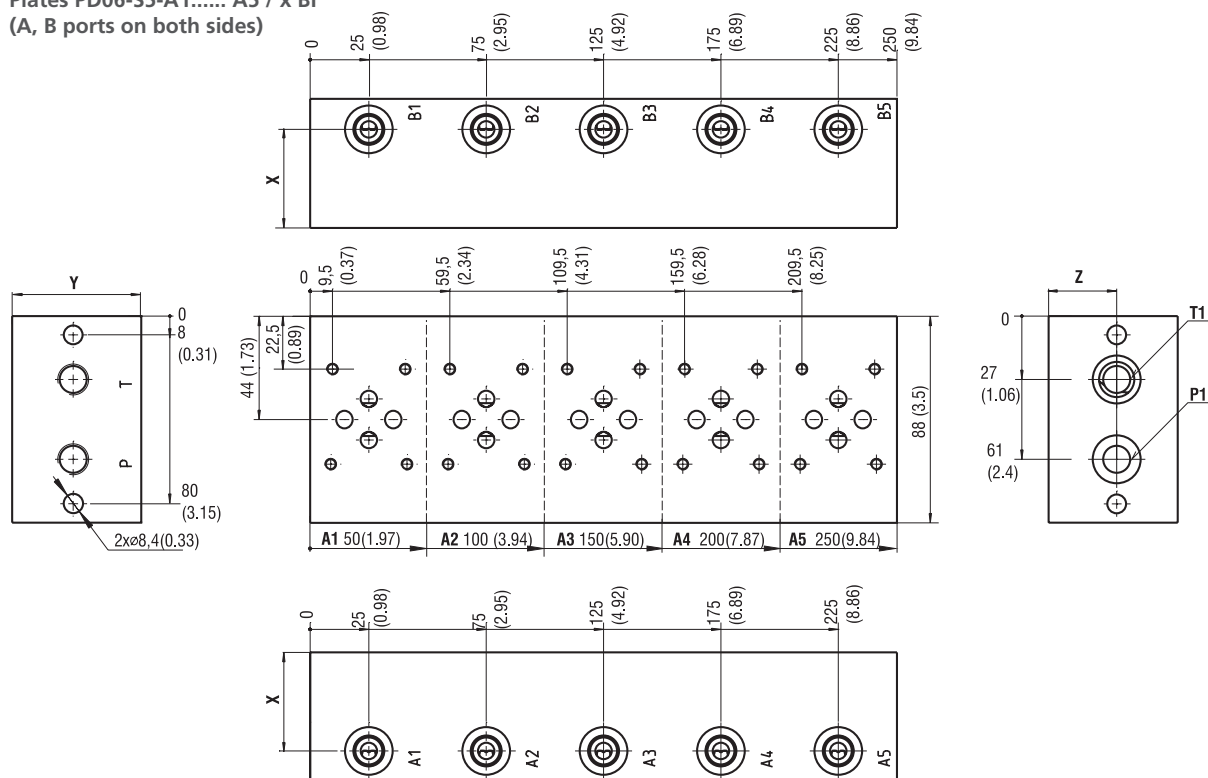
Dimensions in millimeters (inches)

Plates PD06-S5

Plates PD06-S5-A1..... A5 / x AI
(A, B ports on one side)



Plates PD06-S5-A1..... A5 / x BI (A, B ports on both sides)

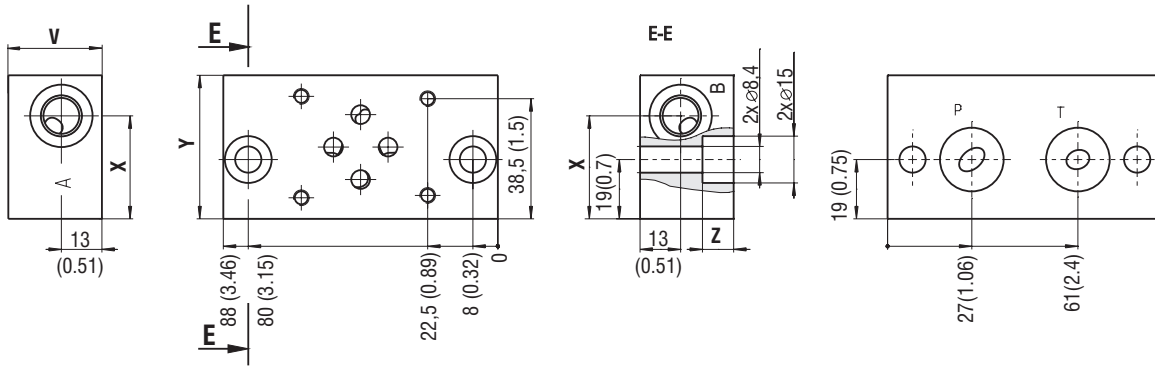


A1 - A5 Port size (side location AI or BI)	Dimensions mm (in)			Plate weight	kg (lbs)
	Y	X	Z		
G1	55 (2.17)	42 (1.65)	27.5 (1.08)	A1	0.6 (1.32)
G2	58 (2.28)	45 (1.77)	29 (1.14)	A2	1.2 (2.65)
U1	55 (2.17)	42 (1.65)	27.5 (1.08)	A3	1.8 (3.96)
				A4	2.4 (5.29)
				A5	3.0 (6.61)

A1 - A5 (side location AI or BI)	Port size			A1...A5, B1...B5	P, T	P1, T1	A1.. A5 B1.. B5	P, T	P1, T1
	Thread	Depth of thread	Counterbore						
Thread	G 1/4	G 1/4		G 3/8	G 1/4		9/16-18		
Depth of thread	13.5 (0.53)	13 (0.51)		13.5 (0.53)	13 (0.51)		12.7		
Counterbore	Ø20		Ø20.4	Ø23		Ø20.4	Ø25	Ø20.4	
Depth of counterbore	0.5+0.5		1.4	0.5+0.5		1.4	0.5+0.5	0	1.4
O-Ring [mm]	G1		17.17x1.68 NBR70	G2		17.17x1.68 NBR70	U1		17.17x1.68 NBR70

Dimensions in millimeters (inches)

Plate PD06-S5-R11



R1 Port size	Dimensions mm (in)				Plate weight	kg (lbs)
	V	Y	X	Z		
G1	30 (1.18)	46 (1.81)	33 (1.30)	10 (0.39)	R1	0.3 (0.66)
U1	32 (1.26)	46.5 (1.83)	33.5 (1.32)	12 (0.47)	R1	0.3 (0.66)

R1 Port size	Port size			
	A, B	P, T	A, B	P, T
Thread	G 1/4		9/16-18	
Depth of thread	12 (0.47)		12.7	
Counterbore	Ø20	Ø20.4	Ø25	Ø20.4
Depth of counterbore	1	1.4	1	1.4
O-Ring [mm]	G1	17.17x1.68 NBR70	U1	17.17x1.68 NBR70

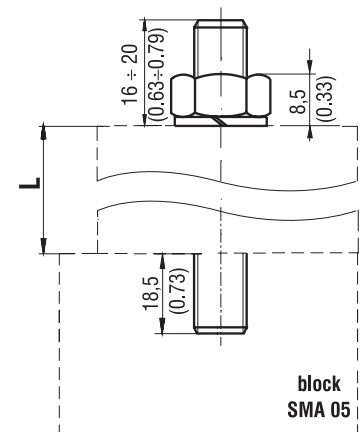
List of standardised types

Design version S5					
Plate - type	SAP	Plate - type	SAP	Plate - type	SAP
PD06-S5-A1/G1AI-ALN	16094900	PD06-S5-A2/G2AI-ALN	16769900	PD06-S5-A1/U1AI-ALN	23485100
PD06-S5-A2/G1AI-ALN	17084600	PD06-S5-A3/G2AI-ALN	16770000	PD06-S5-A2/U1AI-ALN	23485200
PD06-S5-A3/G1AI-ALN	23471800	PD06-S5-A4/G2AI-ALN	16666500	PD06-S5-A3/U1AI-ALN	23485300
PD06-S5-A4/G1AI-ALN	23471900	PD06-S5-A5/G2AI-ALN	16770100	PD06-S5-A4/U1AI-ALN	23485400
PD06-S5-A5/G1AI-ALN	23472000	PD06-S5-A1/G2BI-ALN	23473100	PD06-S5-A5/U1AI-ALN	23485500
PD06-S5-A1/G1BI-ALN	23472600	PD06-S5-A2/G2BI-ALN	23473200	PD06-S5-A1/U1BI-ALN	23485600
PD06-S5-A2/G1BI-ALN	23472700	PD06-S5-A3/G2BI-ALN	23473300	PD06-S5-A2/U1BI-ALN	23485700
PD06-S5-A3/G1BI-ALN	23472800	PD06-S5-A4/G2BI-ALN	23473400	PD06-S5-A3/U1BI-ALN	23485800
PD06-S5-A4/G1BI-ALN	23472900	PD06-S5-A5/G2BI-ALN	23473500	PD06-S5-A4/U1BI-ALN	23485900
PD06-S5-A5/G1BI-ALN	17236800	PD06-S5-B1/G1AI-ALN	29767700	PD06-S5-A5/U1BI-ALN	23486000
PD06-S5-A1/G2AI-ALN	16666400	PD06-S5-R11/G1-ALN	16095400	PD06-S5-R11/U1-ALN	23476100

Assembly of PD06-S5 plates

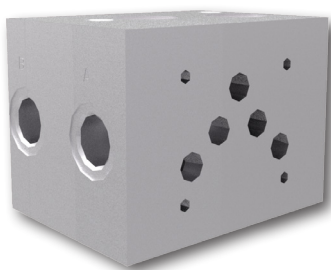
One threaded end of an M8 stud is screwed in the aluminium block, the plate is connected to the block with a nut and a washer. The set consists of two studs, spring washers and nuts. The torque for the nut is 18 Nm (13.3 lbf.ft).

Number of section	Total block length L [mm (in)]	Version A and B		Version C	
		Stud	Set SAP No.	Stud	Set SAP No.
1	50 (1.96)	M8x83	16096200	M8x127	16668000
2	100 (3.93)	M8x133	16096300	M8x177	16668100
3	150 (5.90)	M8x185	16096400	M8x227	16668200
4	200 (7.87)	M8x233	16667500	M8x277	16667900
5	250 (9.84)	M8x285	16096500	M8x327	16668300

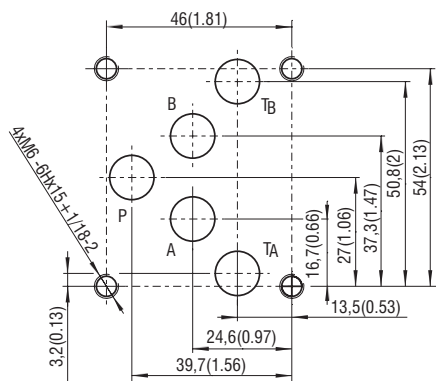


PD10

Size 10 (D05) • p_{max} 250 bar (3600 PSI)



ISO 4401-05-04-0-05



Ports P, A, B, T - max Ø11.2 mm (0.44 in)

Technical Features

- › Designed to connect in parallel two or more ISO 4401-05 (CETOP 05) valves to build compact hydraulics on each axis vertically
- › Stackable models (version Z6 and Z10) with mounting interface for ZB06 or ZB10 hydraulic power unit.
- › Flexible design of various stackable plates enables simple creation of circuits without the use of pipes and fittings.
- › Maximum 6 parallel modular valve sections may be installed. Maximum flow rate can be increased up to double the output if the sub-plates are powered at both ends.
- › Serial plates are available in aluminium. For other material consult our technical department for their identification and feasibility.
- › Includes mounting stud kits for plate assembly
- › In the standard version, the aluminium serial plate is without surface protection

Technical Data

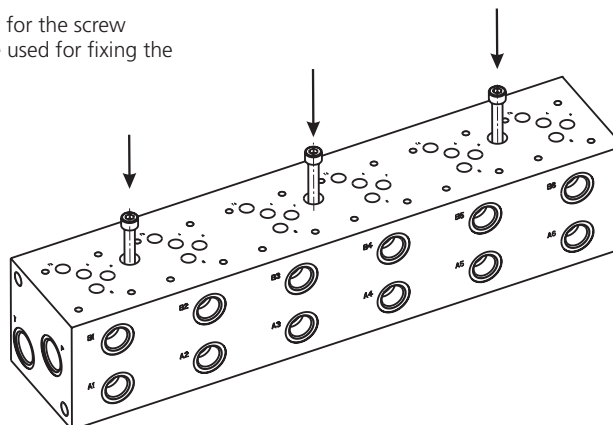
Modular valves mounting surface		10 (D05)
Max. operating pressure (aluminium)	bar (PSI)	250 (3630)
Port threads (depending on model)		see table
Mass (depending on model)	kg (lbs)	see table
	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Mounting surface	SMT_0019	Size 10 (D05)
Studs and nuts for vertical stacking assemblies		HA_0020

Functional Description

Design version NS (Not Stackable)

The plates of design version NS have from 1 up to 6 sections. They can be used only separately because they do not have any holes for studs. Outputs P1, T1, P, T on both sides have a countersink for a sealing ring.

NS plates have vertical holes for M8 screws. The holes have a countersink for the screw head on one side and connecting M10 thread on the other side. They are used for fixing the plates to a base or a frame.

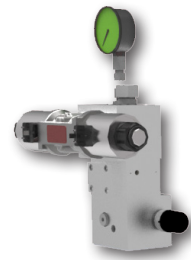


Six-section plate PD10-NS-A6/G10Al.

The plate can be fixed to a base or a frame with M8 or M10 screws.

Design version Z6 (Stackable for ZB06)

The plates of design version Z6 are intended for an assembly onto the top surface of manifold ZB06 of power packs SA4 to extend the control functions. Plates with 1 up to 2 section are provided with two horizontal through-holes of diameter D 10.2 mm for M10 studs. Side outputs P1, T1 (on side of the last section) have a countersink for a sealing ring.

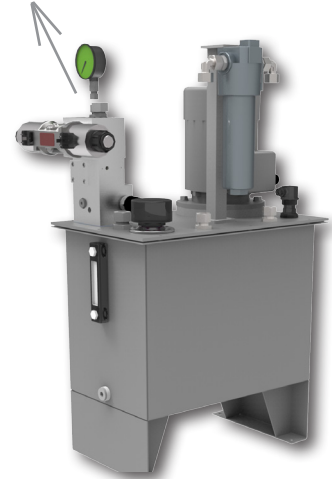


PD10-Z6-A2

Control circuit of SA power pack extended by plate PD10-Z6-A2 with a possibility to vertically group valves.

Design version Z10 (Stackable for ZB10)

The plates of design version Z10 are intended for an assembly onto the top surface of manifold ZB10 of power packs SA4 to extend the control functions. Plates with one section are provided with two horizontal through going holes of diameter D13 mm for M12 screws. Side outputs P1, T1 have a countersink for a sealing ring.



Ordering Code

PD10 - [] - [] / [] - AL [] - []

Serial plates for ISO 4401-05 (CETOP 05) valves

Nominal size

Design version

Non stackable **NS**
 Stackable – for ZB06 base plate **Z6**
 Stackable – for ZB10 base plate **Z10**

Functional symbol (section)

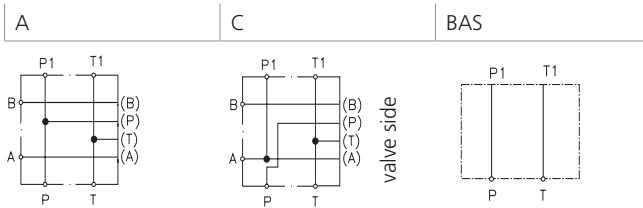


Plate with functional symbol C is produced only as a one section type PD10-Z6 - C1

Number of sections

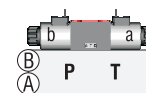
1 section		1
2 sections	Number of sections	2
3 sections	1 - 6	3
4 sections	1 - 2	4
5 sections	1	5
6 sections		6

Surface treatment
 aluminium plate without treatment
No designation

Seals
 without seal rings
 NBR
No designation

Material
 aluminium
AL

Side location for A and B consumer ports, and valve position



Design version
 NS, Z6, Z10

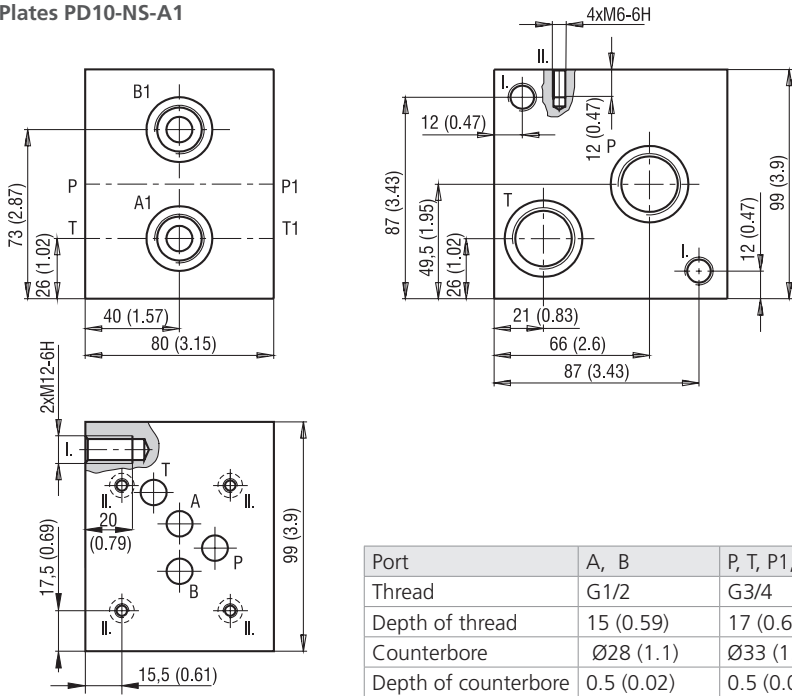
Port threads

Designation	P	T	A	B	Used for version
G8	G3/8	G1/2	G1/2	G1/2	Z6
G9	G1/2	G1/2	G1/2	G1/2	Z10, BAS
G10	G3/4	G3/4	G1/2	G1/2	NS

The standardised PD plates, listed in this data sheet, are available. For other plate versions contact our technical department for their identification and feasibility.

Dimensions in millimeters (inches)

Plates PD10-NS-A1

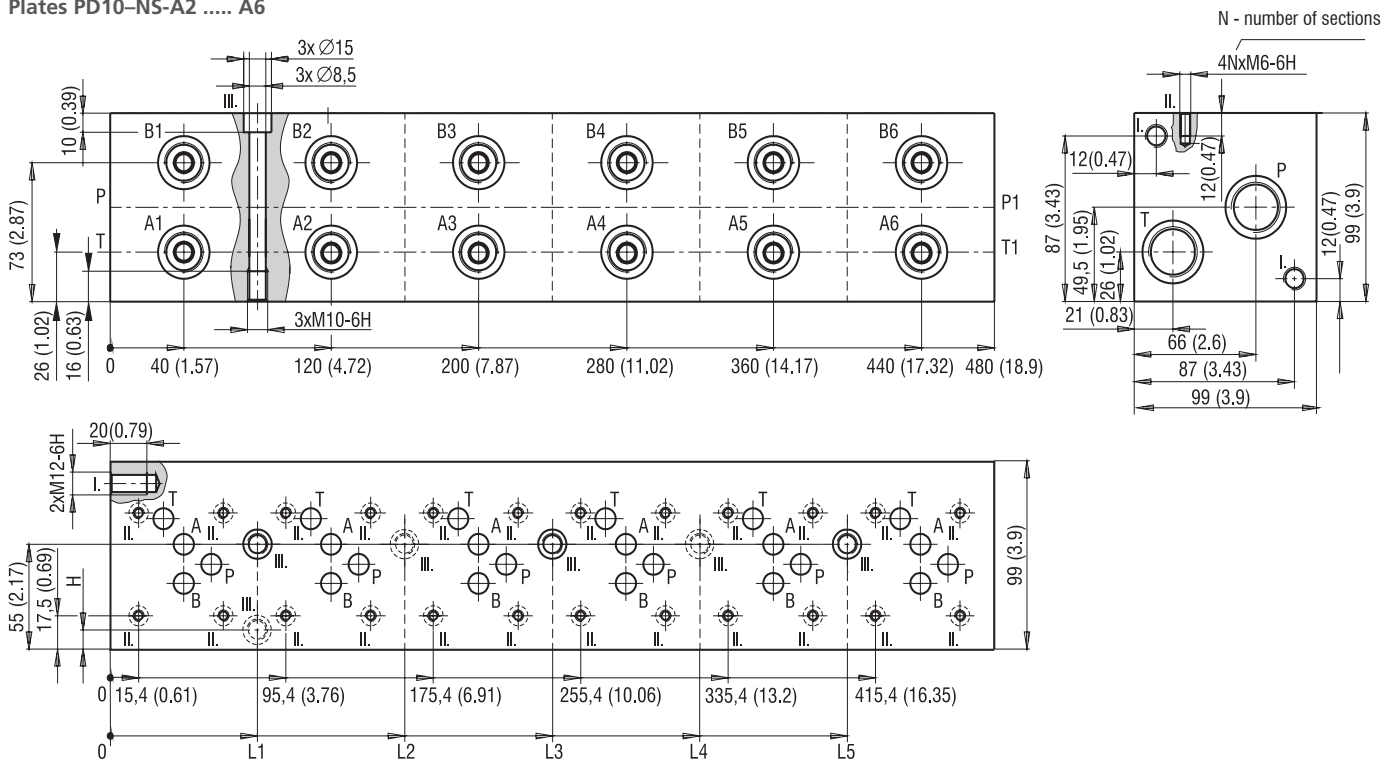


List of standardised types

Design version	Plate - type	SAP
NS	PD10-NS-A1/G10AI-AL	16108400
	PD10-NS-A2/G10AI-AL	16108500
	PD10-NS-A3/G10AI-AL	16108600
	PD10-NS-A4/G10AI-AL	16108700
	PD10-NS-A5/G10AI-AL	16108800
	PD10-NS-A6/G10AI-AL	16108900

Port	A, B	P, T, P1, T1
Thread	G1/2	G3/4
Depth of thread	15 (0.59)	17 (0.67)
Counterbore	Ø28 (1.1)	Ø33 (1.3)
Depth of counterbore	0.5 (0.02)	0.5 (0.02)

Plates PD10-NS-A2 A6

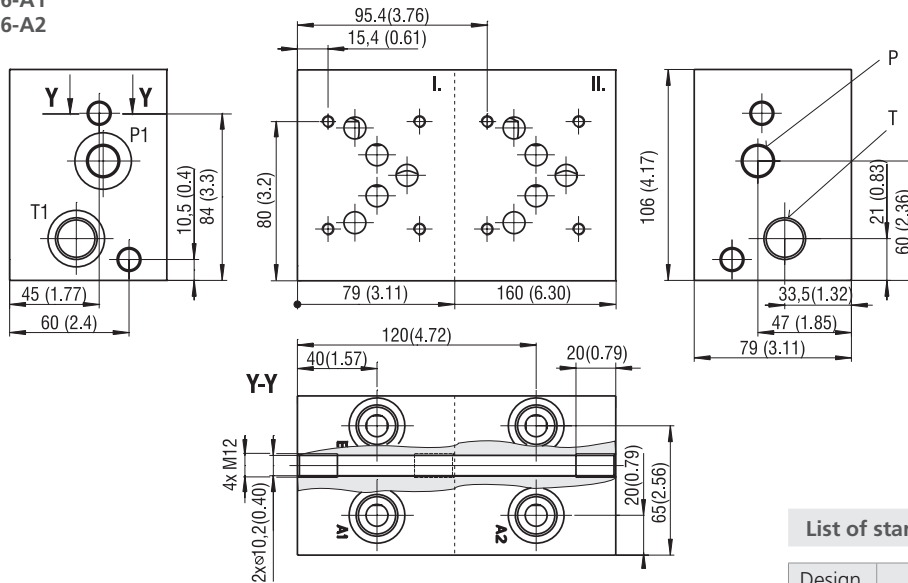


Number of sections	L1	L2	L3	L4	L5	H	Mass of plates kg [lbs]
PD10A1-AL							2.32 (5.11)
PD10A2-AL	80	-	-	-	-	10	4.48 (9.88)
PD10A3-AL	80	160	-	-	-	-	6.62 (14.59)
PD10A4-AL	80	-	240	-	-	-	8.85 (19.51)
PD10A5-AL	80	-	240	320	-	-	11.03 (24.32)
PD10A6-AL	80	-	240	-	400	-	13.21 (29.12)

Plate Dimensions in millimeters (inches)

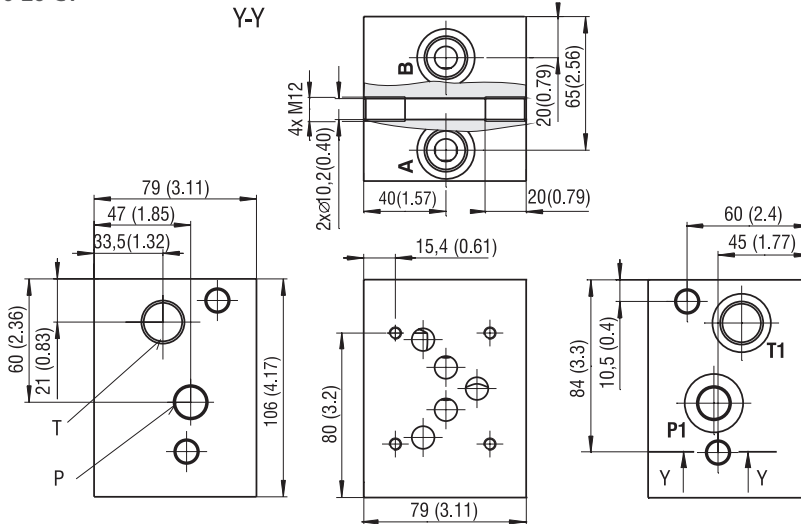
Stackable with mounting interface for ZB06 base plates

- PD10-Z6-A1
- PD10-Z6-A2



Stackable with mounting interface for ZB06 base plate

- PD10-Z6-C1



List of standardised types

Design version	Plate - type	SAP
Z6	PD10-Z6-A1/G8AI-AL	23698700
	PD10-Z6-A2/G8AI-AL	24608100
	PD10-Z6-C1/G8AI-AL	17954300

Port size Dimensions in millimeters (inches)					
Section	A1, A2, C				
Port	A, B	P	T	P1	T1
Thread	G 1/2	G 3/8	G 1/2	G 3/8	G 1/2
Depth of thread	15 (0.59)	15 (0.59)	15 (0.59)	15 (0.59)	15 (0.59)
Counterbore	Ø28 (1.1)			Ø28.4 (1.12)	Ø28.4 (1.12)
Depth of counterbore	0.5 (0.02)			2.1 (0.8)	2.1 (0.8)
O-Ring [mm]				23.4x2.62	23.4x2.62

Assembly of PD10-Z6 plates

One threaded end of an M10 stud is screwed into the basic block, the plate is connected to the block with a nut and washer. The connecting set consists of two studs, spring washers and crown nuts. The torque of the nut is 35+3 Nm (25.8+2.2 ft-lbf).

Number of section	Total plate length L [mm (in)]	Steel basic block			
		Screw	SAP No.	Washer	SAP No.
1	79 (3.11)	M10x90 (2x)	20243300	D10.2 (2x)	20256100
		Stud			Set SAP No. 16103200
2	160 (6.30)	M10x192			
Aluminium basic block					
Number of section	Total plate length L [mm (in)]	Screw	SAP No.	Washer	SAP No.
		M10x100 (2x)	20243400	D10.2 (2x)	20256100
		Stud			Set SAP No. 23676900
2	160 (6.30)	M10x199			

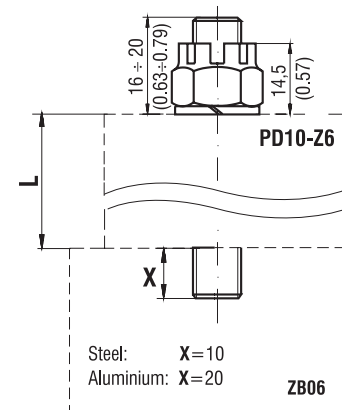
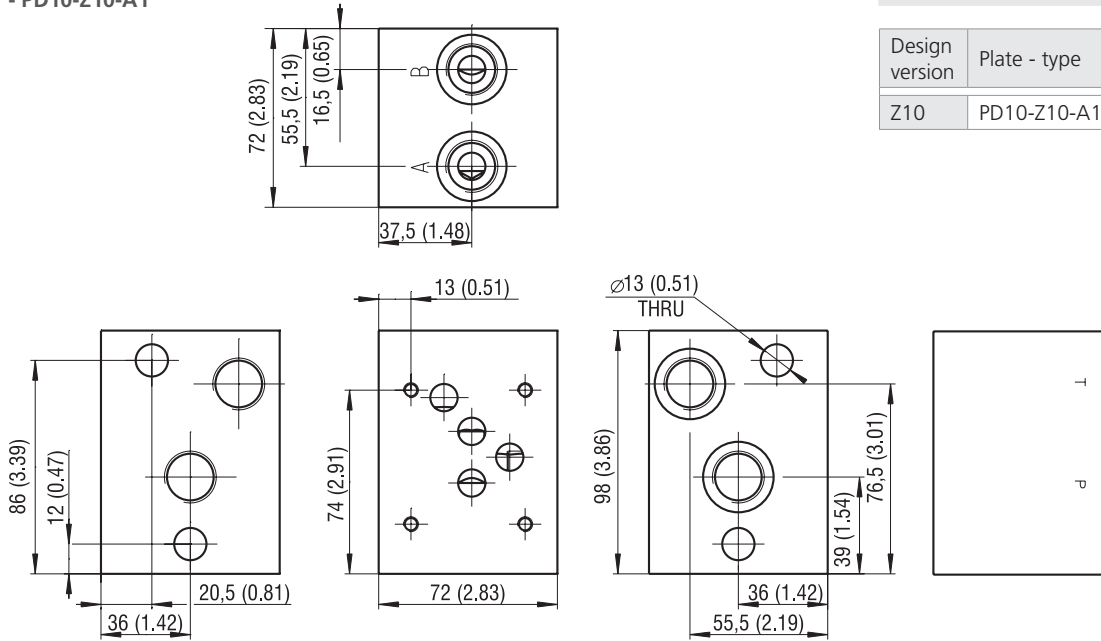


Plate Dimensions in millimeters (inches)

Stackable with mounting interface for ZB10 base plate - PD10-Z10-A1

List of standardised types

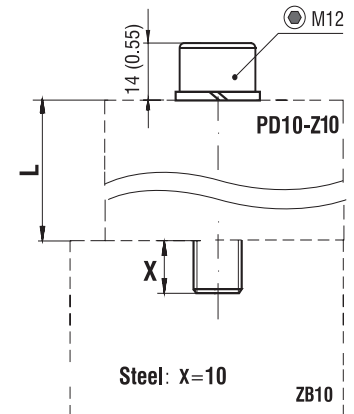
Design version	Plate - type	SAP
Z10	PD10-Z10-A1/G9AI-AL	24602800



Assembly of PD10-Z10 plates

One section plate is connected to the basic block with two screws and washers. The torque for the M12 screws is 52+3 Nm (38.4+2.2 ft-lbf).

Number of section	Total plate length L [mm (in)]	Steel basic block Connecting set			
		Screw	SAP No.	Washer	SAP No.
1	72 (3.11)	M12x90 (2x)	20244500	D12.2 (2x)	20256200



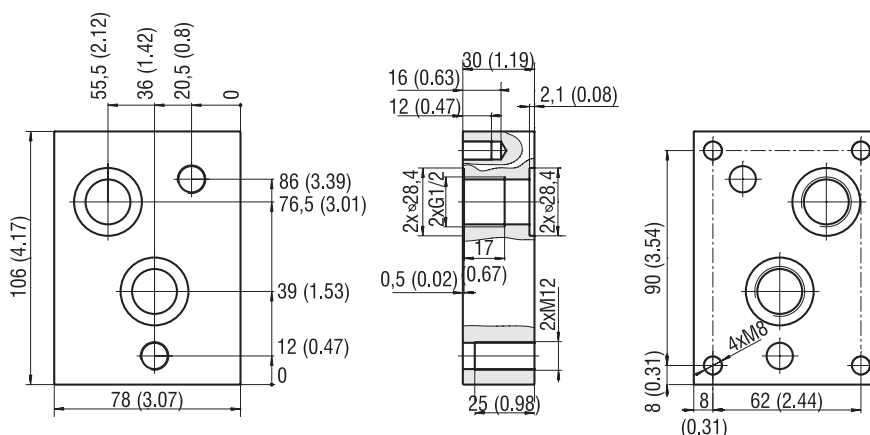
Connecting plate BAS for PD10-Z10 plates

The connecting plate BAS can be used instead the basic block ZB10. The plate is mounted onto the surface of tank cover with 4 M8 screws. Two threaded openings are intended for M12 studs to connect PD10 plate. The BAS plate is connected to hydraulic circuit (P, T) with pipes or hoses on the underside.

PD10-Z10-BAS

List of standardised types

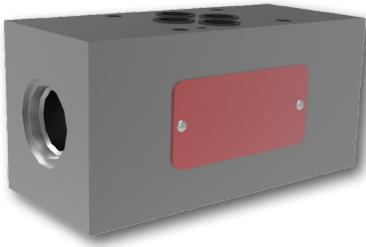
Design version	Plate - type	SAP
BAS	PD10-Z10-BAS/G9-ST-A	24600700



Sandwich Plates for Valves

SB-04 (06, 10)

Size 04, 06, 10 (D02, D03, D05) • p_{max} (G) 350 bar (5100 PSI) • p_{max} (ST) 420 bar (6100 PSI)



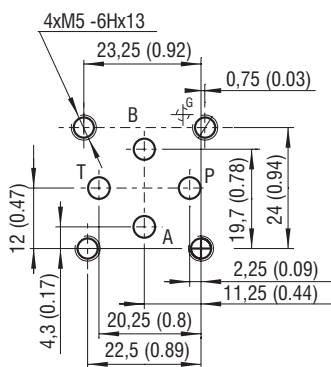
Technical Features

- › Designed for vertical assembly of built-in two-way and three-way valves in hydraulic circuits
- › Subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02, 03 and 05) Size 04, 06 and 10
- › Wide range of functional versions available for standard ISO 4401, UNF or metric threaded cavities
- › All versions stackable on PD04, (06, 10) and DR04 (06) serial plates
- › Sandwich plates are available in cast iron and steel
- › In the standard version, cast iron plates are zinc-coated for 520 h protection acc. to ISO 9227, steel plates are phosphated

Technical Data

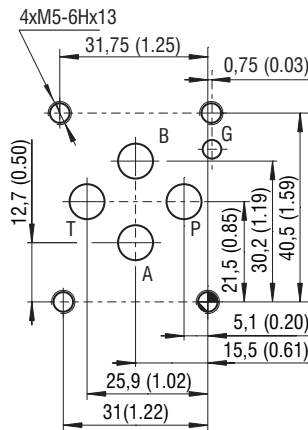
Valve size		04 (D02)	06 (D03)	10 (D05)
Max. operating pressure	bar (PSI)	cast iron - 350 (5080), steel - 420 (6100)		
Mass		see page 4-12		
	Data Sheet	Type		
General information	GI_0060	Products and operating conditions		
Cavity details	SMT_0019	SMT_A2*, A3*, B2*, B3*, BP3*, BPY3*, C2*, C3*, CP3*, Q3*, QG2*, R3*		
Spare parts	SP_8010			

ISO 4401-02-01-0-05



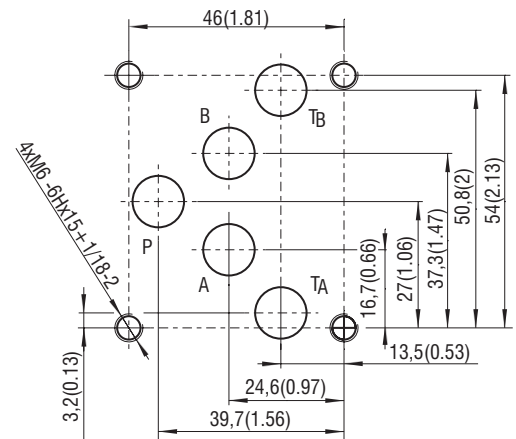
Ports P, A, B, T - max. \varnothing 4.5 mm (0.18 in)

ISO 4401-03-02-0-05



Ports P, A, B, T - max. \varnothing 7.5 mm (0.29 in)

ISO 4401-05-04-0-05



Ports P, A, B, T - max. \varnothing 11.2 mm (0.44 in)

Ordering Code

SB -						V -	
Sandwich plates for valves							
Nominal size	04	06	10			P	Surface treatment
						B	phosphated
							zinc-coated (ZnNi), ISO 9227 (520 h)
Cavity							Seals
3/4-16 UNF* (C-8-2)				A2			FPM (Viton)
3/4-16 UNF* (C-8-3)				A3			
7/8-14 UNF* (C-10-2)				B2			
7/8-14 UNF* (C-10-3)				B3			
7/8-14 UNF* (C-10-3S)				BP3			
7/8-14 UNF*				BPY3			
1-1/16-12 UN*(C-12-2)				C2			
1-1/16-12 UN*(C-12-3)				C3			
1-1/16-12 UN*(C-12-3S)				CP3			
M20x1,5*				Q3			
M22x1,5*				QG2			
M27x1,5*				R3			
*See cavity datasheet HA 0019							
						G	Body material
						ST	cast iron (350 bar (5080 PSI))
							steel (420 bar (6100 PSI))
							Functional Symbols
							see functional symbols pages 2 and 3
							Number of valves in sandwich plates
							1
							2

Not all combination of features are available as actual products. The standard versions are listed on pages 4 and 12
For the identification and feasibility of other body versions consult our technical department.

Functional symbols

Single valve installation, 2-Way

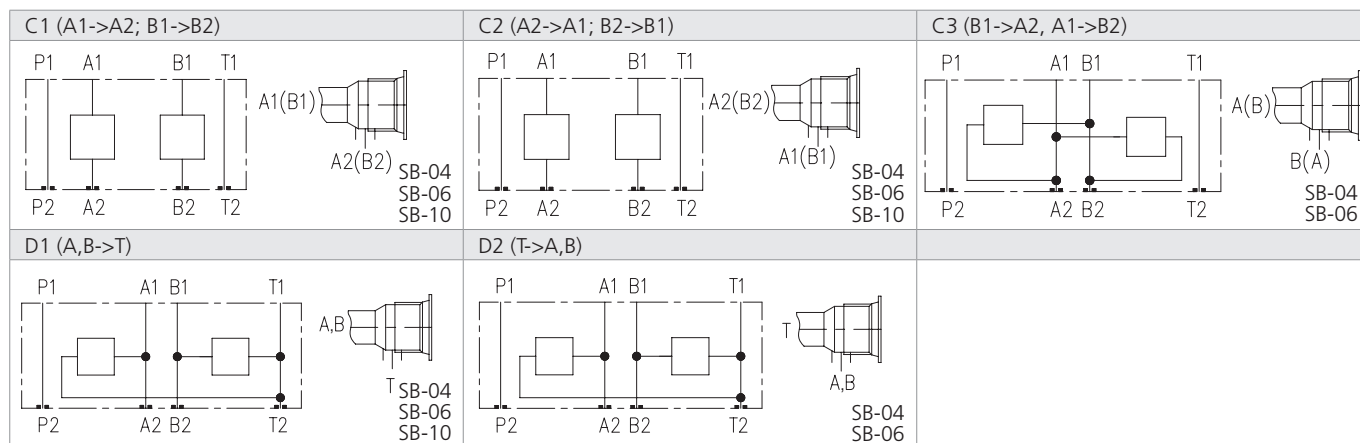
A1 (A1->A2) SB-04 SB-06 SB-10	A2 (A2->A1) SB-04 SB-06 SB-10	B1 (B1->B2) SB-04 SB-06
B2 (B2->B1) SB-04 SB-06 SB-10	AB1 (A->B) SB-04 SB-06	AB2 (B->A) SB-04 SB-06
AT1 (A->T) SB-04 SB-06	AT2 (T->A) SB-04 SB-06	BT1 (B->T) SB-04 SB-06
BT2 (T->B) SB-04 SB-06	PT1 (P->T) SB-04 SB-06 SB-10	PT2 (T->P) SB-04 SB-06
P1 (P1->P2) SB-04 SB-06	P2 (P2->P1) SB-04 SB-06	T1 (T1->T2) SB-06
T2 (T2->T1) SB-06		

Single valve installation, 3-Way

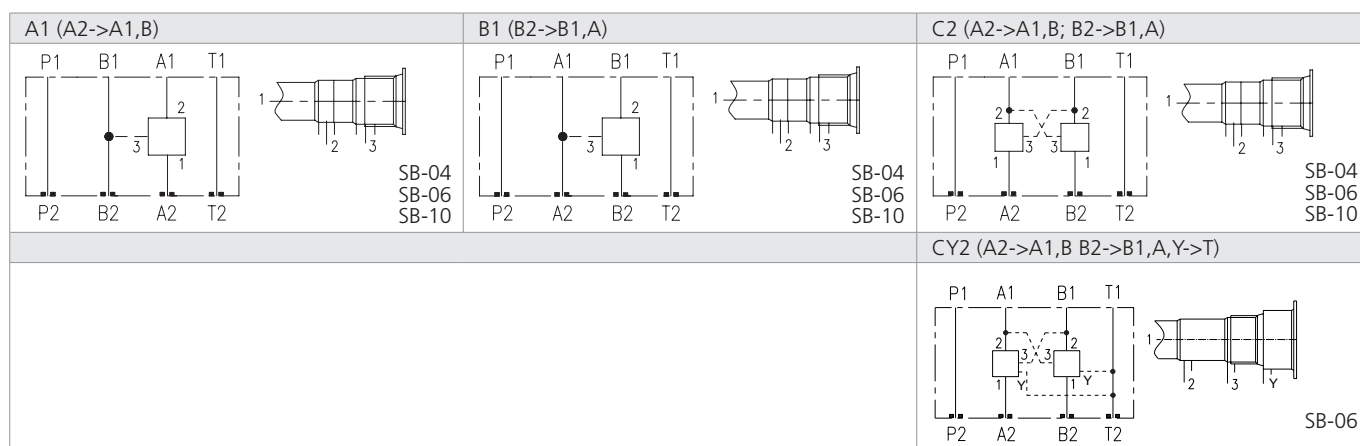
A2 (A1->A2,T) SB-06	B2 (B1->B2,T) SB-06	P2 (P2->P1,T) SB-04 SB-06 SB-10
P3 (P2->P1,T) SB-06	P4 (P2->P1,T) SB-06 SB-10	

Functional symbols

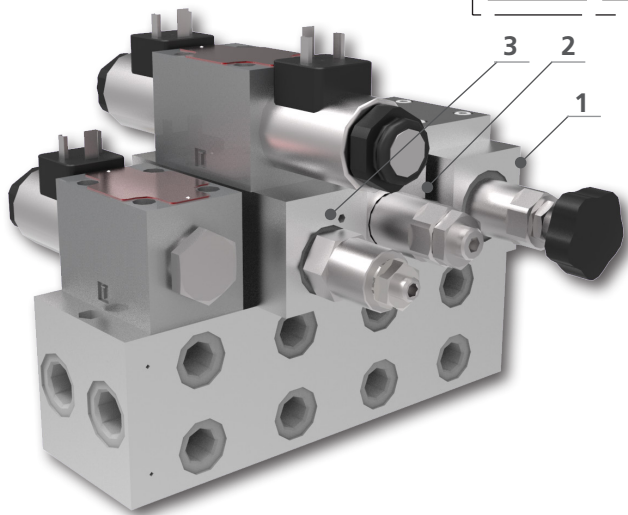
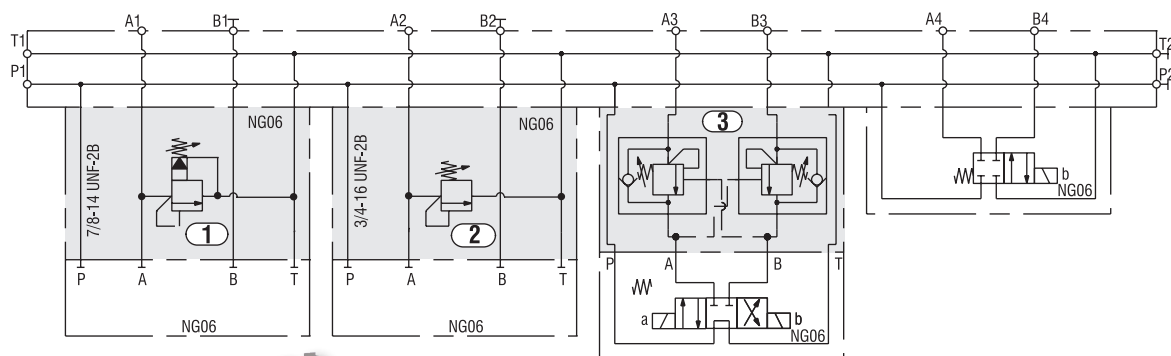
Dual valve installation, 2-Way



Piloted valve installation, 3-Way



An Example of Sandwich Plate Installations



Pos.	Ordering code
1	SB-06B2-AT1-GV-B
2	SB-06A2-AT1-GV-B
3	SB-06Q3-2C2-GV-B

Dimensions in millimeters (inches)

Single valve installation, 2-Way

3D picture shown is for illustration purpose only.

A1 (A1->A2)

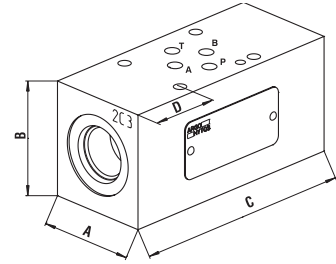
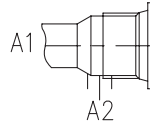
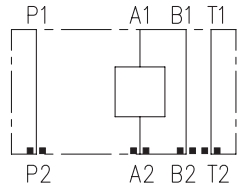


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1A1-GV-B		cast iron	350 (5080)	36x40x74/37 (1.41x1.57x2.91/1.46)	0.70 (1.54)	30978800
	QG2	M22x1.5	SB-04QG2-1A1-STV-P	MA04-ROE3/V	steel	420 (6090)	35x40x76/36 (1.42x1.56x2.99/1.42)	0.70 (1.54)	28592100
06	A2	3/4-16 UNF	SB-06A2-1A1-GV-B		cast iron	350 (5080)	45x50x73.5/19 (1.77x1.97x2.89/0.75)	1.05 (2.32)	28063500
	B2	7/8-14 UNF	SB-06B2-1A1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.22 (2.68)	30021500
	QG2	M22x1.5	SB-06QG2-1A1-STV-P	MA06-ROE3/V	steel	420 (6090)	38x40x80/28 (1.50x1.56x3.15/1.10)	0.95 (2.10)	28593400
10	B2	7/8-14 UNF	SB-10B2-1A1-GV-B		cast iron	350 (5080)	70x50x84/15 (2.76x1.97x3.31/0.59)	1.89 (4.17)	34249300

A2 (A2->A1)

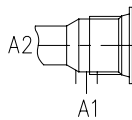
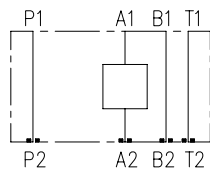


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1A2-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.41x1.57x2.91/1.24)	0.68 (1.50)	32360000
06	A2	3/4-16 UNF	SB-06A2-1A2-GV-B		cast iron	350 (5080)	45x50x73.5/18 (1.77x1.97x2.89/0.71)	1.05 (2.32)	32184500
	B2	7/8-14 UNF	SB-06B2-1A2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.22 (2.68)	32067900
10	C2	1-1/16 UN	SB-10C2-1A2-GV-B		cast iron	350 (5080)	70x50x100/33 (2.76x1.97x3.94/1.30)	2.25 (4.96)	43380500

B1 (B1->B2)

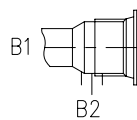
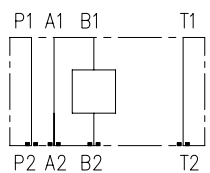


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1B1-GV-B		cast iron	350 (5080)	36x40x74/18 (1.41x1.56x2.91/0.71)	0.68 (1.50)	31113000
	QG2	M22x1.5	SB-04QG2-1B1-STV-P	MB04-ROE3/V	steel	420 (6090)	35x40x76/36 (1.42x1.56x2.99/1.42)	0.70 (1.54)	28592500
06	A2	3/4-16 UNF	SB-06A2-1B1-GV-B		cast iron	350 (5080)	45x50x73.5/12.5 (1.77x1.98x2.89/0.49)	1.06 (2.35)	30677500
	B2	7/8-14 UNF	SB-06B2-1B1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.22 (2.68)	30708100
	QG2	M22x1.5	SB-06QG2-1B1-STV-P	MB06-ROE3/V	steel	420 (6090)	45x40x80/68.5 (1.77x1.57x3.15/2.69)	0.70 (1.54)	28593700

Dimensions in millimeters (inches)

Single valve installation, 2-Way

3D picture shown is for illustration purpose only.

B2 (B2->B1)

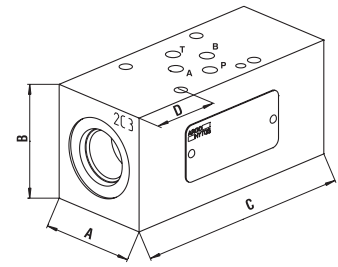
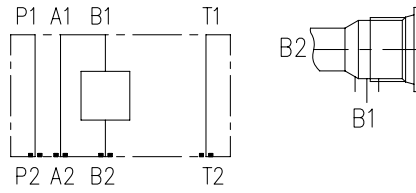


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	A2	3/4-16 UNF	SB-06A2-1B2-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	0.70 (1.54)	41836500
	B2	7/8-14 UNF	SB-06B2-1B2-GV-B		cast iron	350 (5080)	45x50x86/12.5 (1.77x1.97x3.39/1.20)	0.90 (1.98)	31062900
10	C2	1-1/16 UN	SB-10C2-1B2-GV-B		cast iron	350 (5080)	70x50x100/13 2.76x1.97x3.94/0.51)	2.25 (4.96)	43382000

AB1 (A->B)

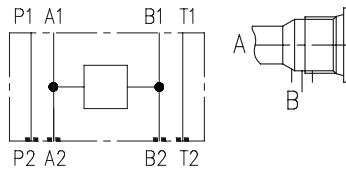


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1AB1-GV-B		cast iron	350 (5080)	36x40x74/18.5 (1.41x 1.57x2.91/0.73)	0.80 (1.76)	32016600
06	A2	3/4-16 UNF	SB-06A2-1AB1-GV-B		cast iron	350 (5080)	45x50x73,5/12.5 (1.77x1.97x2.89/0.49)	1.06 (2.34)	32702000
	B2	7/8-14 UNF	SB-06B2-1AB1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30380500

AB2 (B->A)

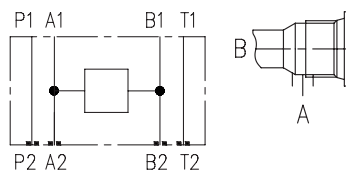


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1AB2-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.41x1.57x2.91/0.73)	0.67 (1.48)	31509300
	QG2	M22x1.5	SB-04QG2-1AB2-STV-P	MX04-ROE3/V	steel	420 (6090)	35x40x76/36 (1.38x1.39x2.99/1.42)	0.70 (1.54)	28592600
06	A2	3/4-16 UNF	SB-06A2-1AB2-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	1.05 (2.32)	30122800
	B2	7/8-14 UNF	SB-06B2-1AB2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30987000
	QG2	M22x1.5	SB-06QG2-1AB2-STV-P	MX06-ROE3/V	steel	420 (6090)	45x40x80/28 (1.77x1.56x3.15/1.10)	0.70 (1.54)	28594000

Dimensions in millimeters (inches)

Single valve installation, 2-Way

3D picture shown is for illustration purpose only.

AT1 (A->T)

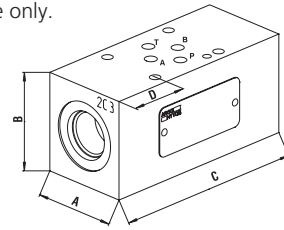
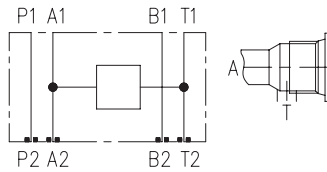


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1AT1-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.41x1.57x2.91/1.24)	0.65 (1.43)	30138300
	QG2	M22x1.5	SB-04QG2-1AT1-STV-P	MA04-VP/V	steel	420 (6090)	35x34,6x80/40 (1.38x1.36x3.15/1.57)	0.70 (1.54)	22501800
06	A2	3/4-16 UNF	SB-06A2-1AT1-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	1.05 (2.32)	29513200
	B2	7/8-14 UNF	SB-06B2-1AT1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30003800
	QG2	M22x1.5	SB-06QG2-1AT1-STV-P	MA06-VP/V	steel	420 (6090)	45x40x80/14 (1.77x1.57x3.15/1.01)	0.95 (2.09)	22949600

AT2 (T->A)

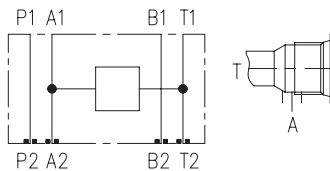


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1AT2-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.41x1.57x2.91/1.24)	0.70 (1.54)	30150000
	QG2	M22x1.5	SB-04QG2-1AT2-STV-P	MD04-ROE3/V	steel	420 (6090)	35x40x76/36 (1.38x1.57x2.99/1.42)	0.70 (1.54)	28592700
06	A2	3/4-16 UNF	SB-06A2-1AT2-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	1.05 (2.32)	30159400
	B2	7/8-14 UNF	SB-06B2-1AT2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30568900
	QG2	M22x1.5	SB-06QG2-1AT2-STV-P	MD06-ROE3/V	steel	420 (6090)	45x40x80/28 (1.77x1.57x3.15/1.10)	0.95 (2.09)	28594300

BT1 (B->T)

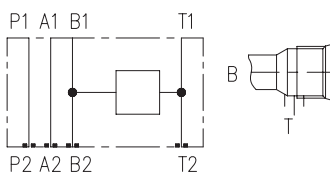


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1BT1-GV-B		cast iron	350 (5080)	36x40x74/18.5 (1.41x 1.57x2.91/0.73)	0.65 (1.43)	29230100
	QG2	M22x1.5	SB-04QG2-1BT1-STV-P	MB04-VP/V	steel	420 (6090)	35x34,6x80/64 (1.38x1.36x3.15/1.57)	0.70 (1.54)	22501900
06	A2	3/4-16 UNF	SB-06A2-1BT1-GV-B		cast iron	350 (5080)	45x50x73,5/12.5 (1.77x1.97x2.89/0.49)	1.05 (2.31)	29527400
	B2	7/8-14 UNF	SB-06B2-1BT1-GV-B		cast iron	350 (5080)	45x50x86/12.5 (1.77x1.97x3.39/0.49)	1.22 (2.25)	30021200
	QG2	M22x1.5	SB-06QG2-1BT1-STV-P	MB06-VP/V	steel	420 (6090)	45x40x80/28 (1.77x1.57x3.15/1.10)	0.95 (2.09)	16661700

Dimensions in millimeters (inches)

Single valve installation, 2-Way

3D picture shown is for illustration purpose only.

BT2 (T>B)

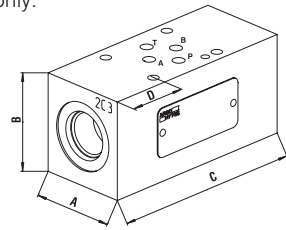
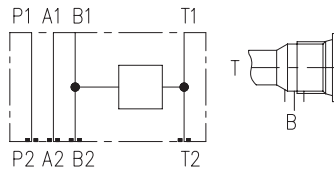


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1BT2-GV-B		cast iron	350 (5080)	36x40x74/18.5 (1.41x 1.57x2.91/0.73)	0.70 (1.54)	31509500
	QG2	M22x1.5	SB-04QG2-1BT2-STV-P	ME04-ROE3/V	steel	420 (6090)	35x40x76/16 (1.38x1.57x2.99/0.63)	0.70 (1.54)	28593000
06	A2	3/4-16 UNF	SB-06A2-1BT2-GV-B		cast iron	350 (5080)	45x50x73,5/12.5 (1.77x1.97x2.89/0.49)	1.07 (2.37)	30677800
	QG2	M22x1.5	SB-06QG2-1BT2-STV-P	ME06-ROE3/V	steel	420 (6090)	45x40x80/68.5 (1.77x1.57x3.15/2.70)	0.95 (2.09)	28594400
	B2	7/8-14 UNF	SB-06B2-1BT2-GV-B		cast iron	350 (5080)	45x50x86/12.5 (1.77x1.97x3.39/0.49)	1.25 (2.76)	30708400

PT1 (P->T)

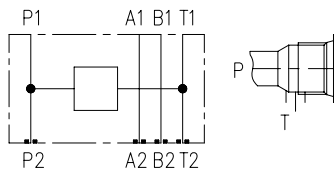


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1PT1-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.42x1.57x2.91/1.24)	0.70 (1.54)	30979100
	QG2	M22x1.5	SB-04QG2-1PT1-STV-P	MP04-VP/V	steel	420 (6090)	35x34,6x80/64 (1.38x1.36x3.15/2.52)	0.65 (1.43)	22502000
06	A2	3/4-16 UNF	SB-06A2-1PT1-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	1.05 (2.32)	29527600
	B2	7/8-14 UNF	SB-06B2-1PT1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.20 (2.65)	30003600
	QG2	M22x1.5	SB-06QG2-1PT1-STV-P	MP06-VP/V	steel	420 (6090)	45x40x80/28 (1.77x1.57x3.15/1.10)	0.82 (1.81)	22949800
10	B2	7/8-14 UNF	SB-10B2-1PT1-GV-B		cast iron	350 (5080)	70x50x84/15 (2.76x1.97x3.31/0.59)	1.85 (4.08)	30568300

PT2 (T->P)

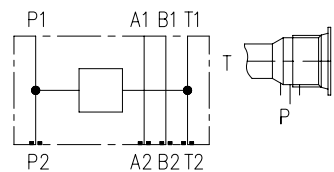


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1PT2-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.42x1.57x2.91/1.24)	0.70 (1.54)	31509800
	QG2	M22x1.5	SB-04QG2-1PT2-STV-P	MG04-ROE3/V	steel	420 (6090)	35x40x76/36 (1.38x1.57x2.99/1.42)	0.70 (1.54)	20717800
06	A2	3/4-16 UNF	SB-06A2-1PT2-GV-B		cast iron	350 (5080)	45x50x73,5/18 (1.77x1.97x2.89/0.71)	1.08 (2.39)	31474200
	B2	7/8-14 UNF	SB-06B2-1PT2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30052800
	QG2	M22x1.5	SB-06QG2-1PT2-STV-P	MG06-ROE3/V	steel	420 (6090)	45x40x80/28 (1.77x1.57x3.15/1.10)	0.95 (2.09)	20690500

Dimensions in millimeters (inches)

Single valve installation, 2-Way

3D picture shown is for illustration purpose only.

P1 (P1->P2)

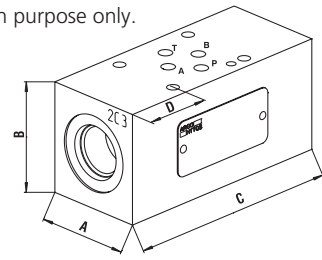
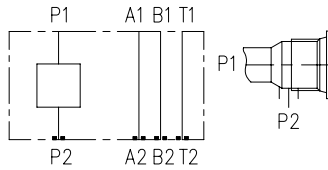


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1P1-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.42x1.57x2.91/1.24)	0.67 (1.48)	40035400
06	A2	3/4-16 UNF	SB-06A2-1P1-GV-B		cast iron	350 (5080)	45x50x73.5/18 (1.77x1.97x2.89/0.71)	1.20 (2.65)	30970100
	B2	7/8-14 UNF	SB-06B2-1P1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30069500

P2 (P2->P1)

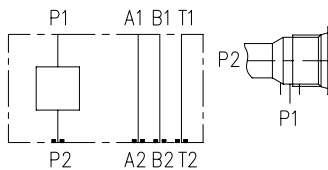


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-1P2-GV-B		cast iron	350 (5080)	36x40x74/31.5 (1.42x1.57x2.91/1.24)	0.68 (1.50)	31850600
06	A2	3/4-16 UNF	SB-06A2-1P2-GV-B		cast iron	350 (5080)	45x50x73.5/18 (1.77x1.97x2.89/0.71)	1.10 (2.43)	30800900
	B2	7/8-14 UNF	SB-06B2-1P2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.25 (2.76)	30018100
	QG2	M22x1.5	SB-06QG2-1P2-STV-P	MP06-ROE3/V	steel	420 (6090)	45x40x80/28 (1.77x1.57x3.15/1.10)	0.95 (2.09)	20690800

T1 (T1->T2)

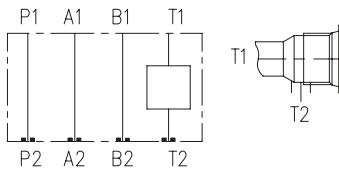


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	A2	3/4-16 UNF	SB-06A2-1T1-GV-B		cast iron	350 (5080)	45x50x73.5/18 (1.77x1.97x2.89/0.71)	1.06 (2.34)	31396300
	B2	7/8-14 UNF	SB-06B2-1T1-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.20 (2.65)	31648000
10	B2	7/8-14 UNF	SB-10B2-1T1-GV-B		cast iron	350 (5080)	70x50x84/15 (2.76x1.97x3.31/0.59)	1.85 (4.08)	32504500

T2 (T2->T1)

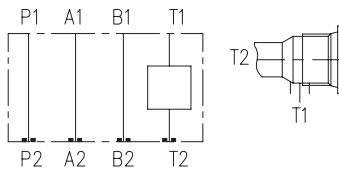


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	B2	7/8-14 UNF	SB-06B2-1T2-GV-B		cast iron	350 (5080)	45x50x86/30.5 (1.77x1.97x3.39/1.20)	1.20 (2.65)	30453800

Dimensions in millimeters (inches)

Single valve installation, 3-Way

3D picture shown is for illustration purpose only.

A2 (A1->A2,T)

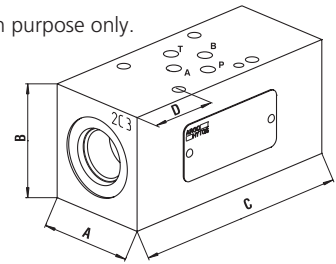
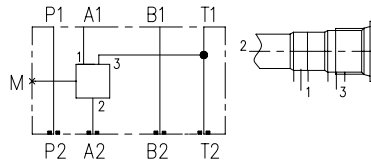


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	A3	3/4-16 UNF	SB-06A3-1A2-GV-B		cast iron	350 (5080)	45x50x80/18 (1.77x1.97x3.15/0.71)	1.16 (2.56)	28063900
	B3	7/8-14 UNF	SB-06B3-1A2-GV-B		cast iron	350 (5080)	45x50x86/25.5 (1.77x1.97x3.39/1.01)	1.20 (2.65)	28064400

B2 (B1->B2,T)

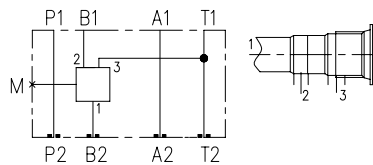


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	A3	3/4-16 UNF	SB-06A3-1B2-GV-B		litina	350 (5080)	45x50x75/12 (1.77x1.97x2.95/0.47)	1.06 (2.34)	40232200

P2 (P2->P1,T)

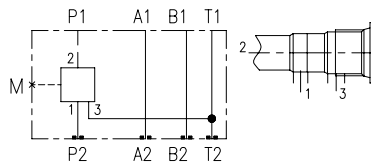


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A3	3/4-16 UNF	SB-04A3-1P2-GV-B		cast iron	350 (5080)	36x50x100/52.5 (1.42x1.97x3.94/2.07)	1.15 (2.54)	31665200
06	A3	3/4-16 UNF	SB-06A3-1P2-GV-B		cast iron	350 (5080)	45x50x75/7.5 (1.77x1.97x2.95/0.30)	1.02 (2.26)	28063800
	B3	7/8-14 UNF	SB-06B3-1P2-GV-B		cast iron	350 (5080)	45x50x98/43 (1.77x1.97x3.86/1.69)	1.40 (3.09)	30786400
10	B3	7/8-14 UNF	SB-10B3-1P2-GV-B		cast iron	350 (5080)	70x50x84/15 (2.76x1.97x3.31/0.59)	1.85 (4.07)	30533700

P3 (P2->P1,T)

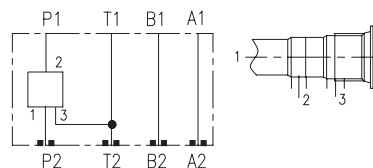


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	A3	3/4-16 UNF	SB-06A3-1P3-GV-B		cast iron	350 (5080)	45x50x75/7.5 (1.77x1.97x2.95/0.30)	1.08 (2.38)	31627600
	B3	7/8-14 UNF	SB-06B3-1P3-GV-B		cast iron	350 (5080)	45x60x98/43 (1.77x2.36x3.86/1.69)	1.70 (3.74)	32234600

P4 (P2->P1,T)

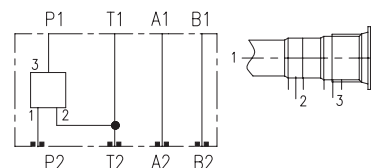


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	B3	7/8-14 UNF	SB-06B3-1P4-GV-B		cast iron	350 (5080)	45x60x98/43 (1.77x2.36x3.86/1.69)	1.70 (3.74)	33881200
10	C3	1-1/16 UN	SB-10C3-1P4-GV-B		cast iron	350 (5080)	70x70x128/58 (2.76x2.76x5.04/2.28)	3.99 (8.80)	43369400

Dimensions in millimeters (inches)

Dual valve installation, 2-Way

3D picture shown is for illustration purpose only.

C1 (A1->A2; B1->B2)

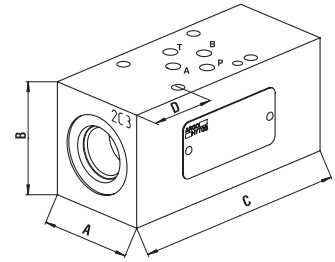
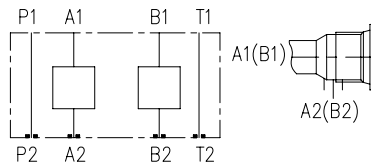


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-2C1-GV-B		cast iron	350 (5080)	36x40x98/37 (1.42x1.57x3.86/1.46)	0.80 (1.76)	28063300
	QG2	M22x1.5	SB-04QG2-2C1-STV-P	MC04-ROE3/V	steel	420 (6090)	35x40x96/36 (1.38x1.57x3.78/1.42)	0.80 (1.76)	28593100
06	A2	3/4-16 UNF	SB-06A2-2C1-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.50 (3.31)	28063600
	B2	7/8-14 UNF	SB-06B2-2C1-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.45 (3.20)	30119500
	QG2	M22x1.5	SB-06QG2-2C1-STV-P	MC06-ROE3/V	steel	420 (6090)	45x40x94/25.5 (1.77x1.57x3.70/1.01)	1.00 (2.21)	28594500
10	B2	7/8-14 UNF	SB-10B2-2C1-GV-B		cast iron	350 (5080)	70x50x92/19 (2.76x1.97x3.62/0.75)	3.64 (8.03)	34528800

C2 (A2->A1; B2->B1)

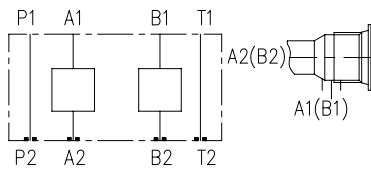


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-2C2-GV-B		cast iron	350 (5080)	36x40x98/37 (1.42x1.57x3.86/1.46)	0.90 (1.98)	30727200
06	A2	3/4-16 UNF	SB-06A2-2C2-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.48 (3.26)	32265200
	B2	7/8-14 UNF	SB-06B2-2C2-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.43 (3.16)	31761100
10	C2	1-1/16 UN	SB-10C2-2C2-GV-B		cast iron	350 (5080)	70x50x120/33 (2.76x1.97x4.72/1.30)	2.49 (5.49)	43380300

C3 (B1->A2, A1->B2)

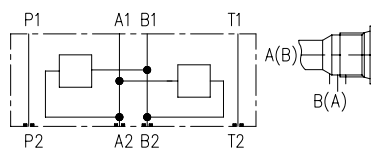


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-2C3-GV-B		cast iron	350 (5080)	36x40x98/37 (1.42x1.57x3.86/1.46)	0.65 (1.43)	30353600
	QG2	M22x1.5	SB-04QG2-2C3-STV-P	MC04-VP/V	steel	420 (6090)	35x34.6x104/40 (1.38x1.36x4.09/1.57)	0.75 (1.65)	22502100
06	A2	3/4-16 UNF	SB-06A2-2C3-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.57)	1.51 (3.33)	30122200
	B2	7/8-14 UNF	SB-06B2-2C3-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.57)	1.45 (3.20)	28064300
	QG2	M22x1.5	SB-06QG2-2C3-STV-P	MC06-VP/V	steel	420 (6090)	45x40x94/25.5 (1.77x1.57x3.70/1.01)	1.05 (2.32)	16758800

Dimensions in millimeters (inches)

Dual valve installation, 2-Way

3D picture shown is for illustration purpose only.

D1 (A,B->T)

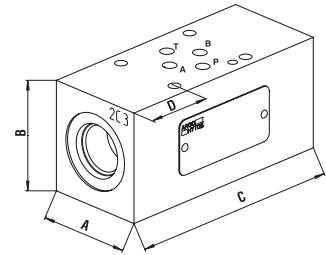
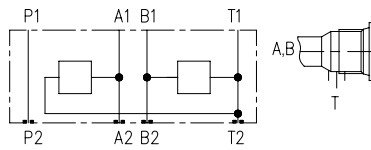


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-2D1-GV-B		cast iron	350 (5080)	36x40x98/37 (1.42x1.57x3.86/1.46)	0.85 (1.87)	29992200
	QG2	M22x1.5	SB-04QG2-2D1-STV-P	MD04-VP/V	steel	420 (6090)	35x35x76/36 (1.38x1.38x2.99/1.42)	0.75 (1.65)	22502200
06	A2	3/4-16 UNF	SB-06A2-2D1-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.50 (3.31)	28591400
	B2	7/8-14 UNF	SB-06B2-2D1-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.00 (2.21)	30755800
	QG2	M22x1.5	SB-06QG2-2D1-STV-P	MD06-VP/V	steel	420 (6090)	45x40x94/25.5 (1.77x1.57x3.70/1.01)	1.05 (2.32)	22950100
10	B2	7/8-14 UNF	SB-10B2-2D1-GV-B		cast iron	350 (5080)	45x50x100/23 (1.77x1.97x3.94/0.91)	2.21 (4.88)	34568000

D2 (T>A,B)

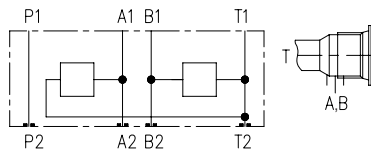


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	A2	3/4-16 UNF	SB-04A2-2D2-GV-B		cast iron	350 (5080)	36x40x98/37 (1.42x1.57x3.86/1.46)	0.50 (3.31)	28229200
	QG2	M22x1.5	SB-04QG2-2D2-STV-P	MF04-ROE3/V	steel	420 (6090)	35x40x96/36 (1.38x1.57x3.78/1.46)	0.82 (1.81)	28593200
06	A2	3/4-16 UNF	SB-06A2-2D2-GV-B		cast iron	350 (5080)	45x50x68/12.5 (1.77x1.97x2.68/0.49)	0.93 (2.05)	30855200
	B2	7/8-14 UNF	SB-06B2-2D2-GV-B		cast iron	350 (5080)	45x50x104/30.5 (1.77x1.97x4.09/1.20)	1.40 (3.09)	30143800
	QG2	M22x1.5	SB-06QG2-2D2-STV-P	MF06-ROE3/V	steel	420 (6090)	45x40x94/25.5 (1.77x1.57x3.70/1.01)	1.05 (2.32)	20690300

Dimensions in millimeters (inches)

Piloted valve installation, 3-Way

3D picture shown is for illustration purpose only.

A1 (A2->A1,B)

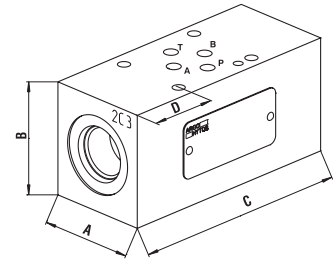
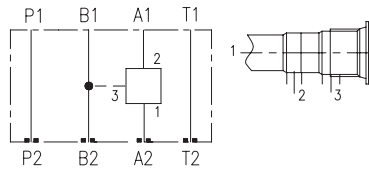


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	Q3	M20x1,5	SB-04Q3-1A1-GV-B		cast iron	350 (5080)	30x50x82/50 (1.18x1.97x3.23/1.97)	1.35 (2.98)	32475000
06	BP3	7/8-14UNF	SB-06BP3-1A1-GV-B		cast iron	350 (5080)	45x53x94.5/39.5 (1.77x2.09x3.72/1.56)	1.42 (3.13)	41072900
10	CP3	1-1/16-12 UF	SB-10CP3-1A1-GV-B		cast iron	350 (5080)	70x70x120 (2.76x2.76x4.72)	3.76 (8.29)	41722200

B1 (B2->B1,A)

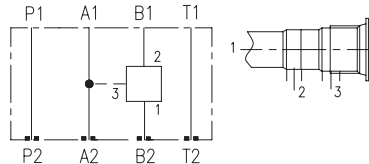


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	Q3	M20x1,5	SB-04Q3-1B1-GV-B		cast iron	350 (5080)	30x50x82/8 (1.18x1.97x3.23/0.32)	1.35 (2.98)	32043900
06	BP3	7/8-14UNF	SB-06BP3-1B1-GV-B		cast iron	350 (5080)	45x53x94.5/12 (1.77x2.09x3.72/0.47)	1.42 (3.13)	41054200
10	CP3	1-1/16-12 UF	SB-10CP3-1B1-GV-B		cast iron	350 (5080)	70x70x120 (2.76x2.76x4.72)	3.76 (8.29)	41723000

C2 (A2->A1,B; B2->B1,A)

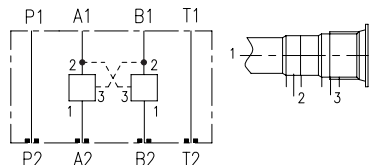


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
04	Q3	M20x1,5	SB-04Q3-2C2-GV-B		cast iron	350 (5080)	38x48.5x120/48 (1.50x1.91x4.72/1.89)	1.35 (2.98)	30846300
06	Q3	M20x1,5	SB-06Q3-2C2-GV-B		cast iron	350 (5080)	43,5x48.5x110/33.5 (1.71x1.91x4.33/1.32)	1.43 (3.16)	30851700
	R3	M27x1,5	SB-06R3-2C2-GV-B		cast iron	350 (5080)	46x70x150/49.5 (1.81x2.76x5.91/1.95)	2.90 (6.28)	30818000
	BP3	7/8-14UNF	SB-06BP3-2C2-GV-B		cast iron	350 (5080)	45x53x122/39.5 (1.77x2.09x4.80/1.56)	1.75 (3.86)	41047200
10	CP3	1-1/16-12 UF	SB-10CP3-2C2-GV-B		cast iron	350 (5080)	70x70x152 (2.76x2.76x5.98)	3.77(8.31)	41721800

CY2 (A2->A1,B B2->B1,A,Y->T)

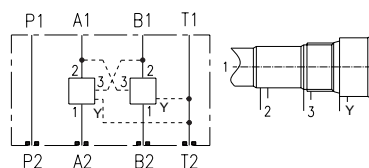
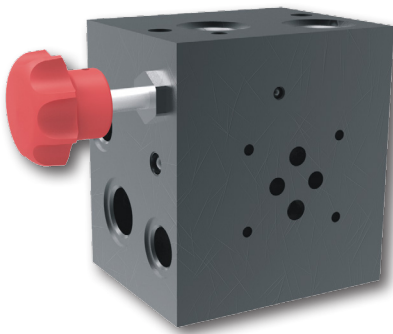


Plate size	Cavity size	Cavity thread	Ordering code	Ordering code - former	Plate material	Pressure bar (PSI)	Dimensions AxBxC/D mm (in)	Mass kg (lbs)	Ordering No.
06	BPY3	7/8-14 UNF	SB-06BPY3-2CY2-STV-B		steel	420 (6090)	45x60x148/52.5 (1.77x2.36x5.83/2.07)	2.62 (0.10)	43807900

Base Plate with Pressure Relief Valve for Serial Plate Assemblies

ZB06

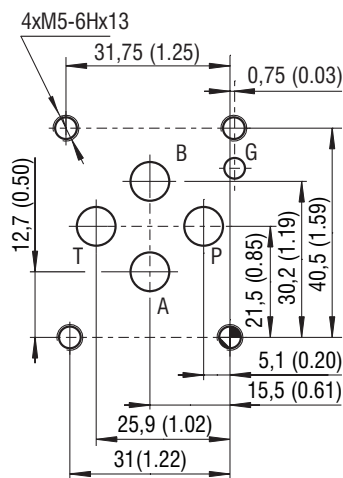
Size 06 (D03) • p_{max} 320 bar (4600 PSI)



Technical Features

- › Tank cover mounted base manifold for hydraulic power packs which require one directional valve, optionally stackable with PD06-Z6 (Cat. 0006) serial plates
- › Designed for flange mounted valves with pattern acc. to ISO 4401-03 (CETOP 03)
- › Simplified models ZB06L* for cost effective circuit design and assembly with stackable serial PD06-Z6 plates
- › Integrated functions for circuit unloading drain, main circuit check and pressure relief valves
- › Suitable for mounting the pump drive unit horizontally on the tank cover, or for vertical arrangement with the pump situated in the tank under the oil level
- › Variety of models support the build-up of systems with constant or regulated pumps
- › In the standard version, the ZB06A(B) manifold housing is zinc-coated for 520 h and the steel parts are uinc-coated for 240 h protection acc. to ISO 9227. Aluminium ZB06L manifold housing is without any surface protection

ISO 4401-03-02-0-05 (CETOP 03)



Ports P, A, B, T max \varnothing 7.5 mm (0.29 in)

Technical Data

Modular valves mounting surface		06 (D03)	
Cartridge cavity		M28x1.5 / QP2	
Max. operating pressure	bar (PSI)	aluminium 250 (3626)	
	bar (PSI)	steel 320 (4640)	
Max. flow		50 (13.2)	
Port dimensions		ZB06A(B)	ZB06L
		P, P1, T, T1, T2 ... G1/2	P, T, T1 ... G1/2
		A, B, PP2, D2 ... G3/8	D2, T2 ... G3/8
		L2 ... G1/8	-
Weight	ZB06A(B)	kg (lbs)	steel 4.7 (10.4)
	ZB06L		aluminium 1.7 (3.75)
		aluminium 1.5 (3.31)	

	Data sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details / Mounting interface	SMT_0019	SMT-QP2*
		Size 06 / CETOP 03
Studs and nuts for vertical stacking assemblies - Dn04,06,10_0020		

Ordering Code

<p>Base manifold with pressure relief valve for PD serial plates assembly</p> <p>Size, mounting interface of serial plates base plate for PD06-Z6 serial plates</p> <p>Models with one mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03) with check valve without check valve</p> <p>Models without mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03) without check valve</p> <p>Pressure relief valve cavity M28x1.5 / QP2 (VPP1-06 / VPP2-06)*</p> <p><small>*Pressure relief valve is not supplied with the ZB block see catalogue HA_5061 (VPP1-06), HA_5062(VPP2-06)</small></p>	<p>ZB06 - QP2 - - K - </p>	<p>Surface treatment</p> <p>No designation aluminium manifold without treatment</p> <p>B zinc-coated (ZnNi), ISO 9227 (520 h)</p> <p>Seals</p> <p>K seal plate for oil tank cover assembly</p> <p>Material of base manifold</p> <p>AL aluminium, EN AW-7075 T6</p> <p>ST steel*</p> <p><small>*only for „ZB06A(B)“ models</small></p> <p>Design models for ZB06L types</p> <p>1 T return line from plate side</p> <p>2 T return line from bottom side</p> <p>3 two T return lines from plate and bottom side</p> <p>Design models for ZB06A(B)</p> <p>+ Connection P-B</p> <p>11 without drain valve without P-B ports connection</p> <p>12 without drain valve with P-B ports connection</p> <p>21 with drain valve without P-B ports connection</p> <p>22 with drain valve with P-B ports connection</p>
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Functional Symbols

Models for flange mounted valves with pattern acc. to ISO 4401-03 (CETOP 03)

with check valve

ZB06A*-11

ZB06A*-12

ZB06A*-21

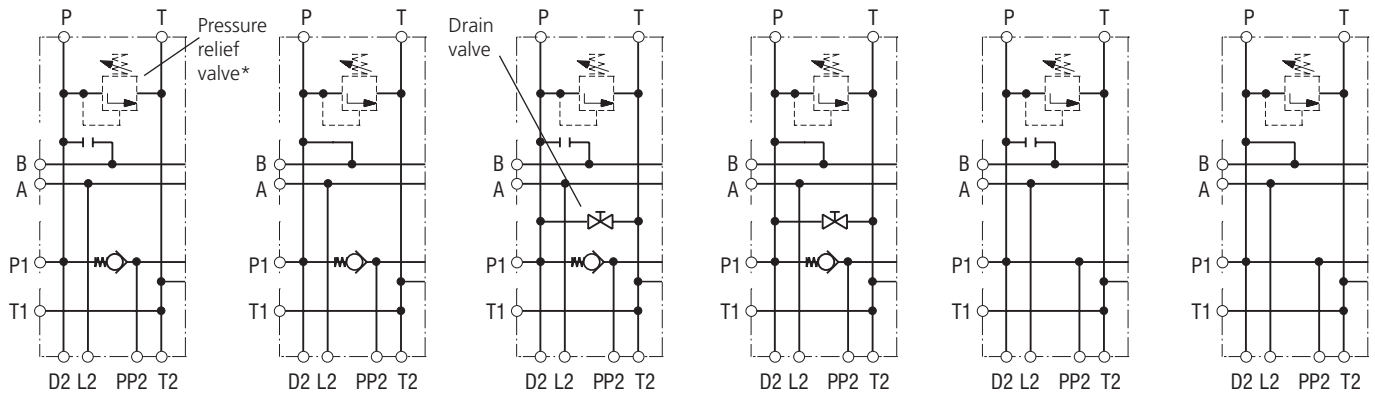
ZB06A*-22

without check valve

ZB06B*-11

ZB06B*-12

mounting interface of PD06-Z6 (Cat. 0006) serial plates



Models for flange mounted valves with pattern acc. to ISO 4401-03 (CETOP 03)

without check valve

ZB06B*-21

ZB06B*-22

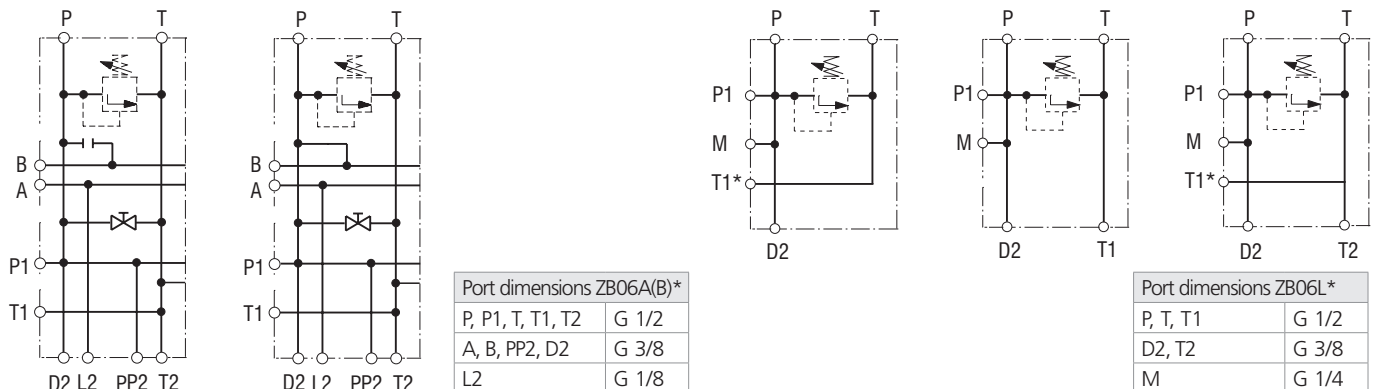
Simplified models ZB06L* without mounting pattern for modular valve

ZB06L*-1

ZB06L*-2

ZB06L*-3

mounting interface of PD06-Z6 (cat. 0006) serial plates



Port dimensions ZB06A(B)*	
P, P1, T, T1, T2	G 1/2
A, B, PP2, D2	G 3/8
L2	G 1/8

Port dimensions ZB06L*	
P, T, T1	G 1/2
D2, T2	G 3/8
M	G 1/4

Pressure relief valve is not supplied with the ZB block

Available types

Tab. 1	ZB06A(B)*ST, zinc-coated		
Ordering number	Type	Pressure [bar (PSI)]	Weight [kg (lbs)]
23686401	ZB06A-QP2-11-STK-B	320 (4640)	cca 4.7 (10.4)
23686501	ZB06A-QP2-21-STK-B	320 (4640)	
23686601	ZB06A-QP2-12-STK-B	320 (4640)	
23686701	ZB06A-QP2-22-STK-B	320 (4640)	
23687001	ZB06B-QP2-11-STK-B	320 (4640)	
23687201	ZB06B-QP2-21-STK-B	320 (4640)	
23687401	ZB06B-QP2-12-STK-B	320 (4640)	
23687501	ZB06B-QP2-22-STK-B	320 (4640)	

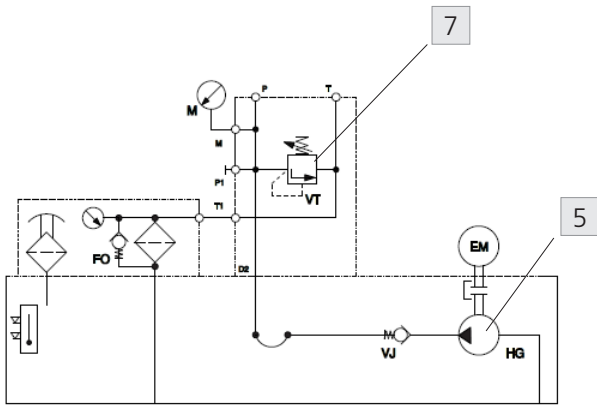
Tab. 2	ZB06A(B)*AL, aluminium versions		
Ordering number	Type	Pressure [bar (PSI)]	Weight [kg (lbs)]
30849400	ZB06A-QP2-11-ALK	250 (3626)	cca 1.7 (3.75)
30849500	ZB06A-QP2-12-ALK	250 (3626)	
30849600	ZB06A-QP2-21-ALK	250 (3626)	
30849700	ZB06A-QP2-22-ALK	250 (3626)	
30849800	ZB06B-QP2-11-ALK	250 (3626)	
30849900	ZB06B-QP2-12-ALK	250 (3626)	
30850100	ZB06B-QP2-21-ALK	250 (3626)	
30850200	ZB06B-QP2-22-ALK	250 (3626)	

Tab. 3	ZB06L*AL, aluminium versions		
Ordering number	Type	Pressure [bar (PSI)]	Weight [kg (lbs)]
23439800	ZB06L-QP2-1-ALK	250 (3626)	cca 1.6 (3.5)
23439900	ZB06L-QP2-2-ALK	250 (3626)	
31785200	ZB06L-QP2-3-ALK	250 (3626)	

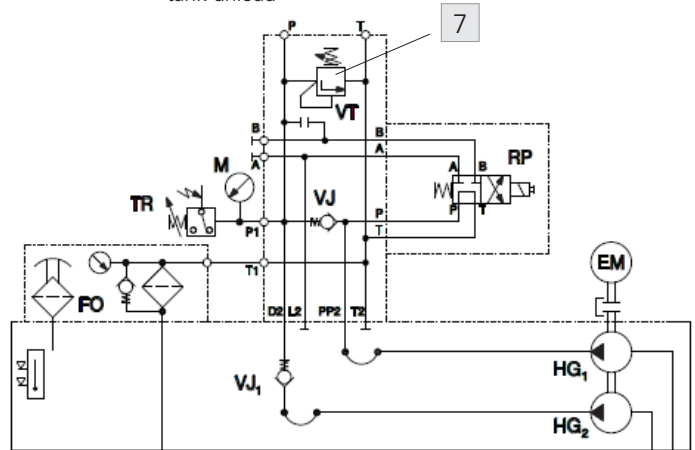
Application

Typical circuit This block enables a great number of circuit arrangements. The shown example represents only one of many possible variants.

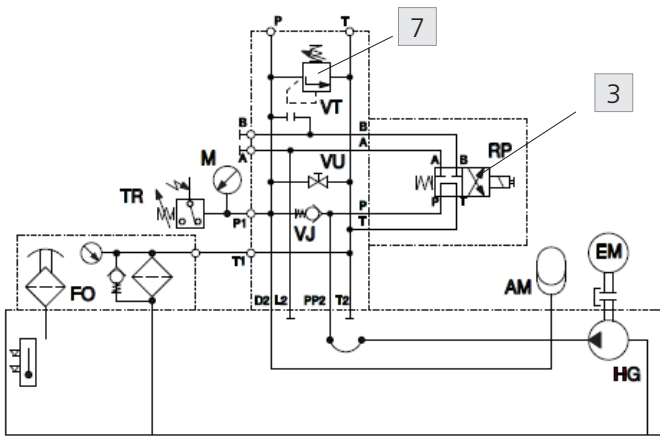
ZB06L*-1 Basic pressure circuit protection and connection with gear pump and return filter



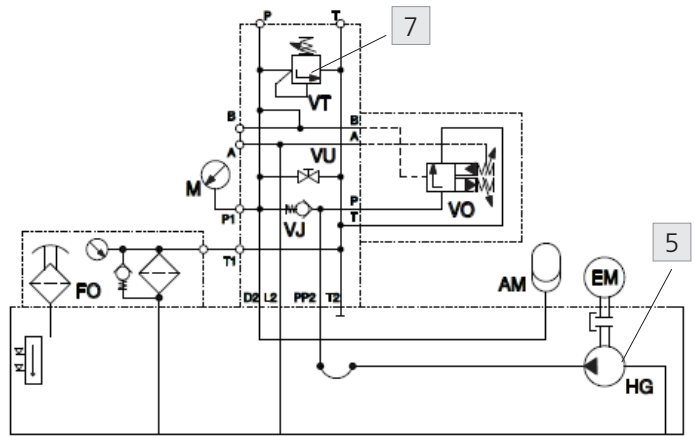
ZB06A*-11 Basic pressure circuit protection and connection with tandem gear pump and return filter with one pump tank unload



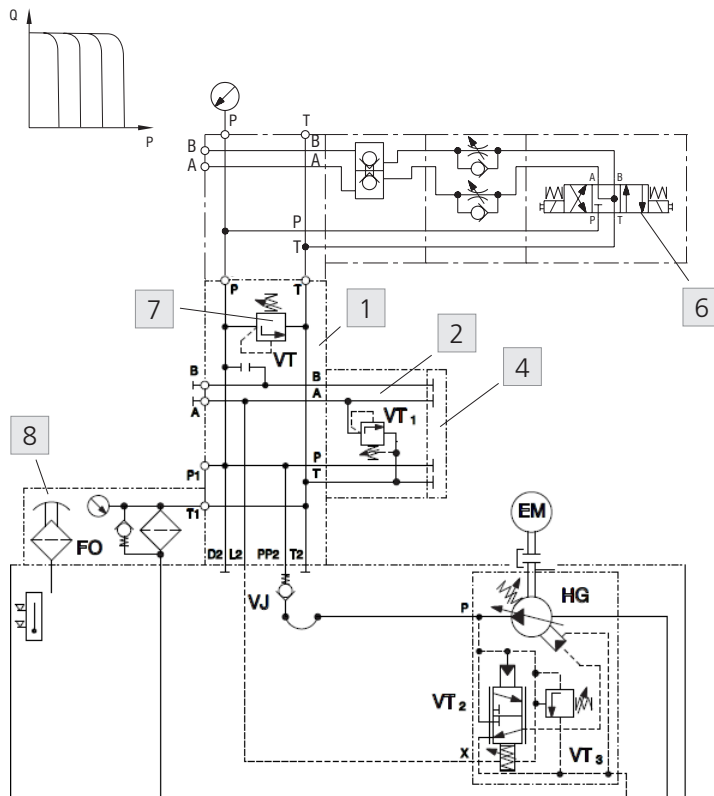
ZB06A*-21 System with accumulator



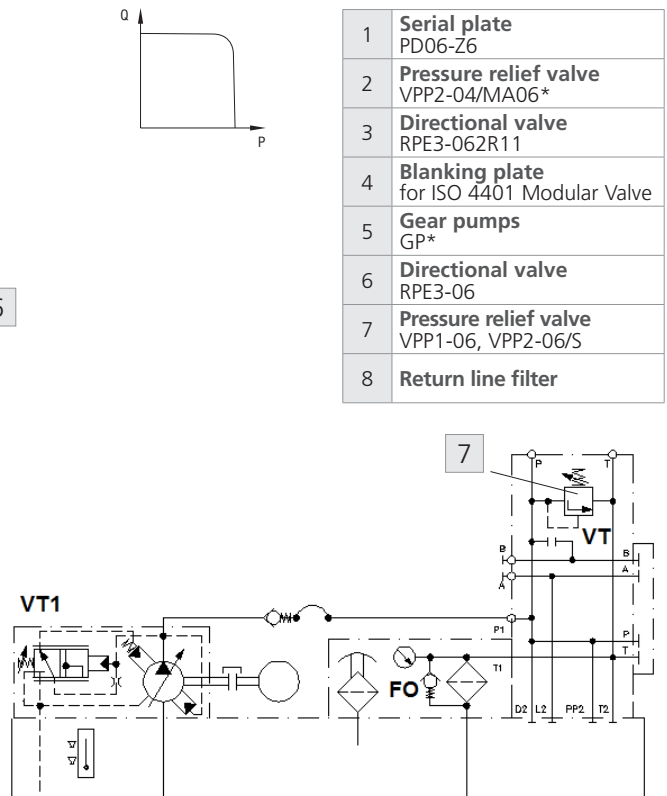
ZB06A*-22 System with accumulator and accumulator charging valve



ZB06B* Constant pressure regulation with relief valve (remote control)



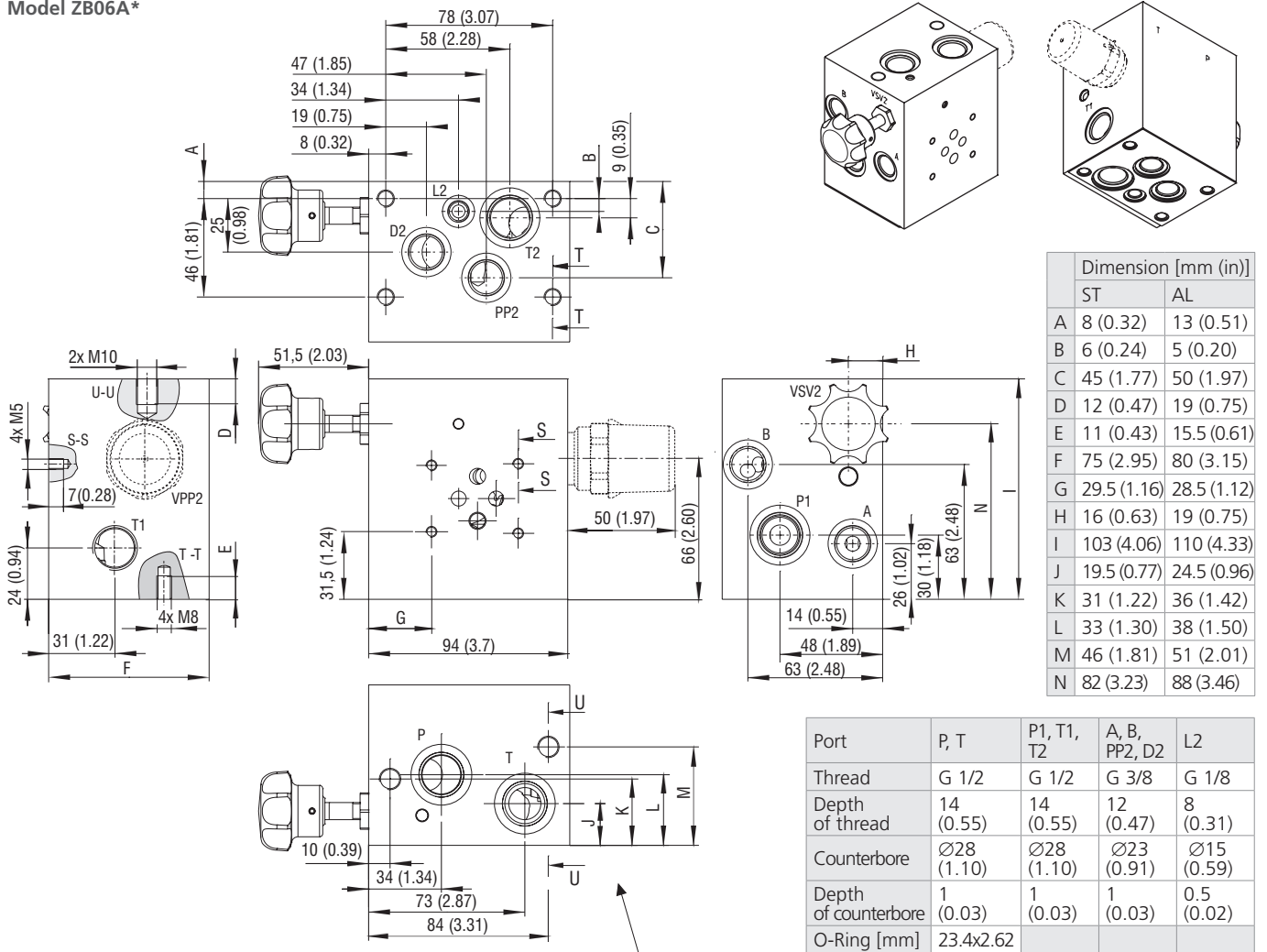
ZB06B* Constant pressure regulation (setting on the pump)



1	Serial plate PD06-Z6
2	Pressure relief valve VPP2-04/MA06*
3	Directional valve RPE3-062R11
4	Blanking plate for ISO 4401 Modular Valve
5	Gear pumps GP*
6	Directional valve RPE3-06
7	Pressure relief valve VPP1-06, VPP2-06/S
8	Return line filter

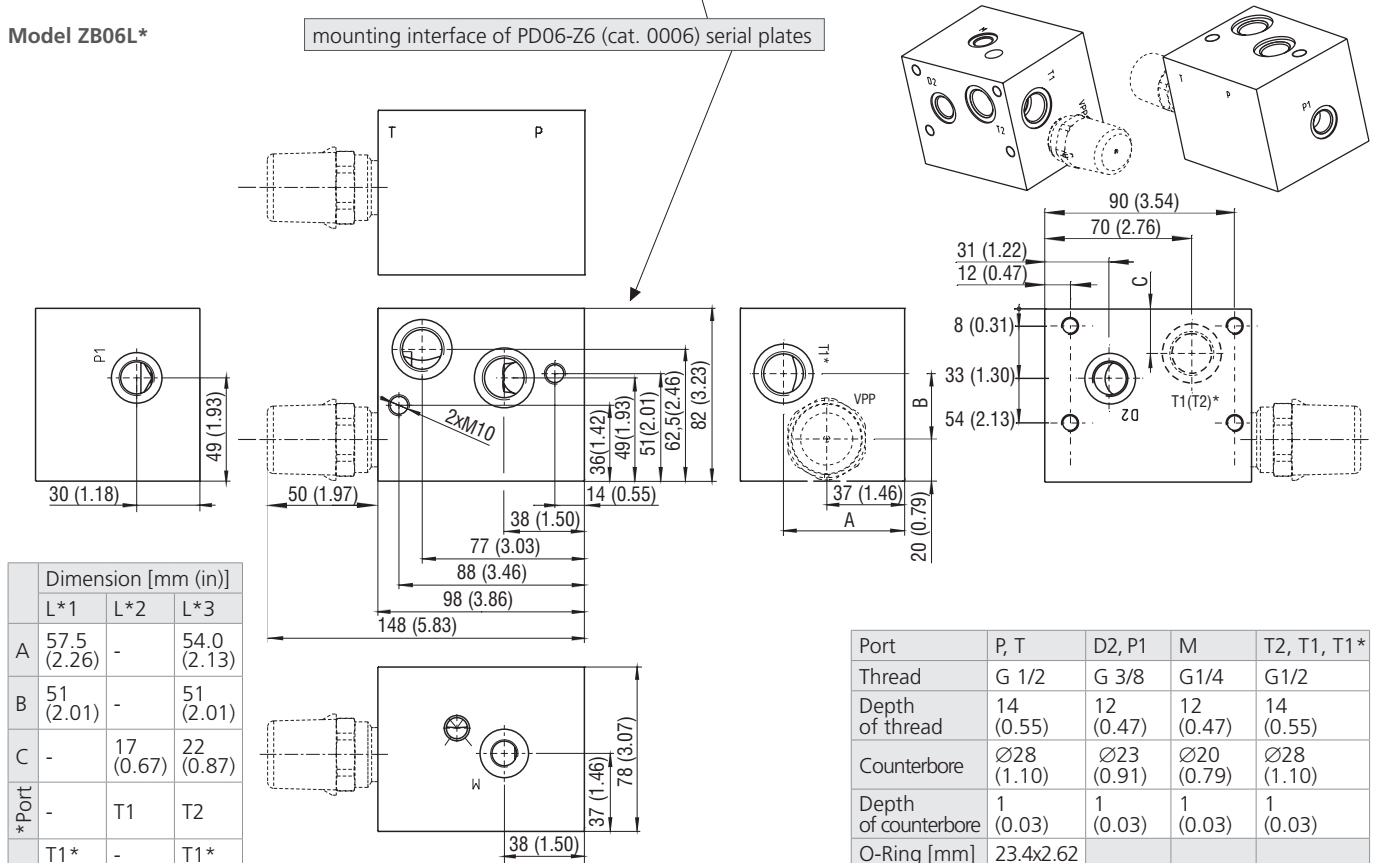
Dimensions in millimeters (inches)

Model ZB06A*



Model ZB06L*

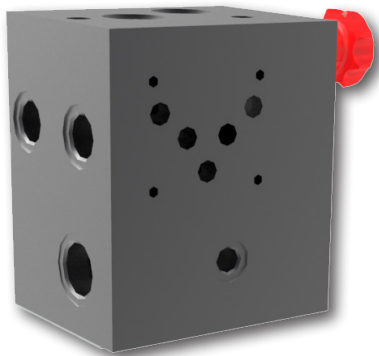
mounting interface of PD06-Z6 (cat. 0006) serial plates



Base Plate with with Pressure Relief Valve for Serial Plates Assemblies

ZB10

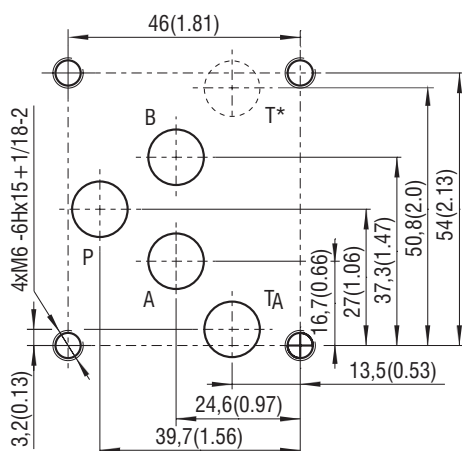
Size 10 (D05) • p_{max} 320 bar (4600 PSI)



Technical Features

- › Tank cover mounted base manifold for hydraulic power packs which require one directional valve, optionally stackable with PD10-Z10 (Cat. 0008) serial plates
- › Designed for flange mounted valves with pattern acc. to ISO 4401-05 (CETOP 05)
- › Simplified models ZB10L* for cost effective circuit design and assembly with stackable serial PD10-Z10 plates
- › Integrated functions for circuit unloading drain, main circuit check and pressure relief valves
- › Suitable for mounting the pump drive unit horizontally on the tank cover, or for vertical arrangement with the pump situated in the tank under the oil level
- › Variety of models support the build-up of systems with constant or regulated pumps
- › In the standard version, the ZB10A(B) manifold housing is zinc-coated for 520 h and the steel parts are uninc-coated for 240 h protection acc. to ISO 9227. Aluminium ZB10L manifold housing is without any surface protection

ISO 4401-05 (CETOP 05)



Ports P, A, B, T - max \varnothing 11.2 mm (0.44 in)

Port T only with model ZB10A(B)-QT2

Technical Data

Modular valves mounting surface		10 (D05)	
Cartridge cavity		M28x1.5 / QP2, M35x1.5 / QT2	
Max. operating pressure		aluminium 250 (3626)	
		steel 320 (4640)	
Max. flow		l/min (GPM)	50 (13.2) for QP2
			120 (31.7) for QT2
			ZB10A(B)-QP2(QT2)*ST*
			ZB10L-QT2*AL*
		Base plate	Simplified base plate
		P1 ... G3/4	T1 ... G3/4
Port dimensions		A, B, P, T, PP2, D2, T1, T2, T3... G1/2	P, T, P1, D2, T2 ... G1/2
		M1, M2, M3 ... G1/4	M ... G1/4
		L2 ... G1/8	-
Mass	ZB10A(B)	kg (lbs)	steel 6.3 (13.9)
	ZB10L		steel 9.3 (20.5)
			aluminium 2.5 (5.5)

	Data sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details / Mounting interface	SMT_0019	SMT-QP2*, SMT-QT2*
		Size 10 / CETOP 05

Studs and nuts for vertical stacking assemblies - Dn04, 06, 10_0020

Ordering Code

ZB10 [] - [] - [] - [] **K** - []

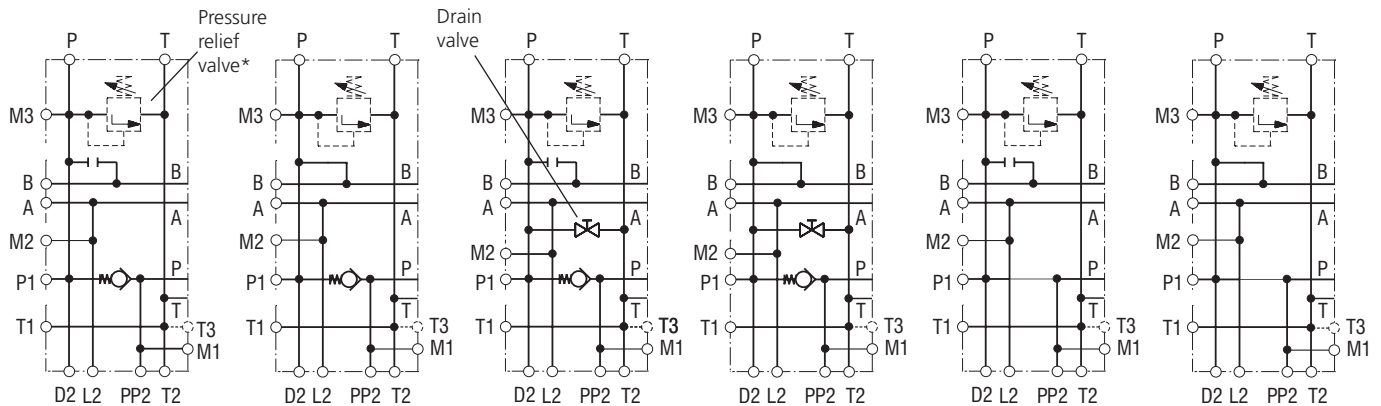
<p>Base manifold with pressure relief valve for PD serial plates assembly</p> <p>Size, mounting interface of serial plates base plate for PD10-Z10 serial plates</p> <p>Models with one mounting interface acc. to ISO 4401, DIN 24340 (CETOP 05) with check valve without check valve</p> <p>Models without mounting interface acc. to ISO 4401, DIN 24340 (CETOP 05) without check valve</p> <p>Pressure relief valve cavity M28x1.5 / QP2 (VPP1-06, VPP2-06)* M35x1.5 / QT2 (VPP1-10)*</p> <p>*Pressure relief valve is not supplied with the ZB block see catalogue: HA_5061 (VPP1-06, VPP1-10), HA_5062(VPP2-06)</p>	<p>A B</p> <p>L</p> <p>QP2 QT2</p>	<p>No designation</p> <p>B</p> <p>K</p> <p>AL ST</p> <p>1 3</p> <p>11 12 21 22</p>	<p>Surface treatment</p> <p>aluminium manifold without treatment</p> <p>zinc-coated (ZnNi), ISO 9227 (520 h)</p> <p>Seals</p> <p>seal plate for oil tank cover assembly</p> <p>Material of base manifold</p> <p>aluminium, EN AW-7075 T6* steel**</p> <p>*only for „ZB10L“ models **only for „ZB10A(B)“ models</p> <p>Design models for ZB10L types</p> <p>T return line from bottom side two T return lines from plate and bottom side</p> <p>Design models for ZB10A(B)</p> <p>+ Connection P-B</p> <p>without P-B ports connection with P-B ports connection without P-B ports connection with P-B ports connection</p>
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Functional Symbols

Models for flange mounted valves with pattern acc. to ISO 4401-05 (CETOP 05)

with check valve				without check valve	
ZB10A*-11	ZB10A*-12	ZB10A*-21	ZB10A*-22	ZB10B*-11	ZB10B*-12

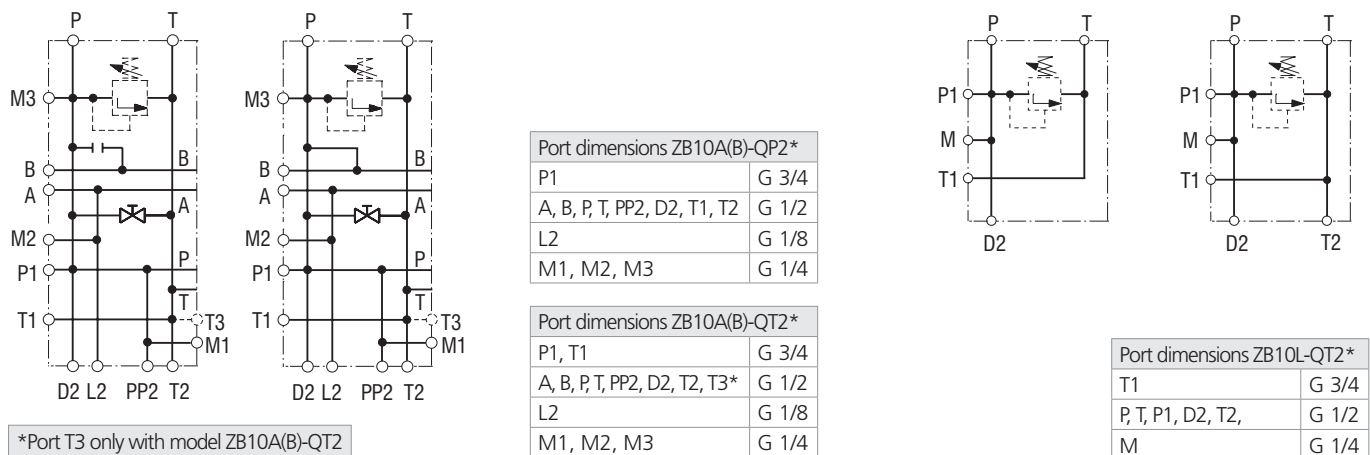
mounting interface of PD10-Z10 (cat. 0008) serial plates



Models for flange mounted valves with pattern acc. to ISO 4401-05 (CETOP 05)

without check valve		Simplified models ZB10L* without mounting pattern for modular valve	
ZB10B*-21	ZB10B*-22	ZB10L*-1	ZB10L*-3

mounting interface of PD10-Z10 (cat. 0008) serial plates



Pressure relief valve is not supplied with the ZB block

Application

Tab. 1	ZB10A(B)QP2*ST, zinc-coated		
Ordering number	Type	Pressure [bar]	Weight [kg]
23442001	ZB10A-QP2-11-STK-B	320	cca 6.3
23440601	ZB10A-QP2-21-STK-B	320	
30843100	ZB10A-QP2-12-STK-B	320	
30843200	ZB10A-QP2-22-STK-B	320	
23440501	ZB10B-QP2-11-STK-B	320	
23441801	ZB10B-QP2-21-STK-B	320	
30843300	ZB10B-QP2-12-STK-B	320	
30843400	ZB10B-QP2-22-STK-B	320	

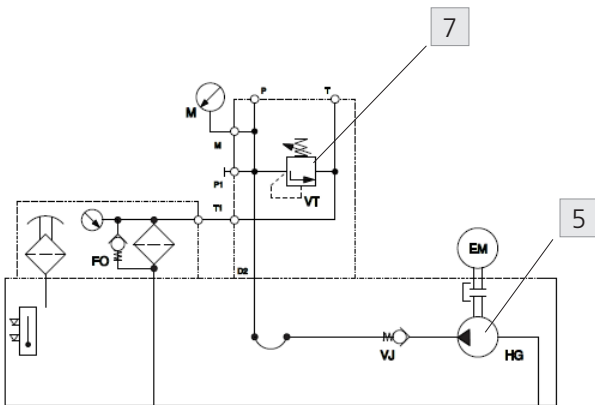
Tab. 2	ZB10A(B)QT2*ST, zinc-coated		
Ordering number	Type	Pressure [bar]	Weight [kg]
32861900	ZB10A-QT2-11-STK-B	320	cca 9.3
34046400	ZB10A-QT2-21-STK-B	320	
34046600	ZB10A-QT2-12-STK-B	320	
34046900	ZB10A-QT2-22-STK-B	320	
34047400	ZB10B-QT2-11-STK-B	320	
34047700	ZB10B-QT2-21-STK-B	320	
34047800	ZB10B-QT2-12-STK-B	320	
34047900	ZB10B-QT2-22-STK-B	320	

Tab. 3	ZB10LQT2* AL, aluminium versions		
Ordering number	Type	Pressure [bar]	Weight [kg]
34048000	ZB10L-QT2-1-AL	250	cca 2.3
31785300	ZB10L-QT2-3-AL	250	

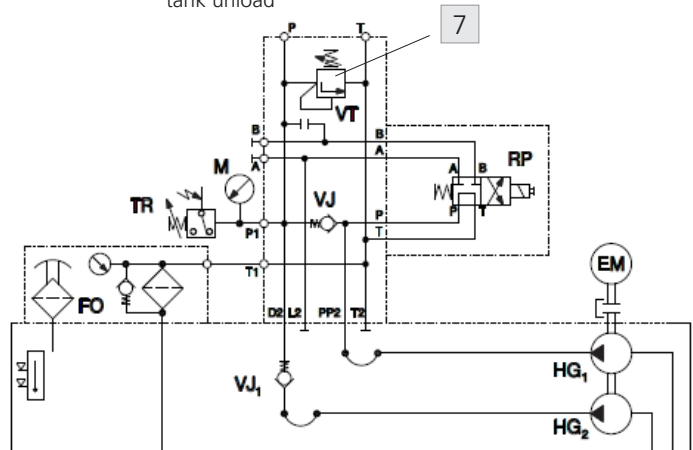
Available types

Typical circuit This block enables a great number of circuit arrangements. The shown example represents only one of many possible variants.

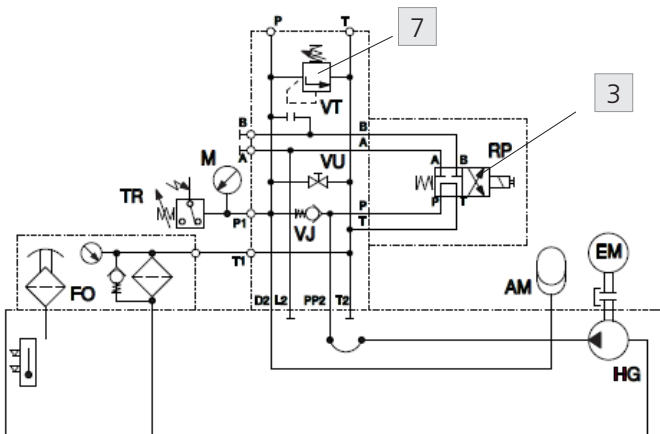
ZB10L*-1 Basic pressure circuit protection and connection with gear pump and return filter



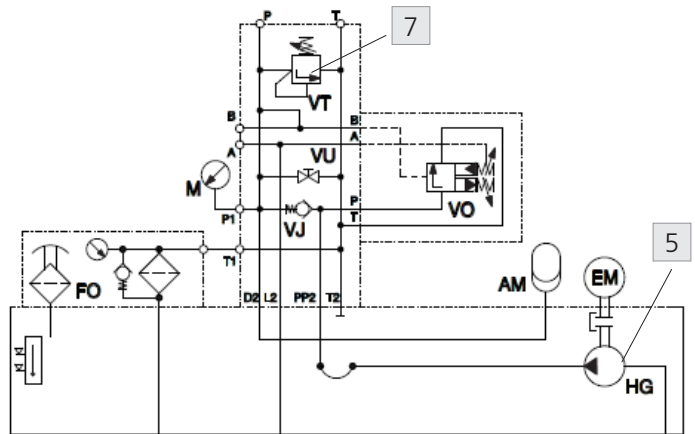
ZB10A*-11 Basic pressure circuit protection and connection with tandem gear pump and return filter with one pump tank unload



ZB10A*-21 System with accumulator

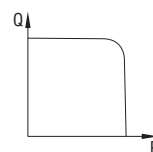
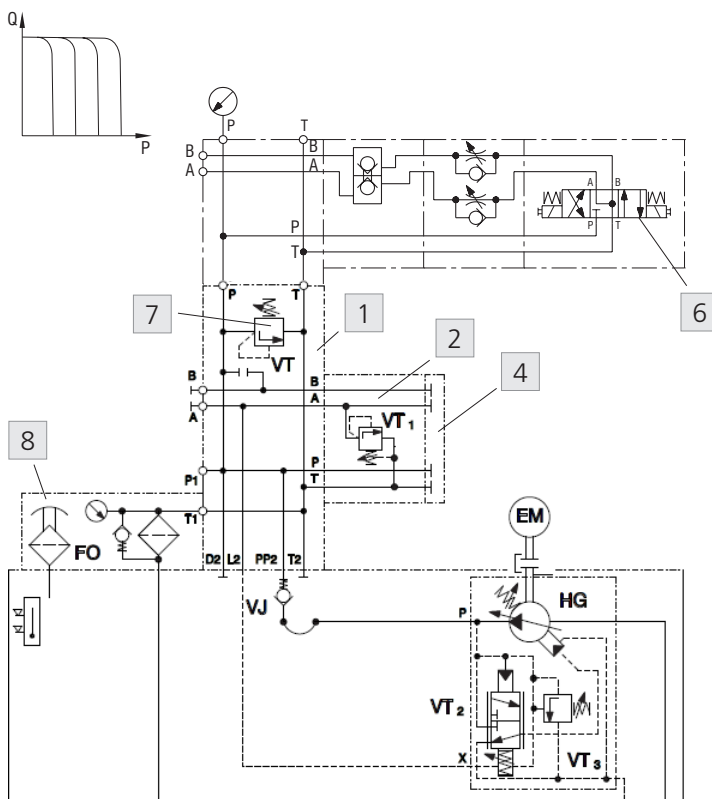


ZB10A*-22 System with accumulator and accumulator charging valve

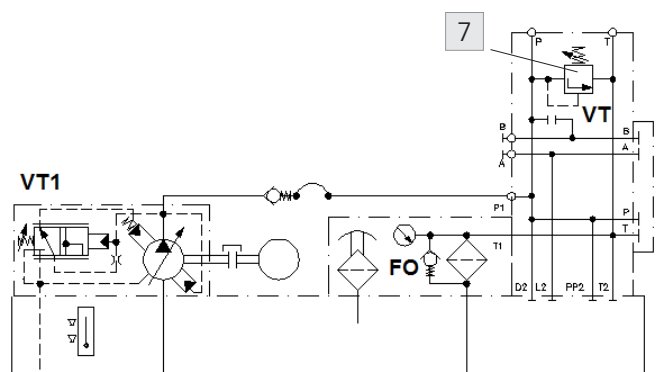


ZB10B* Constant pressure regulation with relief valve (remote control)

ZB10B* Constant pressure regulation (setting on the pump)

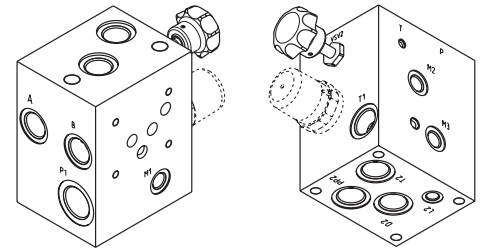
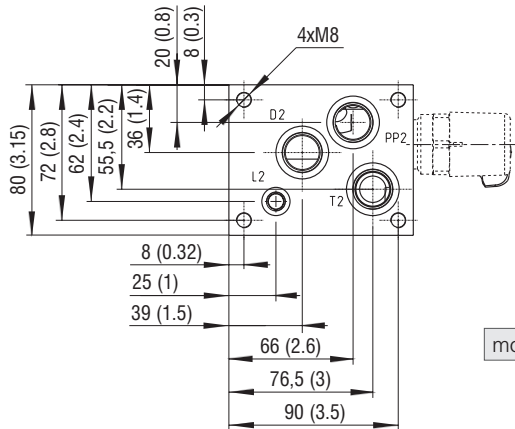


1	Serial plate PD10-Z10
2	Pressure relief valve VPN2-10/M
3	Directional valve RPE4-102R11
4	Blanking plate for ISO 4401 Modular Valve
5	Gear pumps GP*
6	Directional valve RPE4-10
7	Pressure relief valve VPP1-10, VPP1-06, VPP1-06
8	Return line filter

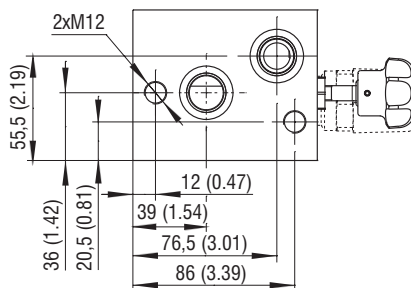
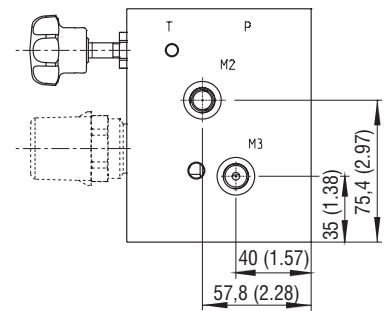
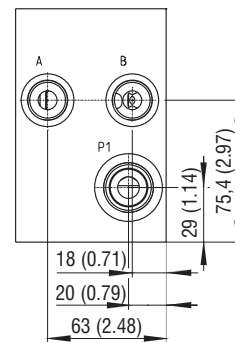
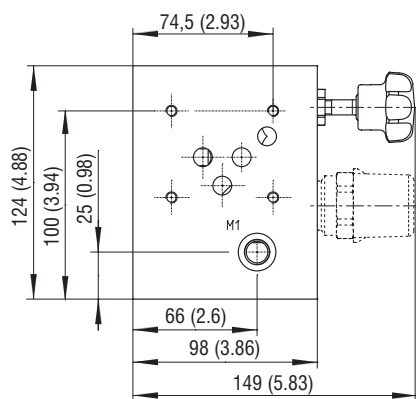
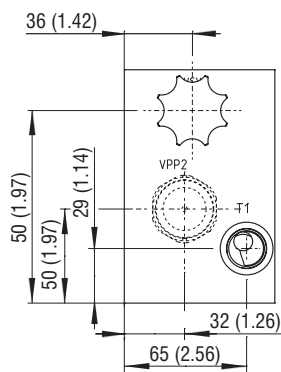


Dimensions in millimeters (inches)

Model ZB10A-QP2*



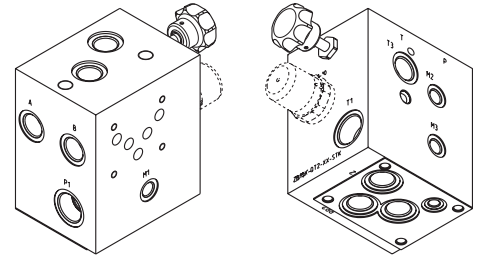
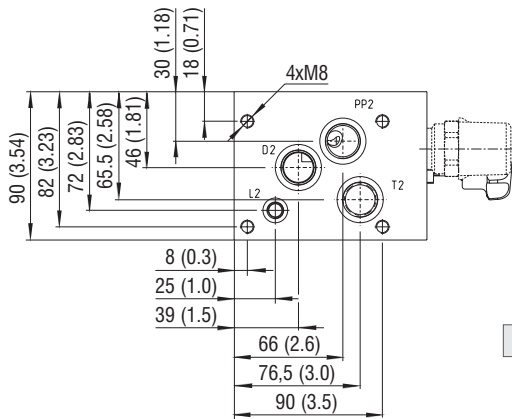
mounting interface of PD10-Z10 (cat. 0008) serial plates



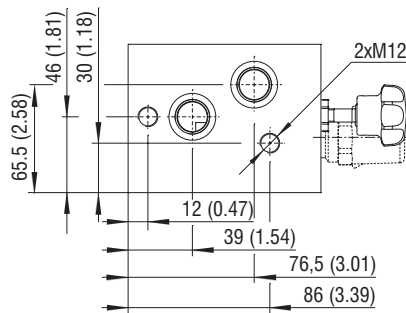
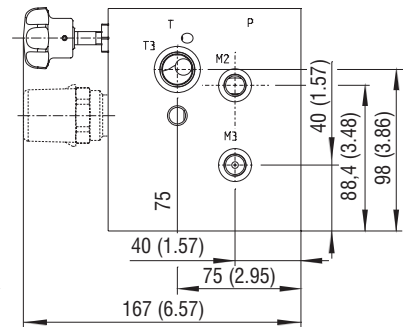
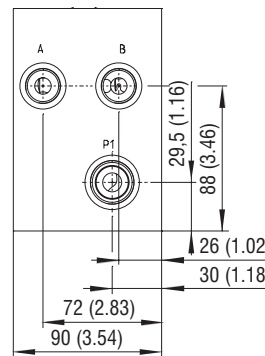
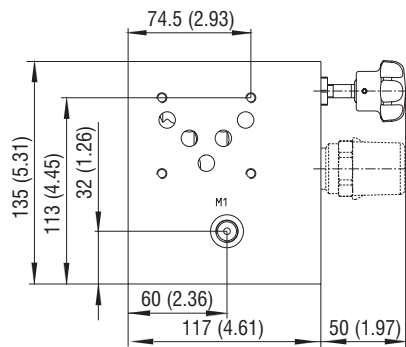
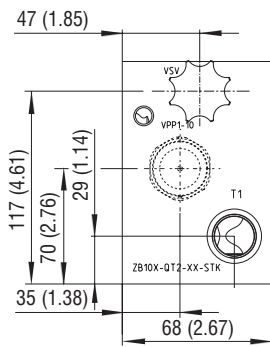
ZB10A(B)*	Size of ports Dimensions in millimeters (inches)					
	P1	P, T,	L2	M1, M2, M3	A, B, PP2, D2, T2, T3	T1
Thread	G 3/4	G 1/2	G 1/8	G 1/4	G 1/2	G 1/2
Depth of thread	16 (0.63)	14 (0.55)	8 (0.31)	12 (0.47)	14 (0.55)	14 (0.55)
Counterbore	∅33 (1.30)	∅28 (1.10)	∅15 (0.59)	∅20 (0.79)	∅28 (1.10)	∅28 (1.10)
Depth of counterbore	1 (0.03)	1 (0.03)	0.5 (0.02)	1 (0.03)	1 (0.03)	1 (0.03)
O-Ring [mm]		23.81x2.62				

Dimensions in millimeters (inches)

Model ZB10A-QT2*



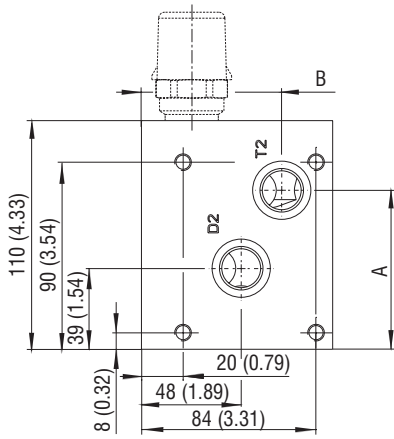
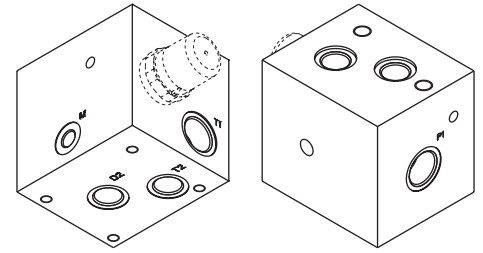
mounting interface of PD10-Z10 (cat. 0008) serial plates



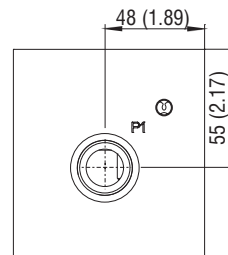
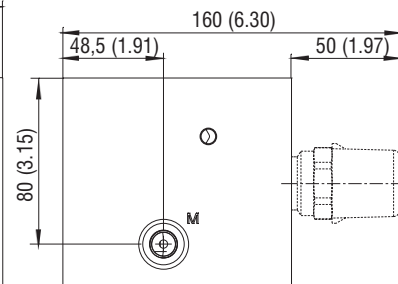
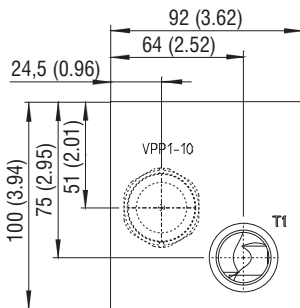
ZB10A(B)*	Size of ports Dimensions in millimeters (inches)					
	P1	P, T,	L2	M1, M2, M3	A, B, PP2, D2, T2, T3	T1
Thread	G 3/4	G 1/2	G 1/8	G 1/4	G 1/2	G 3/4
Depth of thread	16 (0.63)	14 (0.55)	8 (0.31)	12 (0.47)	14 (0.55)	16 (0.63)
Counterbore	∅33 (1.30)	∅28 (1.10)	∅15 (0.59)	∅20 (0.79)	∅28 (1.10)	∅33 (1.30)
Depth of counterbore	1 (0.03)	1 (0.03)	0.5 (0.02)	1 (0.03)	1 (0.03)	1 (0.03)
O-Ring [mm]		23.81x2.62				

Dimensions in millimeters (inches)

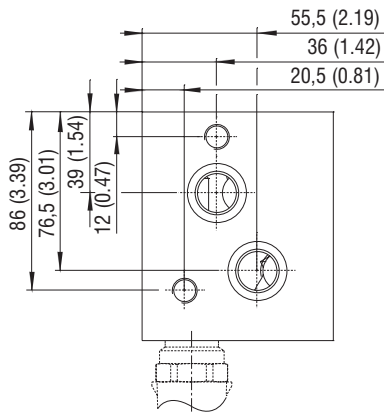
Model ZB10L*



mounting interface of PD10-Z10 (cat. 0008) serial plates



	Dimension [mm (in)]	
	Model	
	L*1	L*3
A	-	76,5 (3.01)
B	-	60 (2.36)
Port	-	T2



ZB10L*	Size of ports			
	Dimensions in millimeters (inches)			
Port	T1	P, T,	P1, D2, T2	M
Thread	G 3/4	G 1/2	G 1/2	G 1/4
Depth of thread	16 (0.63)	14 (0.55)	14 (0.55)	12 (0.47)
Counterbore	∅33 (1.30)	∅28 (1.10)	∅28 (1.10)	∅20 (0.79)
Depth of counterbore	1 (0.03)	1 (0.03)	1 (0.03)	1 (0.03)
O-Ring [mm]		23.81x2.62		