

Pilot-operated, balanced piston sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-163A
Series	0
Capacity	30 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006
Model Weight	0.11 kg.

**CONFIGURATION OPTIONS**

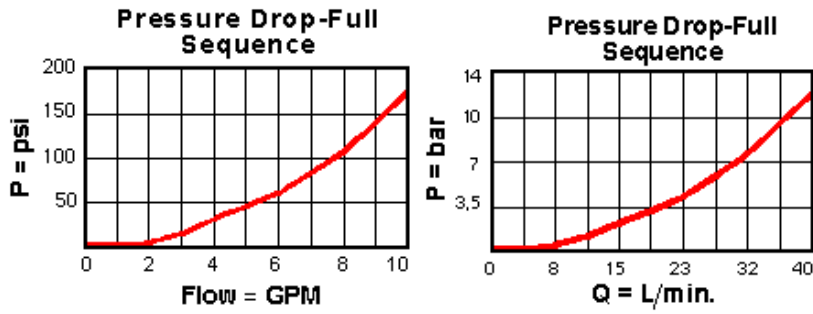
**Model Code Example: RSBCLAN**

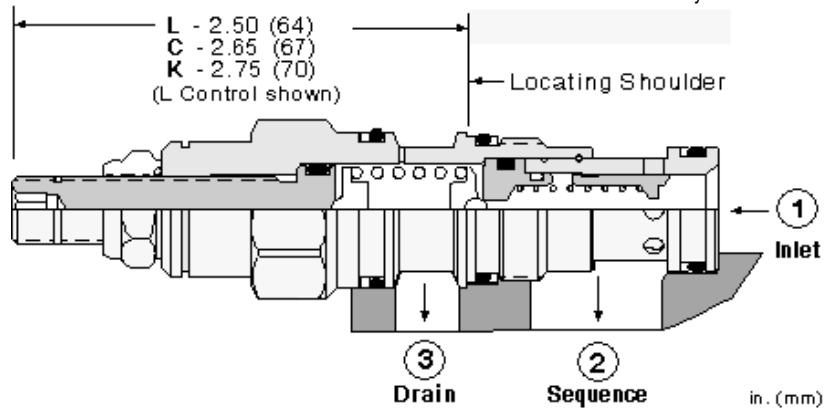
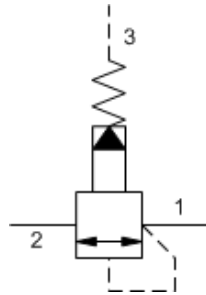
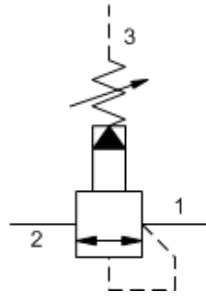
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>B</b> 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
	<b>C</b> 75 - 6000 psi (5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	<b>N</b> 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 75 - 400 psi (5 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Minimum setting is 75 psi (5 bar) for all spring ranges.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Not suitable for use in load holding applications due to spool leakage.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Pilot-operated, balanced piston sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.16 kg.

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

## CONFIGURATION OPTIONS

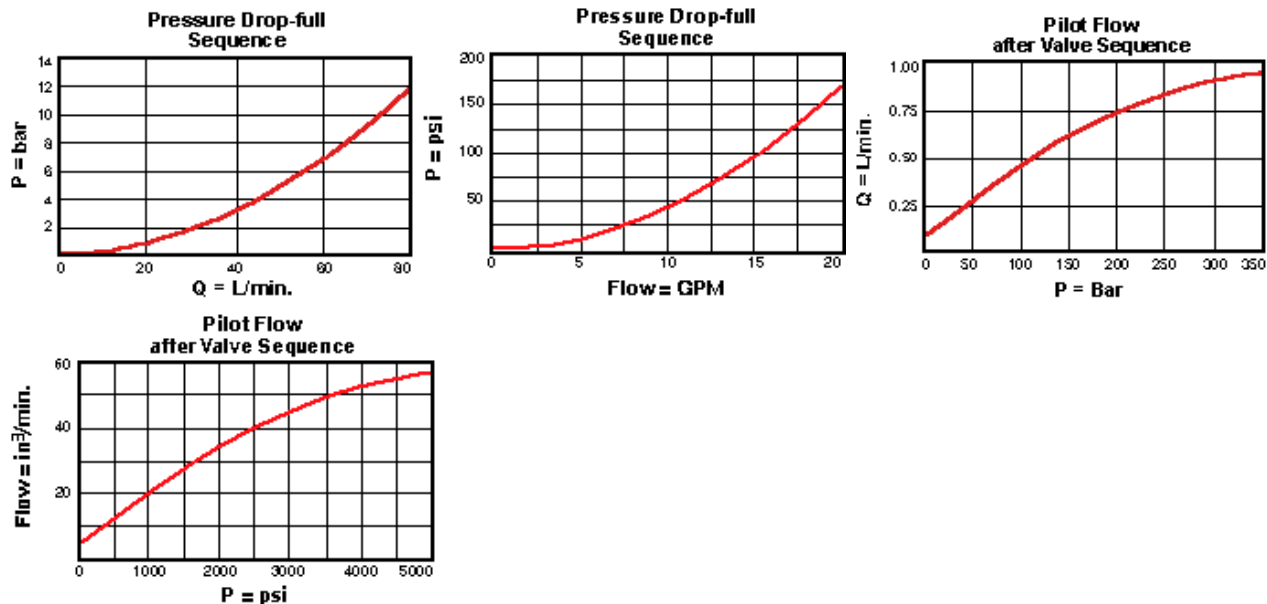
## Model Code Example: RSDCLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
<b>J</b> Capped Screw Adjustment	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
<b>O</b> Handknob with Panel Mount	<b>D</b> 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
<b>W</b> Hex Wrench Adjustment	<b>E</b> 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
<b>Y</b> Tri-Grip Handknob	<b>N</b> 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

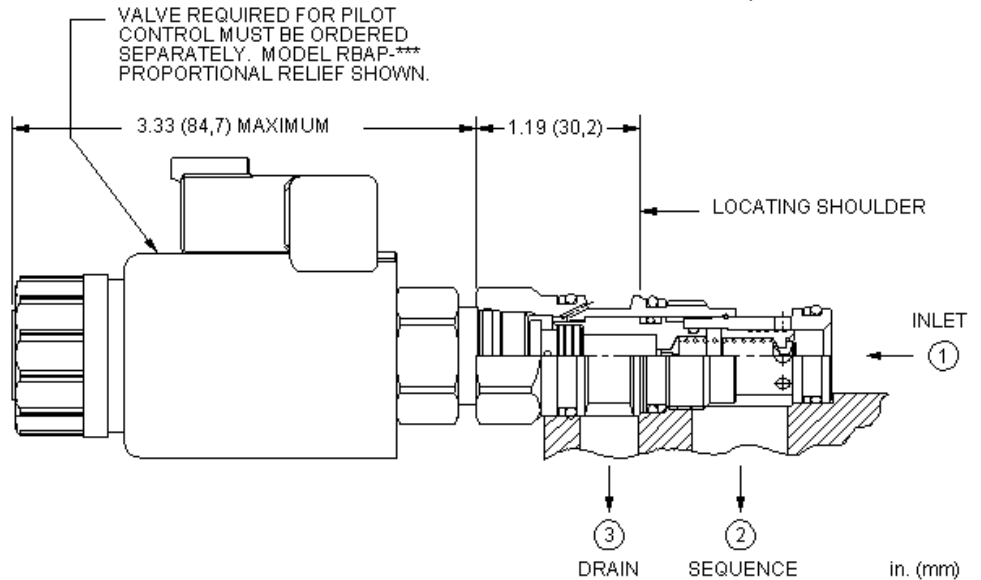
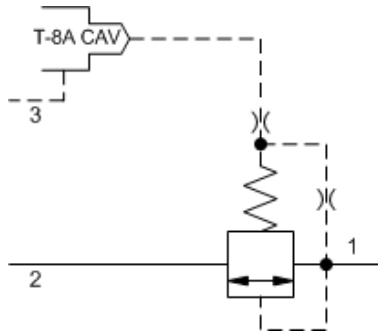
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Not suitable for use in load holding applications due to spool leakage.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSDC8](#) Pilot-operated, balanced piston sequence main stage with integral T-8A control cavity



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Response Time - Typical	10 ms
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.10 kg.

**NOTES**

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

**CONFIGURATION OPTIONS**

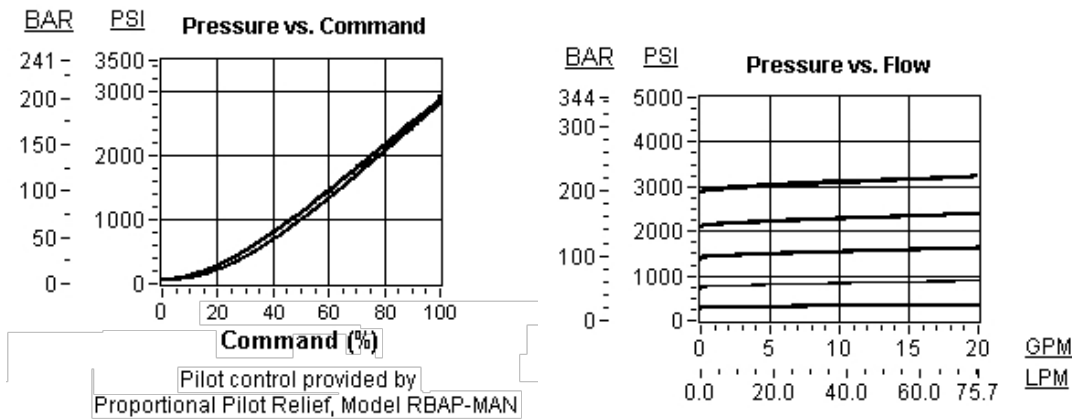
**Model Code Example: RSDC8WN**

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
<b>W</b> 100 psi (7 bar)	<b>N</b> Buna-N
D 25 psi (1,7 bar)	E EPDM
	V Viton

## TECHNICAL FEATURES

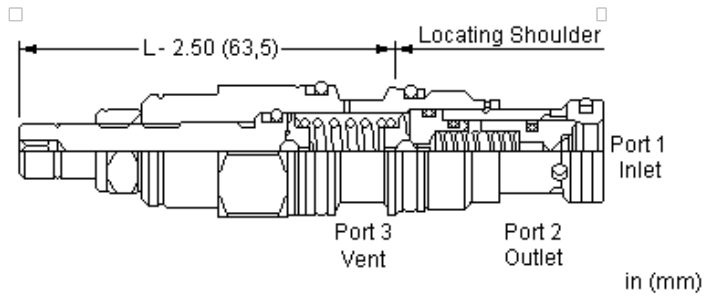
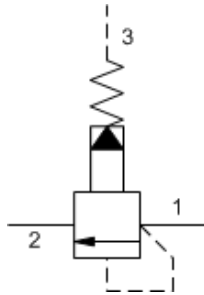
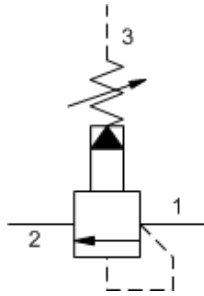
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSDC](#) Pilot-operated, balanced piston sequence valve



Pilot-operated, balanced poppet sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.16 kg.

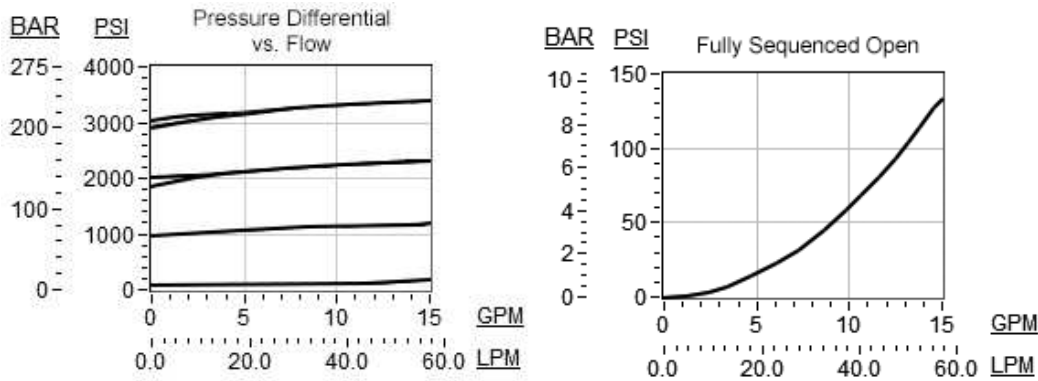
**CONFIGURATION OPTIONS**
**Model Code Example: RSDSLAN**

<b>CONTROL</b>	<b>(L) ADJUSTMENT RANGE</b>	<b>(A) SEAL MATERIAL</b>	<b>(N) MATERIAL/COATING</b>
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		/LH Mild Steel, Zinc-Nickel
	<b>N</b> 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

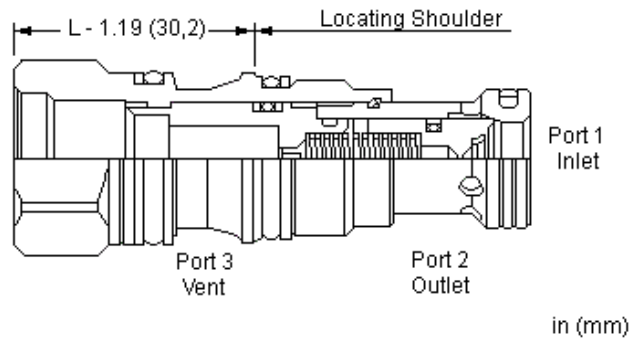
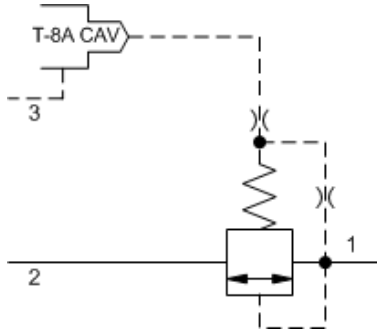
## PERFORMANCE CURVES



## RELATED MODELS

- [RSDS8](#) Pilot-operated, balanced poppet sequence main stage with integral T-8A control cavity





This valve is a normally closed poppet element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,11 - 0,16 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseal	0,7 cc/min.
Response Time - Typical	10 ms
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.10 kg.

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

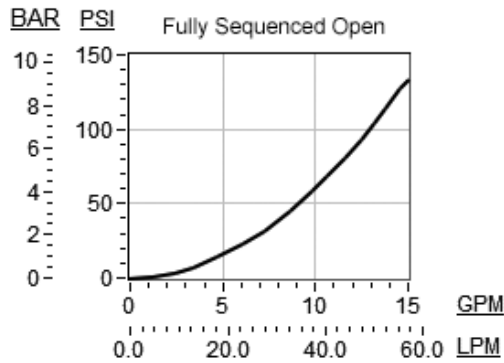
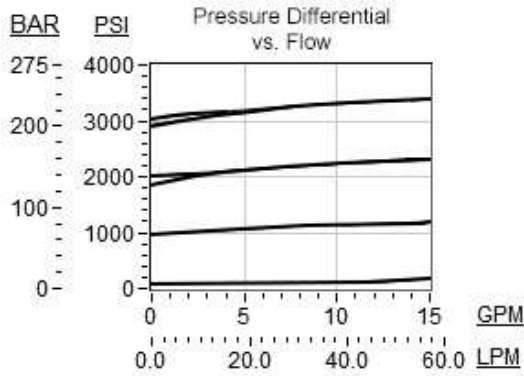
**CONFIGURATION OPTIONS**
**Model Code Example: RSDS8WN**

<b>BIAS PRESSURE</b>	<b>(W)</b>	<b>SEAL MATERIAL</b>	<b>(N)</b>
<b>W</b> 100 psi (7 bar)		<b>N</b> Buna-N	
<b>D</b> 50 psi (3,5 bar)		<b>V</b> Viton	

## TECHNICAL FEATURES

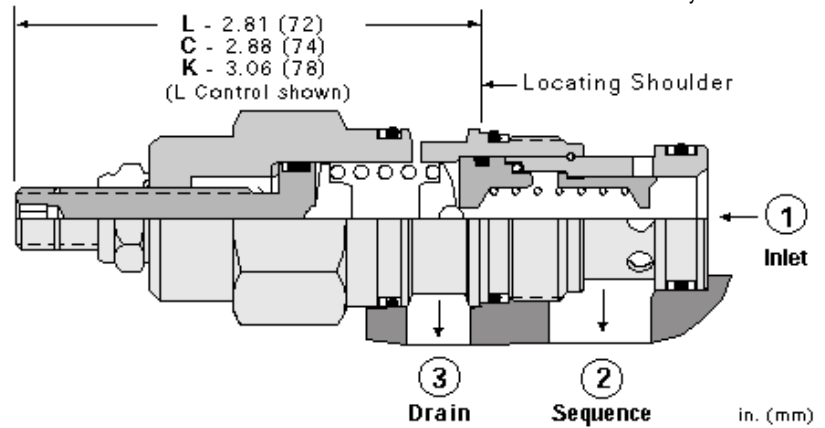
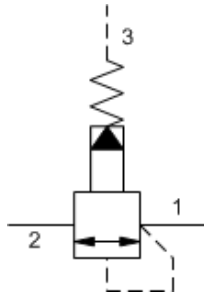
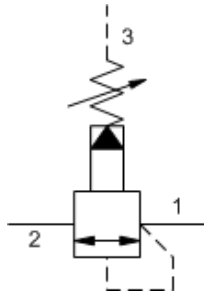
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSDS](#) Pilot-operated, balanced poppet sequence valve



Pilot-operated, balanced piston sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	EPDM: 990202014
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.29 kg.

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

## CONFIGURATION OPTIONS

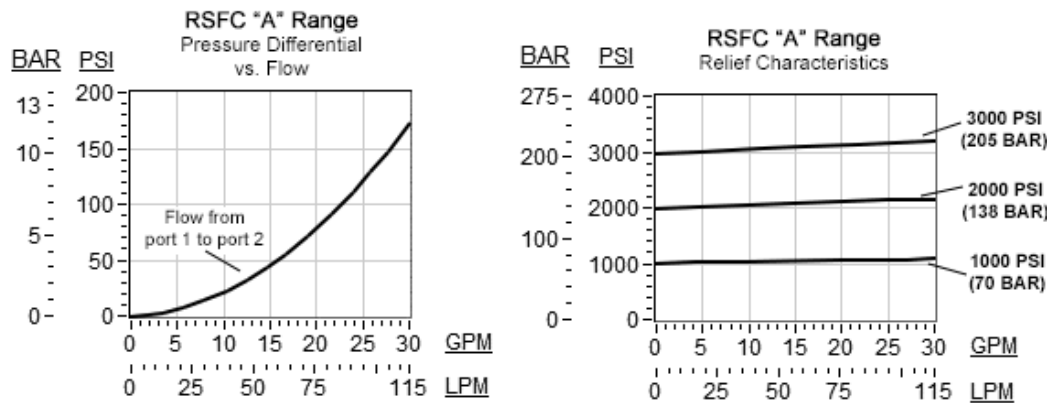
## Model Code Example: RSFCLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
<b>J</b> Capped Screw Adjustment	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
<b>O</b> Handknob with Panel Mount	<b>D</b> 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
<b>W</b> Hex Wrench Adjustment	<b>E</b> 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
<b>Y</b> Tri-Grip Handknob	<b>N</b> 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

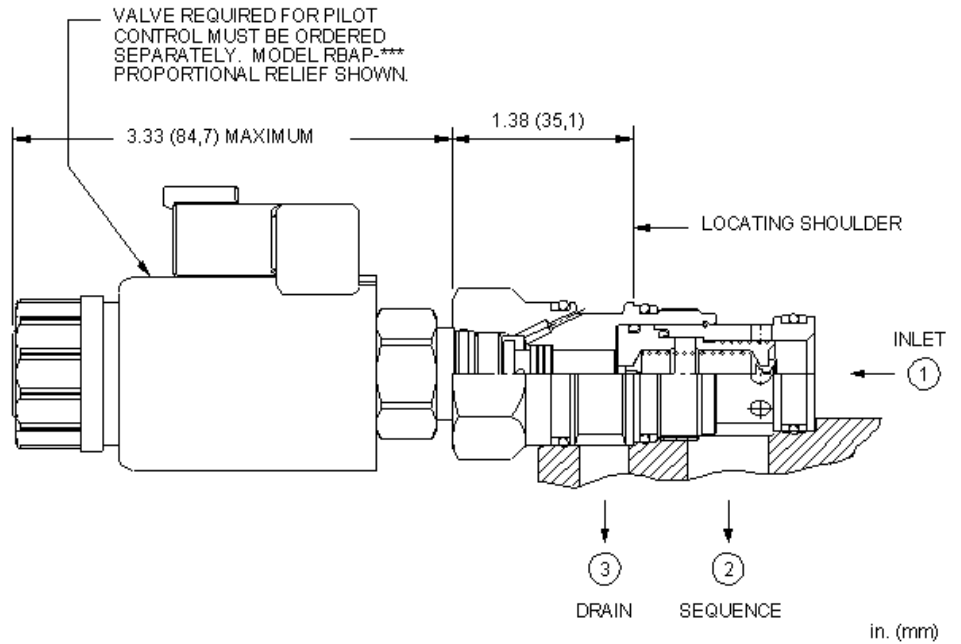
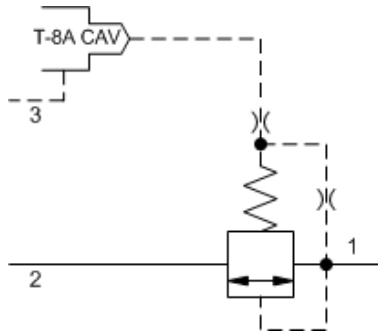
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Not suitable for use in load holding applications due to spool leakage.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSFC8](#) Pilot-operated, balanced piston sequence main stage with integral T-8A control cavity



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Response Time - Typical	10 ms
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.20 kg.

**NOTES**

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

**CONFIGURATION OPTIONS**

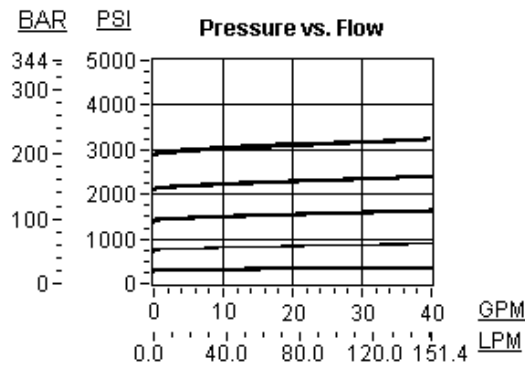
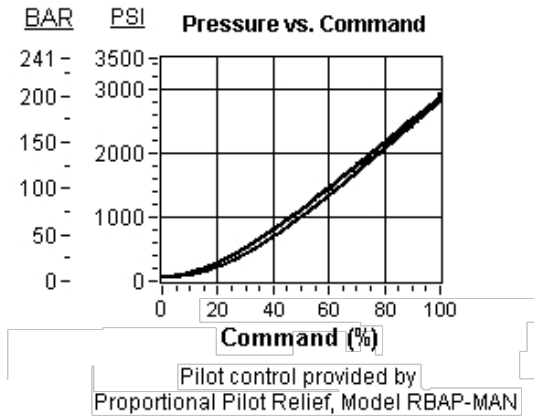
**Model Code Example: RSFC8WN**

<b>MINIMUM CONTROL PRESSURE (W)</b>	<b>SEAL MATERIAL (N)</b>
W 100 psi (7 bar)	N Buna-N
D 25 psi (1,7 bar)	V Viton

## TECHNICAL FEATURES

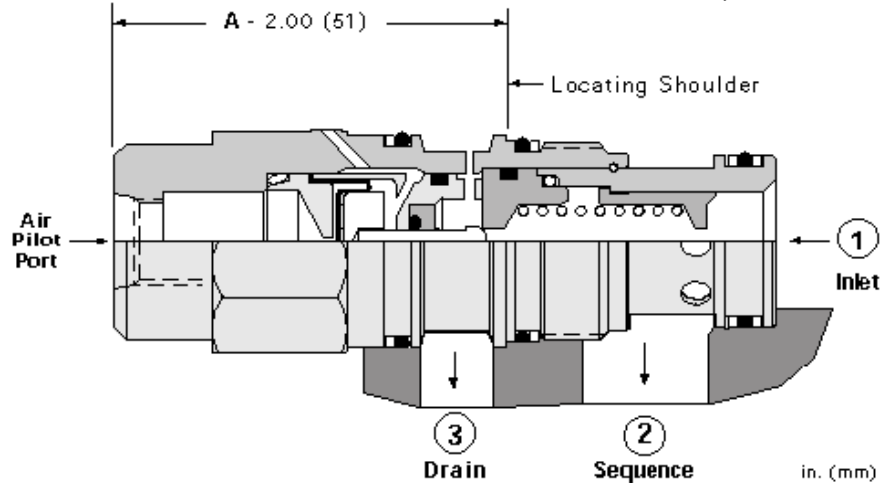
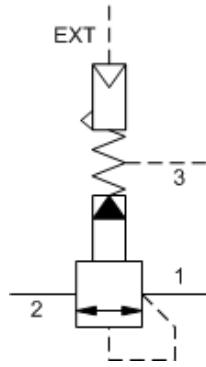
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSFC](#) Pilot-operated, balanced piston sequence valve



Air-controlled, pilot-operated, balanced piston sequence valves use compressed air over a diaphragm instead of an adjustable spring to control the pressure setting of the valve. The air signal is supplied through a port in the hex-end of the cartridge. They will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Pilot Ratio	20:1
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.
Maximum Air Pressure	10,5 bar
Response Time - Typical	10 ms
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0,27 kg.

**CONFIGURATION OPTIONS**

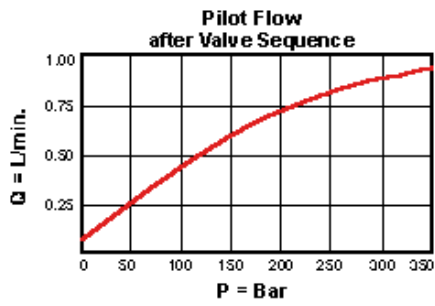
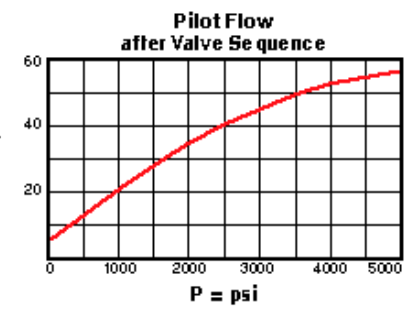
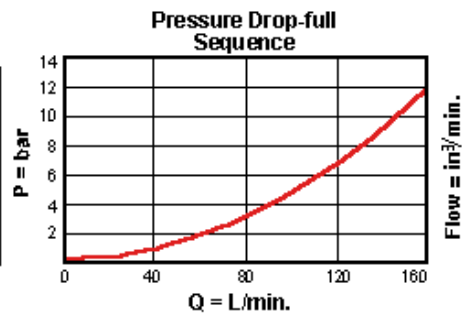
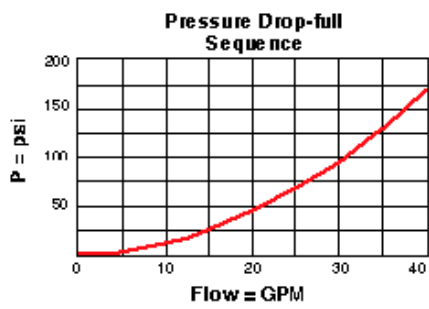
Model Code Example: **RSFEABN**

<b>CONTROL</b>	<b>(A) ADJUSTMENT RANGE</b>	<b>(B) SEAL MATERIAL</b>	<b>(N)</b>
A External 1/4 NPTF Port	B 50 - 1500 psi (3,5 - 105 bar)	N Buna-N V Viton	

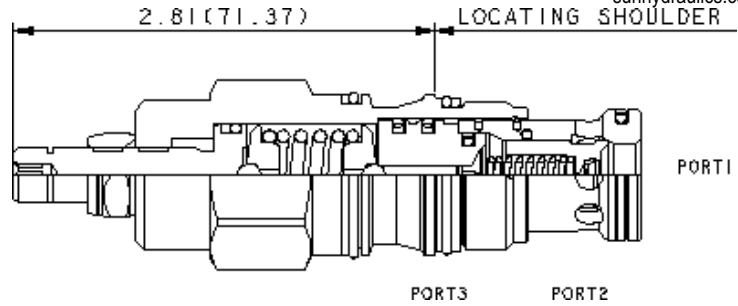
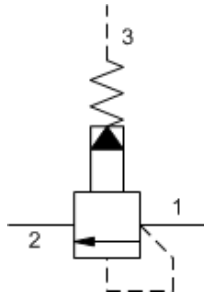
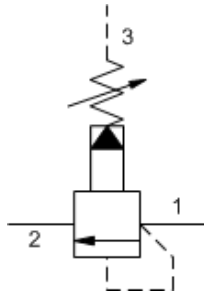
**TECHNICAL FEATURES**

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Maximum air pilot pressure should not exceed 150 psi (10,5 bar).
- Pressure at port 3 (drain) determines the minimum valve setting and should not exceed 1000 psi (70 bar).
- Capable of providing explosion proof remote control of the pressure setting, the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES







Pilot-operated, balanced poppet sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006
Model Weight	0.29 kg.

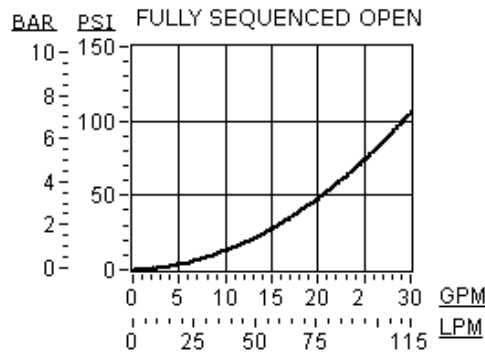
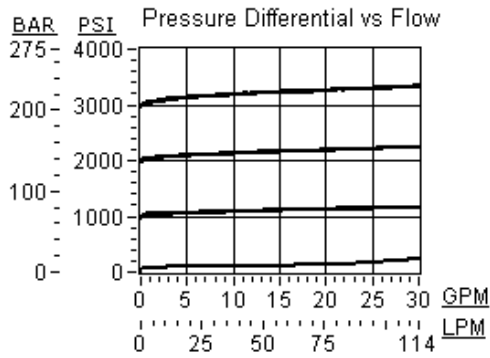
**CONFIGURATION OPTIONS**
**Model Code Example: RSFSLAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	<b>N</b> 60 - 800 psi (4 - 55 bar), 200 psi (14 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

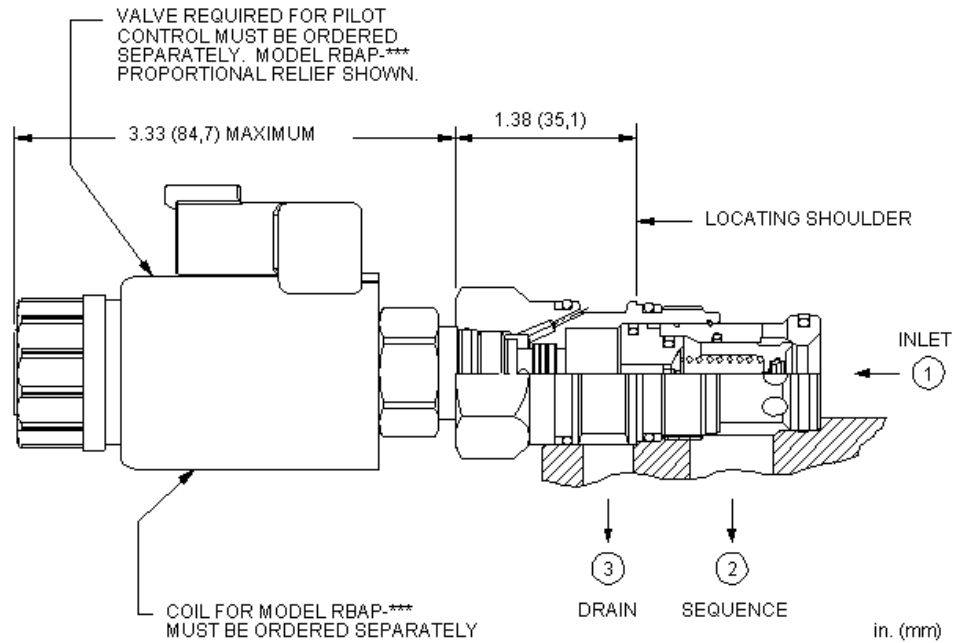
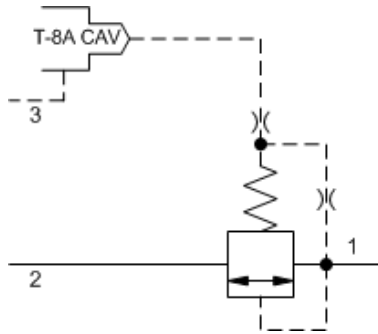
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSFS8](#) Pilot-operated, balanced poppet sequence main stage with integral T-8A control cavity



This valve is a normally closed poppet element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseal	0,7 cc/min.
Response Time - Typical	10 ms
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Seal kit - Cartridge	Buna: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006
Model Weight	0.20 kg.

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

**CONFIGURATION OPTIONS**

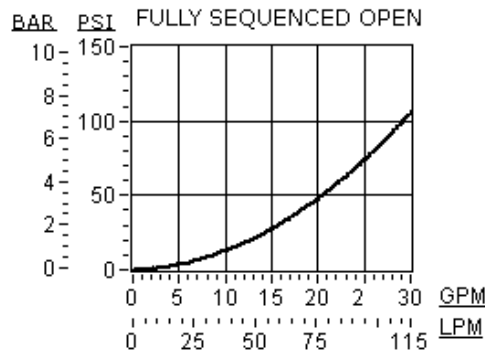
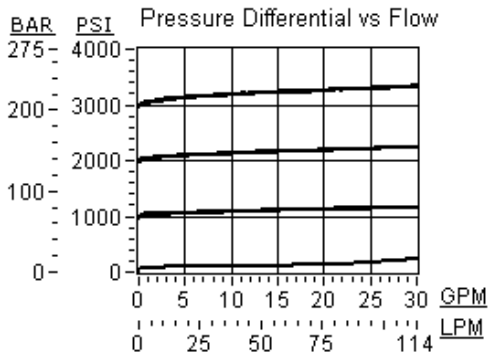
**Model Code Example: RSFS8WN**

<b>MINIMUM CONTROL PRESSURE (W)</b>	<b>SEAL MATERIAL (N)</b>
W 100 psi (7 bar)	N Buna-N
B 50 psi (3,5 bar)	V Viton

## TECHNICAL FEATURES

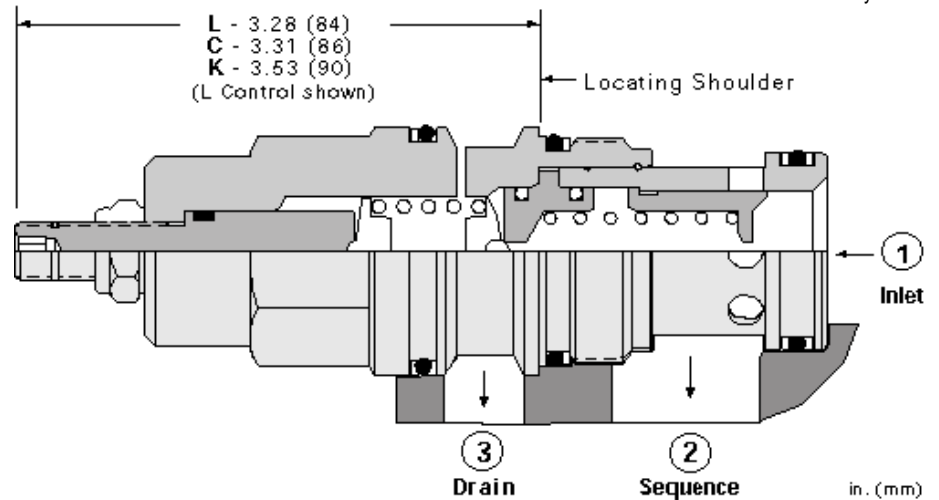
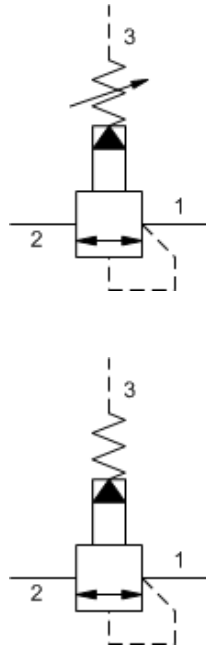
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSFS](#) Pilot-operated, balanced poppet sequence valve



Pilot-operated, balanced piston sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.62 kg.

## CONFIGURATION OPTIONS

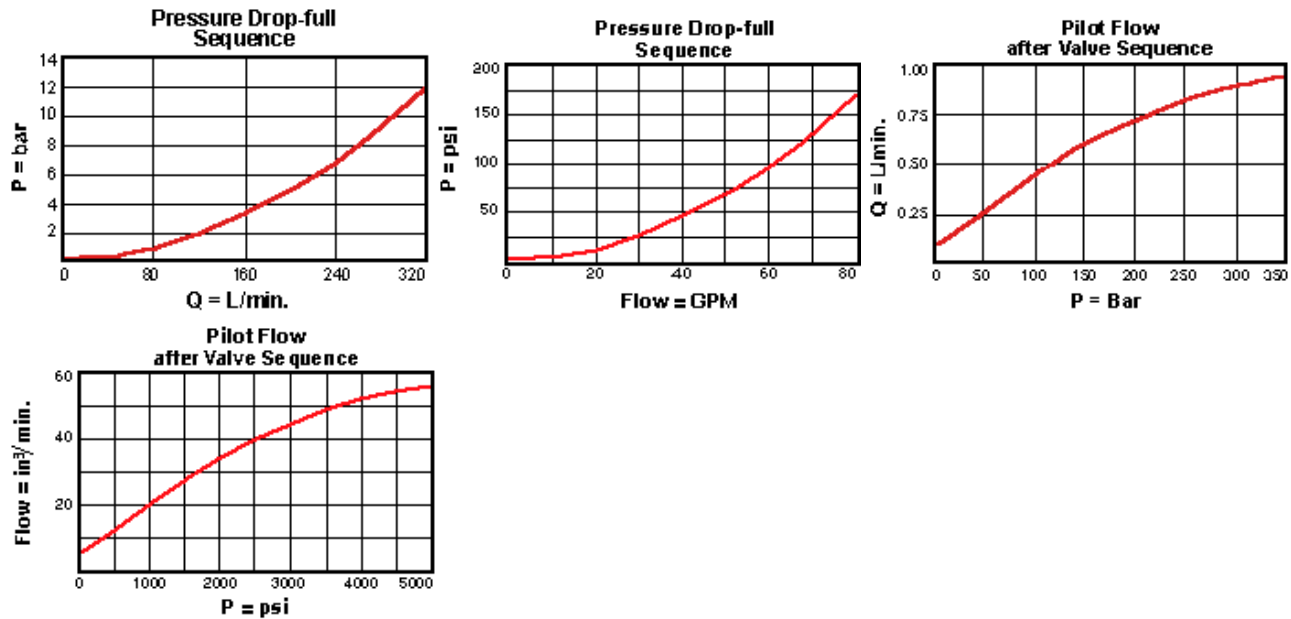
## Model Code Example: RSHCLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	E EPDM	/AP Stainless Steel, Passivated
K Handknob	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/LH Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
	N 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		

## TECHNICAL FEATURES

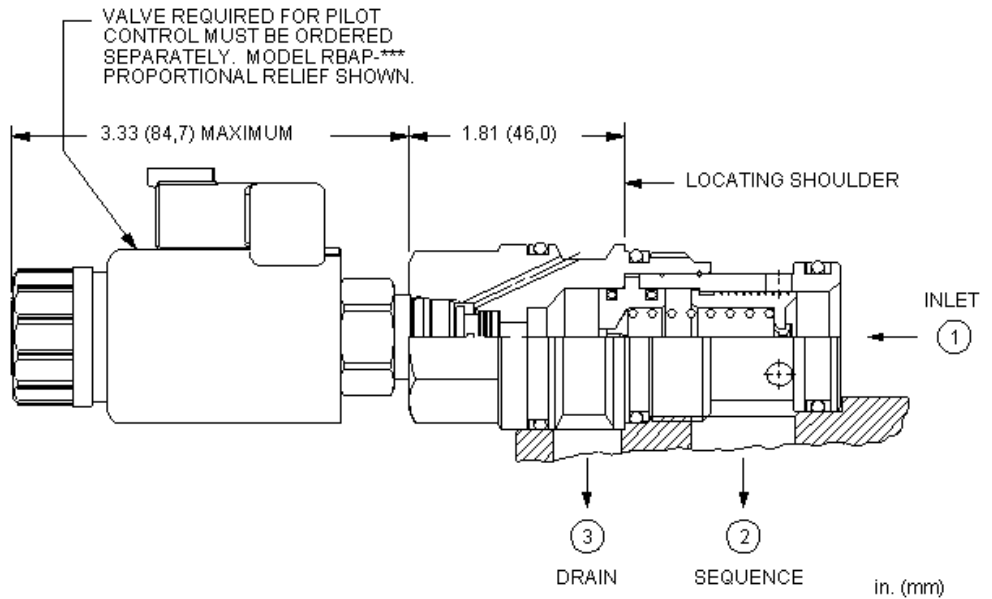
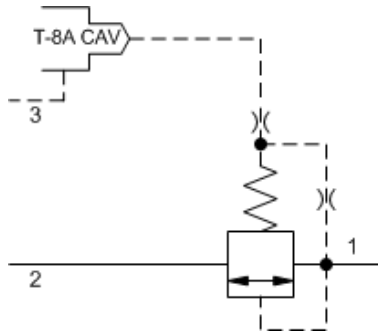
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Not suitable for use in load holding applications due to spool leakage.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSHC8](#) Pilot-operated, balanced piston sequence main stage with integral T-8A control cavity



This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Response Time - Typical	10 ms
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.49 kg.

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

**CONFIGURATION OPTIONS**

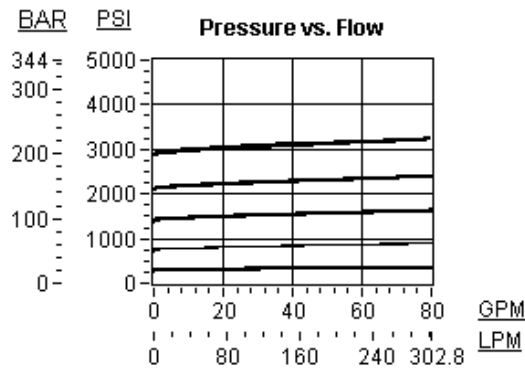
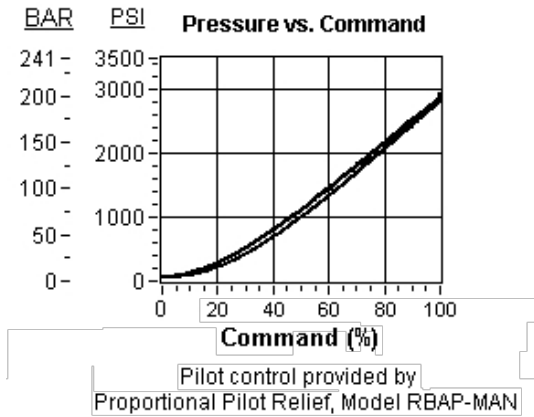
**Model Code Example: RSHC8WN**

<b>MINIMUM CONTROL PRESSURE (W)</b>	<b>SEAL MATERIAL (N)</b>
W 100 psi (7 bar)	N Buna-N
D 25 psi (1,7 bar)	V Viton

## TECHNICAL FEATURES

- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

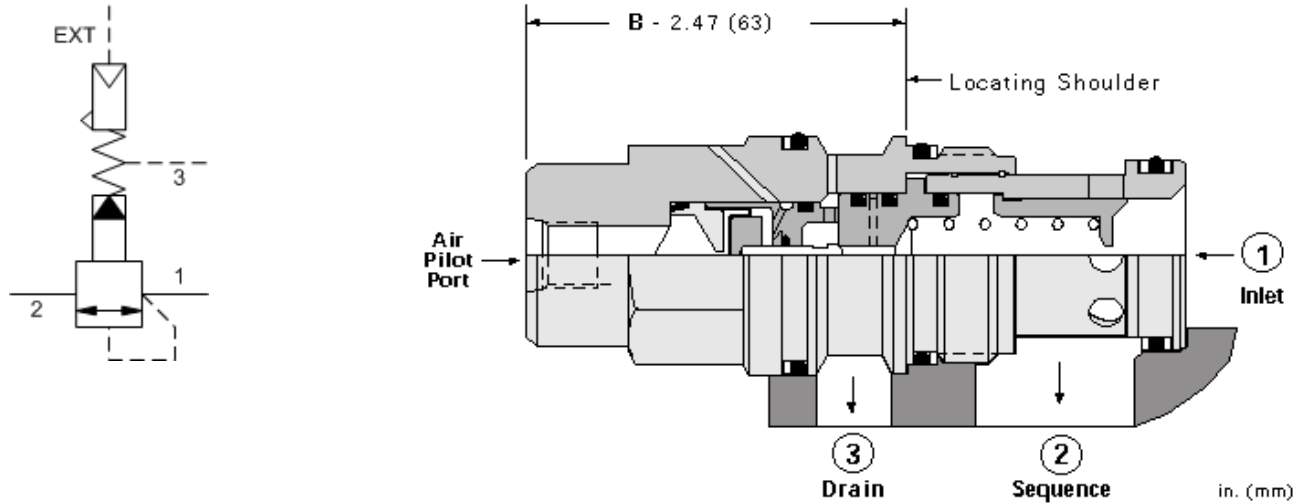
## PERFORMANCE CURVES



## RELATED MODELS

- [RSHC](#) Pilot-operated, balanced piston sequence valve





Air-controlled, pilot-operated, balanced piston sequence valves use compressed air over a diaphragm instead of an adjustable spring to control the pressure setting of the valve. The air signal is supplied through a port in the hex-end of the cartridge. They will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Pilot Ratio	20:1
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.
Maximum Air Pressure	10,5 bar
Response Time - Typical	10 ms
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.60 kg.

**CONFIGURATION OPTIONS**

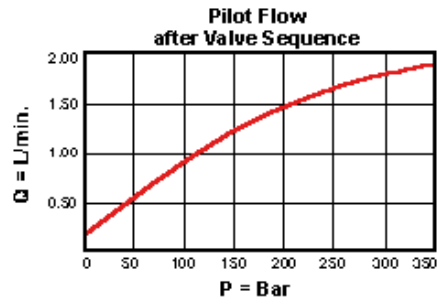
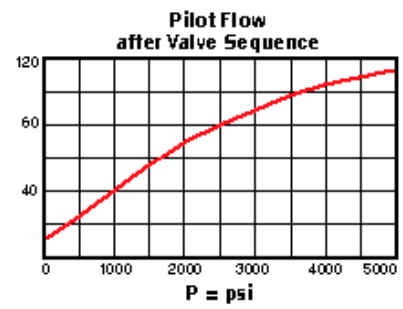
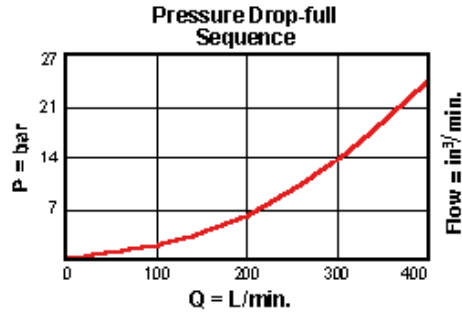
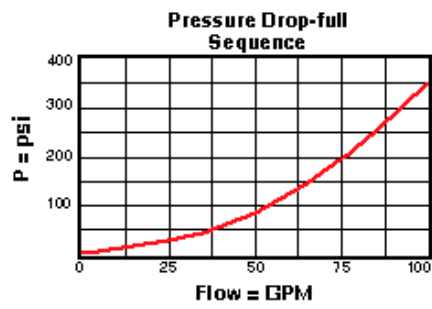
**Model Code Example: RSHEBBN**

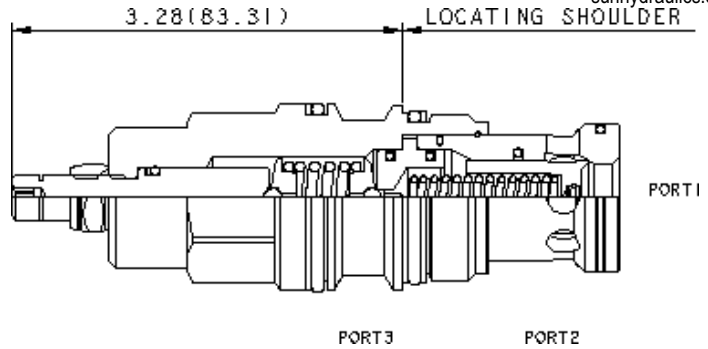
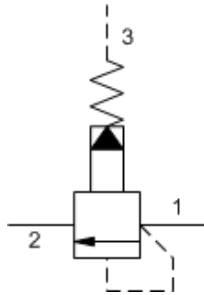
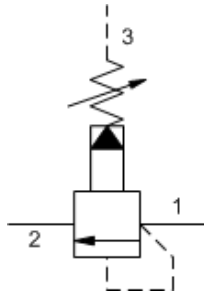
<b>CONTROL</b>	<b>(B) ADJUSTMENT RANGE</b>	<b>(B) SEAL MATERIAL</b>	<b>(N)</b>
<b>B</b> External 4-SAE Port	<b>B</b> 50 - 1500 psi (3,5 - 105 bar)	<b>N</b> Buna-N	
		<b>V</b> Viton	

**TECHNICAL FEATURES**

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Maximum air pilot pressure should not exceed 150 psi (10,5 bar).
- Pressure at port 3 (drain) determines the minimum valve setting and should not exceed 1000 psi (70 bar).
- Capable of providing explosion proof remote control of the pressure setting, the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

# PERFORMANCE CURVES





Pilot-operated, balanced poppet sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990217007
Seal kit - Cartridge	Polyurethane: 990217002
Seal kit - Cartridge	Viton: 990217006
Model Weight	0.63 kg.

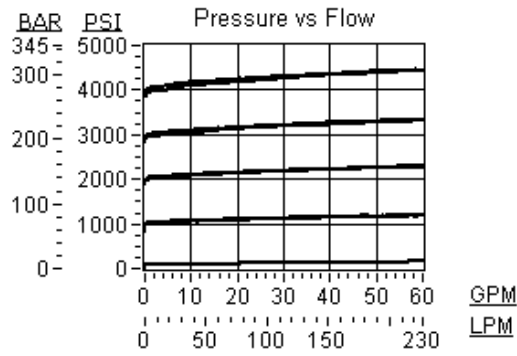
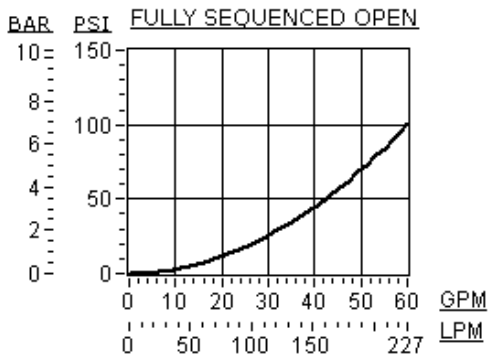
**CONFIGURATION OPTIONS**
**Model Code Example: RSHSLAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	<b>N</b> 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

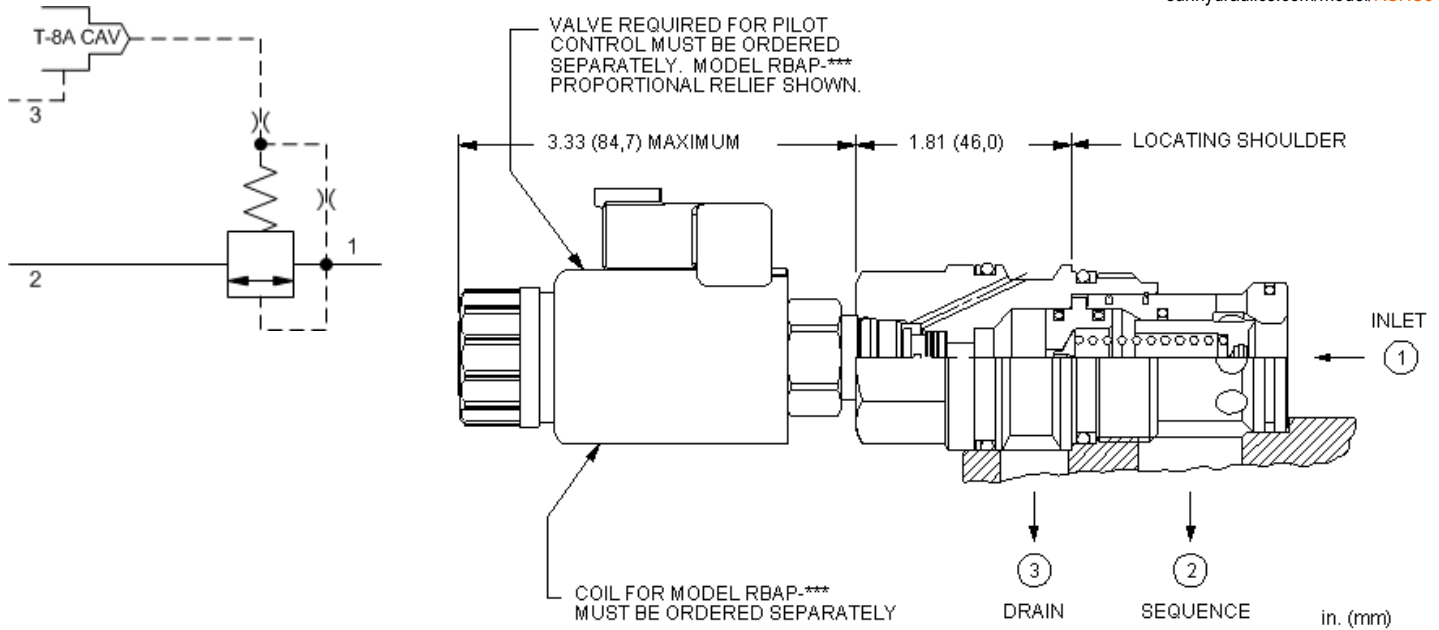
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSHS8](#) Pilot-operated, balanced poppet sequence main stage with integral T-8A control cavity



This valve is a normally closed poppet element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseal	0,7 cc/min.
Response Time - Typical	2 ms
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Seal kit - Cartridge	Buna: 990217007
Seal kit - Cartridge	Polyurethane: 990217002
Seal kit - Cartridge	Viton: 990217006
Model Weight	0.50 kg.

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

**CONFIGURATION OPTIONS**

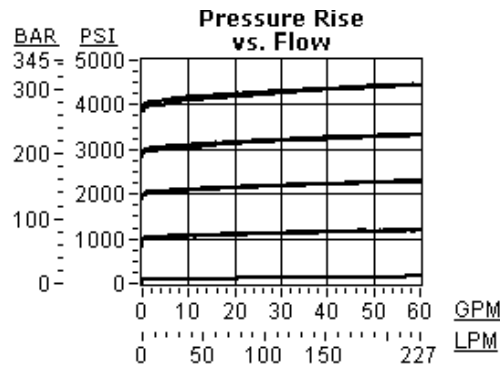
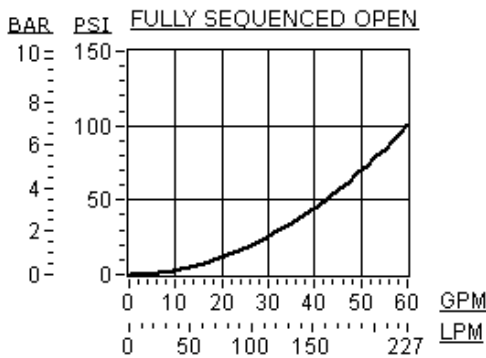
**Model Code Example: RSHS8WN**

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
B 50 psi (3,5 bar)	V Viton

## TECHNICAL FEATURES

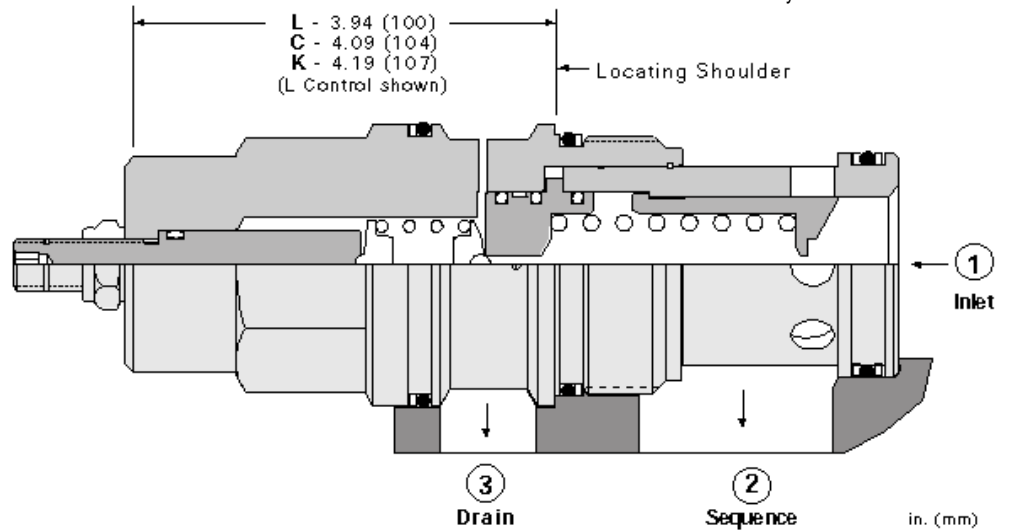
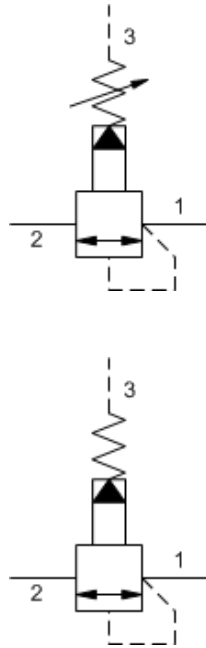
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSHS](#) Pilot-operated, balanced poppet sequence valve



Pilot-operated, balanced piston sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	10 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.44 kg.

**CONFIGURATION OPTIONS**

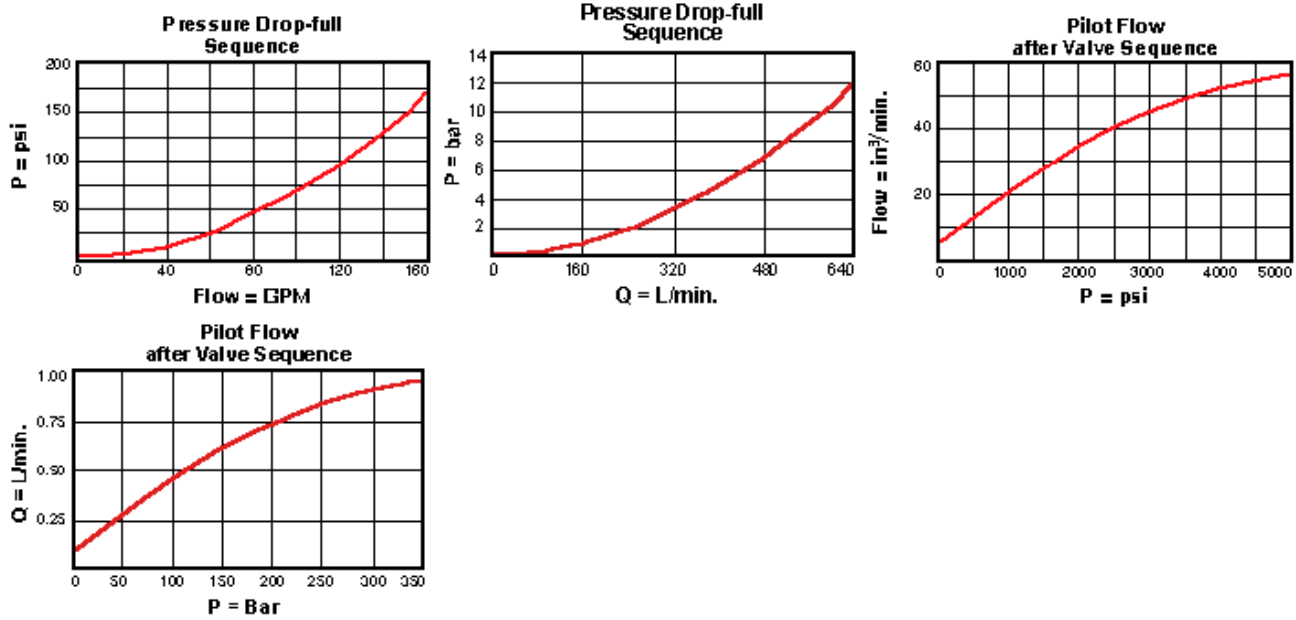
**Model Code Example: RSJCLAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
<b>K</b> Handknob	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting		
<b>Y</b> Tri-Grip Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	<b>E</b> 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Not suitable for use in load holding applications due to spool leakage.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

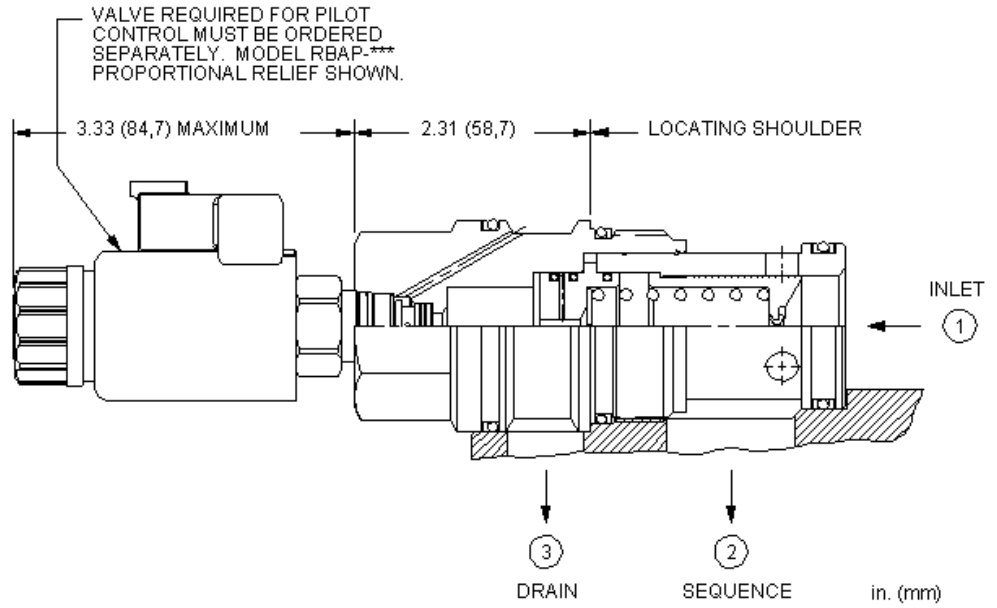
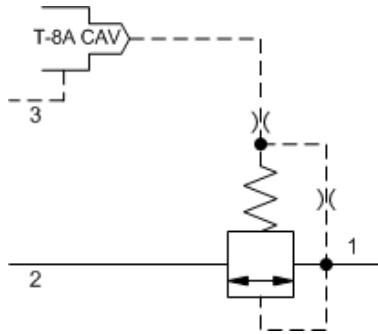
## PERFORMANCE CURVES



## RELATED MODELS

- [RSJC8](#) Pilot-operated, balanced piston sequence main stage with integral T-8A control cavity





This valve is a normally closed modulating element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced piston design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the modulating element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Main stage leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Response Time - Typical	10 ms
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.19 kg.

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

**CONFIGURATION OPTIONS**

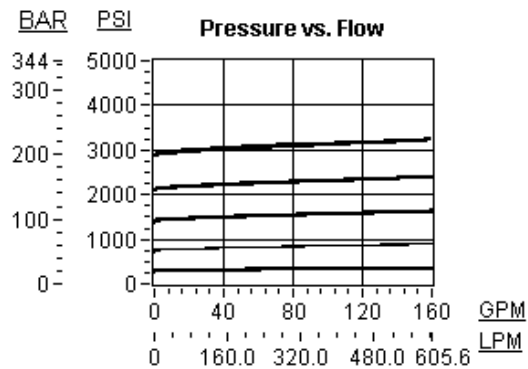
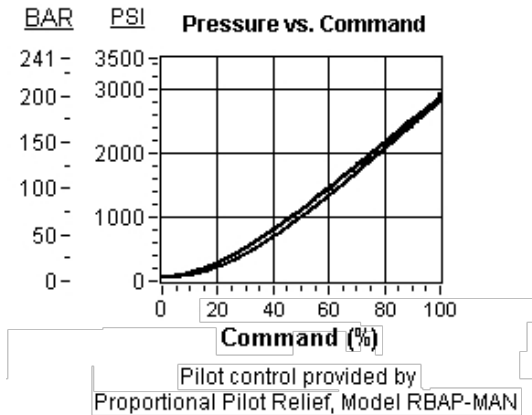
**Model Code Example: RSJC8WN**

MINIMUM CONTROL PRESSURE (W)	SEAL MATERIAL (N)
W 100 psi (7 bar)	N Buna-N
D 25 psi (1,7 bar)	V Viton

## TECHNICAL FEATURES

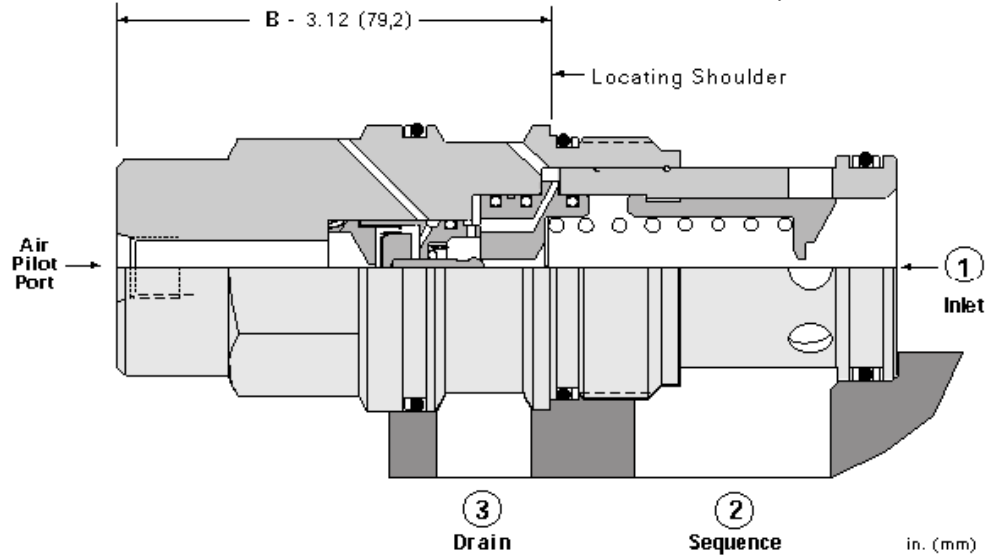
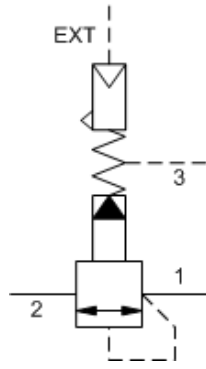
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSJC](#) Pilot-operated, balanced piston sequence valve



Air-controlled, pilot-operated, balanced piston sequence valves use compressed air over a diaphragm instead of an adjustable spring to control the pressure setting of the valve. The air signal is supplied through a port in the hex-end of the cartridge. They will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Pilot Ratio	20:1
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	140 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.
Maximum Air Pressure	10,5 bar
Response Time - Typical	10 ms
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.41 kg.

**CONFIGURATION OPTIONS**

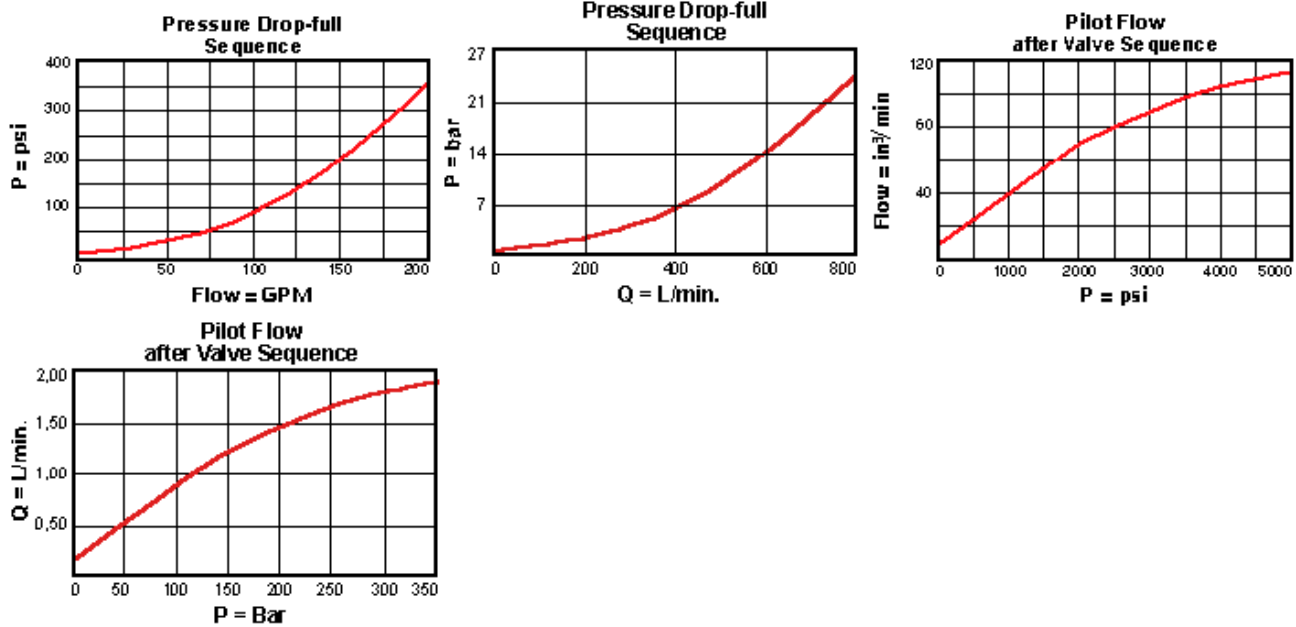
**Model Code Example: RSJE<sup>B</sup>BN**

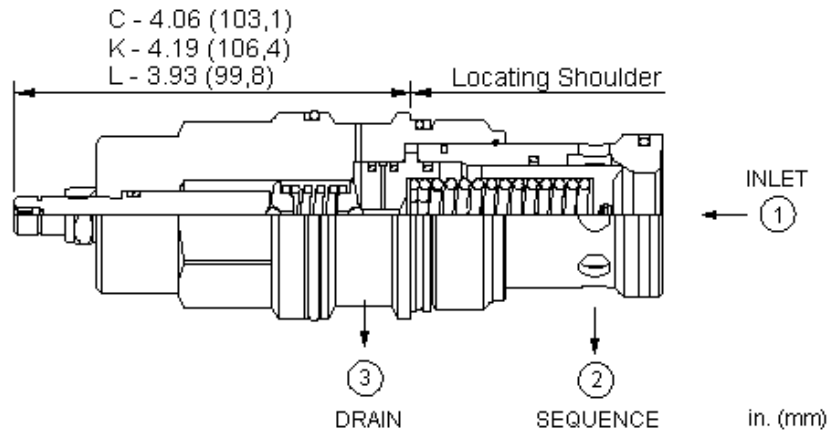
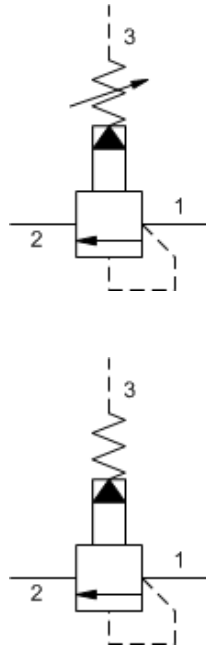
<b>CONTROL</b>	<b>(B) ADJUSTMENT RANGE</b>	<b>(B) SEAL MATERIAL</b>	<b>(N)</b>
<b>B</b> External 4-SAE Port	<b>B</b> 50 - 1500 psi (3,5 - 105 bar)	<b>N</b> Buna-N	<b>V</b> Viton

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Maximum air pilot pressure should not exceed 150 psi (10,5 bar).
- Pressure at port 3 (drain) determines the minimum valve setting and should not exceed 1000 psi (70 bar).
- Capable of providing explosion proof remote control of the pressure setting, the hydraulic setting is directly proportional to the air setting at a ratio of 20:1 (hydraulic:air).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Pilot-operated, balanced poppet sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3). These valves are insensitive to back pressure at port 2 (sequence), up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Maximum Valve Leakage at Reset	0,7 cc/min.
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990219007
Seal kit - Cartridge	Viton: 990219006
Model Weight	1.43 kg.

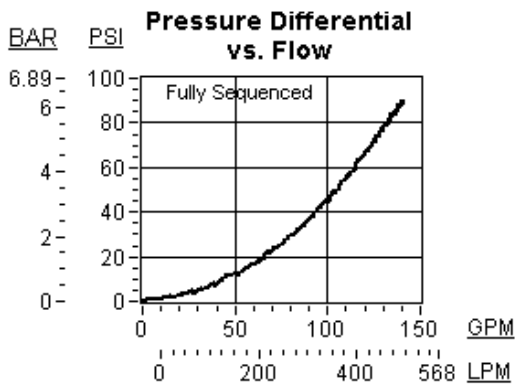
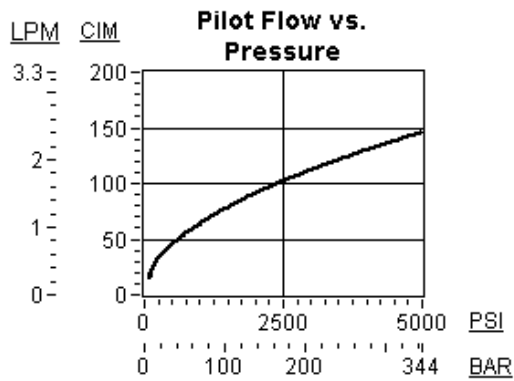
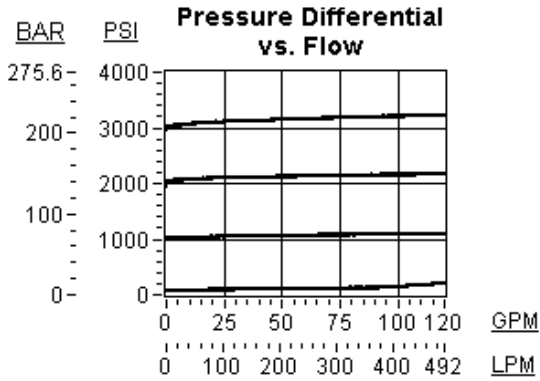
**CONFIGURATION OPTIONS**
**Model Code Example: RSJSLAN**

<b>CONTROL</b>	<b>(L) ADJUSTMENT RANGE</b>	<b>(A) SEAL MATERIAL</b>	<b>(N) MATERIAL/COATING</b>
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		/LH Mild Steel, Zinc-Nickel
	<b>N</b> 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>Q</b> 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

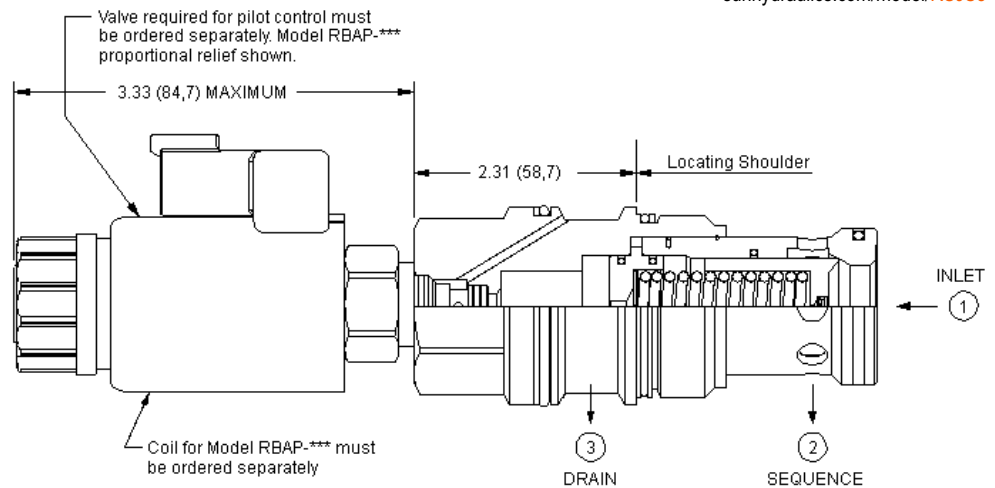
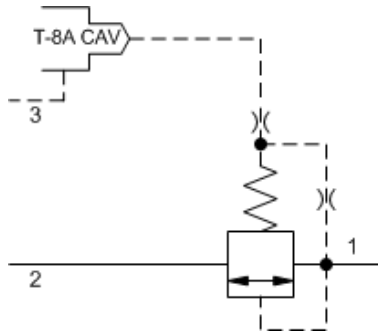
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



## RELATED MODELS

- [RSJS8](#) Pilot-operated, balanced poppet sequence main stage with integral T-8A control cavity



This valve is a normally closed poppet element that incorporates an integral pilot control cavity. It is externally drained, and is a balanced poppet design. The pilot control cavity will accept any T-8A pressure control cartridge. When the pressure at the inlet (port 1) reaches the pilot control cartridge's setting, the poppet element starts to open to port 2, throttling flow to regulate the pressure. The pilot cartridge's setting determines the difference in pressure between the inlet (port 1) and the drain (port 3). These valves are insensitive to back pressure at port 2, up to the valve setting. They may be used to regulate pressure in place of 2-port relief valves if there is pressure in the return line.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,33 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Main stage leakage at reseal	0,7 cc/min.
Response Time - Typical	2 ms
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Seal kit - Cartridge	Buna: 990219007
Seal kit - Cartridge	Viton: 990219006
Model Weight	1.16 kg.

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

**CONFIGURATION OPTIONS**

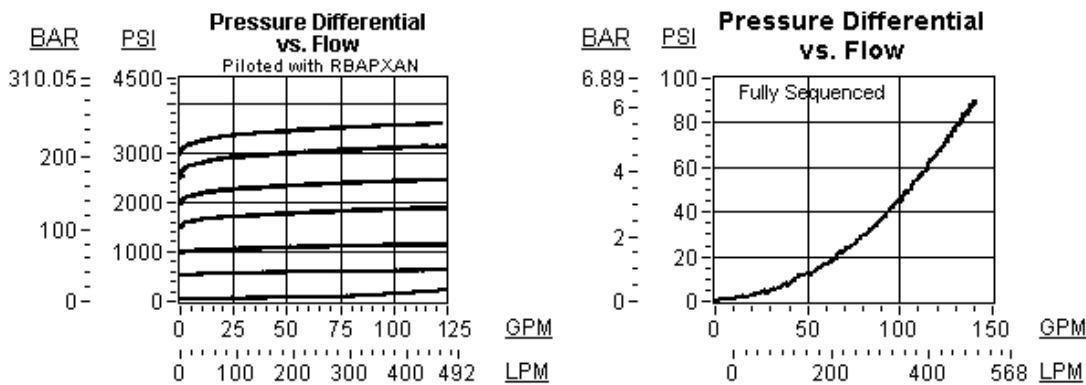
**Model Code Example: RSJS8WN**

<b>MINIMUM CONTROL PRESSURE (W)</b>	<b>SEAL MATERIAL (N)</b>
<b>W</b> 100 psi (7 bar)	<b>N</b> Buna-N
<b>B</b> 50 psi (3,5 bar)	<b>V</b> Viton

## TECHNICAL FEATURES

- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- NOTE: With the -8 control option, the main stage valve should first be installed to the correct torque value. The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.
- The -8 control option allows the pilot control valve to be incorporated directly into the end of the relief cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid operation, air pilot operation, and hydraulic pilot operation. See Pilot Control Cartridges.
- Because the modulating occurs inside the cartridge these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

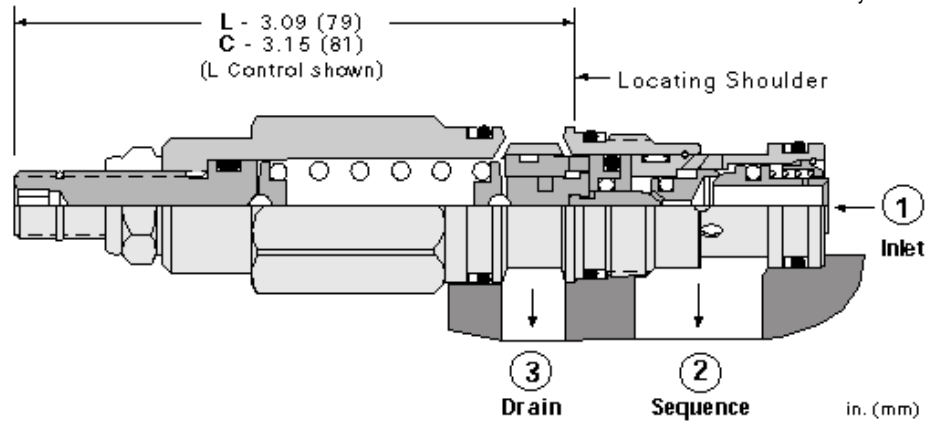
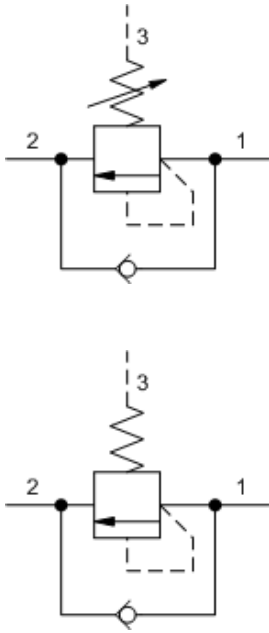
## PERFORMANCE CURVES



## RELATED MODELS

- [RSJS](#) Pilot-operated, balanced poppet sequence valve





Direct-acting sequence valves with reverse-flow check will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. Additionally, these valves incorporate an integral check valve to provide reverse flow from port 2 (sequence) to port 1 (inlet). The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Check Cracking Pressure	2,8 bar
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	EPDM: 990011014
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.20 kg.

**CONFIGURATION OPTIONS**

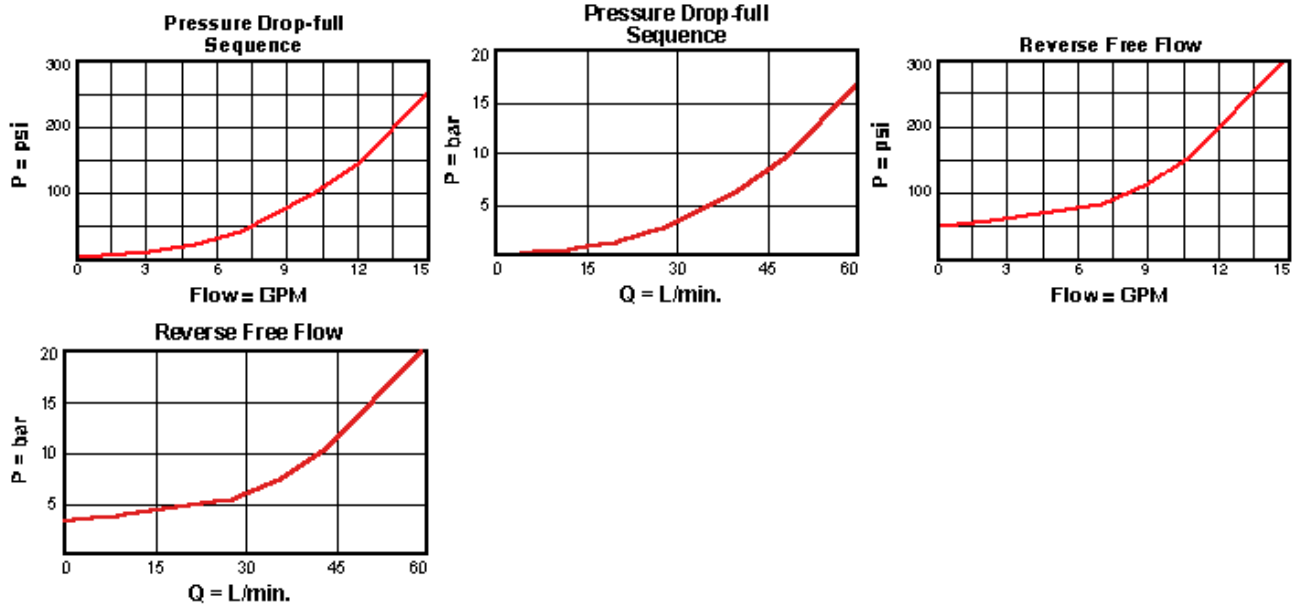
**Model Code Example: SCCALAN**

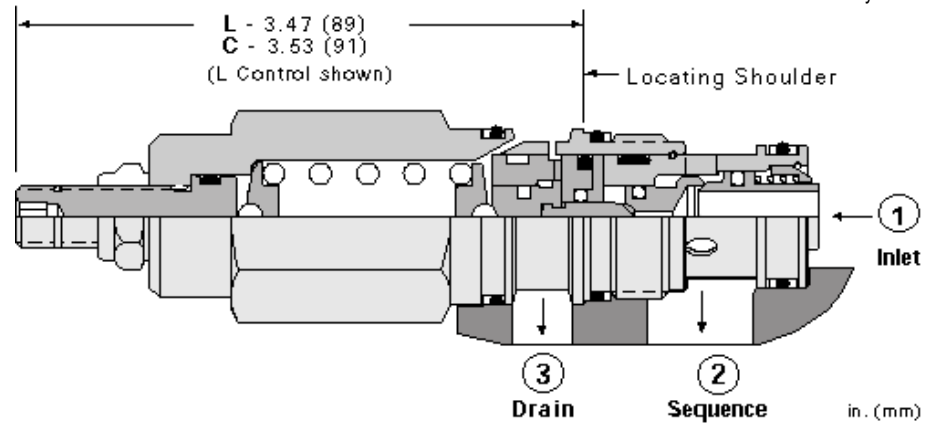
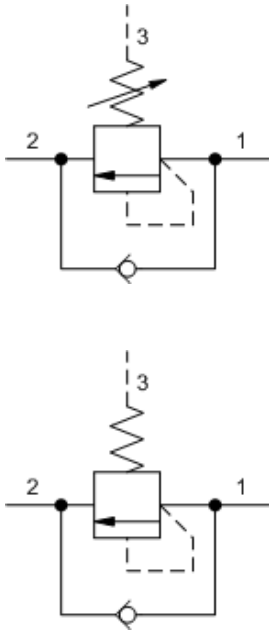
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Direct-acting sequence valves with reverse-flow check will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. Additionally, these valves incorporate an integral check valve to provide reverse flow from port 2 (sequence) to port 1 (inlet). The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reset	0,7 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.36 kg.

**CONFIGURATION OPTIONS**

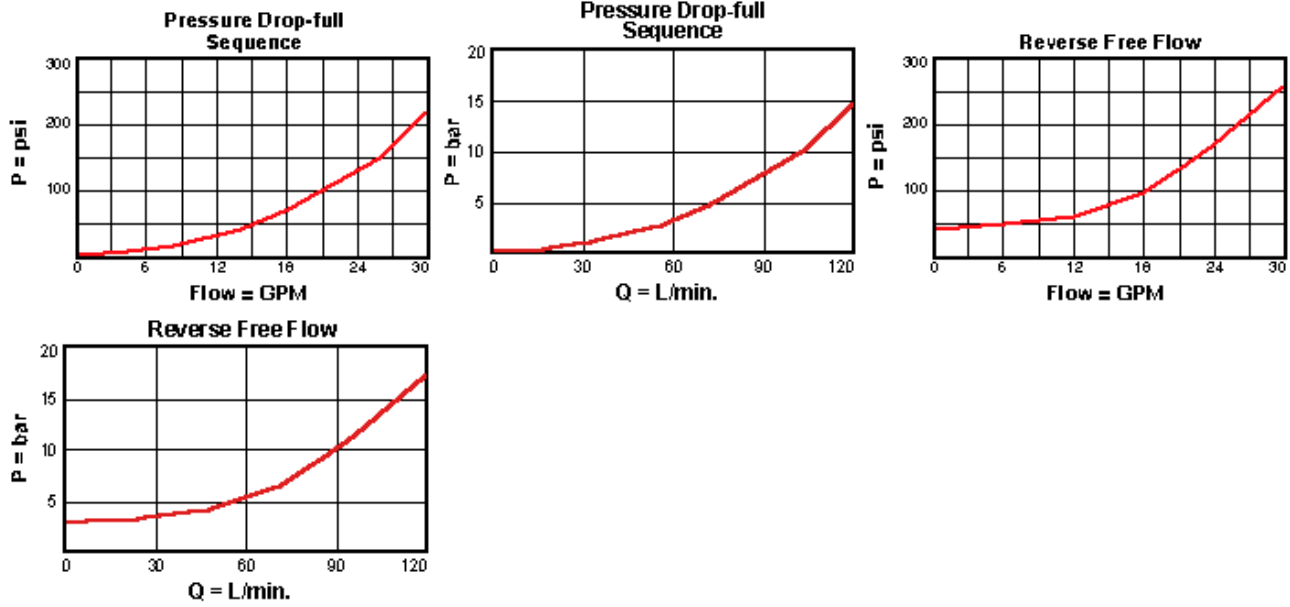
**Model Code Example: SCEALAN**

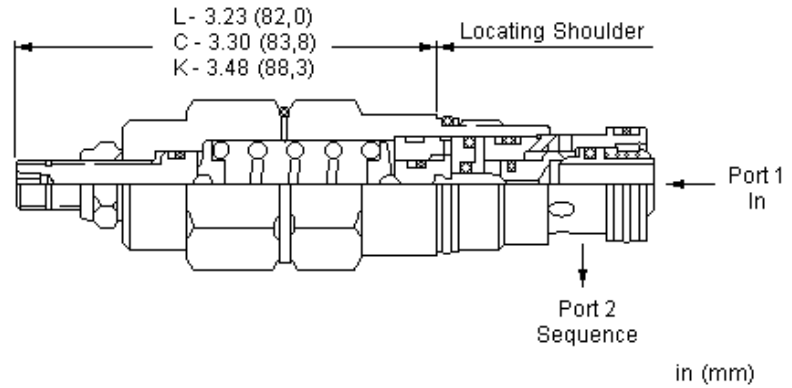
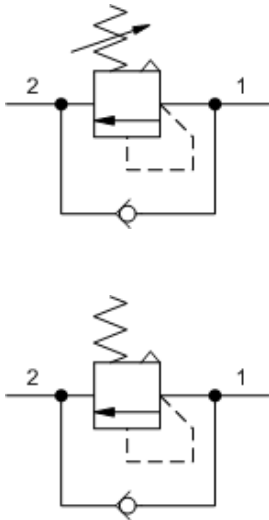
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting		
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Atmospherically referenced, direct-acting sequence valves with reverse-flow check will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. Additionally, these valves incorporate an integral check valve to provide reverse flow from port 2 (sequence) to port 1 (inlet). The pressure setting of this sequence valve controls the pressure at port 1 relative to the atmospheric vent.

**TECHNICAL DATA**

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

Cavity	T-5A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006
Model Weight	0.37 kg.

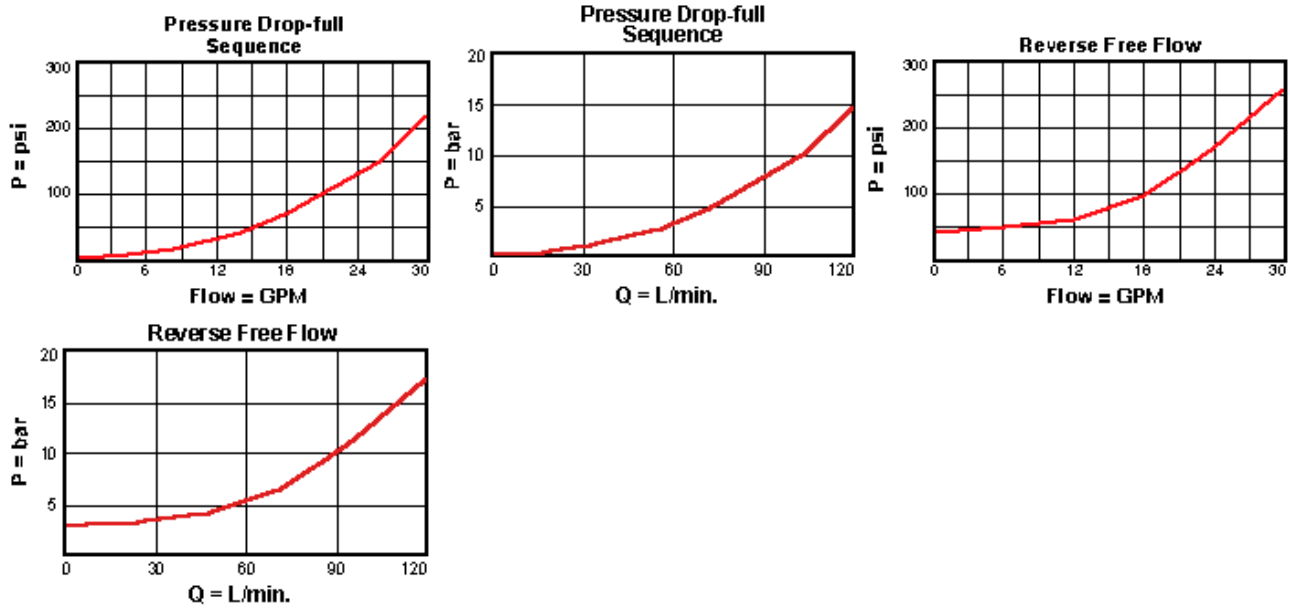
**CONFIGURATION OPTIONS**
**Model Code Example: SCEBLAN**

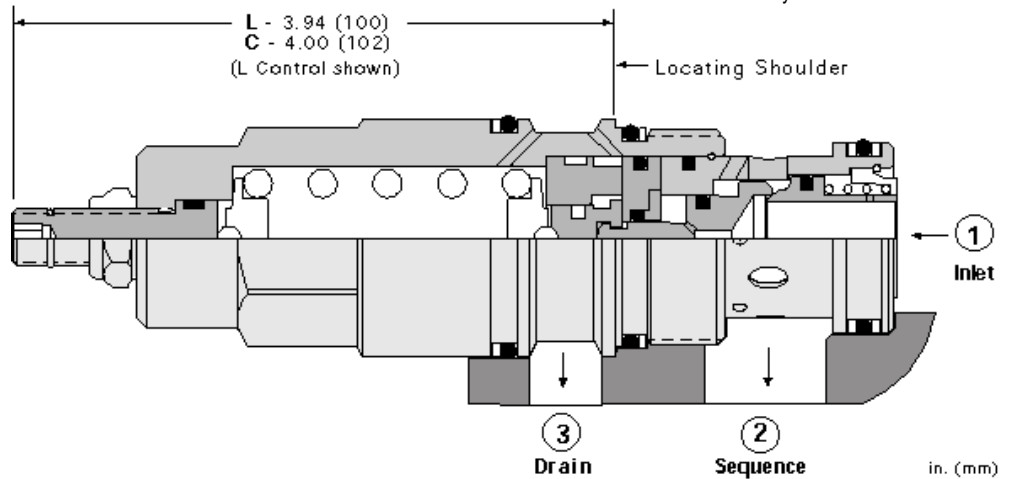
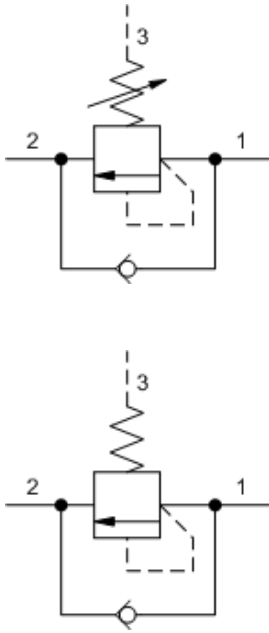
<b>CONTROL</b>	<b>(L) ADJUSTMENT RANGE</b>	<b>(A) SEAL MATERIAL</b>	<b>(N)</b>
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- Suitable for use in load holding applications.
- Atmospherically referenced valves should only be used where it is impossible have a drain connection. Over time, the atmospherically referenced valves may leak externally or allow moisture into the spring chamber.
- Approximately 1 drop (0,07 cc) of fluid will pass into the vented spring chamber every 4000 cycles.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Direct-acting sequence valves with reverse-flow check will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. Additionally, these valves incorporate an integral check valve to provide reverse flow from port 2 (sequence) to port 1 (inlet). The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.72 kg.

**CONFIGURATION OPTIONS**

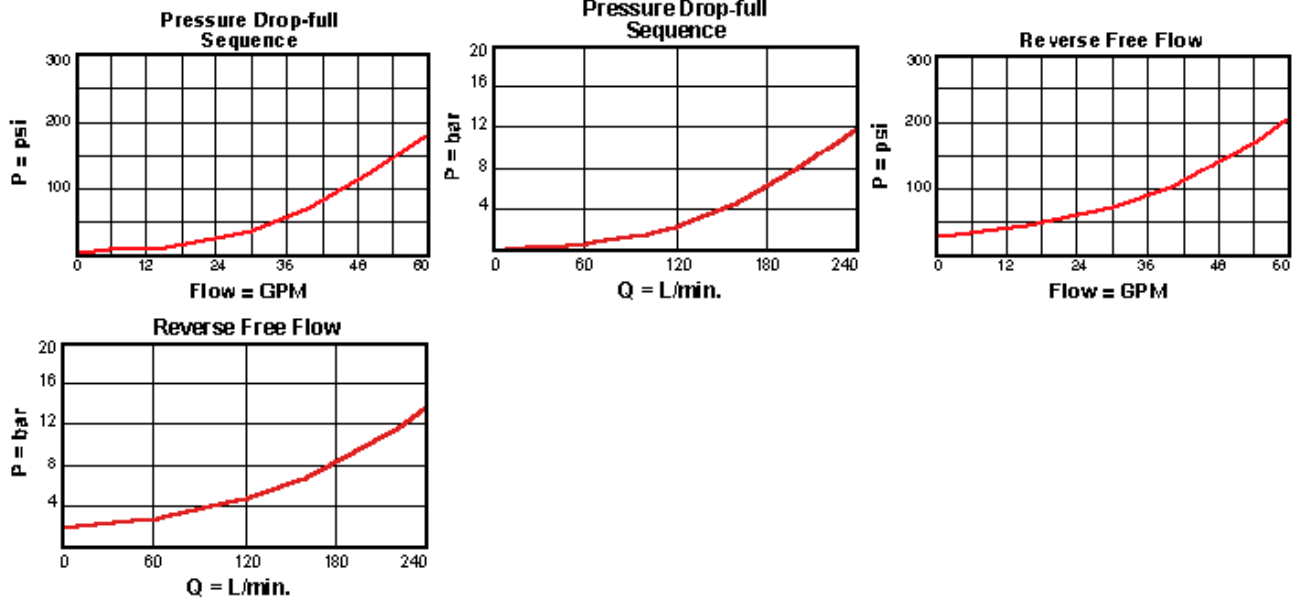
**Model Code Example: SCGALAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	W 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
	B 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting		/LH Mild Steel, Zinc-Nickel
	C 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	D 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		

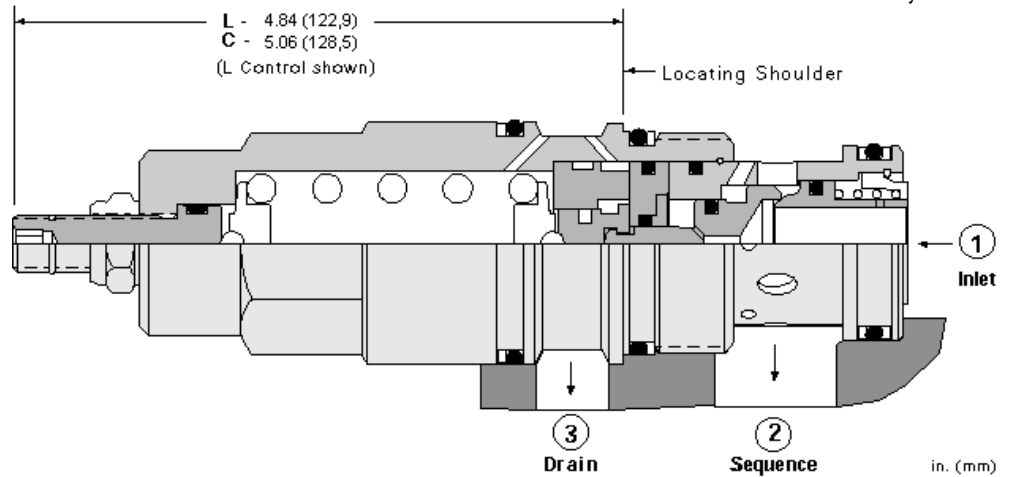
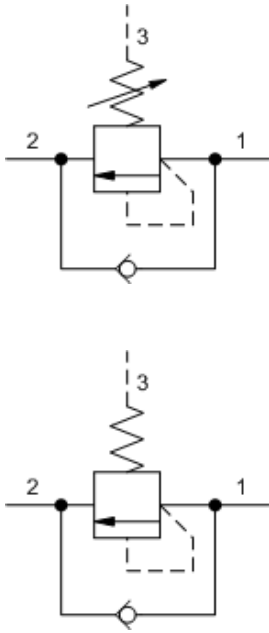
## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES







Direct-acting sequence valves with reverse-flow check will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. Additionally, these valves incorporate an integral check valve to provide reverse flow from port 2 (sequence) to port 1 (inlet). The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Check Cracking Pressure	1,7 bar
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.71 kg.

**CONFIGURATION OPTIONS**

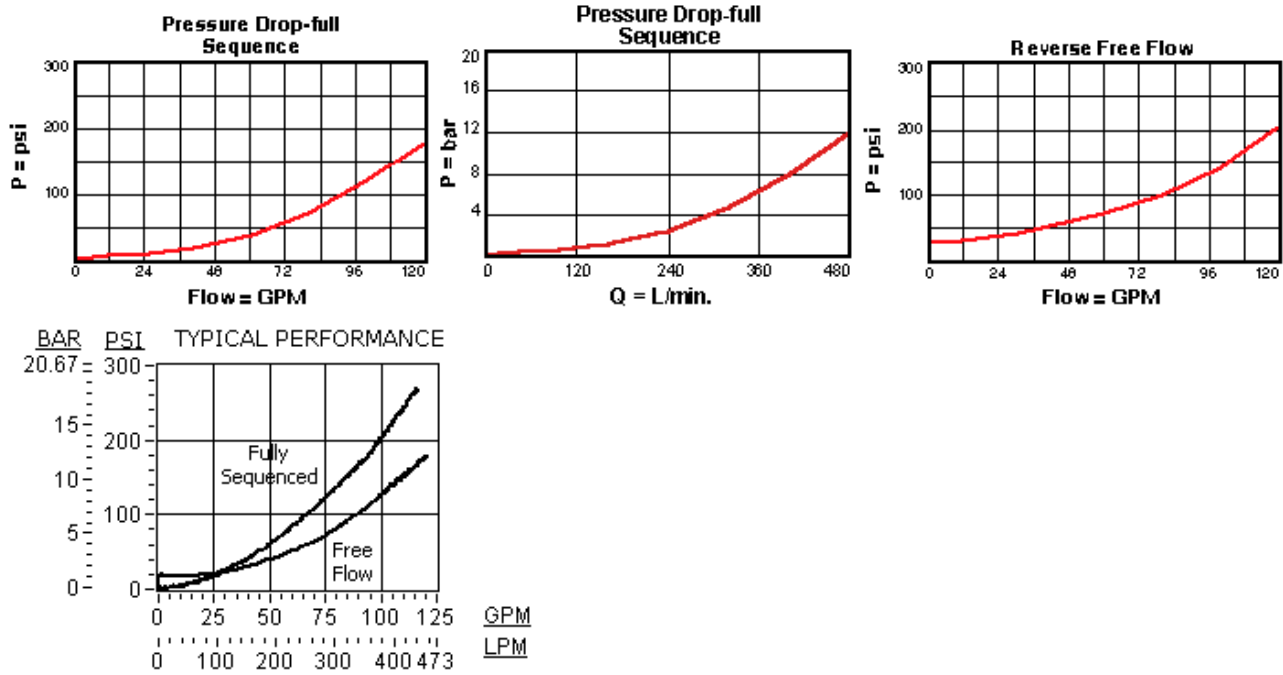
**Model Code Example: SCIALAN**

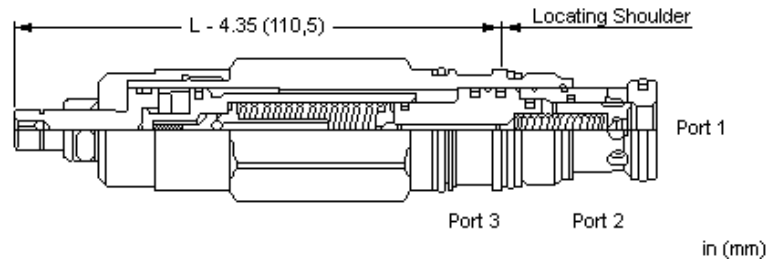
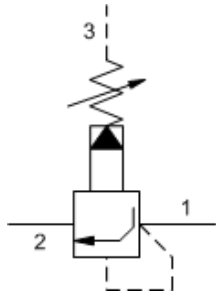
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Pilot-operated, anti shock sequence cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

The external drain makes the valve insensitive to pressure at port 2.

### TECHNICAL DATA

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	200 - 400 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990402007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990402006
Model Weight	0.47 kg.

### CONFIGURATION OPTIONS

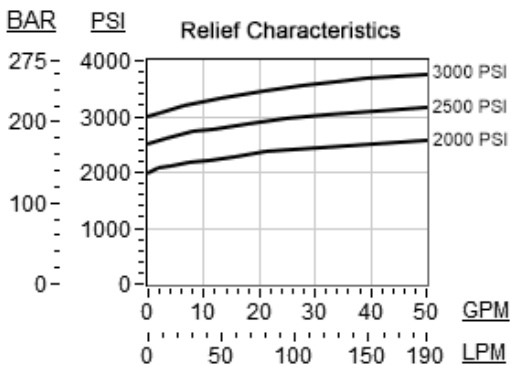
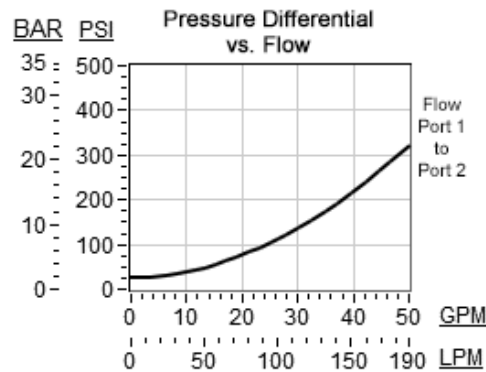
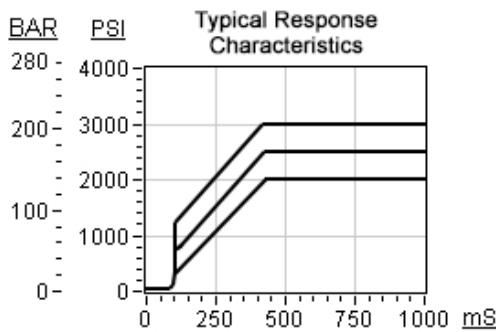
Model Code Example: **SDFTLAN**

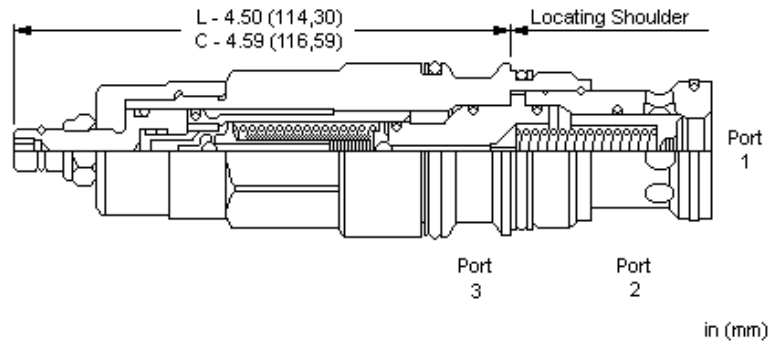
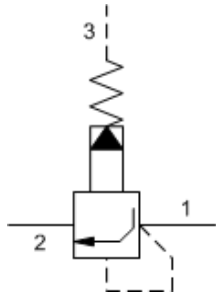
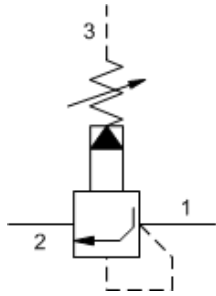
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
<b>L</b> Standard Screw Adjustment	<b>A</b> 2000 - 3000 psi (140 - 210 bar), 2000 psi (140 bar) Standard Setting <b>C</b> 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting <b>W</b> 3000 - 4500 psi (210 - 315 bar), 3000 psi (210 bar) Standard Setting	<b>N</b> Buna-N <b>V</b> Viton	

## TECHNICAL FEATURES

- Because the modulating occurs inside the cartridge, these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Not suitable for sequencing cylinders.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Pressure settings are insensitive to back pressure at port 2.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Not suitable for use in load holding applications.
- When pressure at the inlet (port 1) exceeds the threshold setting, the valve opens to tank (port 2). The pilot section moves forward at a steady rate, increasing the setting by compressing the pilot spring. Maximum setting is achieved when the pilot section reaches a mechanical stop.
- The main stage orifice is protected against contamination.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Pilot-operated, anti shock relief cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

The external drain makes the valve insensitive to pressure at port 2.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reset	0,7 cc/min.
Pressure Ramp Up Time	300 - 500 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990217007
Seal kit - Cartridge	Polyurethane: 990217002
Seal kit - Cartridge	Viton: 990217006
Model Weight	0.85 kg.

**CONFIGURATION OPTIONS**

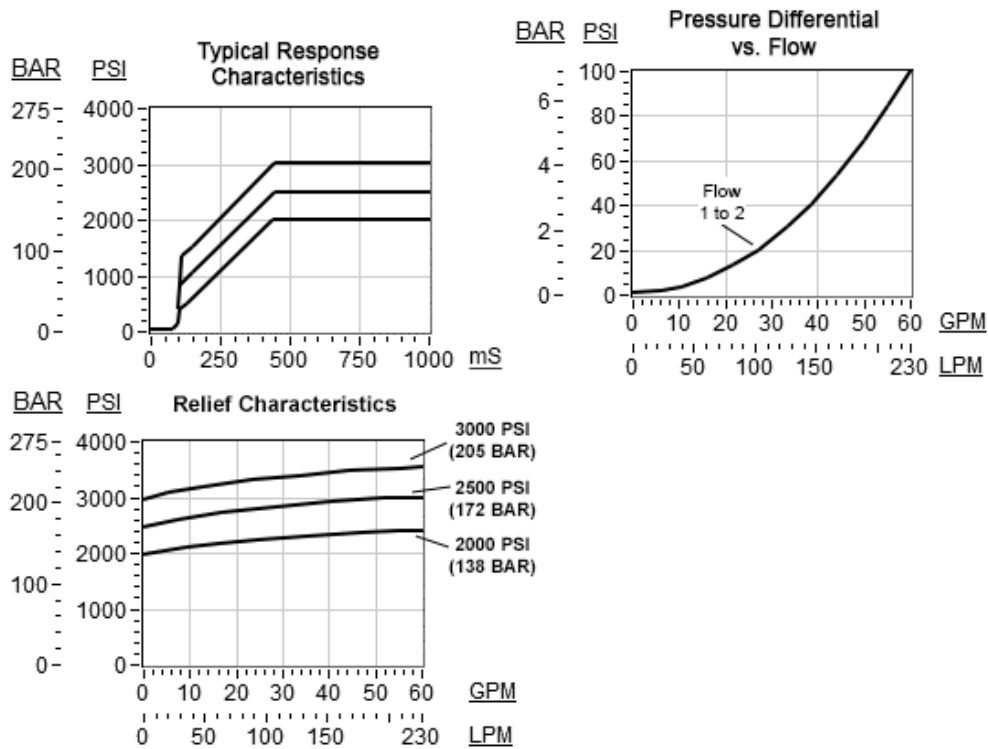
**Model Code Example: SDHTLAN**

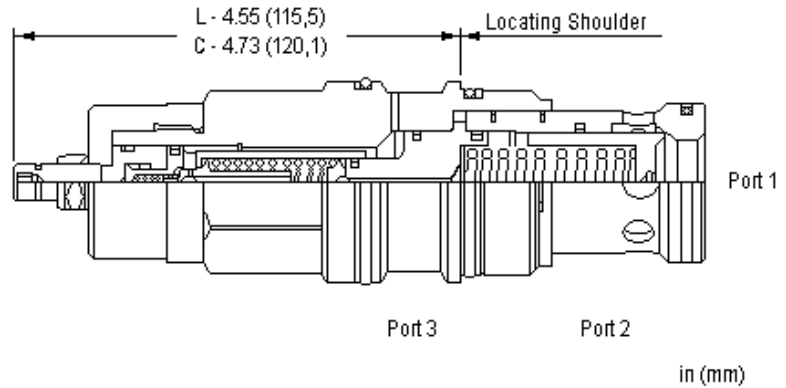
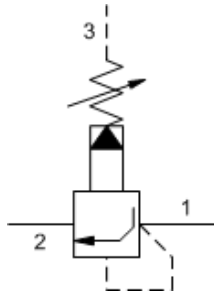
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
<b>L</b> Standard Screw Adjustment	<b>A</b> 2000 - 3000 psi (140 - 210 bar), 2000 psi (140 bar) Standard Setting	<b>N</b> Buna-N	
<b>C</b> Tamper Resistant - Factory Set	<b>C</b> 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting	<b>V</b> Viton	
	<b>W</b> 3000 - 4500 psi (210 - 315 bar), 3000 psi (210 bar) Standard Setting		

## TECHNICAL FEATURES

- Because the modulating occurs inside the cartridge, these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Not suitable for sequencing cylinders.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Pressure settings are insensitive to back pressure at port 2.
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Not suitable for use in load holding applications.
- When pressure at the inlet (port 1) exceeds the threshold setting, the valve opens to tank (port 2). The pilot section moves forward at a steady rate, increasing the setting by compressing the pilot spring. Maximum setting is achieved when the pilot section reaches a mechanical stop.
- The main stage orifice is protected against contamination.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Pilot-operated, anti shock sequence cartridges limit maximum system pressure and also limit the rate of pressure rise. The valve opens and then ramps closed at a constant speed, independent of settings and flows. The adjust screw determines the maximum (relief) setting and the minimum (threshold) setting.

The external drain makes the valve insensitive to pressure at port 2.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,41 L/min.
Pressure Ramp Up Time	200 - 400 ms
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4.5
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990219007
Seal kit - Cartridge	Viton: 990219006
Model Weight	1.60 kg.

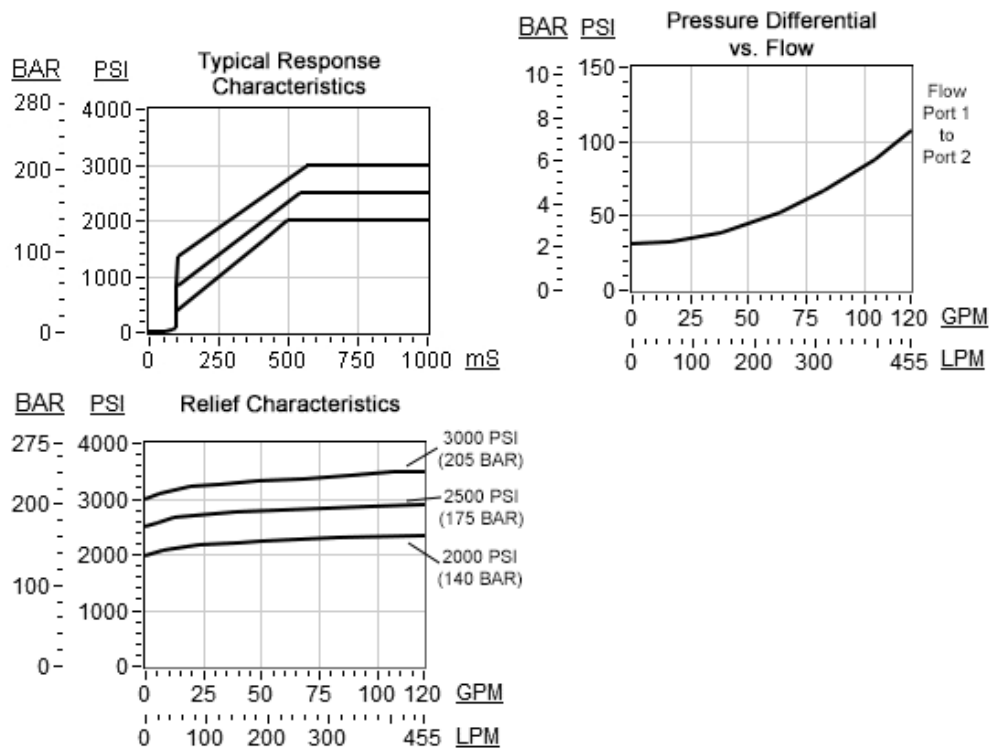
**CONFIGURATION OPTIONS**
**Model Code Example: SDJTLAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 2000 - 3000 psi (140 - 210 bar), 2000 psi (140 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Concealed Manual Override	<b>C</b> 4500 - 6000 psi (315 - 420 bar), 4500 psi (315 bar) Standard Setting	<b>V</b> Viton	/LH Mild Steel, Zinc-Nickel
	<b>W</b> 3000 - 4500 psi (210 - 315 bar), 3000 psi (210 bar) Standard Setting		

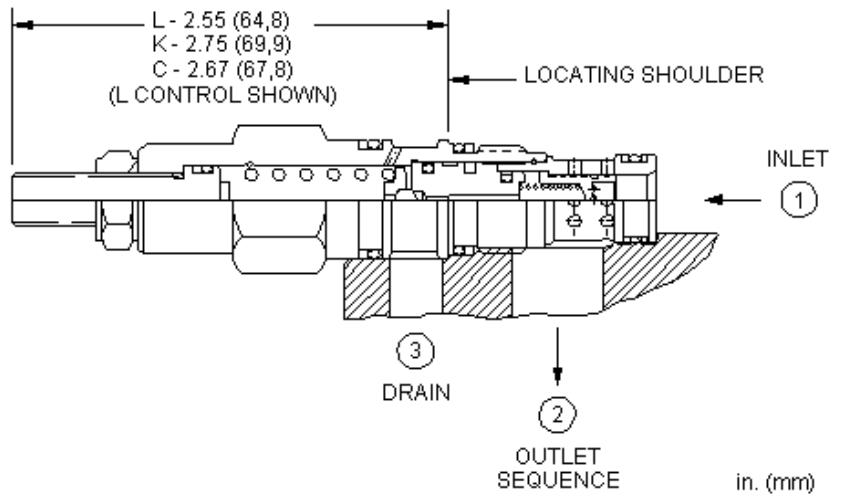
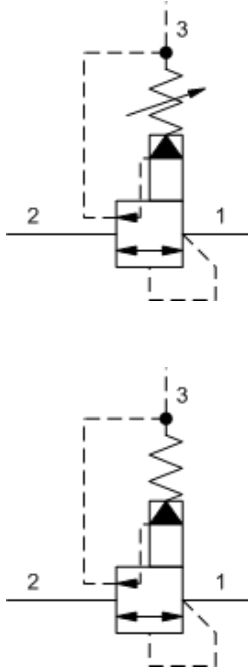
## TECHNICAL FEATURES

- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- Because the modulating occurs inside the cartridge, these valves are immune to most of the problems associated with cavitation, namely noise and manifold erosion.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Not suitable for use in load holding applications.
- When pressure at the inlet (port 1) exceeds the threshold setting, the valve opens to tank (port 2). The pilot section moves forward at a steady rate, increasing the setting by compressing the pilot spring. Maximum setting is achieved when the pilot section reaches a mechanical stop.
- The main stage orifice is protected against contamination.
- Not suitable for sequencing cylinders.
- Pressure settings are insensitive to back pressure at port 2.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES







Kick-down sequence valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to port 2 (sequence). The pressure setting at port 1 is relative to the drain (port 3). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, pressure at port 1 must fall below the setting of the valve, flow from port 1 to port 2 must cease, and pressure at port 2 must be equal to or greater than the pressure at port 1.

**TECHNICAL DATA**

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

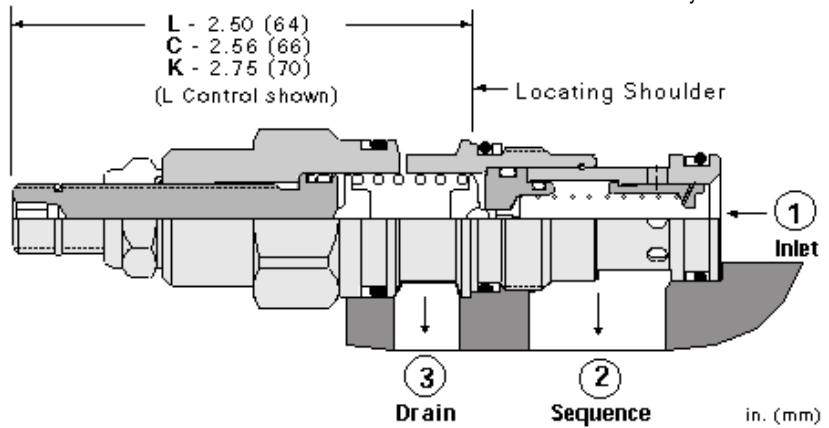
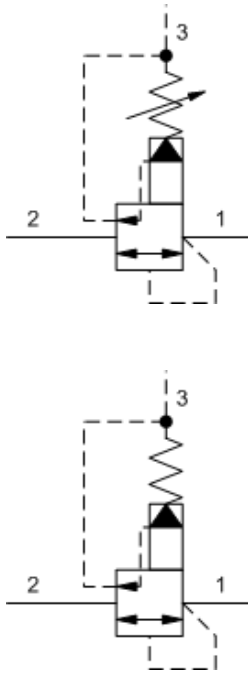
Cavity	T-163A
Series	0
Capacity	30 L/min.
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Response Time - Typical	25 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	19,1 mm
Valve Installation Torque	27 - 33 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006
Model Weight	0.11 kg.

**CONFIGURATION OPTIONS**
**Model Code Example: SQBBLAN**

CONTROL	(L)	ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
L Standard Screw Adjustment		A 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting		N Buna-N	
C Tamper Resistant - Factory Set		B 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting		V Viton	
K Handknob		C 75 - 6000 psi (5 - 420 bar), 1000 psi (70 bar) Standard Setting			
		N 75 - 800 psi (5 - 55 bar), 400 psi (28 bar) Standard Setting			
		Q 75 - 400 psi (5 - 28 bar), 200 psi (14 bar) Standard Setting			
		W 75 - 4500 psi (5 - 315 bar), 1000 psi (70 bar) Standard Setting			

## TECHNICAL FEATURES

- Should not be used in load holding applications.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.



Kick-down sequence valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to port 2 (sequence). The pressure setting at port 1 is relative to the drain (port 3). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, pressure at port 1 must fall below the setting of the valve, flow from port 1 to port 2 must cease, and pressure at port 2 must be equal to or greater than the pressure at port 1.

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.
Response Time - Typical	25 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.16 kg.

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

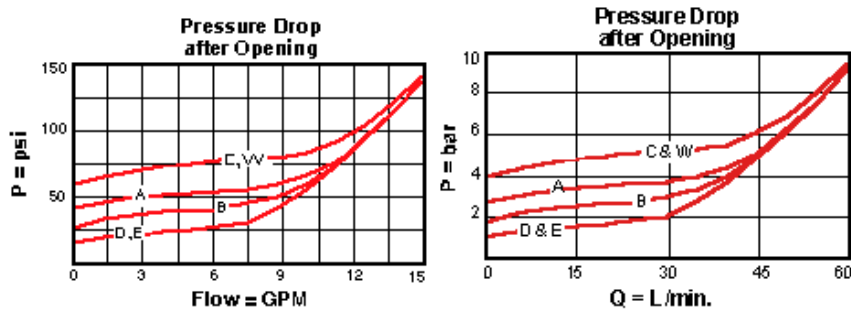
**CONFIGURATION OPTIONS**
**Model Code Example: SQDBLAN**

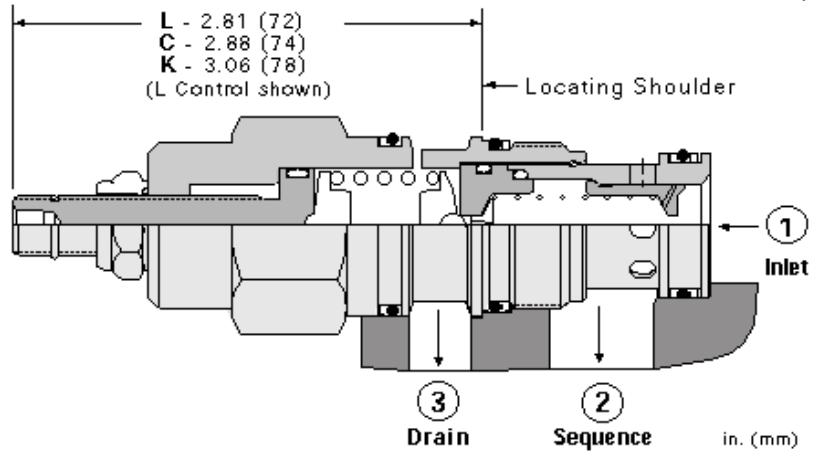
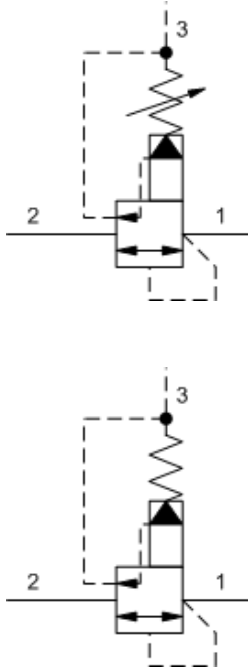
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	/AP Stainless Steel, Passivated
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
O Handknob with Panel Mount	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Should not be used in load holding applications.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Kick-down sequence valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to port 2 (sequence). The pressure setting at port 1 is relative to the drain (port 3). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, pressure at port 1 must fall below the setting of the valve, flow from port 1 to port 2 must cease, and pressure at port 2 must be equal to or greater than the pressure at port 1.

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.
Response Time - Typical	25 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.28 kg.

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

**CONFIGURATION OPTIONS**

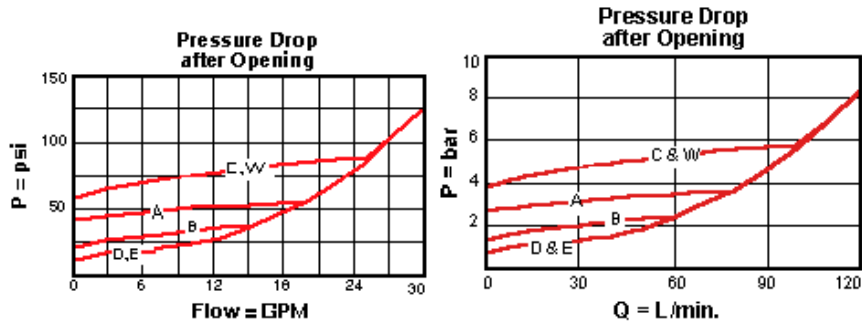
**Model Code Example: SQFBLAN**

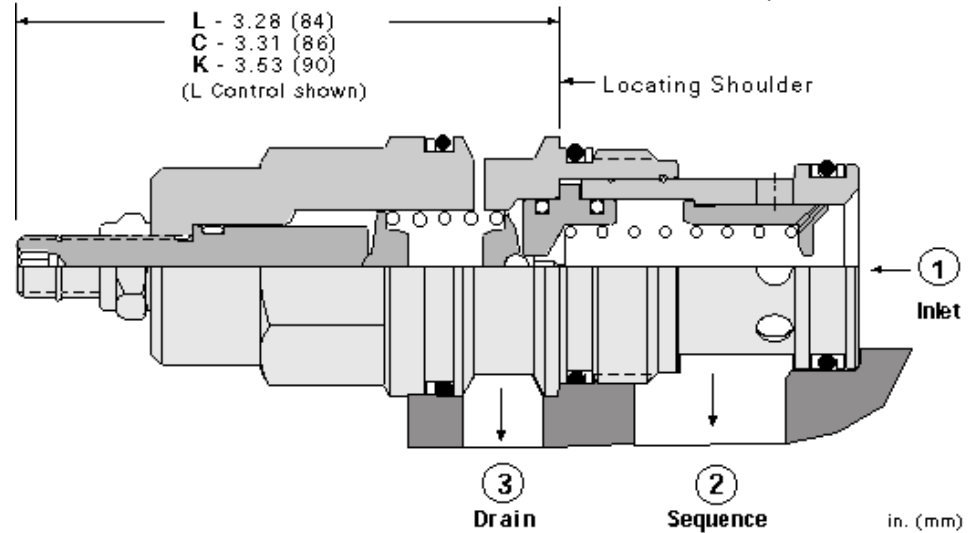
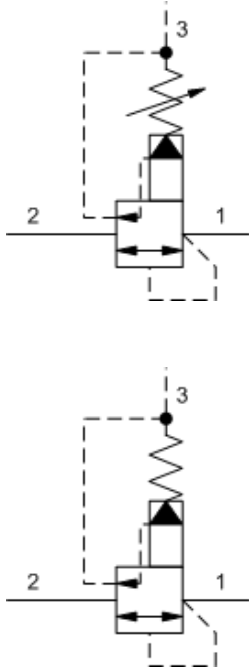
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
<b>O</b> Handknob with Panel Mount	<b>D</b> 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Should not be used in load holding applications.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Kick-down sequence valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to port 2 (sequence). The pressure setting at port 1 is relative to the drain (port 3). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, pressure at port 1 must fall below the setting of the valve, flow from port 1 to port 2 must cease, and pressure at port 2 must be equal to or greater than the pressure at port 1.

**TECHNICAL DATA**

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

Cavity	T-17A
Series	3
Capacity	240 L/min.
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.
Response Time - Typical	25 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	31,8 mm
Valve Installation Torque	203 - 217 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006
Model Weight	0.62 kg.

## CONFIGURATION OPTIONS

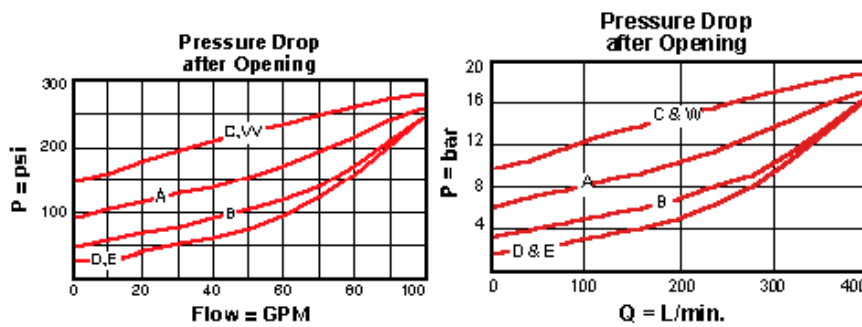
## Model Code Example: SQHBLAN

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

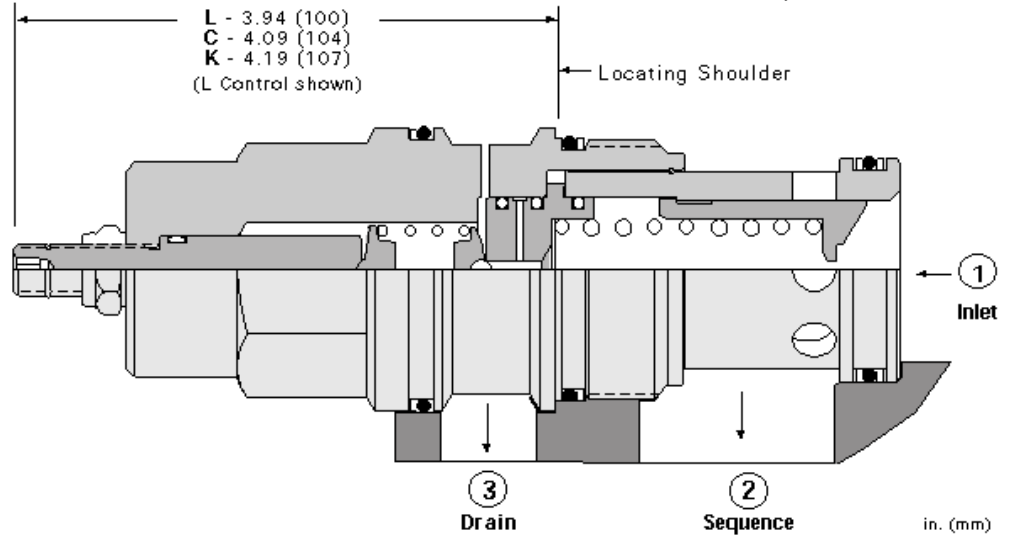
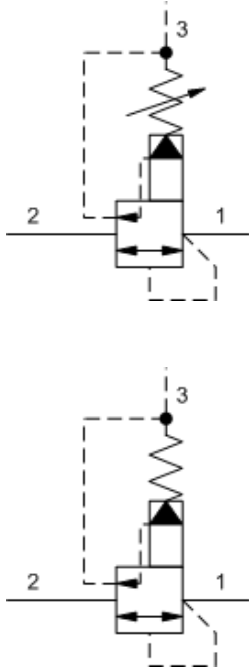
## TECHNICAL FEATURES

- Should not be used in load holding applications.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES







Kick-down sequence valves will kick completely open and remain open once the pressure at the inlet (port 1) exceeds the valve setting, creating an unrestricted flow path from port 1 to port 2 (sequence). The pressure setting at port 1 is relative to the drain (port 3). The valve remains open as long as the pressure at port 1 exceeds the pressure at port 2. To reset the valve, pressure at port 1 must fall below the setting of the valve, flow from port 1 to port 2 must cease, and pressure at port 2 must be equal to or greater than the pressure at port 1.

**TECHNICAL DATA**

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

Cavity	T-19A
Series	4
Capacity	480 L/min.
Factory Pressure Settings Established at	Kick down point
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.
Response Time - Typical	25 ms
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	41,3 mm
Valve Installation Torque	474 - 508 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006
Model Weight	1.43 kg.

## CONFIGURATION OPTIONS

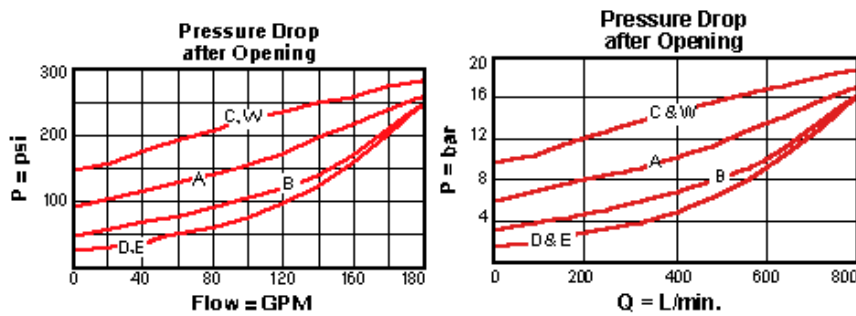
## Model Code Example: SQJBLAN

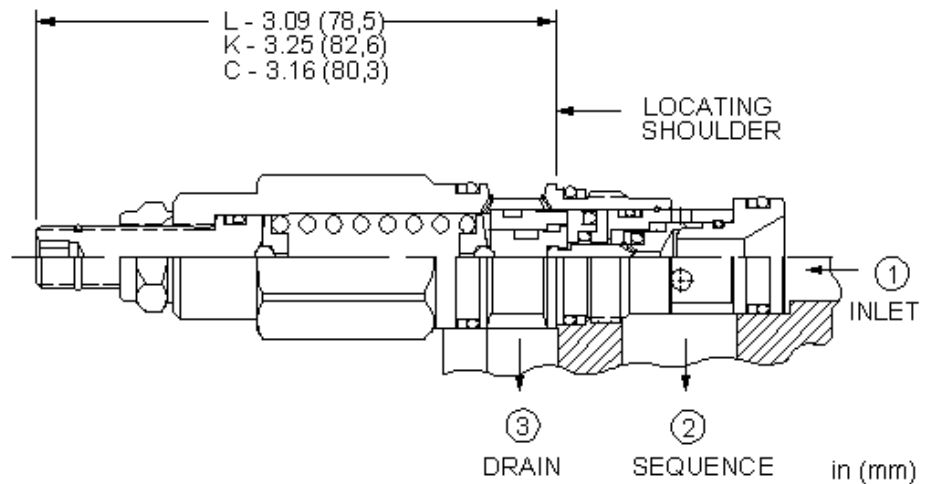
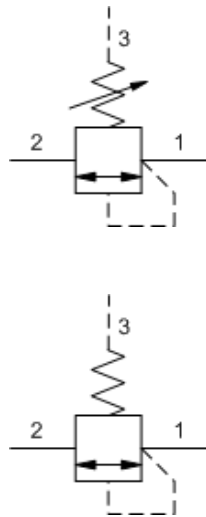
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N)
L Standard Screw Adjustment	A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting	N Buna-N	
C Tamper Resistant - Factory Set	B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting	V Viton	
K Handknob	C 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting		
	D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting		
	W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Should not be used in load holding applications.
- The main stage orifice is protected by a 150 micron stainless steel screen.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Intended for use on the actuator side of the system as flow through the valve must cease for the valve to reset. If used on the pump side of a system, pump flow must be shut off for the valve to reset.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Direct-acting sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-11A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006
Model Weight	0.20 kg.

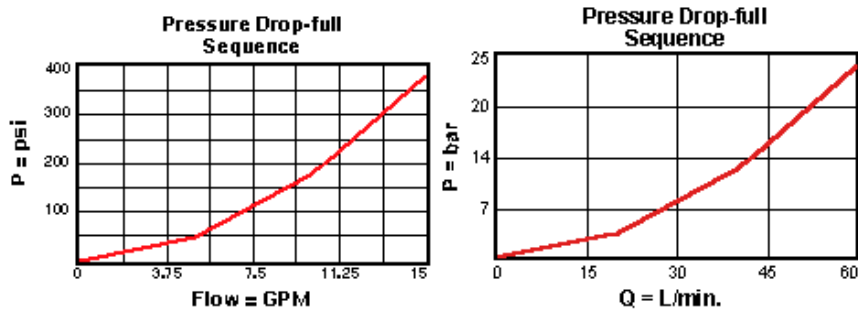
**CONFIGURATION OPTIONS**
**Model Code Example: SXCALAN**

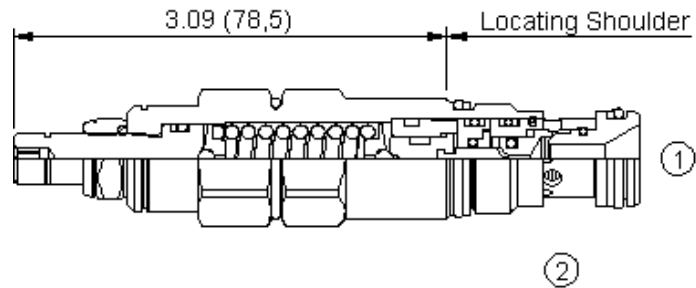
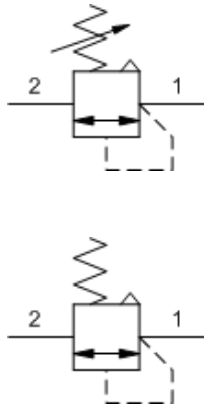
CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Atmospherically referenced, direct-acting sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of this sequence valve controls the pressure at port 1 relative to the atmospheric vent.

**TECHNICAL DATA**

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

Cavity	T-13A
Series	1
Capacity	60 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006
Model Weight	0.21 kg.

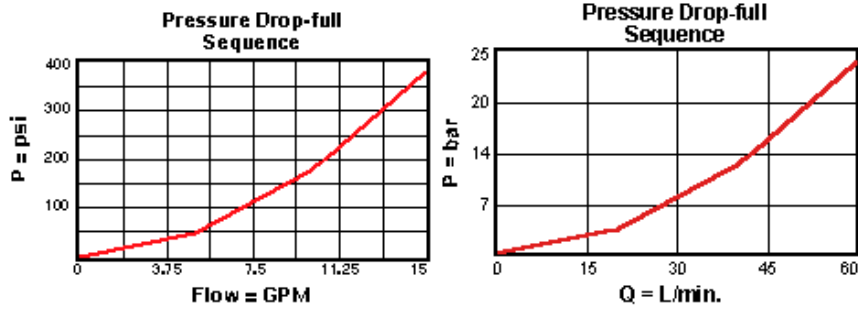
**CONFIGURATION OPTIONS**
**Model Code Example: SXCBLAN**

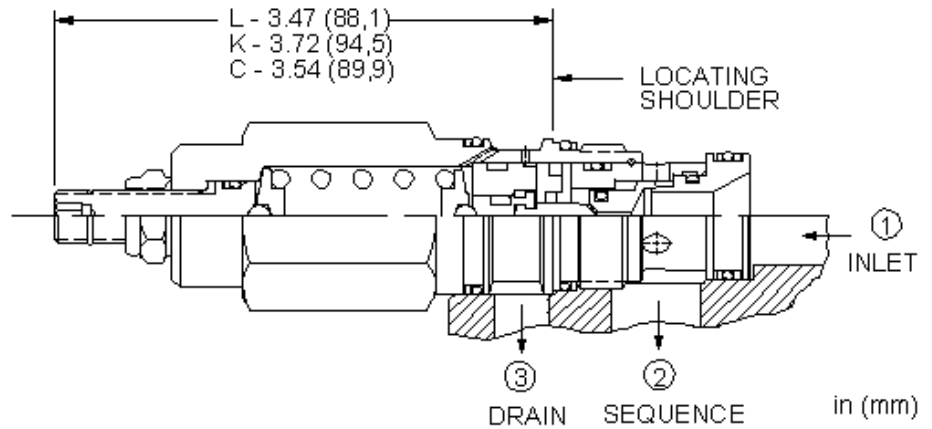
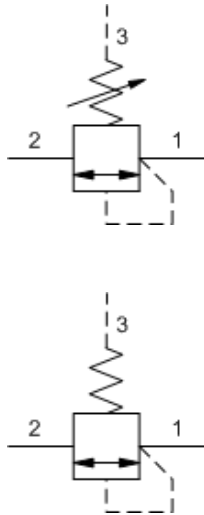
<b>CONTROL</b>	<b>(L) ADJUSTMENT RANGE</b>	<b>(A) SEAL MATERIAL</b>	<b>(N) MATERIAL/COATING</b>
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>E</b> EPDM	/AP Stainless Steel, Passivated
<b>K</b> Handknob	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting	<b>V</b> Viton	
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- Suitable for use in load holding applications.
- Atmospherically referenced valves should only be used where it is impossible have a drain connection. Over time, the atmospherically referenced valves may leak externally or allow moisture into the spring chamber.
- Approximately 1 drop (0,07 cc) of fluid will pass into the vented spring chamber every 4000 cycles.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES





Direct-acting sequence valves will supply a secondary circuit with flow once the pressure at the inlet (port 1) has exceeded the valve setting. The pressure setting of a sequence valve controls the pressure at port 1 relative to the pressure at the drain (port 3).

**TECHNICAL DATA**

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

Cavity	T-2A
Series	2
Capacity	120 L/min.
Factory Pressure Settings Established at	30 cc/min.
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at Reset	0,7 cc/min.
Response Time - Typical	2 ms
Adjustment - No. of CW Turns from Min. to Max. setting	4
Valve Hex Size	28,6 mm
Valve Installation Torque	61 - 68 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006
Model Weight	0.36 kg.

**CONFIGURATION OPTIONS**

**Model Code Example: SXEALAN**

CONTROL	(L) ADJUSTMENT RANGE	(A) SEAL MATERIAL	(N) MATERIAL/COATING
<b>L</b> Standard Screw Adjustment	<b>A</b> 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	<b>N</b> Buna-N	Standard Material/Coating
<b>C</b> Tamper Resistant - Factory Set	<b>B</b> 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	<b>V</b> Viton	/AP Stainless Steel, Passivated
	<b>C</b> 2000 - 6000 psi (140 - 420 bar), 2000 psi (140 bar) Standard Setting		
	<b>D</b> 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	<b>E</b> 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		
	<b>W</b> 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting		

## TECHNICAL FEATURES

- All 3 port sequence cartridges are physically and functionally interchangeable (i.e. same flow path, same cavity for a given frame size).
- Although this is a zero pilot flow valve, port 3 (drain) must be connected to maintain a pressure reference in the control chamber. If port 3 is blocked, reciprocating seal weepage will cause the valve to malfunction.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Suitable for use in load holding applications.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES

