Flow Control Cartridges

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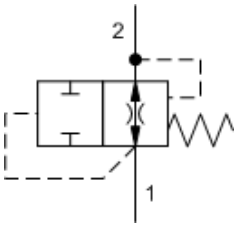
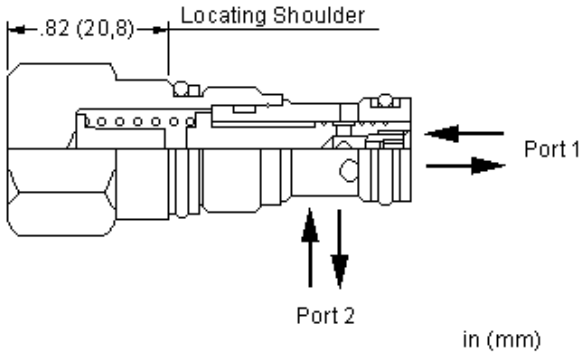
Cavity Information

Series	Ports	Cavities
Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque	2-Port	T-382A
Series P Cartridges M16 Cartridge Thread 22,2 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port	T-8A T-8DP T-9A
Series 0 Cartridges M16 Cartridge Thread 19,1 mm Valve Hex Size 25,4 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque	2-Port 2-Port (Deep) 3-Port	T-162A T-162DP T-163A
Series 1 Cartridges M20 Cartridge Thread 22,2 mm Valve Hex Size 41 - 47 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 6-Port	T-10A T-13A T-11A T-21A T-31A T-61A
Series 2 Cartridges 1"-14 UNS Cartridge Thread 28,6 mm Valve Hex Size 61 - 68 Nm Valve Installation Torque	2-Port 2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-3A T-5A T-2A T-22A T-32A T-52AD T-52A T-62A
Series 3 Cartridges M36 Cartridge Thread 31,8 mm Valve Hex Size 203 - 217 Nm Valve Installation Torque	2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port	T-16A T-17A T-23A T-33A T-53AD T-53A T-63A
Series 4 Cartridges M48 Cartridge Thread 41,3 mm Valve Hex Size 474 - 508 Nm Valve Installation Torque	2-Port 2-Port (Undercut) 3-Port 3-Port (Undercut) 4-Port 4-Port (Undercut) 4-Port 4-Port (Dual path) 6-Port 6-Port	T-18A T-18AU T-19A T-19AU T-24A T-24AU T-34A T-54AD T-54A T-64A





Flow fuse cartridges are used to maintain the position of a hydraulic actuator in the event of a hose or line break. The valve allows flow to and from the actuator but closes instantly if flow from the actuator exceeds the setting of the valve. NOTE: Because the valve responds so rapidly, it is sensitive to any transient flow above the valve setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: FQBAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .5 - 2.25 gpm (2 - 8,5 L/min.)	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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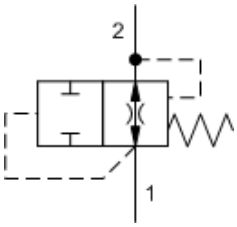

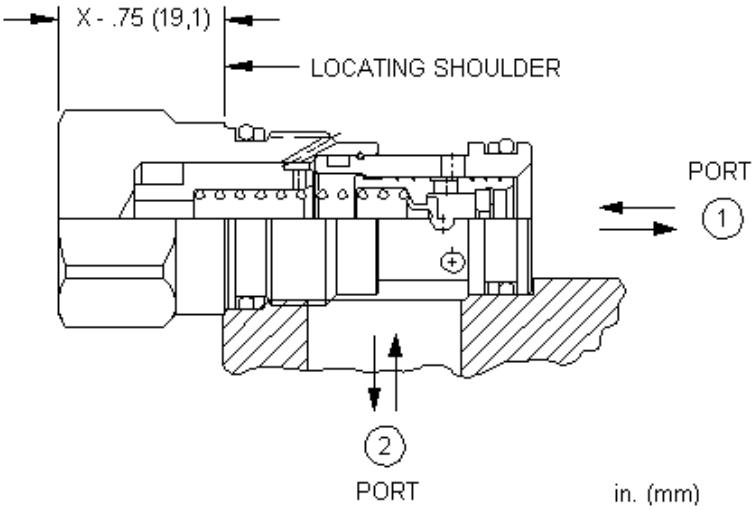

Flow fuse cartridges are used to maintain the position of a hydraulic actuator in the event of a hose or line break. The valve allows flow to and from the actuator but closes instantly if flow from the actuator exceeds the setting of the valve. NOTE: Because the valve responds so rapidly, it is sensitive to any transient flow above the valve setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: FQCAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .5 - 6 gpm (2 - 23 L/min.)	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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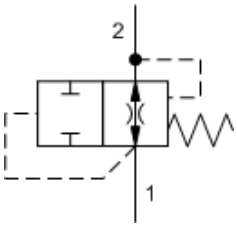

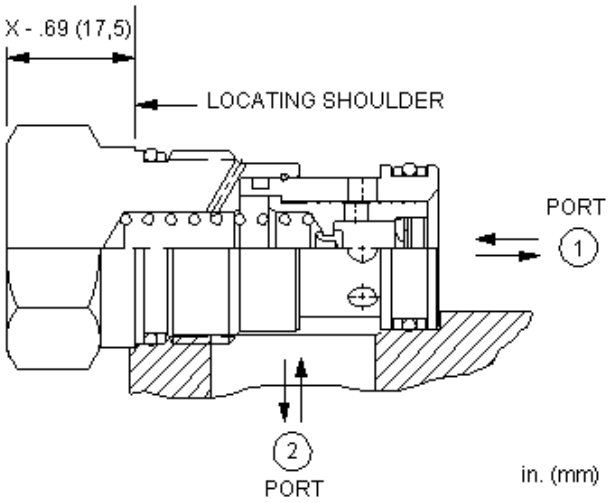

Flow fuse cartridges are used to maintain the position of a hydraulic actuator in the event of a hose or line break. The valve allows flow to and from the actuator but closes instantly if flow from the actuator exceeds the setting of the valve. NOTE: Because the valve responds so rapidly, it is sensitive to any transient flow above the valve setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: FQEAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice 1 - 15 gpm (4 - 60 L/min.)	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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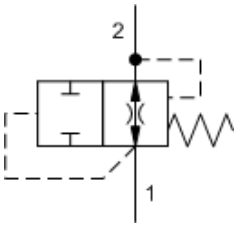

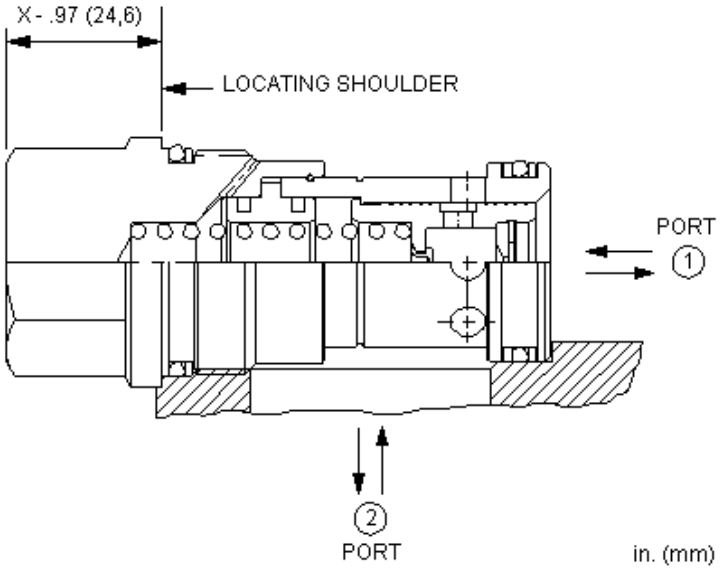

Flow fuse cartridges are used to maintain the position of a hydraulic actuator in the event of a hose or line break. The valve allows flow to and from the actuator but closes instantly if flow from the actuator exceeds the setting of the valve. NOTE: Because the valve responds so rapidly, it is sensitive to any transient flow above the valve setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: FQGAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice 1 - 25 gpm (4 - 95 L/min.)	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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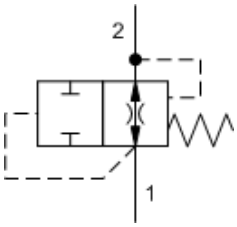

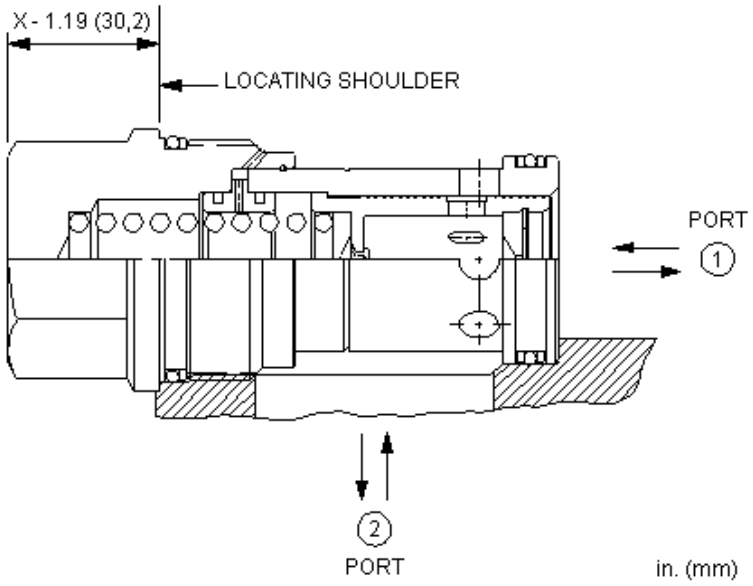

Flow fuse cartridges are used to maintain the position of a hydraulic actuator in the event of a hose or line break. The valve allows flow to and from the actuator but closes instantly if flow from the actuator exceeds the setting of the valve. NOTE: Because the valve responds so rapidly, it is sensitive to any transient flow above the valve setting.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: FQIAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice 1 - 50 gpm (4 - 200 L/min.)	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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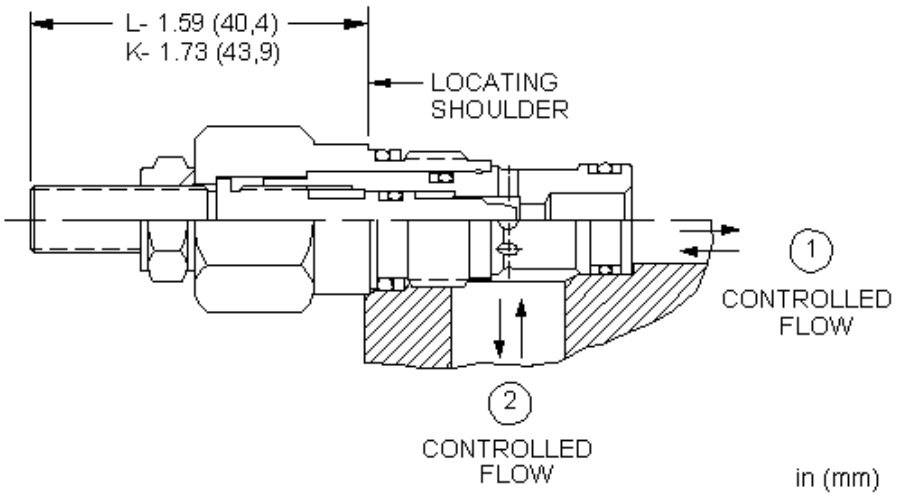

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: NFBCLCN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** .16 in. (4 mm)	**N** Buna-N	Standard Material/Coating
K Handknob		**E** EPDM	**/AP** Stainless Steel, Passivated
W Hex Wrench Adjustment		**V** Viton	**/LH** Mild Steel, Zinc-Nickel

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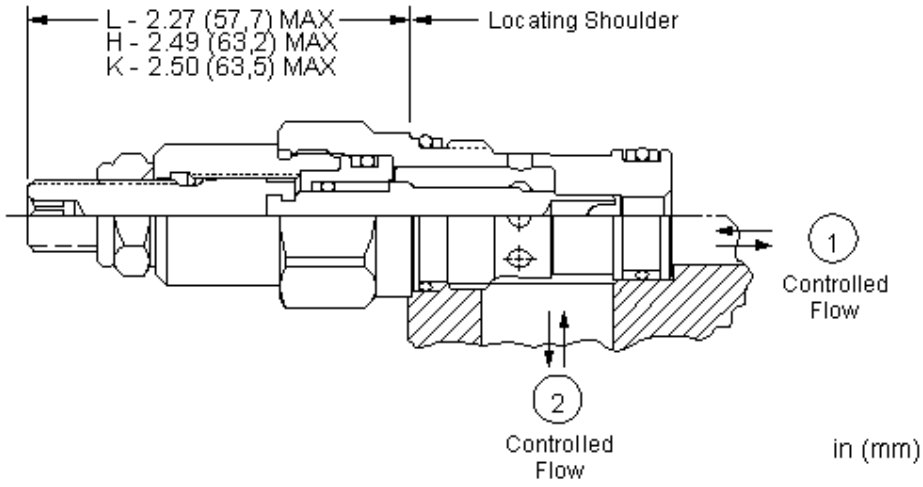

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
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

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: NFCCLCN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** .19 in. (4,8 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**D** .09 in. (2,3 mm)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob, Flow Control			

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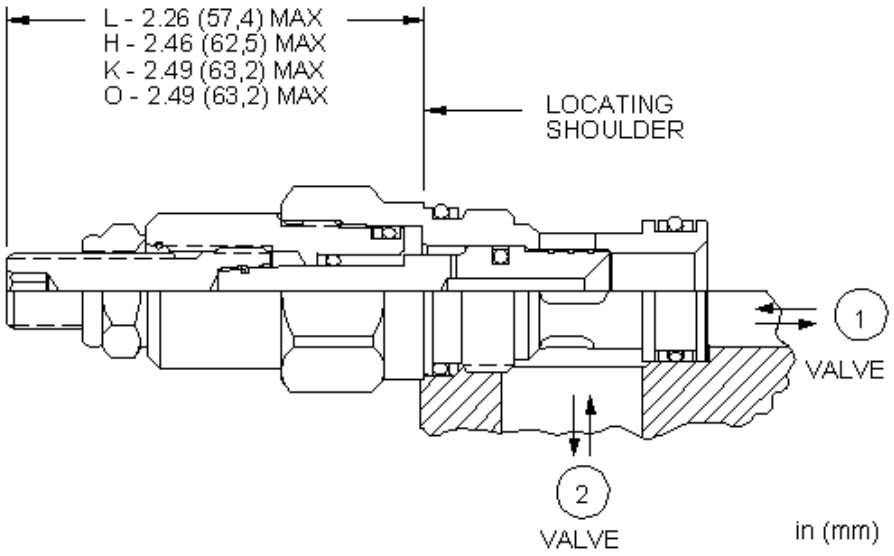

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
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

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: NFCDLFN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (F)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**F** .33 in. (8,4 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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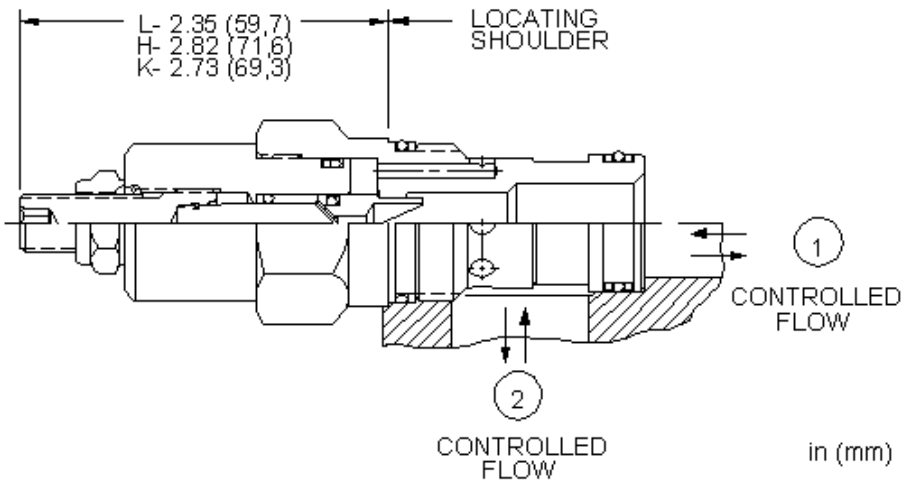

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

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: NFDCLAN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** .25 in. (6,4 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**B** .12 in. (3,0 mm)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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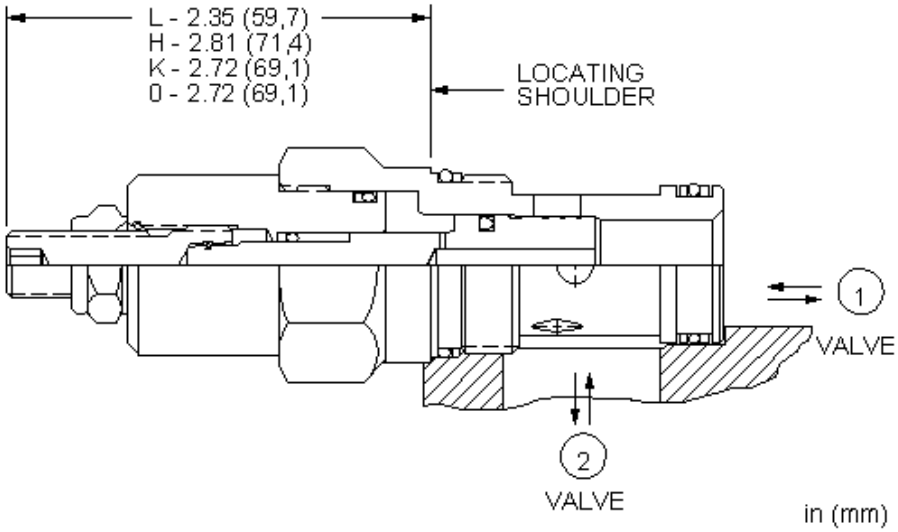

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Polyurethane: 990203014
Seal kit - Cartridge	Viton: 990203006

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: NFDDLGN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (G)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**G** .5 in. (12,7 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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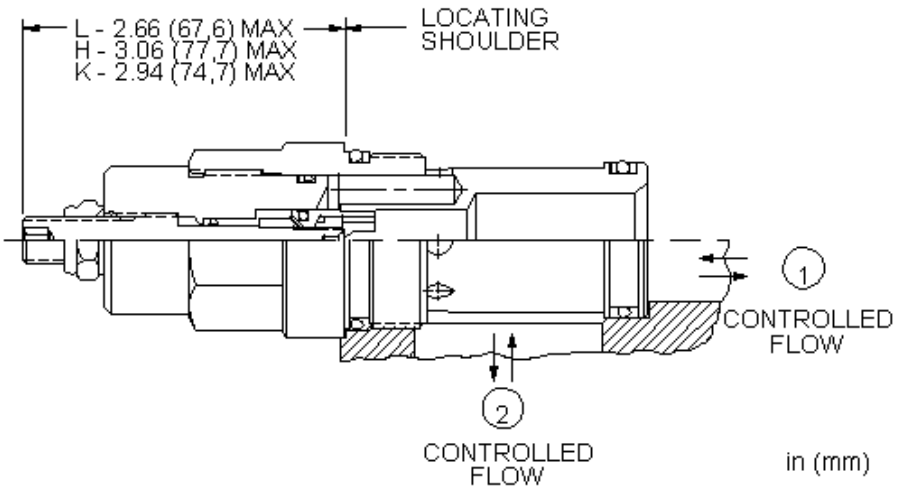

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: NFECLEN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (E)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**E** .38 in. (9,7 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**F** .28 in. (7,1 mm)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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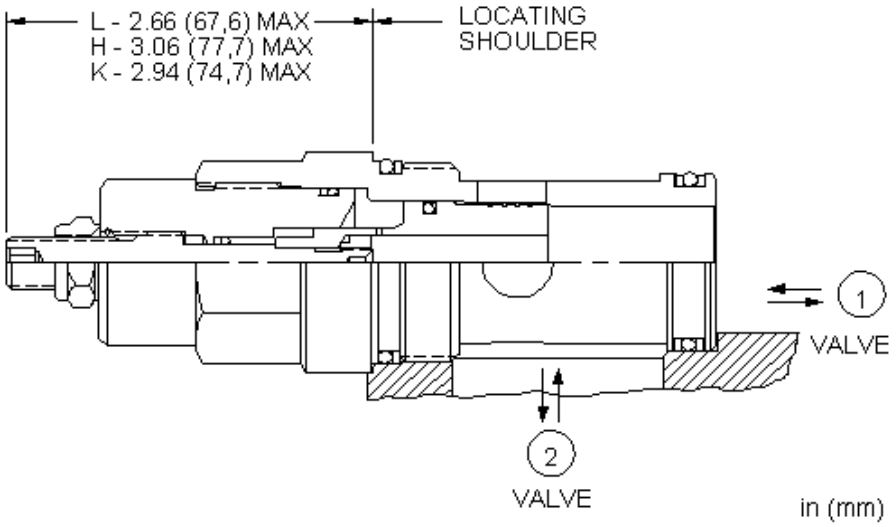

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: NFEDLHN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (H)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**H** .69 in. (17,5 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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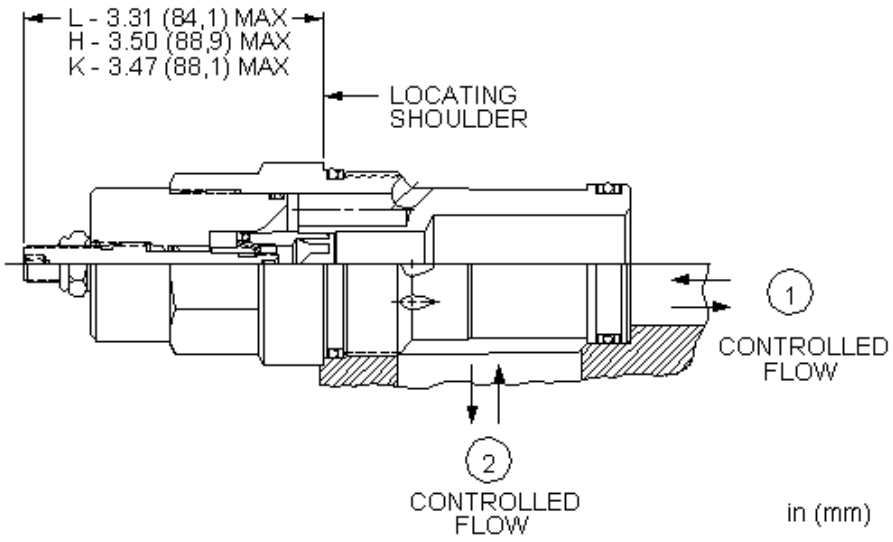

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: NFFCLGN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (G)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**G** .56 in. (14,2 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**H** .38 in. (9,7 mm)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	
Y Tri-Grip Handknob, Flow Control			

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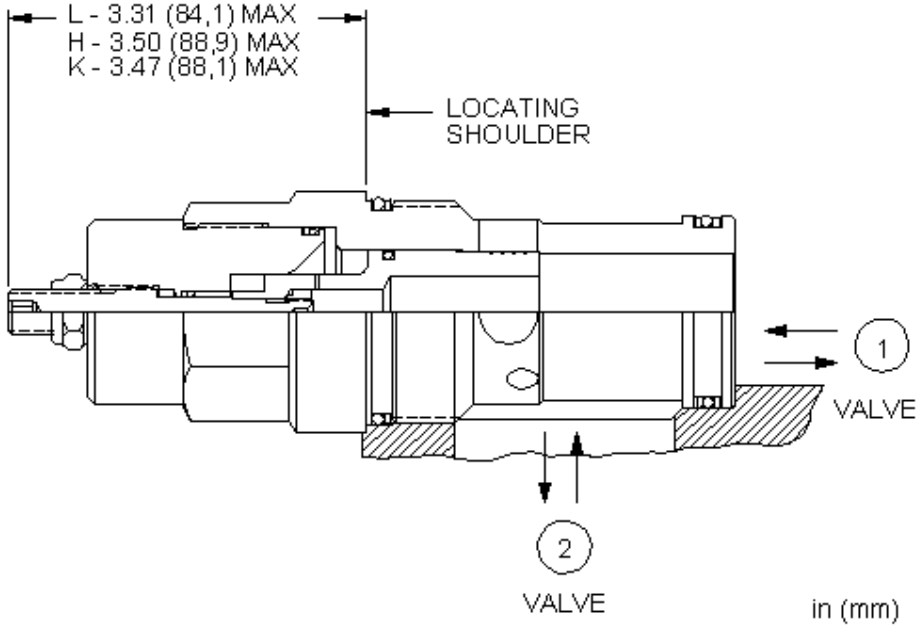

Needle valves are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. They are not pressure compensated and may be used as flow controls or as shutoff valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: NFFDLIN

CONTROL (L)	MAXIMUM ORIFICE DIAMETER (I)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**I** .85 in. (21,6 mm)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
R Capped Screw Adjustment			
Y Tri-Grip Handknob			

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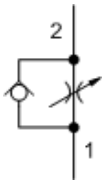

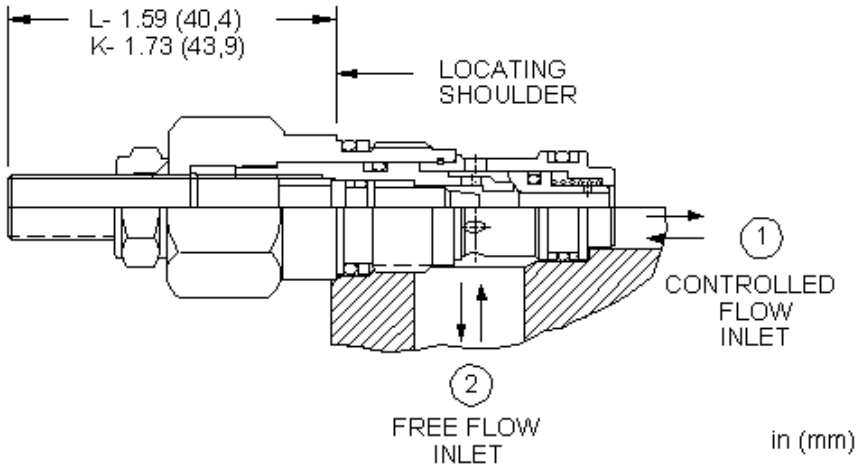

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: NCBBLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
K Handknob		**V** Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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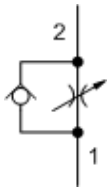

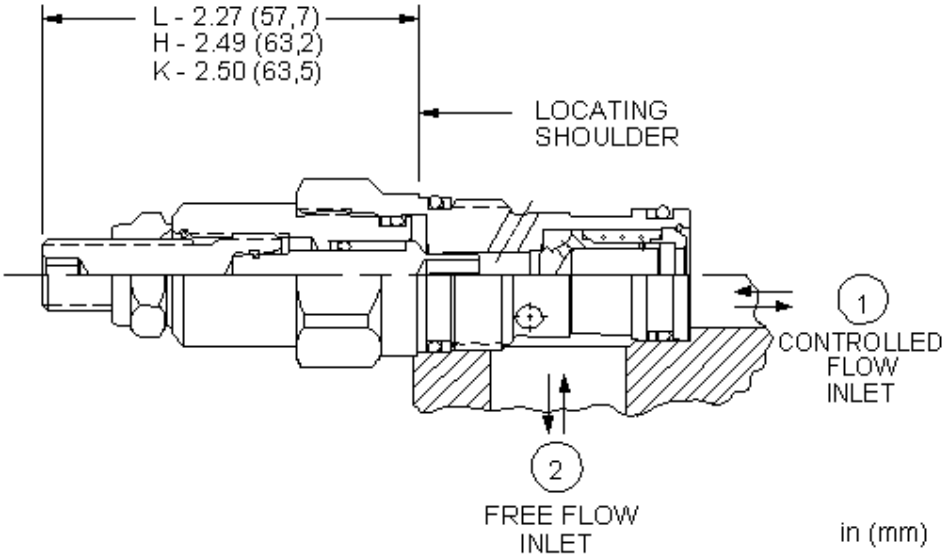

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
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

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: NCCBLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
R Capped Screw Adjustment			
Y Tri-Grip Handknob			

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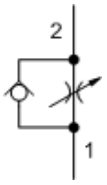

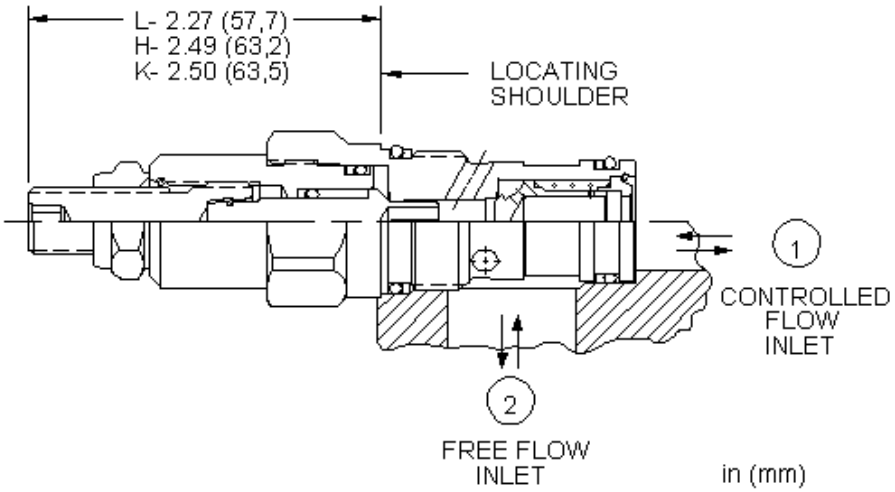

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: NCCCLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)		**/LH** Mild Steel, Zinc-Nickel
O Handknob with Panel Mount			
R Capped Screw Adjustment			
Y Tri-Grip Handknob			

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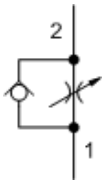

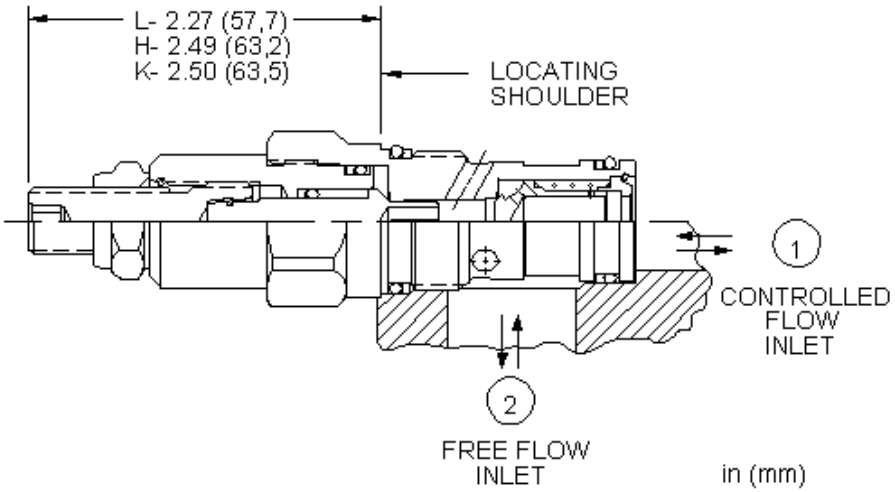

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

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: NCCDLAN

CONTROL (L)	REVERSE FLOW CHECK (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** 4 psi (0,3 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**B** 15 psi (1 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob	**C** 30 psi (2 bar)		**/LH** Mild Steel, Zinc-Nickel
O Handknob with Panel Mount	**D** 50 psi (3,5 bar)		
R Capped Screw Adjustment	**E** 75 psi (5 bar)		
Y Tri-Grip Handknob			

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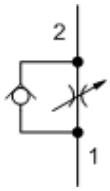

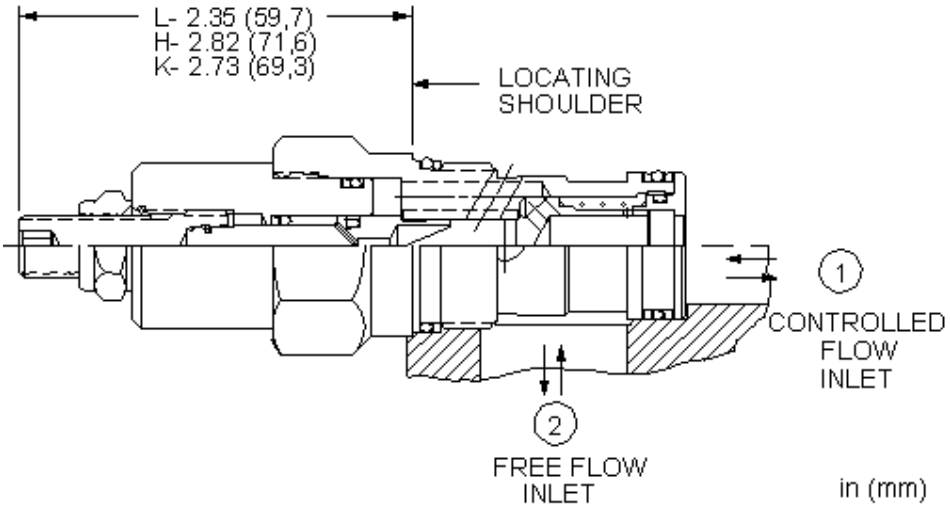

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

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: NCEBLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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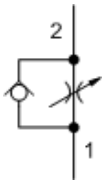

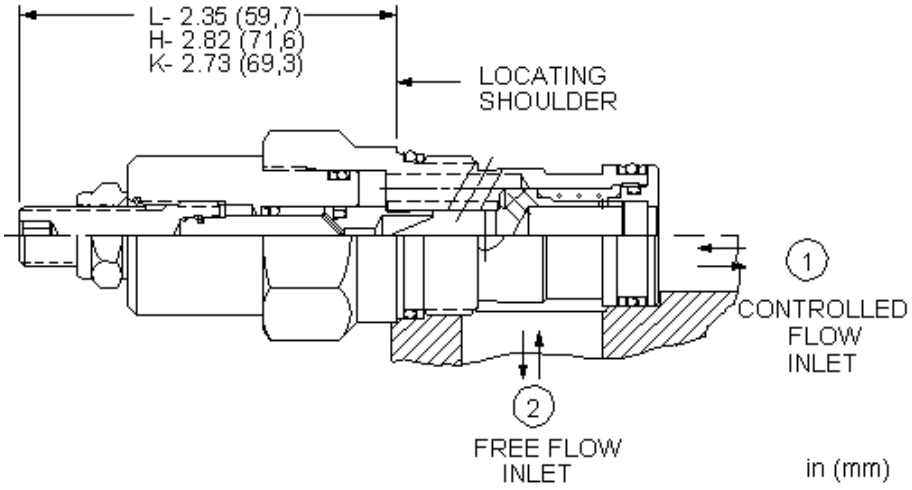

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

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: NCECLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
K Handknob	**E** 75 psi (5 bar)		
Y Tri-Grip Handknob			

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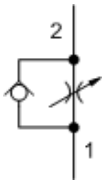

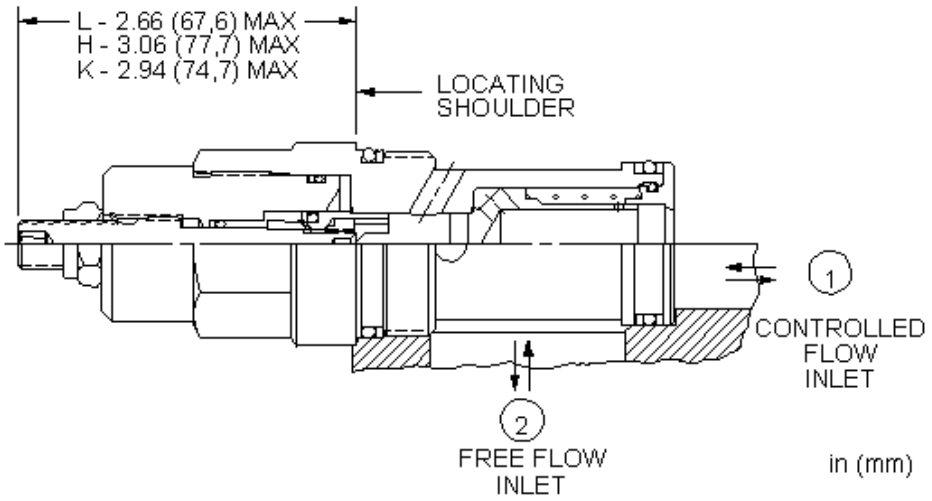

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: NCFBLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)		**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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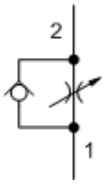

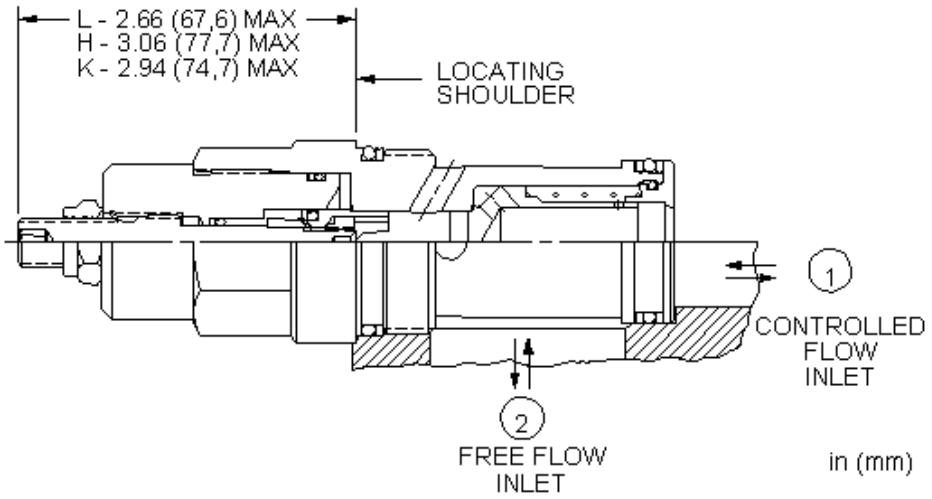

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: NCFCLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)		**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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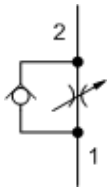

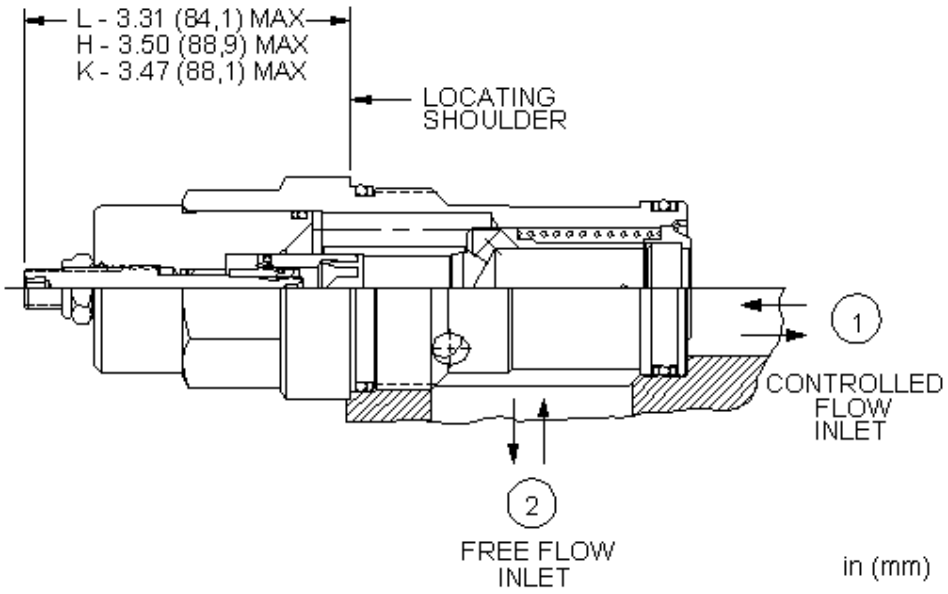

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: NCGBLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob	**E** 75 psi (5 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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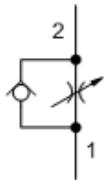

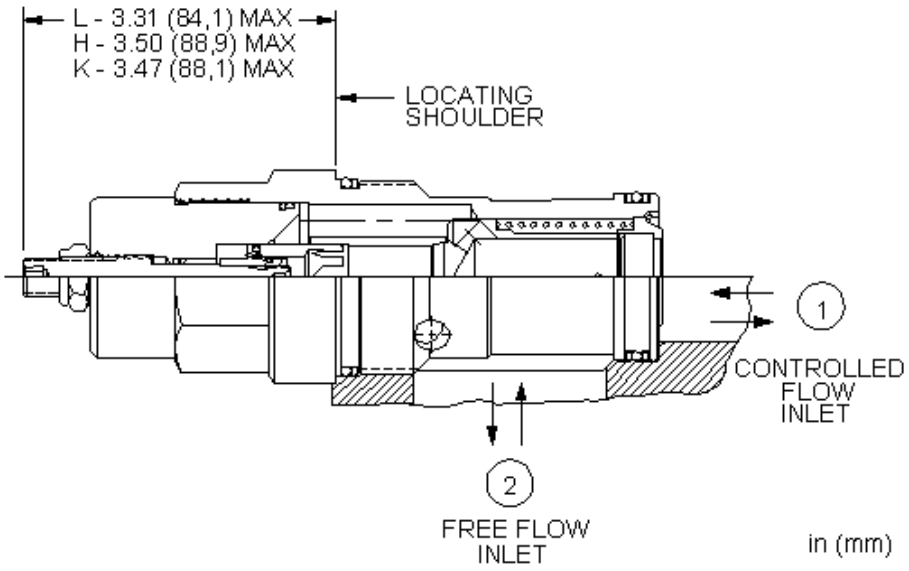

Needle valves with reverse-flow check are fully adjustable orifices used to regulate flow. They are infinitely adjustable from fully closed up to the maximum orifice diameter. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. They are not pressure compensated.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	0,3 cc/min.
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: NCGCLCN

CONTROL (L)	REVERSE FLOW CHECK (C)	SEAL MATERIAL (N)
L Standard Screw Adjustment	**C** 30 psi (2 bar)	**N** Buna-N
H Calibrated Handknob with Detent Lock	**A** 4 psi (0,3 bar)	**V** Viton
K Handknob	**E** 75 psi (5 bar)	
Y Tri-Grip Handknob		

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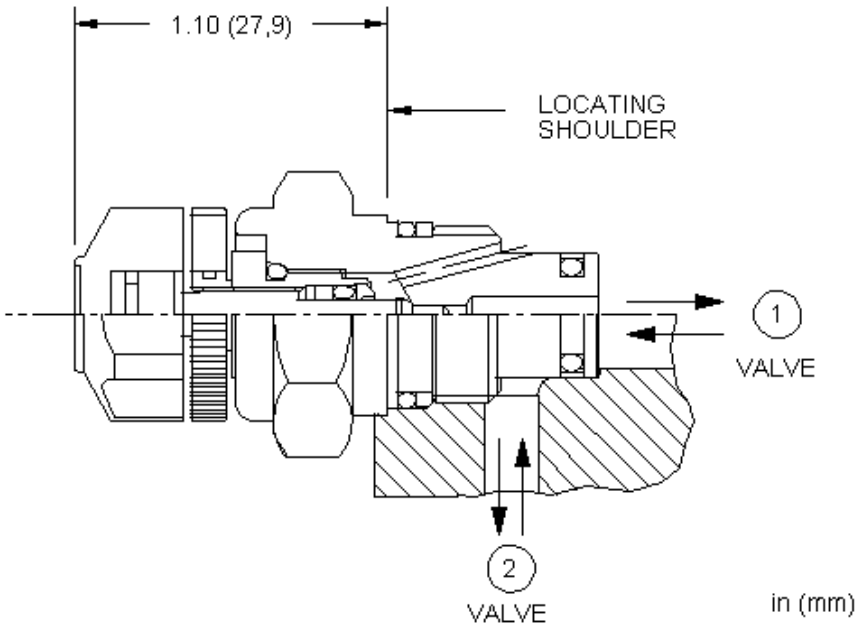

Two-port, pilot-stage needle valves are fully adjustable devices used to regulate pilot flow in a main-stage valve or to meter in/out flow in low flow applications. These cartridges are designed for pilot flow applications and utilize Sun's T-8A cavity so they can be used in conjunction with Sun's pilot-operated, main-stage valves.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	3
Effective Orifice Size	0,9 mm
Seal kit - Cartridge	Buna: 990008007
Seal kit - Cartridge	EPDM: 990008014
Seal kit - Cartridge	Polyurethane: 990008002
Seal kit - Cartridge	Viton: 990008006

CONFIGURATION OPTIONS

Model Code Example: NFABKXN

CONTROL (K)	MAXIMUM ORIFICE DIAMETER (X)	SEAL MATERIAL (N)
K Handknob	**X** .03 in. (0,8 mm)	**N** Buna-N
		E EPDM
		V Viton

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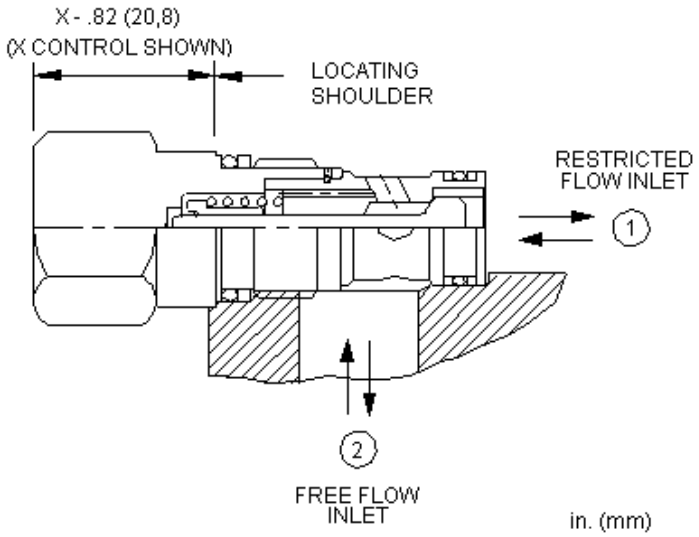

This valve is a fixed-orifice, non-pressure-compensated flow control with a reverse flow check. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

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

CONFIGURATION OPTIONS

Model Code Example: CNACXCN

CONTROL (X)

- **X** Not Adjustable

SETTING RANGE (C)

- **C** 30 psi (2 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)
- **A** 4 psi (0,3 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 - .062 in. (0,4 - 1,6 mm)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

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

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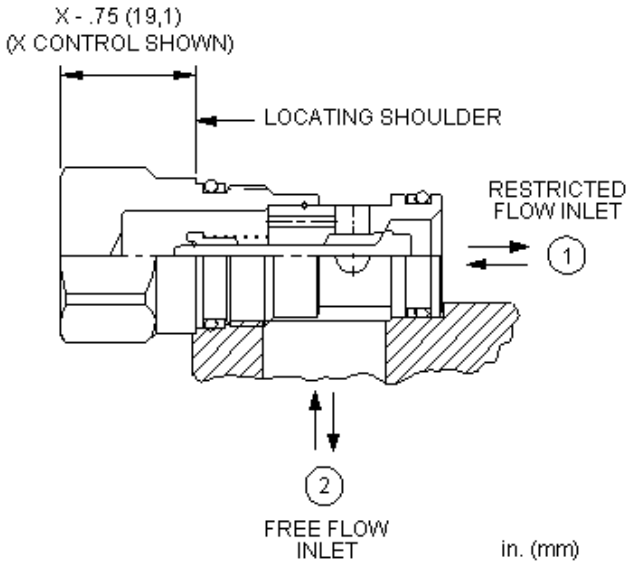

This valve is a fixed-orifice, non-pressure-compensated flow control with a reverse flow check. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 3,9 mm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: CNCCXCN

CONTROL (X)

- **X** Not Adjustable

SETTING RANGE (C)

- **C** 30 psi (2 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- **A** 4 psi (0,3 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 - .153 in. (0,4 - 3,9 mm)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

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

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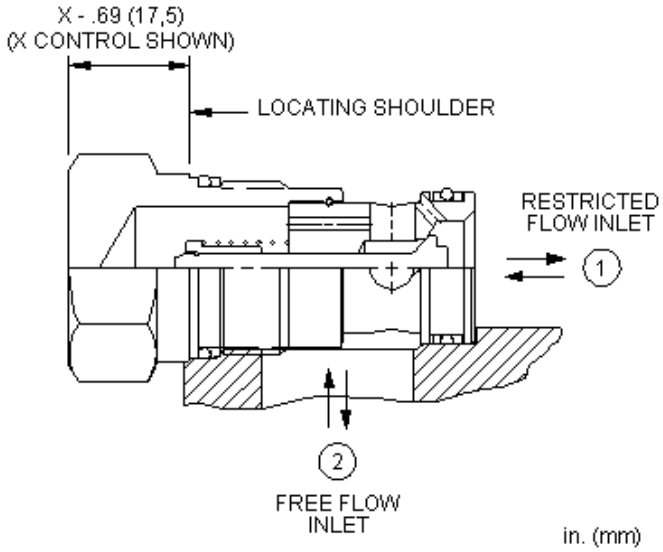

This valve is a fixed-orifice, non-pressure-compensated flow control with a reverse flow check. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

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

CONFIGURATION OPTIONS

Model Code Example: CNECXCN

CONTROL (X)

- **X** Not Adjustable

SETTING RANGE (C)

- **C** 30 psi (2 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **A** 4 psi (0,3 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 - .135 in. (0,4 - 3,4 mm)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

- Standard Material/Coating
- **/AP** Stainless Steel, Passivated

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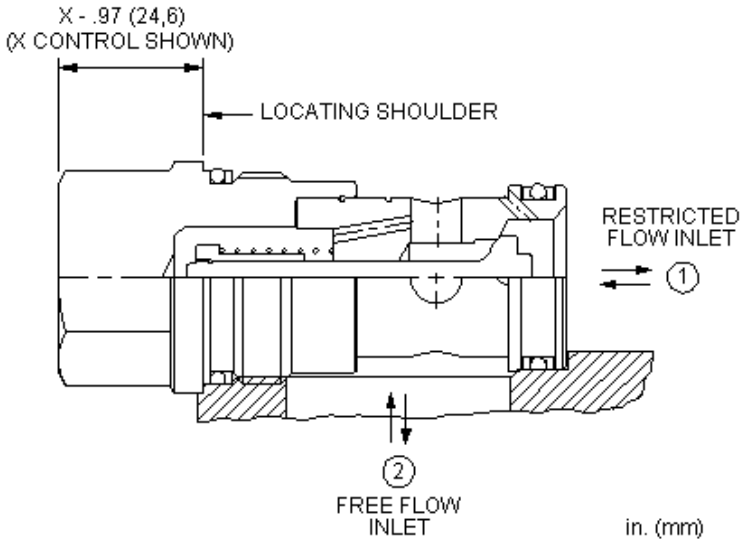

This valve is a fixed-orifice, non-pressure-compensated flow control with a reverse flow check. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 5,5 mm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: CNGCXCN

CONTROL (X)

- **X** Not Adjustable

SETTING RANGE (C)

- **C** 30 psi (2 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **A** 4 psi (0,3 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

- Standard Material/Coating
- **/AP** Stainless Steel, Passivated

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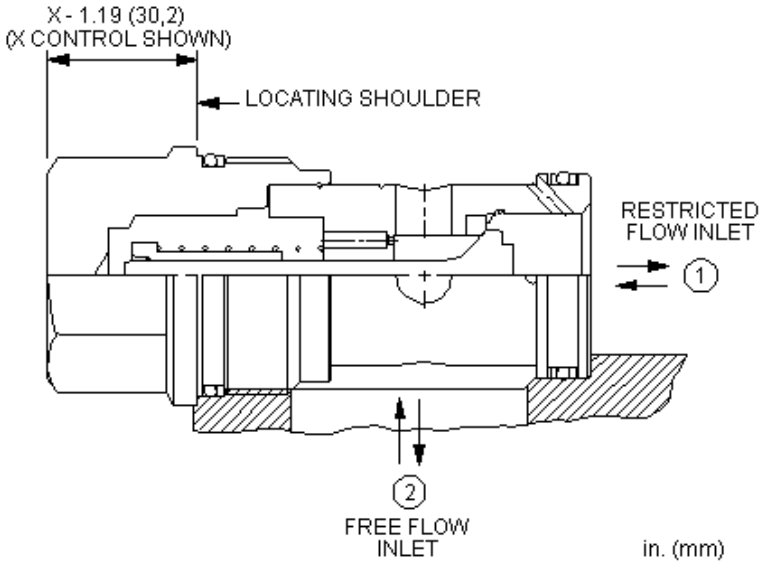

This valve is a fixed-orifice, non-pressure-compensated flow control with a reverse flow check. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Orifice Range	0,4 - 5,5 mm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: CNICXCN

CONTROL (X)

- **X** Not Adjustable

SETTING RANGE (C)

- **C** 30 psi (2 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **A** 4 psi (0,3 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **B** 15 psi (1 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **D** 50 psi (3,5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **E** 75 psi (5 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)
- **F** 100 psi (7 bar) Cracking Pressure, .016 - .218 in. (0,4 - 5,5 mm)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

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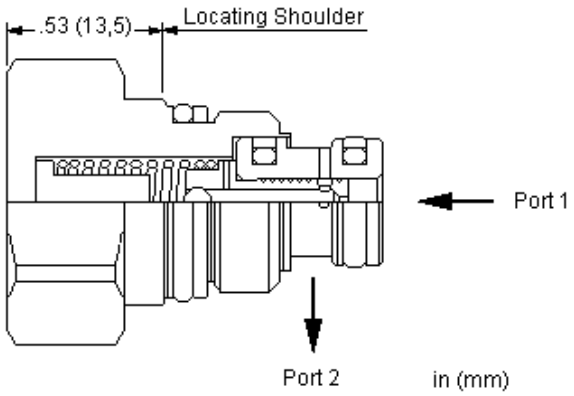

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. A variety of flow rates are available.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990008007
Seal kit - Cartridge	EPDM: 990008014
Seal kit - Cartridge	Polyurethane: 990008002
Seal kit - Cartridge	Viton: 990008006

CONFIGURATION OPTIONS

Model Code Example: FXAAXAN

CONTROL (X)	FLOW RATE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 15 in³/min. (250 cc/min.)	**N** Buna-N	Standard Material/Coating
	B 20 in³/min. (330 cc/min.)	**E** EPDM	**/AP** Stainless Steel, Passivated
	D 40 in³/min. (660 cc/min.)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	F 60 in³/min. (1 L/min.)		
	H 80 in³/min. (1.3 L/min.)		
	J 100 in³/min. (1.6 L/min.)		
	L 120 in³/min. (2.0 L/min.)		

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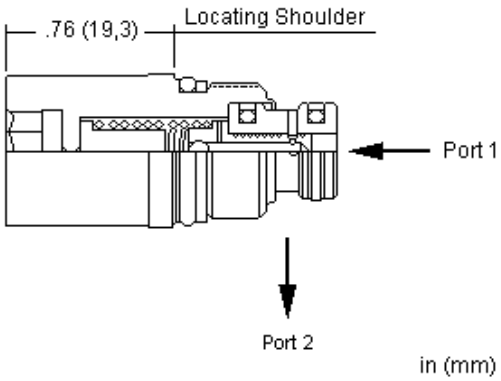

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. A variety of flow rates are available.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Valve Internal Hex Size	8 mm
Seal kit - Cartridge	Buna: 990008007
Seal kit - Cartridge	Polyurethane: 990008002
Seal kit - Cartridge	Viton: 990008006

CONFIGURATION OPTIONS

Model Code Example: FXAGXAN

CONTROL (X)	FLOW RATE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 15 in³/min. (250 cc/min.)	**N** Buna-N
	B 20 in³/min. (330 cc/min.)	**V** Viton
	D 40 in³/min. (660 cc/min.)	
	F 60 in³/min. (1 L/min.)	
	H 80 in³/min. (1.3 L/min.)	
	J 100 in³/min. (1.6 L/min.)	
	L 120 in³/min. (2.0 L/min.)	

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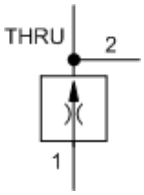

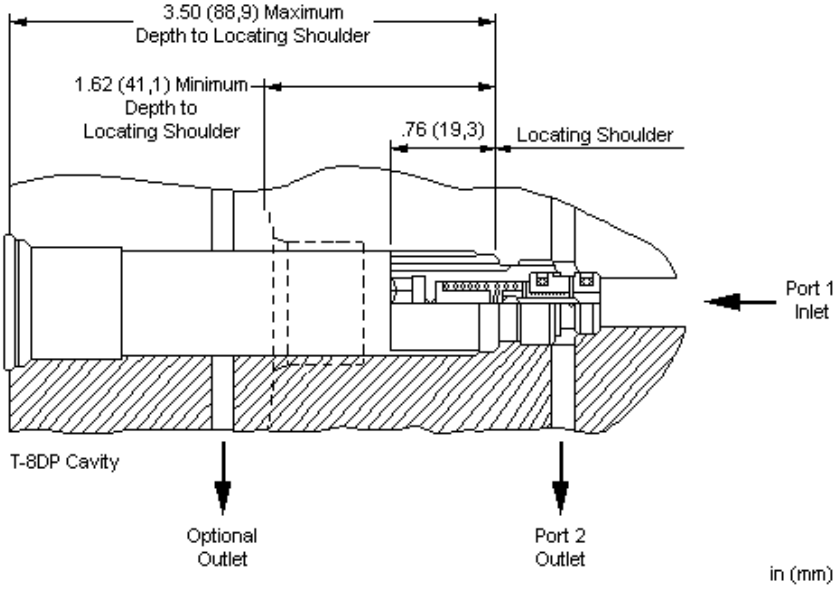

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. A variety of flow rates are available. The THRU port at the top of the valve can be used as the outlet with port 2 blocked. See cavity drawing for details.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Valve Internal Hex Size	8 mm

CONFIGURATION OPTIONS

Model Code Example: FXAMXAN

CONTROL (X)	FLOW RATE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 15 in³/min. (250 cc/min.)	**N** Buna-N
	B 20 in³/min. (330 cc/min.)	**V** Viton
	D 40 in³/min. (660 cc/min.)	
	F 60 in³/min. (1 L/min.)	
	H 80 in³/min. (1.3 L/min.)	
	J 100 in³/min. (1.6 L/min.)	
	L 120 in³/min. (2.0 L/min.)	

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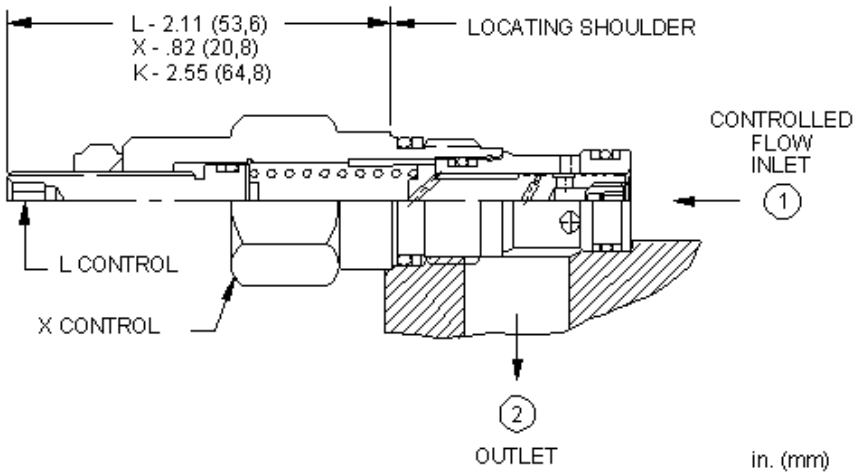

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	EPDM: 990162014
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: FXBAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 3 gpm (0,4 - 11 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel

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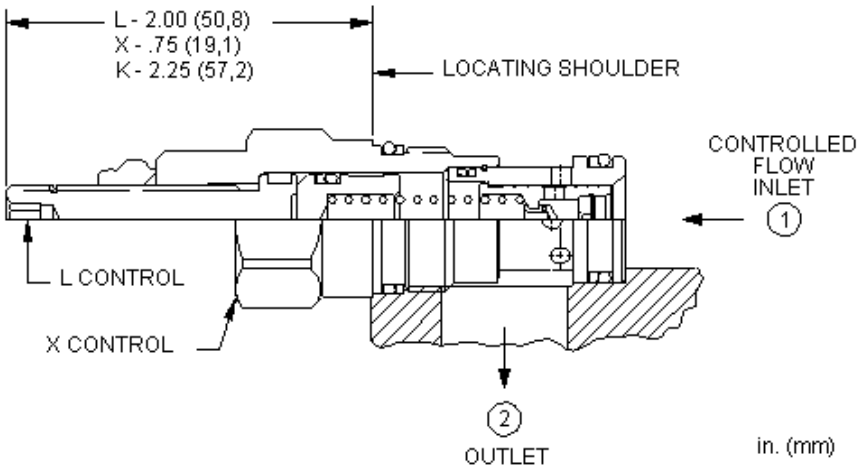

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
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

CONFIGURATION OPTIONS

Model Code Example: FXCAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel

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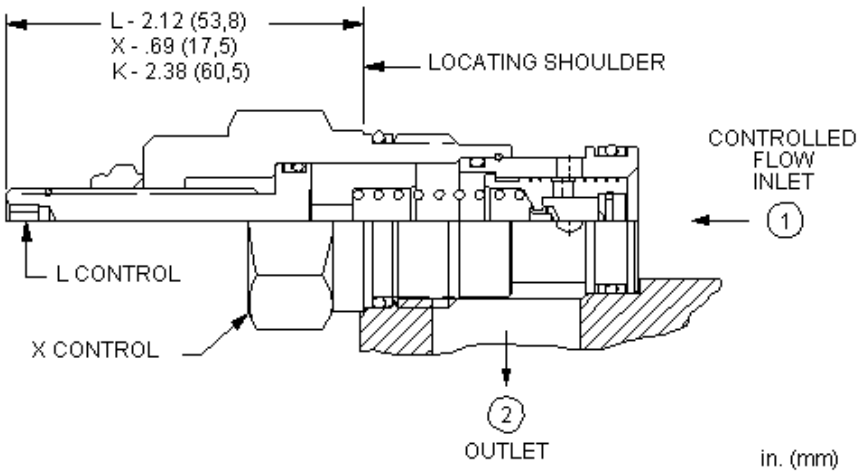

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: FXDAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel

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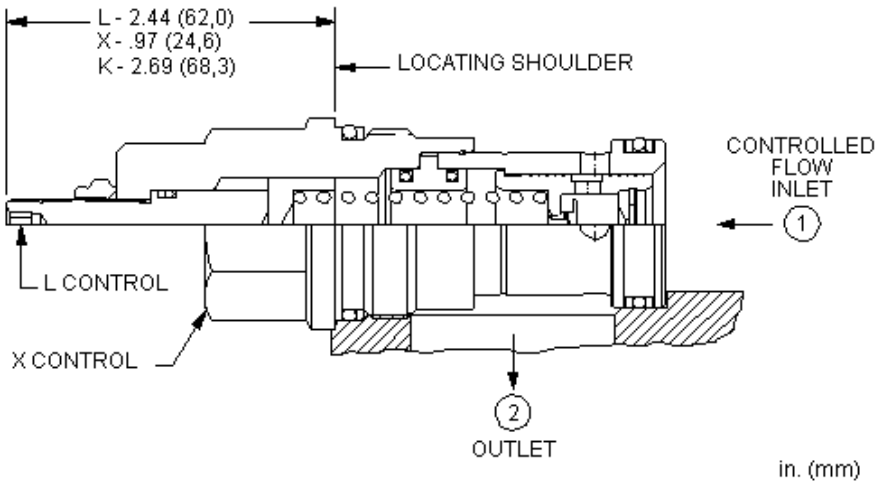

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: FXEALAN

CONTROL (L)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Tuning Adjustment	**A** Replaceable Orifice .2 - 25 gpm (0,8 - 95 L/min.)	**N** Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
X Not Adjustable			

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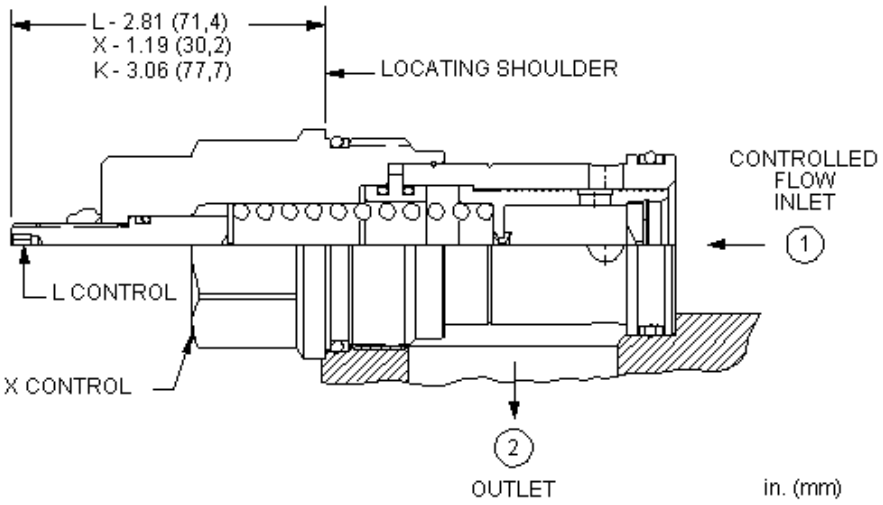

Fixed-orifice, pressure-compensated flow controls provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: FXFAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .2 - 50 gpm (1 - 200 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	

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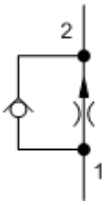

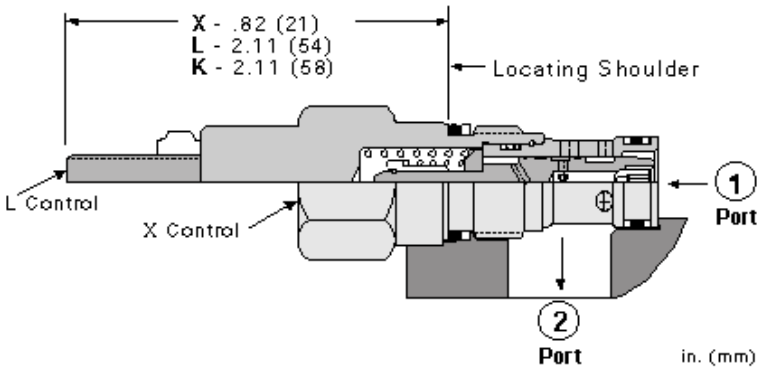

Fixed-orifice, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990162007
Seal kit - Cartridge	Polyurethane: 990162002
Seal kit - Cartridge	Viton: 990162006

CONFIGURATION OPTIONS

Model Code Example: FCBBXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 3 gpm (0,4 - 11 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			**/LH** Mild Steel, Zinc-Nickel

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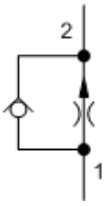

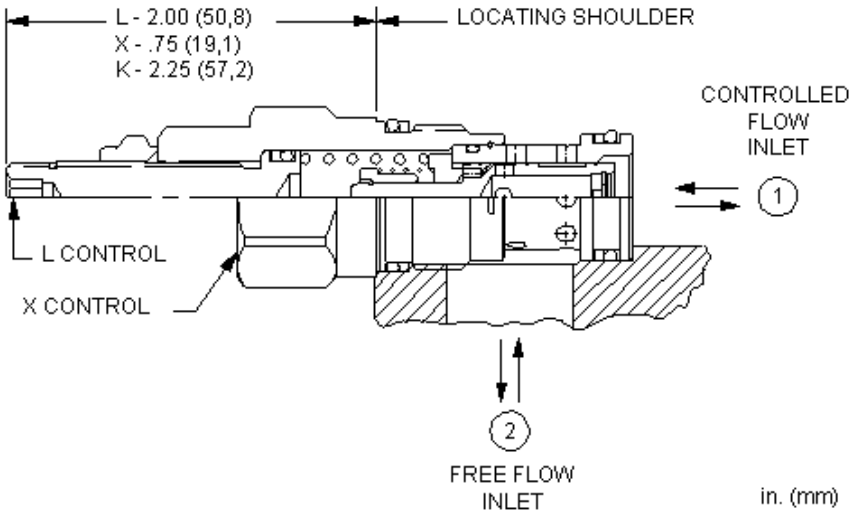

Fixed-orifice, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990010007
Seal kit - Cartridge	Polyurethane: 990010002
Seal kit - Cartridge	Viton: 990010006

CONFIGURATION OPTIONS

Model Code Example: FCCBXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			

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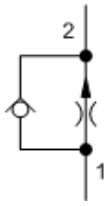

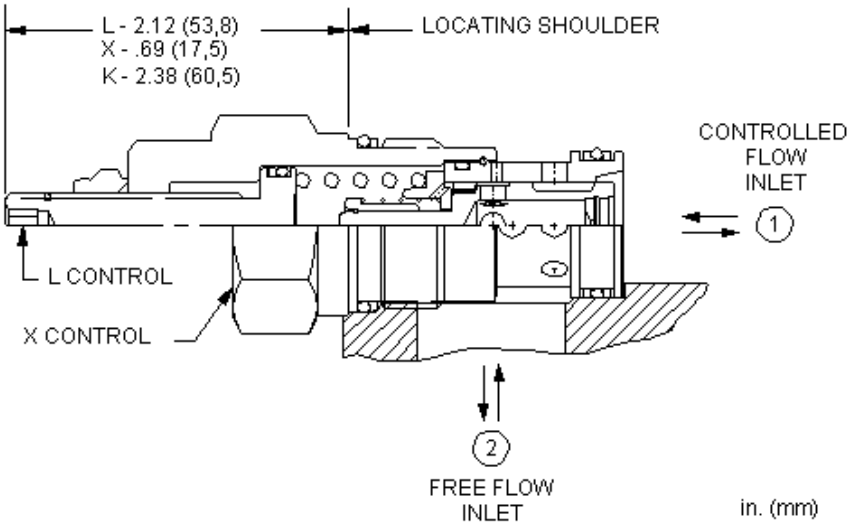

Fixed-orifice, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: FCDBXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			**/LH** Mild Steel, Zinc-Nickel

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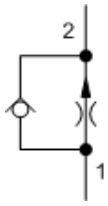

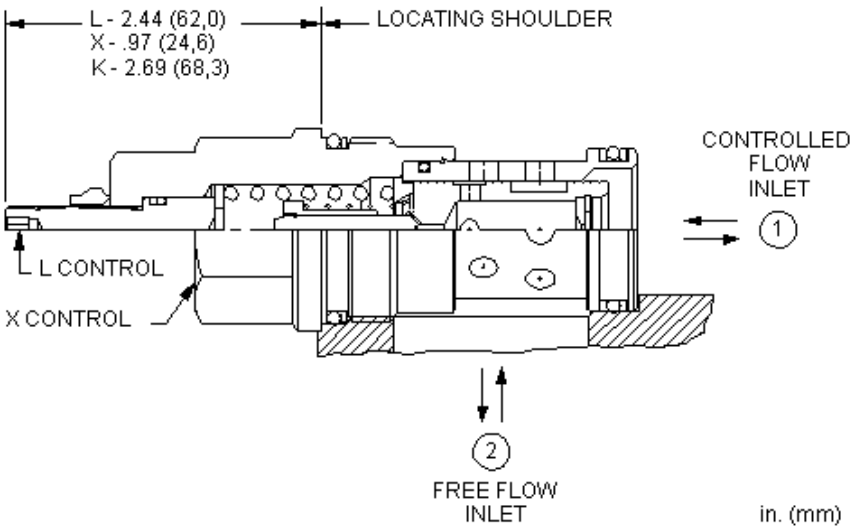

Fixed-orifice, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: FCEBXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .2 - 25 gpm (0,8 - 95 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			

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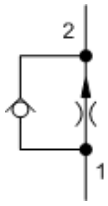

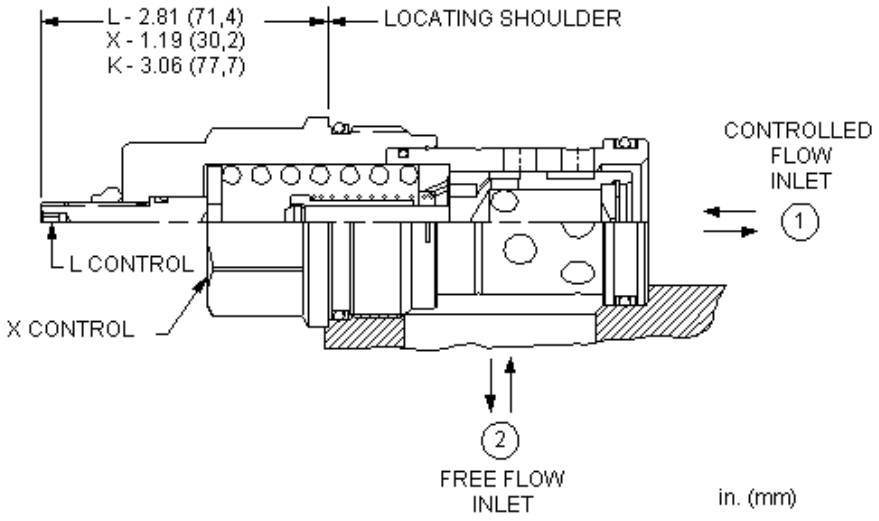

Fixed-orifice, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: FCFBXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .2 - 50 gpm (1 - 200 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			

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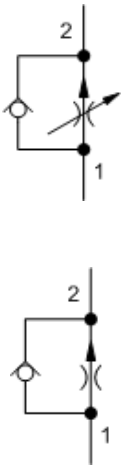

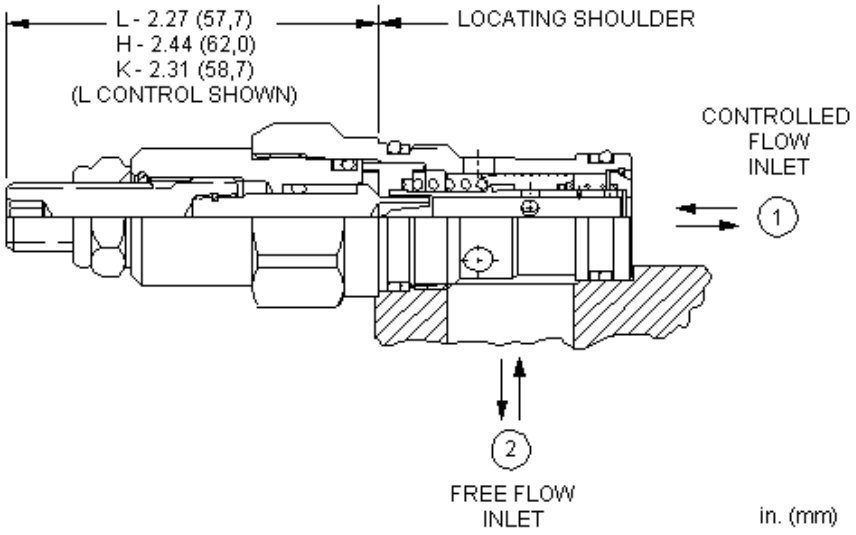

Fully adjustable, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. They are infinitely adjustable from nearly closed up to the maximum flow. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
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

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: FDBALAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**B** .1 - 2 gpm (0,4 - 8 L/min.)	**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	**/LH** Mild Steel, Zinc-Nickel
Y Tri-Grip Handknob			

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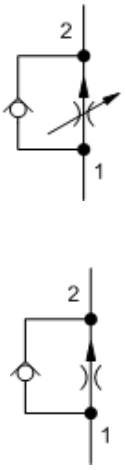

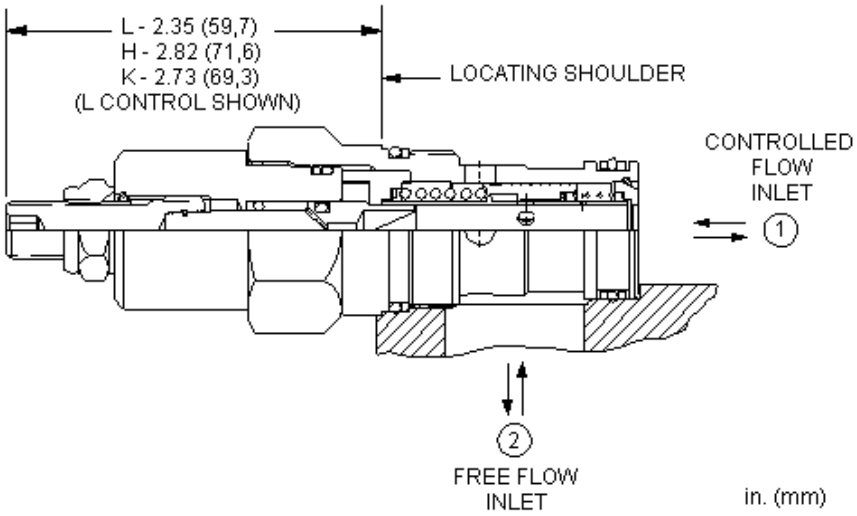

Fully adjustable, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. They are infinitely adjustable from nearly closed up to the maximum flow. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

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: FDCBLAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** .1 - 12 gpm (0,4 - 45 L/min.)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**B** .1 - 3 gpm (0,4 - 11 L/min.)	**E** EPDM	**/LH** Mild Steel, Zinc-Nickel
K Handknob		**V** Viton	
Y Tri-Grip Handknob			

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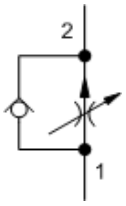

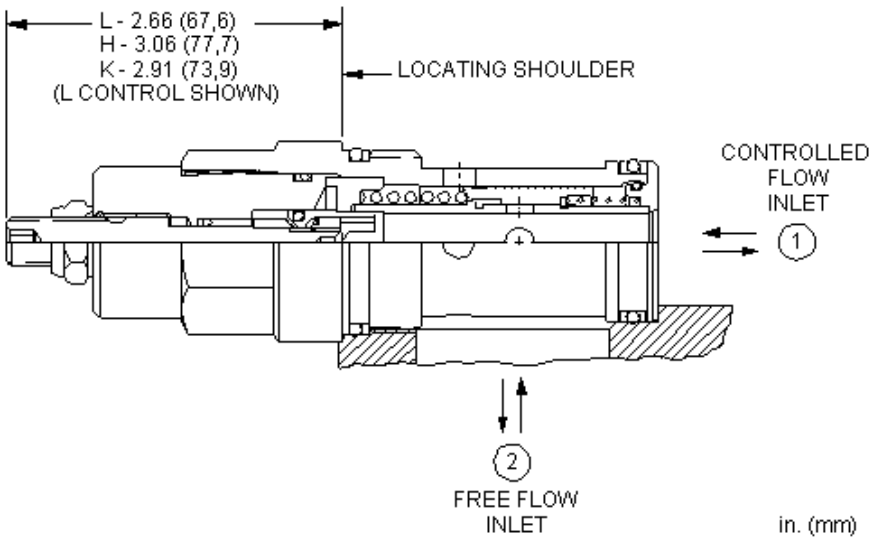

Fully adjustable, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. They are infinitely adjustable from nearly closed up to the maximum flow. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	EPDM: 990016014
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: FDEALAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** .2 - 25 gpm (0,8 - 95 L/min.)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock	**B** .2 - 16 gpm (0,8 - 60 L/min.)	**E** EPDM	**/LH** Mild Steel, Zinc-Nickel
K Handknob		**V** Viton	
Y Tri-Grip Handknob			

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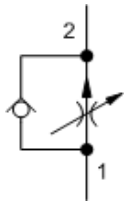

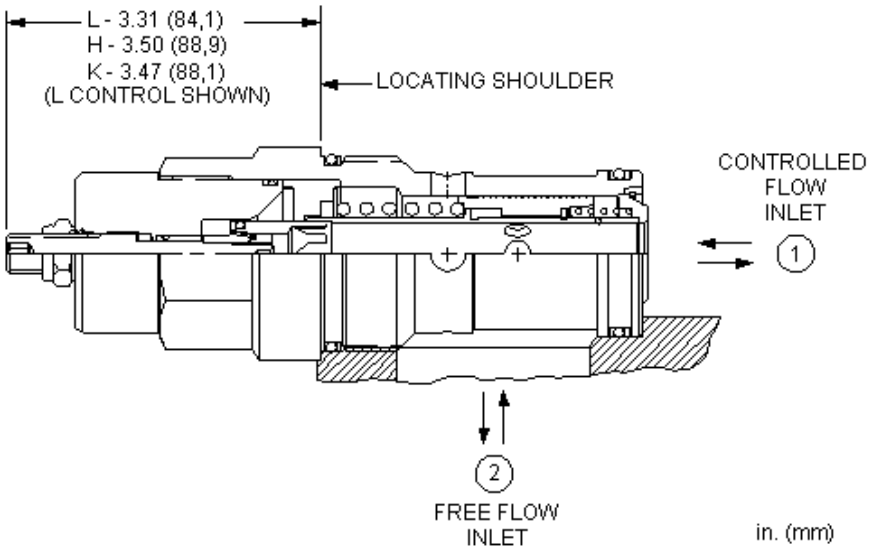

Fully adjustable, pressure-compensated flow controls with reverse-flow check provide precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. They are infinitely adjustable from nearly closed up to the maximum flow. An integral high-capacity check valve provides unrestricted flow from port 2 to port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990018007
Seal kit - Cartridge	EPDM: 990018014
Seal kit - Cartridge	Polyurethane: 990018002
Seal kit - Cartridge	Viton: 990018006

CONFIGURATION OPTIONS

Model Code Example: FDFALAN

CONTROL (L)	ADJUSTMENT RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**A** .2 - 50 gpm (1 - 200 L/min.)	**N** Buna-N	Standard Material/Coating
H Calibrated Handknob with Detent Lock		**E** EPDM	**/LH** Mild Steel, Zinc-Nickel
K Handknob		**V** Viton	
Y Tri-Grip Handknob			

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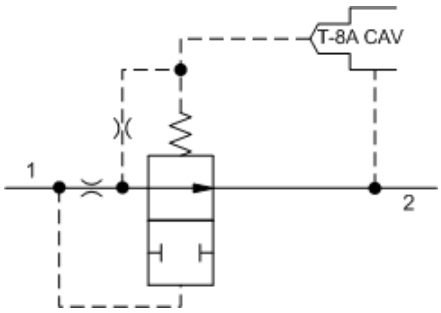

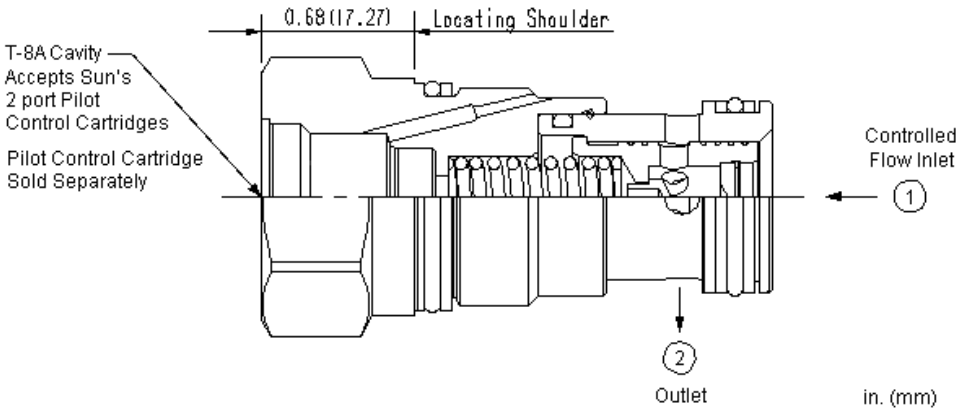

This valve is a fixed-orifice, pressure-compensated flow control valve with an integral pilot control cavity. The pilot control cavity will accept any T-8A pilot control cartridge. This type of valve provides precise flow regulation for meter-in or meter-out applications where there may be wide pressure fluctuations. The flow setting is specified by the user and is set at the factory.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Pilot Control Cavity	T-8A
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	Viton: 990203006

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

CONFIGURATION OPTIONS

Model Code Example: FXDA8AN

SETTING RANGE (A)

- **A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)
- **B** Permanent Orifice .1 - 12 gpm (0,4 - 45 L/min.)

SEAL MATERIAL (N)

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

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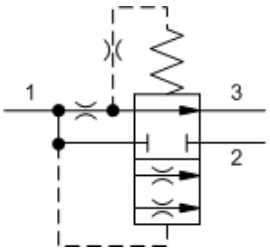

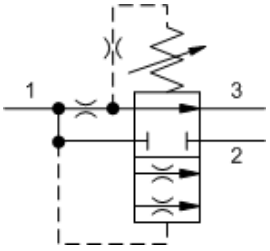

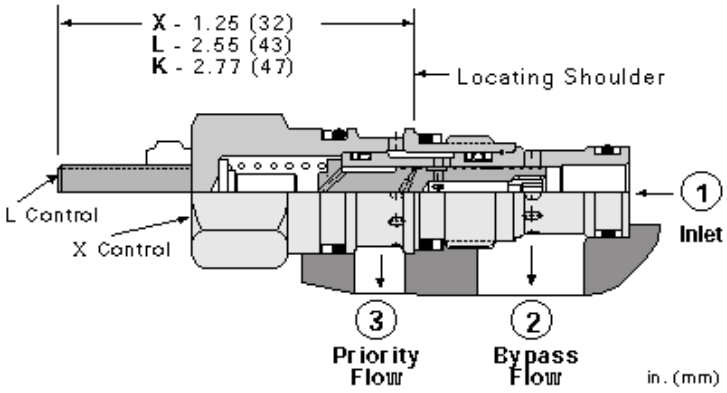

Bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Input Flow	30 L/min.
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

CONFIGURATION OPTIONS

Model Code Example: FRBAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** Replaceable Orifice .1 - 3 gpm (0,4 - 11 L/min.)	**N** Buna-N
L Tuning Adjustment		**V** Viton

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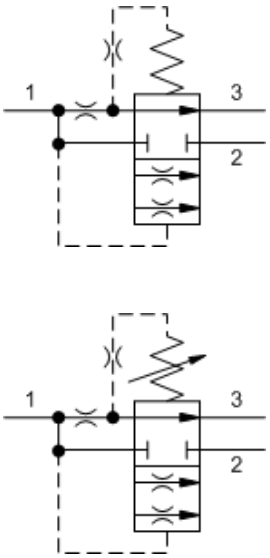

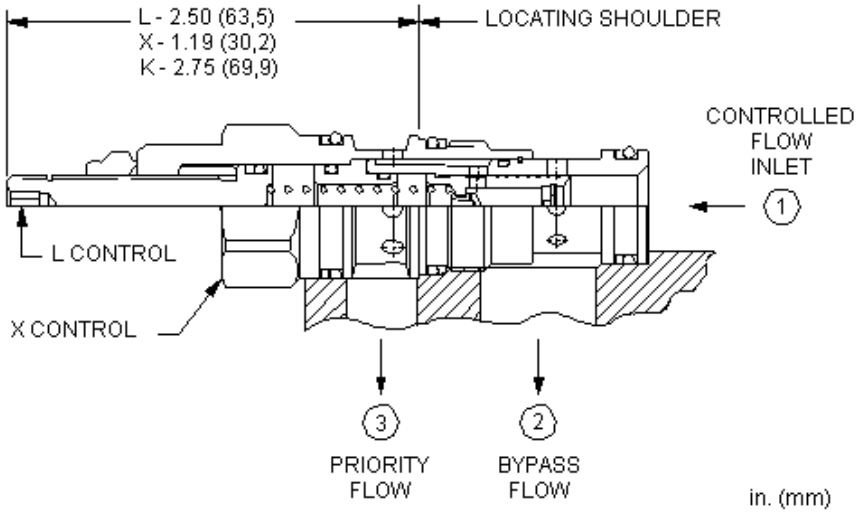

Bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Input Flow	60 L/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: FRCAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			

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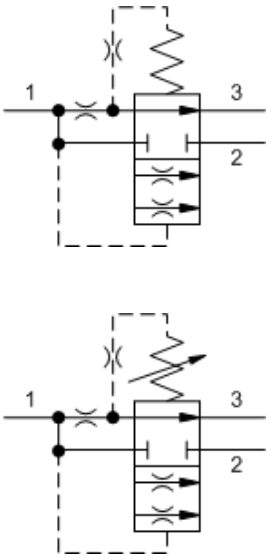

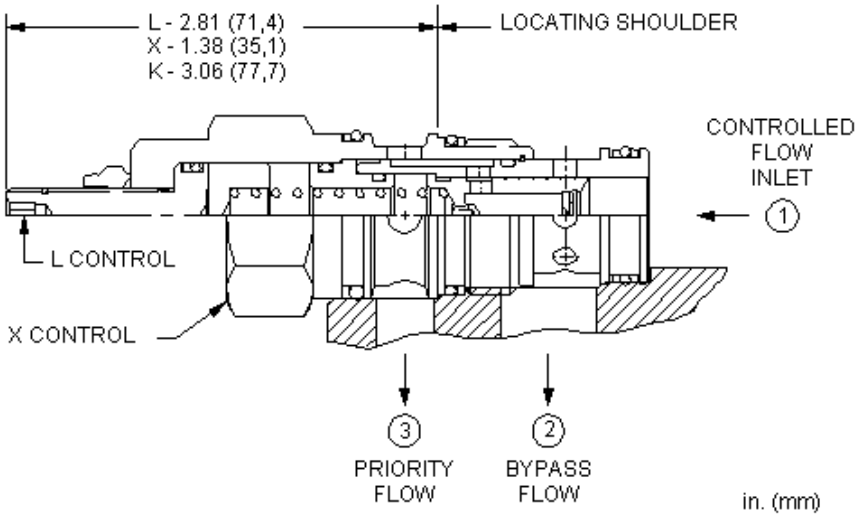

Bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Input Flow	120 L/min.
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

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: FRDAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**E** EPDM	**/AP** Stainless Steel, Passivated
K Handknob		**V** Viton	

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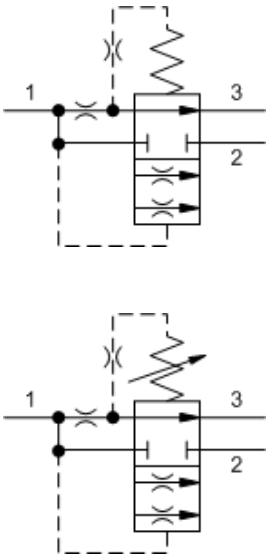

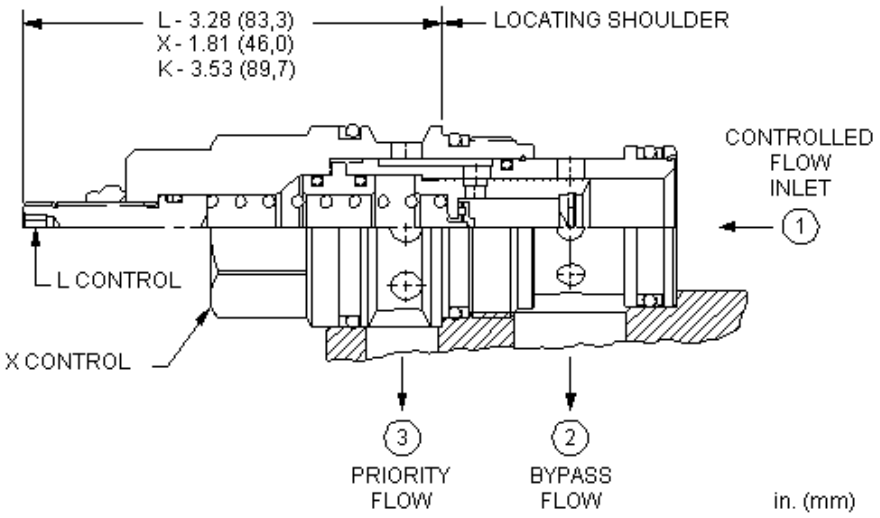

Bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Input Flow	240 L/min.
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

CONFIGURATION OPTIONS

Model Code Example: FREAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .2 - 25 gpm (0,8 - 95 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			**/LH** Mild Steel, Zinc-Nickel

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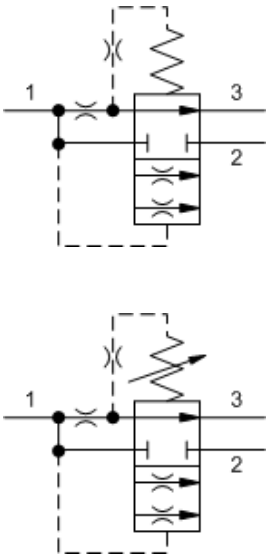

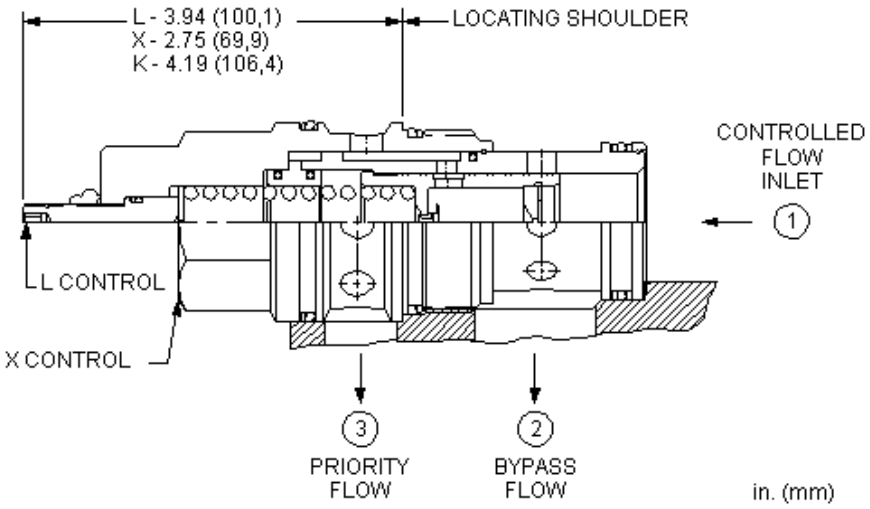

Bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Input Flow	480 L/min.
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

CONFIGURATION OPTIONS

Model Code Example: FRFAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** Replaceable Orifice .2 - 50 gpm (1 - 200 L/min.)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated
K Handknob			

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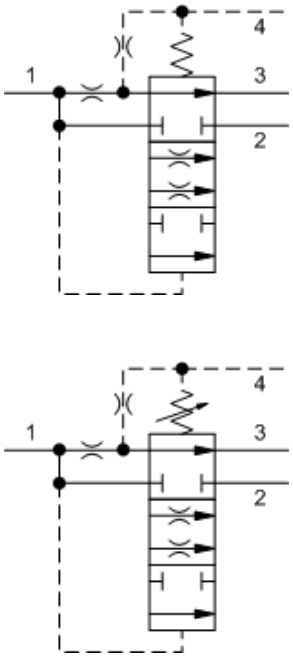

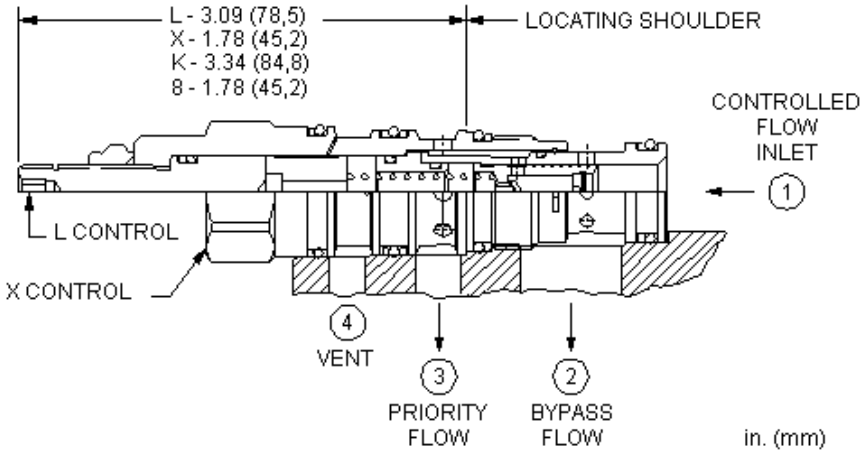

Ventable, bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit. A vent port (port 4) allows these valves to be controlled remotely.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	60 L/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: FVCAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** Replaceable Orifice .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N
L Tuning Adjustment		**V** Viton

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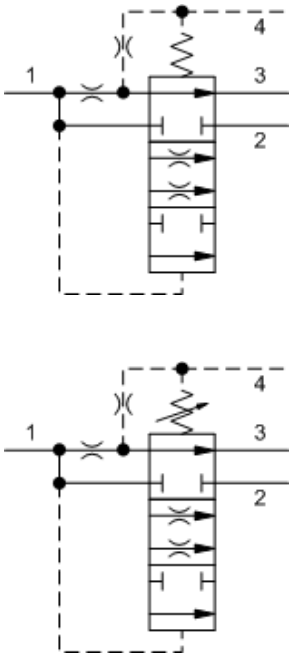

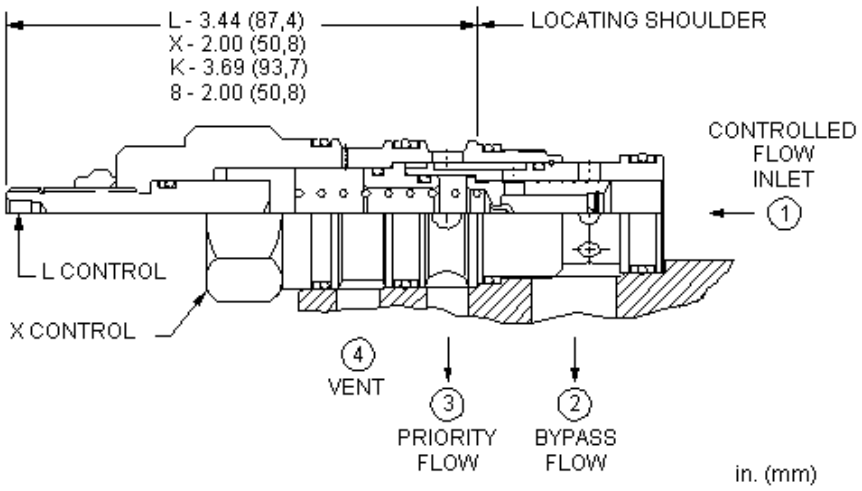

Ventable, bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit. A vent port (port 4) allows these valves to be controlled remotely.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	120 L/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: FVDAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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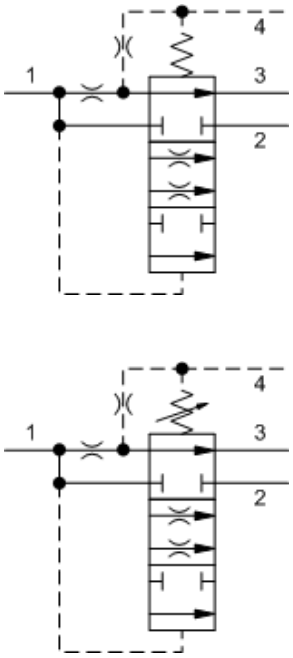

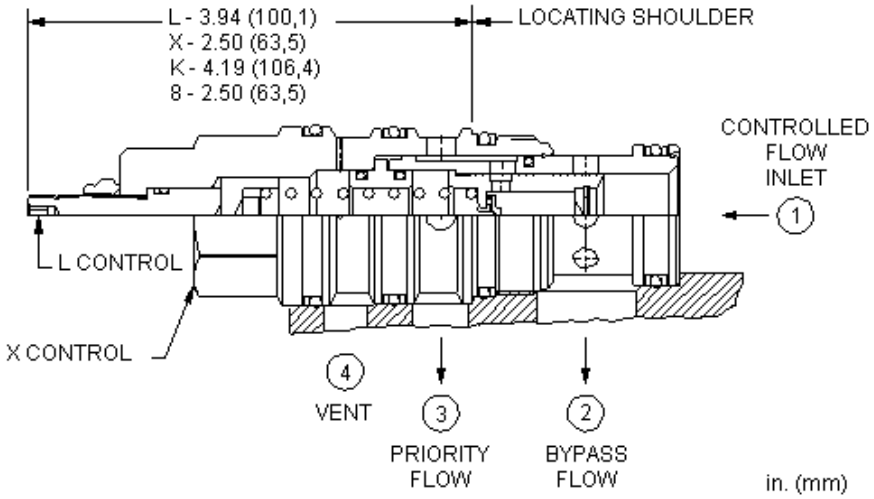

Ventable, bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit. A vent port (port 4) allows these valves to be controlled remotely.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	240 L/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: FVEAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** Replaceable Orifice .2 - 25 gpm (0,8 - 95 L/min.)	**N** Buna-N
K Handknob		**V** Viton
L Tuning Adjustment		

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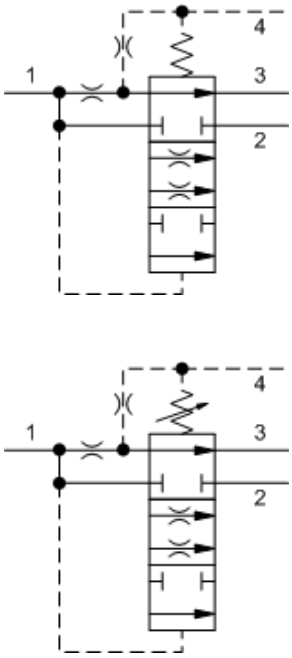

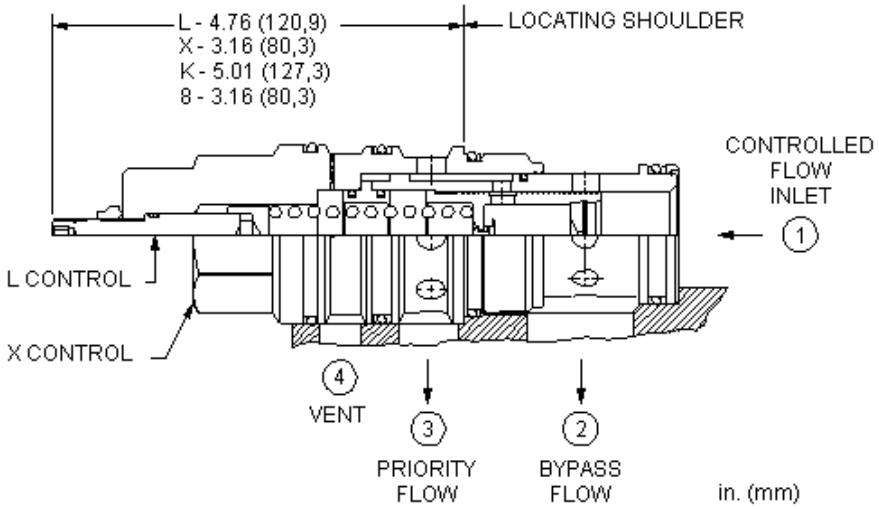

Ventable, bypass/restrictive, fixed-orifice, priority flow controls take an input flow at port 1 and use it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess is bypassed out port 2. The bypass flow may be used in a secondary circuit. A vent port (port 4) allows these valves to be controlled remotely.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	480 L/min.
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: FVFAXAN

CONTROL (X)	SETTING RANGE (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** Replaceable Orifice .2 - 50 gpm (1 - 200 L/min.)	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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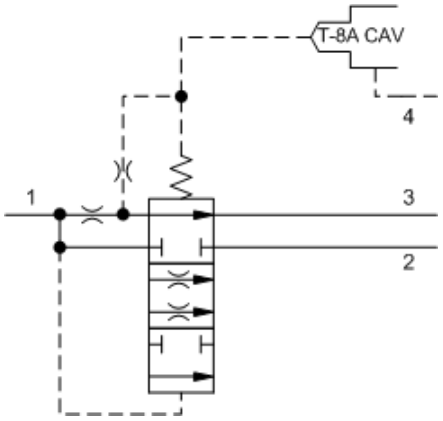
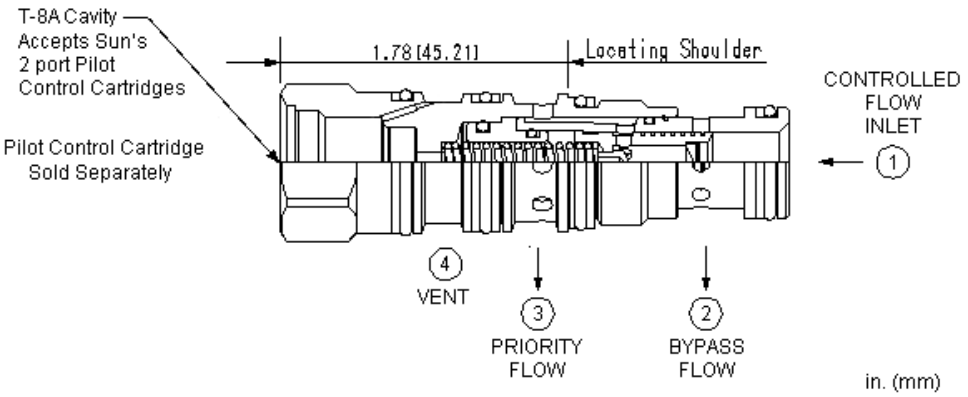
Ventable, fixed orifice, bypass/restrictive, priority, flow control valve with integral T-8A control cavity

SERIES 1 / CAPACITY: 23 L/min. / CAVITY: T-21A

snhy.com/FVCA8





This valve is a ventable, bypass/restrictive, fixed-orifice, priority flow control with an integral pilot control cavity. The pilot control cavity will accept any T-8A pilot pressure or directional control cartridge. It takes an input flow at port 1 and uses it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess flow is bypassed out of port 2. Bypass flow may be used for a secondary circuit. Depending on which pilot control valve is installed in the T-8A cavity, priority flow can be selected electrically, manually, hydraulically or pneumatically.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	60 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

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

CONFIGURATION OPTIONS

Model Code Example: FVCA8AN

SETTING RANGE (A)

- **A** Replaceable Orifice .1 - 6 gpm (0,4 - 23 L/min.)
- **B** Permanent Orifice .1 - 6 gpm (0,4 - 23 L/min.)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

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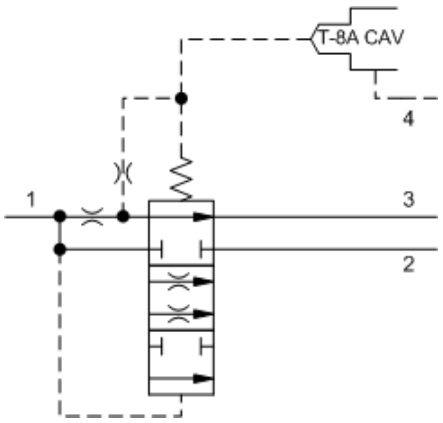
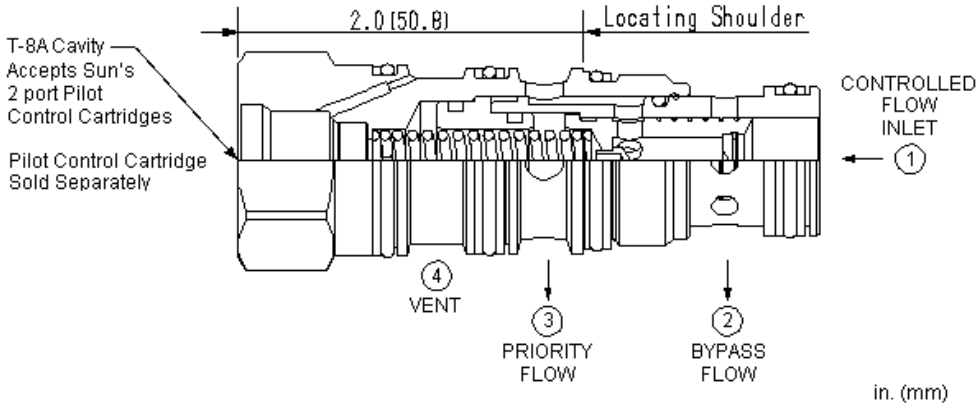
Ventable, fixed orifice, bypass/restrictive, priority, flow control valve with integral T-8A control cavity

SERIES 2 / CAPACITY: 45 L/min. / CAVITY: T-22A

snhy.com/FVDA8





This valve is a ventable, bypass/restrictive, fixed-orifice, priority flow control with an integral pilot control cavity. The pilot control cavity will accept any T-8A pilot pressure or directional control cartridge. It takes an input flow at port 1 and uses it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess flow is bypassed out of port 2. Bypass flow may be used for a secondary circuit. Depending on which pilot control valve is installed in the T-8A cavity, priority flow can be selected electrically, manually, hydraulically or pneumatically.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	120 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990022007
Seal kit - Cartridge	EPDM: 990022014
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

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

CONFIGURATION OPTIONS

Model Code Example: FVDA8AN

SETTING RANGE (A)

- **A** Replaceable Orifice .1 - 12 gpm (0,4 - 45 L/min.)
- **B** Permanent Orifice .1 - 12 gpm (0,4 - 45 L/min.)

SEAL MATERIAL (N)

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

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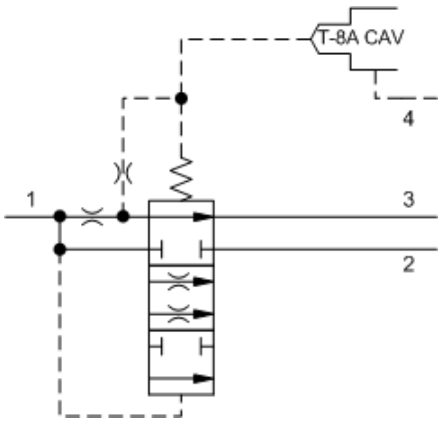

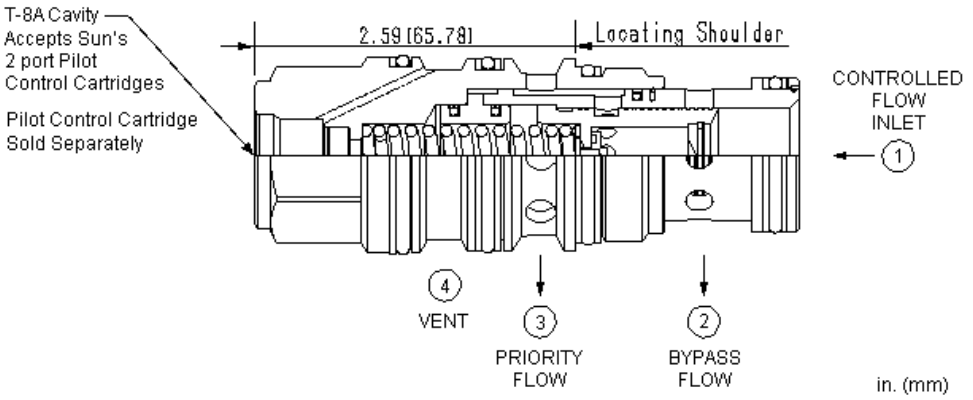

This valve is a ventable, bypass/restrictive, fixed-orifice, priority flow control with an integral pilot control cavity. The pilot control cavity will accept any T-8A pilot pressure or directional control cartridge. It takes an input flow at port 1 and uses it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess flow is bypassed out of port 2. Bypass flow may be used for a secondary circuit. Depending on which pilot control valve is installed in the T-8A cavity, priority flow can be selected electrically, manually, hydraulically or pneumatically.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	240 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

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

CONFIGURATION OPTIONS

Model Code Example: FVEA8AN

SETTING RANGE (A)

- **A** Replaceable Orifice .2 - 25 gpm (0,8 - 95 L/min.)
- **B** Permanent Orifice .2 - 25 gpm (0,8 - 95 L/min.)

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

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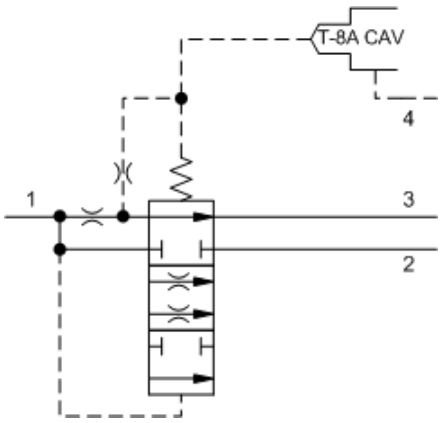

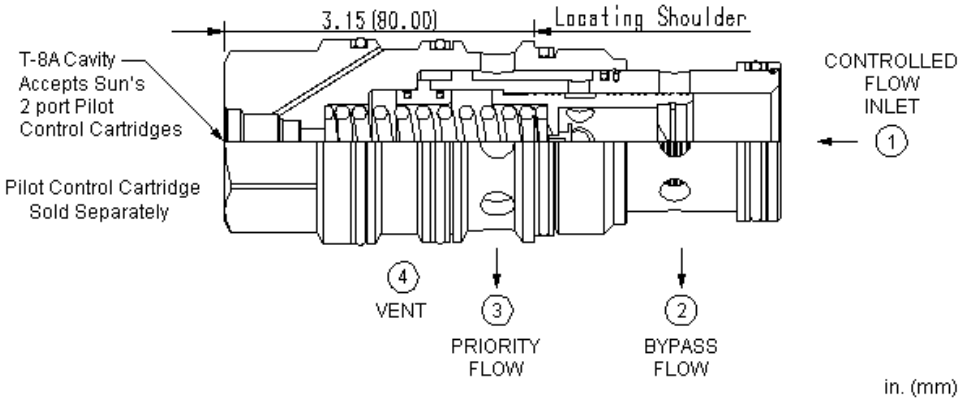

This valve is a ventable, bypass/restrictive, fixed-orifice, priority flow control with an integral pilot control cavity. The pilot control cavity will accept any T-8A pilot pressure or directional control cartridge. It takes an input flow at port 1 and uses it to satisfy the priority flow at port 3. If the input flow exceeds the priority flow requirement, the excess flow is bypassed out of port 2. Bypass flow may be used for a secondary circuit. Depending on which pilot control valve is installed in the T-8A cavity, priority flow can be selected electrically, manually, hydraulically or pneumatically.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Nominal Vent Flow	0,75 L/min.
Maximum Input Flow	480 L/min.
Pilot Control Cavity	T-8A
Pilot Control Valve Installation Torque	27 - 33 Nm
Pilot Control Valve Hex Size	22,2 mm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

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

CONFIGURATION OPTIONS

Model Code Example: FVFA8AN

SETTING RANGE	(A)
A	Replaceable Orifice .2 - 50 gpm (1 - 200 L/min.)
B	Permanent Orifice .2 - 50 gpm (1 - 200 L/min.)

SEAL MATERIAL	(N)
N	Buna-N
E	EPDM
V	Viton

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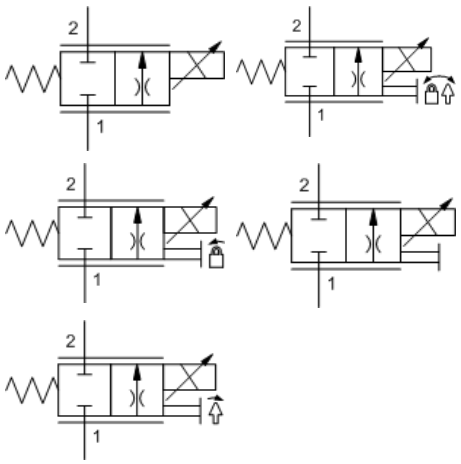

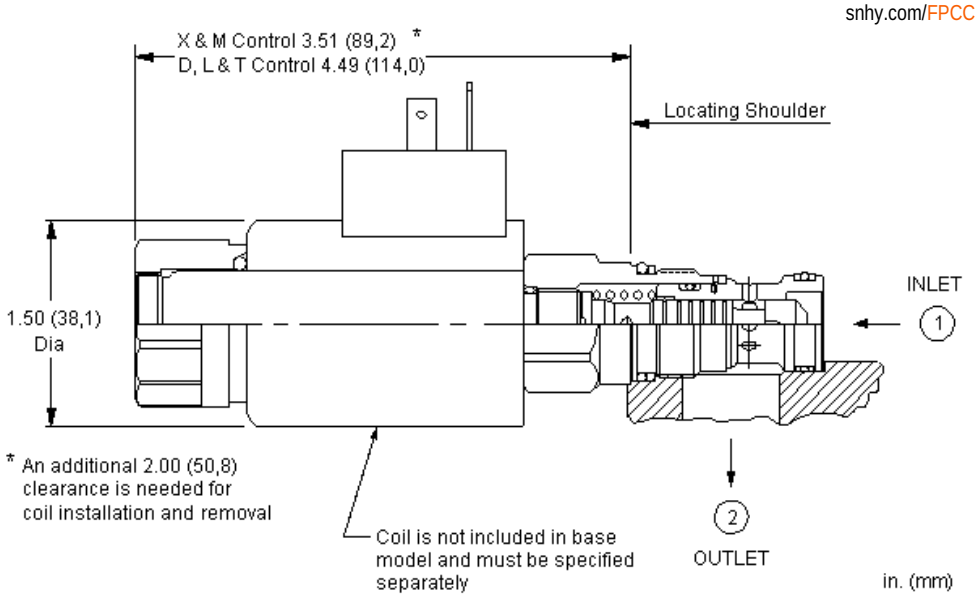

This valve is a normally closed, electro-proportional throttle that is spring-biased closed. Energizing the coil generates an opening force on the spool proportional to the command current, and this force is countered by the spring and flow forces. This force balance creates a metering orifice whose effective size is proportional to the current. The valve exhibits a large degree of self-compensation in the 1-to-2 direction and will provide proportional flow control in the 2-to-1 direction with the addition of an external compensator. Full reverse flow (2-to-1) with 100% command in the 2-to-1 direction is possible without a compensator under all conditions.

TECHNICAL DATA

Maximum Valve Leakage at 110 SUS (24 cSt)	100 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	EPDM: 990010014
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

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

CONFIGURATION OPTIONS

Model Code Example: FPCCXCN

CONTROL (X)	FLOW RATE (C)	SEAL MATERIAL (N)	COIL *
X No Manual Override	**C** .25 - 7 gpm (1 - 28 L/min.)	**N** Buna-N	No coil
D Twist/Lock (Dual) Manual Override	**A** .1 - 1.5 gpm (0,4 - 6 L/min.)	**E** EPDM	**212** DIN 43650-Form A, 12 VDC
E Twist (Extended) Manual Override	**B** .15 - 3.5 gpm (0,6 - 14 L/min.)	**V** Viton	**224** DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override	**D** .25 - 10 gpm (1 - 40 L/min.)		**712** Twin Lead, 12 VDC
M Manual Override			**724** Twin Lead, 24 VDC
T Twist (Momentary) Manual Override			**912** Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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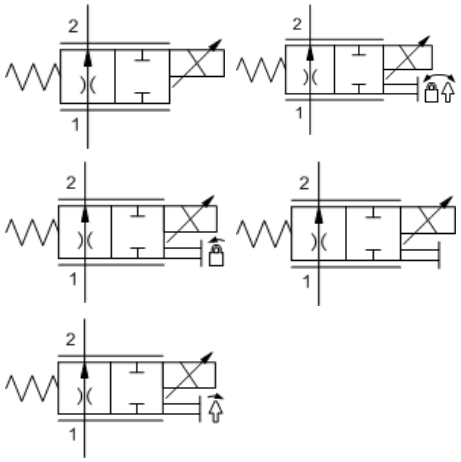

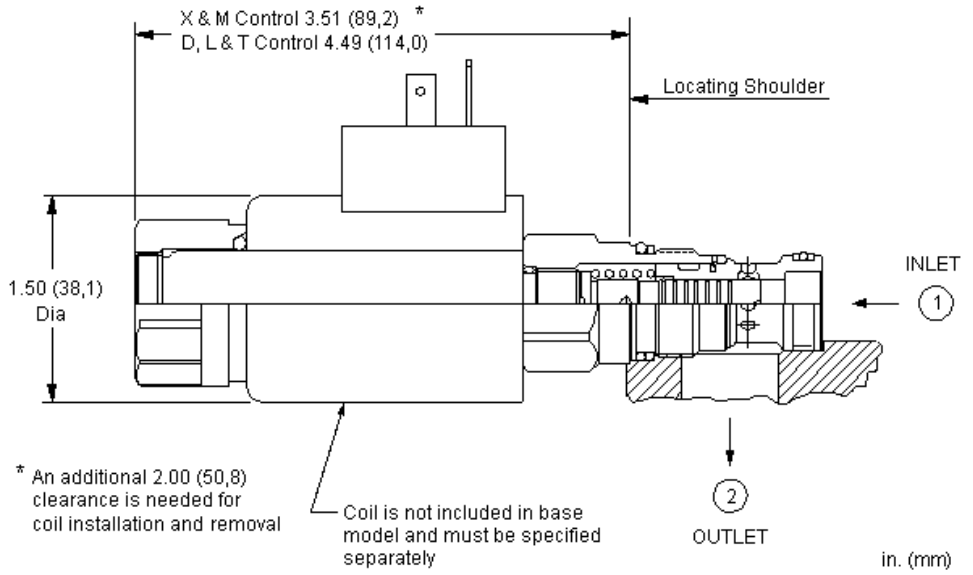

This valve is a normally open electro-proportional throttle that is spring-biased open. Energizing the coil generates an closing force on the spool proportional to the command current, and this force is countered by the spring and flow forces. This force balance creates a metering orifice whose effective size is proportional to the current. The valve exhibits a large degree of self-compensation in the 1-to-2 direction and will provide proportional flow control in the 2-to-1 direction with the addition of an external compensator. Full reverse flow (2-to-1) with no command in the 2-to-1 direction is possible without a compensator under all conditions.

TECHNICAL DATA

Maximum Valve Leakage at 110 SUS (24 cSt)	100 cc/min.@210 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990413007
Seal kit - Cartridge	Polyurethane: 990413002
Seal kit - Cartridge	Viton: 990413006

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

CONFIGURATION OPTIONS

Model Code Example: FPCHXCN

CONTROL (X)	FLOW RATE (C)	SEAL MATERIAL (N)	COIL *
X No Manual Override	**C** .25 - 7 gpm (1 - 28 L/min.)	**N** Buna-N	No coil
D Twist/Lock (Dual) Manual Override	**A** .1 - 1.5 gpm (0,4 - 6 L/min.)	**E** EPDM	**212** DIN 43650-Form A, 12 VDC
E Twist (Extended) Manual Override	**B** .15 - 3.5 gpm (0,6 - 14 L/min.)	**V** Viton	**224** DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override			**712** Twin Lead, 12 VDC
M Manual Override			**724** Twin Lead, 24 VDC
T Twist (Momentary) Manual Override			**912** Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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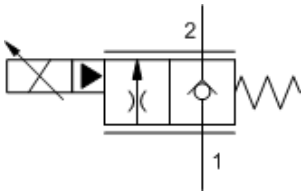
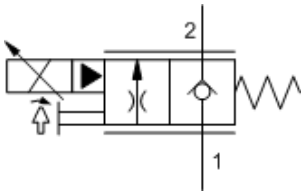
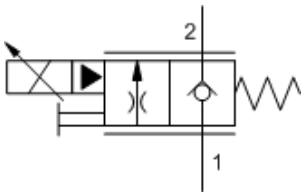


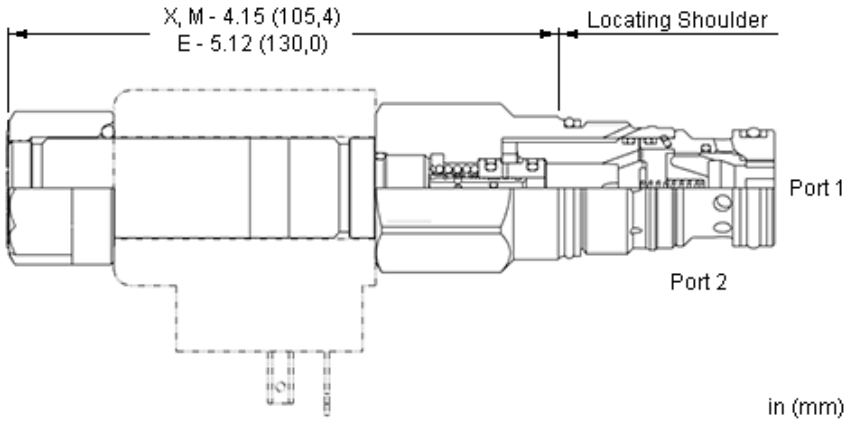
X-Control



E-Control



M-Control



This valve is a pilot-operated, normally closed, electro-proportional throttle with reverse free-flow check. Energizing the coil generates an opening force on the pilot stage which vents the main stage poppet to open proportionally. Metered flow is from port 1 to port 2 with reverse free flow from port 2 to port 1.

TECHNICAL DATA

Recommended dither frequency	100 Hz
Maximum Valve Leakage at 110 SUS (24 cSt)	20 drops/min.@5000 psi
Manual Override Force Requirement	33 N/100 bar @ Port 1
Deadband, nominal (as a percentage of input)	25%
Manual Override Stroke	1,50 mm
Seal kit - Cartridge	Buna: 990203007
Seal kit - Cartridge	EPDM: 990203014
Seal kit - Cartridge	Viton: 990203006

CONFIGURATION OPTIONS

Model Code Example: FPFKXDN

CONTROL (X)	FLOW RATE (D)	SEAL MATERIAL (N)	COIL *
X No Manual Override	**D** Nominal 20 gpm @ 200 psi (14 bar) differential (80 L/min.)	**N** Buna-N	No coil
E Twist (Extended) Manual Override	**B** Nominal 10 gpm @ 200 psi (14 bar) differential (40 L/min.)	**E** EPDM	**212** DIN 43650-Form A, 12 VDC
M Manual Override		**V** Viton	**224** DIN 43650-Form A, 24 VDC
			712 Twin Lead, 12 VDC
			724 Twin Lead, 24 VDC
			912 Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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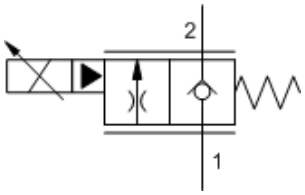
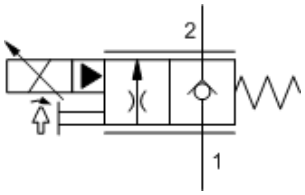
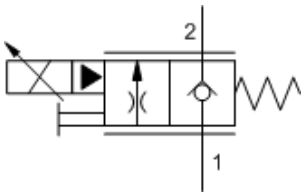


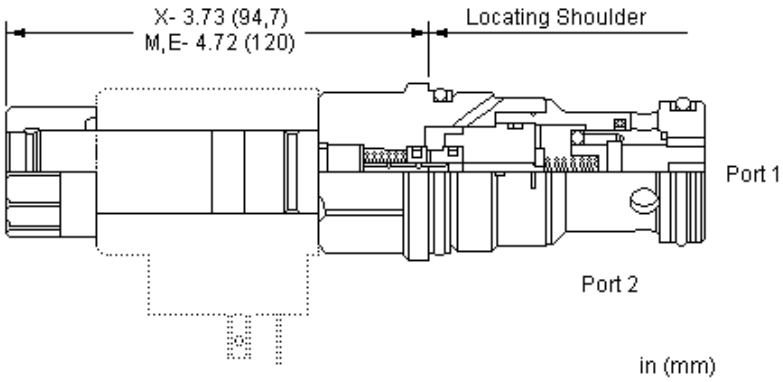
X-Control



E-Control



M-Control



This valve is a pilot-operated, normally closed, electro-proportional throttle with reverse free-flow check. Energizing the coil generates an opening force on the pilot stage which vents the main stage poppet to open proportionally. Metered flow is from port 1 to port 2 with reverse free flow from port 2 to port 1.

TECHNICAL DATA

Recommended dither frequency	100 Hz
Maximum Valve Leakage at 110 SUS (24 cSt)	0,7 cc/min.@350 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Deadband, nominal (as a percentage of input)	25%
Manual Override Stroke	1,50 mm
Seal kit - Cartridge	Buna: 990016007
Seal kit - Cartridge	Polyurethane: 990016002
Seal kit - Cartridge	Viton: 990016006

CONFIGURATION OPTIONS

Model Code Example: FPHKXCN

CONTROL (X)

- **X** No Manual Override
- **E** Twist (Extended) Manual Override
- **M** Manual Override

FLOW RATE (C)

- **C** Nominal 40 gpm @ 200 psi (14 bar) differential (160 L/min.)
- **A** Nominal 20 gpm @ 200 psi (14 bar) differential (80 L/min.)
- **E** Nominal 60 gpm @ 200 psi (14 bar) differential (240 L/min.)

SEAL MATERIAL (N)

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

COIL *

- No coil
- **212** DIN 43650-Form A, 12 VDC
- **224** DIN 43650-Form A, 24 VDC
- **712** Twin Lead, 12 VDC
- **724** Twin Lead, 24 VDC
- **912** Deutsch DT04-2P, 12 VDC
- **924** Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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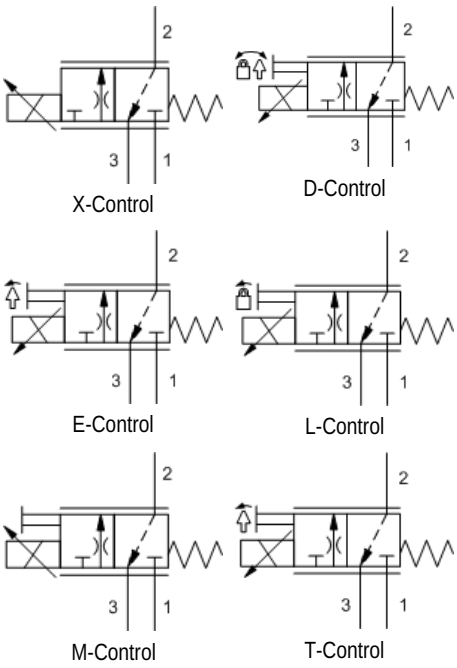

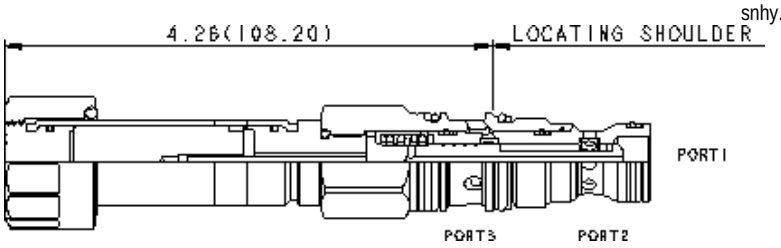

This valve is a 3-way, meter-in, electro-proportional throttle. The flow path, unenergized, has the supply blocked at port 1 and port 2 is drained to tank at port 3. Energizing the coil generates a closing force on the spool, creating a metering orifice in the 1 to 2 direction that is proportional to the coil command current. The valve self-compensates in the 1-to-2 direction and with the addition of an external compensator will provide pressure compensated flow control.

Flow in the 2-to-3 direction is not proportional and is limited in the interest of increased resolution and capacity. Flow capacity in the 2-to-3 direction is about 1.5 gpm (6 L/min). This valve is meant to be used in a circuit that has a separate passage to tank such as a cushion lock circuit. Two FMDAs in conjunction with a cushion lock circuit create a meter-in/meter-out 3-position 4-way.

TECHNICAL DATA

Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	Viton: 990411006

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

CONFIGURATION OPTIONS

Model Code Example: FMDAXDN

CONTROL (X)	FLOW RATE (D)	SEAL MATERIAL (N)	COIL *
X No Manual Override	**D** .1 - 9 gpm (0,4 - 34 L/min.)	**N** Buna-N	No coil
D Twist/Lock (Dual) Manual Override	**A** .1 - 1.6 gpm (0,4 - 6.1 L/min.)	**V** Viton	**212** DIN 43650-Form A, 12 VDC
E Twist (Extended) Manual Override	**B** .1 - 4 gpm (0,4 - 15 L/min.)		**224** DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override	**C** .1 - 6 gpm (0,4 - 23 L/min.)		**712** Twin Lead, 12 VDC
M Manual Override			**724** Twin Lead, 24 VDC
T Twist (Momentary) Manual Override			**912** Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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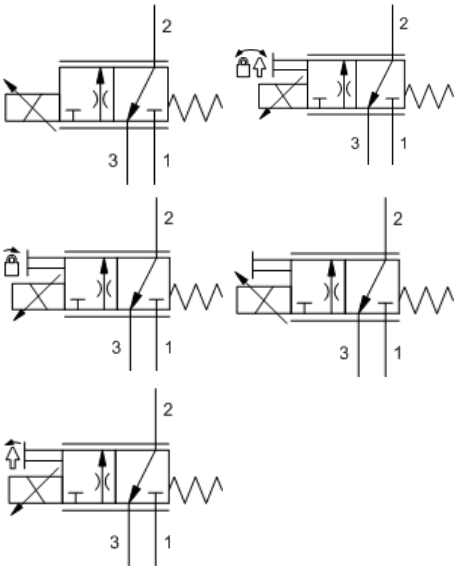

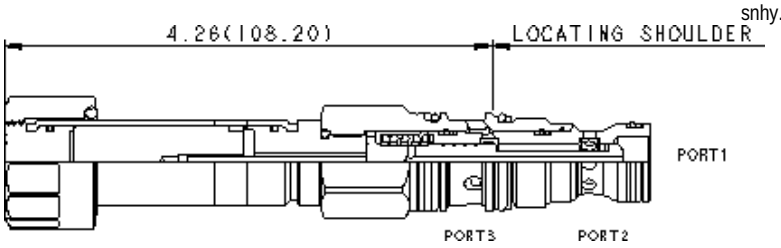

This valve is a 3-way, meter-in, electro-proportional throttle. The flow path, unenergized, has the supply blocked at port 1 and port 2 connected to tank at port 3. Energizing the coil generates a closing force on the spool, creating a metering orifice in the 1 to 2 direction that is proportional to the coil command current. The valve self-compensates in the 1 to 2 direction and with the addition of an external compensator will provide pressure compensated flow control. Flow in the 2 to 3 direction is not proportional.

TECHNICAL DATA

Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Manual Override Force Requirement	33 N/100 bar @ Port 1
Manual Override Stroke	2,5 mm
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	Viton: 990411006

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

CONFIGURATION OPTIONS

Model Code Example: FMDBXCN

CONTROL (X)	FLOW RATE (C)	SEAL MATERIAL (N)	COIL *
X No Manual Override	**C** .1 - 6 gpm (0,4 - 23 L/min.)	**N** Buna-N	No coil
D Twist/Lock (Dual) Manual Override	**A** .1 - 1.6 gpm (0,4 - 6.1 L/min.)	**V** Viton	**212** DIN 43650-Form A, 12 VDC
E Twist (Extended) Manual Override	**B** .1 - 4 gpm (0,4 - 15 L/min.)		**224** DIN 43650-Form A, 24 VDC
L Twist/Lock (Detent) Manual Override			**712** Twin Lead, 12 VDC
M Manual Override			**724** Twin Lead, 24 VDC
T Twist (Momentary) Manual Override			**912** Deutsch DT04-2P, 12 VDC
			924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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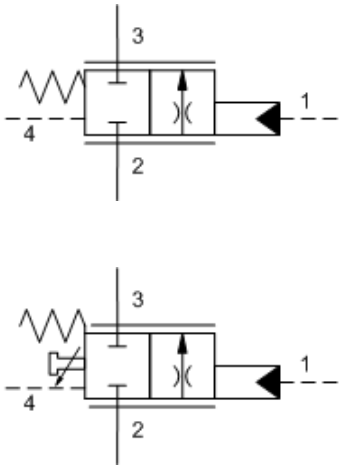

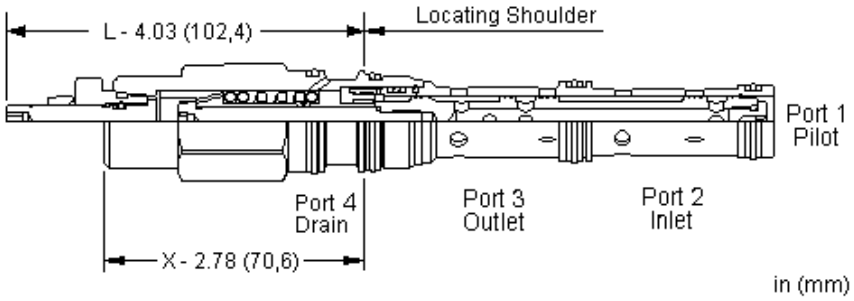

in (mm)

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

The valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	5,5 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Hysteresis	± 2 %
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

NOTES When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTCAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Stroke Adjustment		**V** Viton

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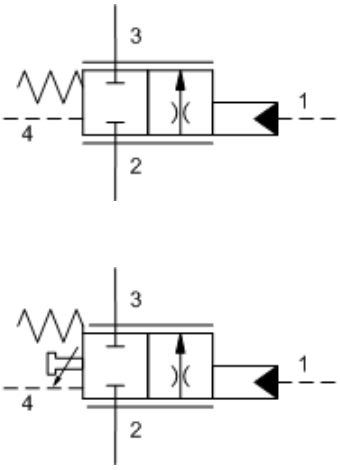

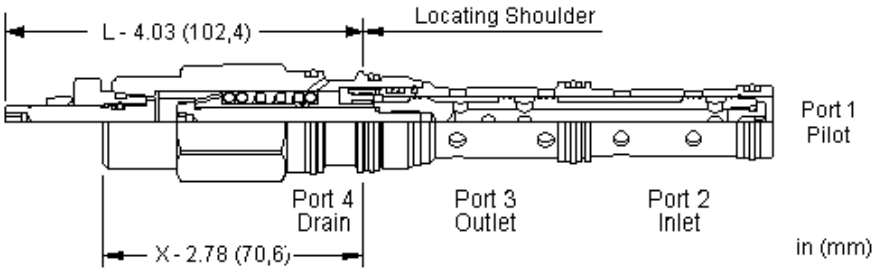

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

The valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	5,5 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Hysteresis	± 2 %
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

NOTES When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTDAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Stroke Adjustment		**V** Viton

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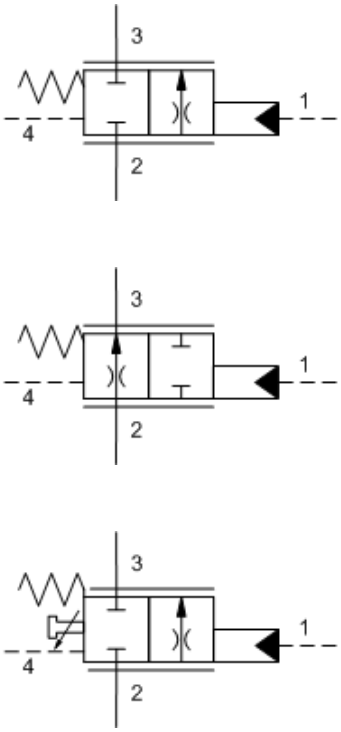

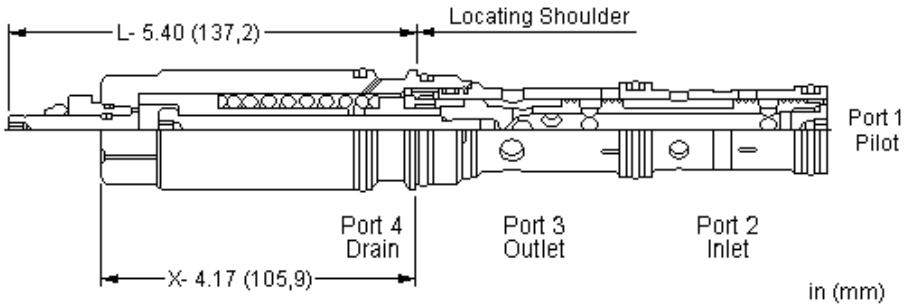

This valve is a 2-way, 2-position proportional throttle. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

The valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	5,5 bar
Pilot Pressure Required for Full Shift at Rated Flow	24 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Hysteresis	± 2 %
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

NOTES When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTEAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Stroke Adjustment	**H** Normally Open	**V** Viton

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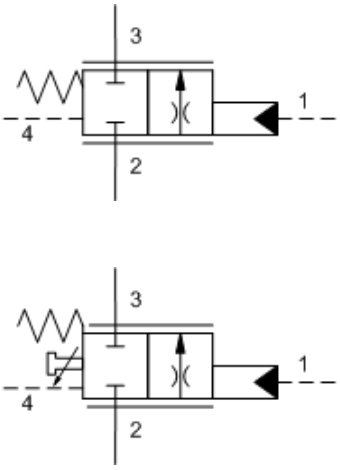

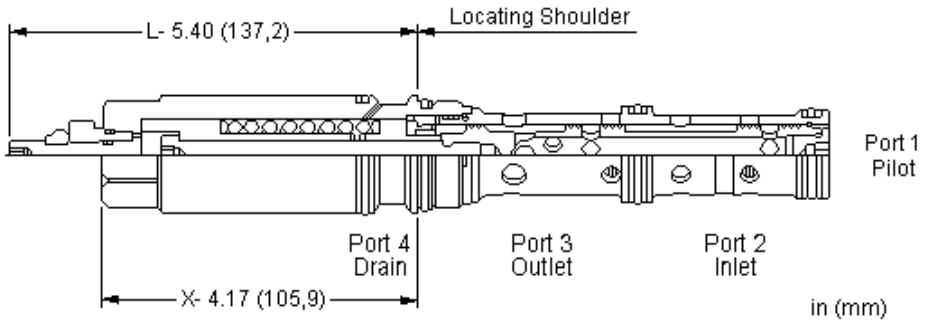

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 opposes the spring and creates a variable metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

The valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	4 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Adjustment - Number of Counterclockwise Turns - Fully Closed to Fully Open	5
Hysteresis	± 2 %
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

NOTES When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTFAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**C** Normally Closed	**N** Buna-N	Standard Material/Coating
L Stroke Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated

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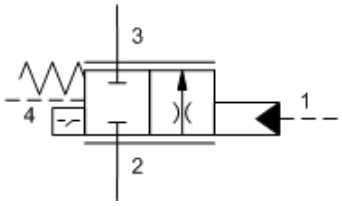

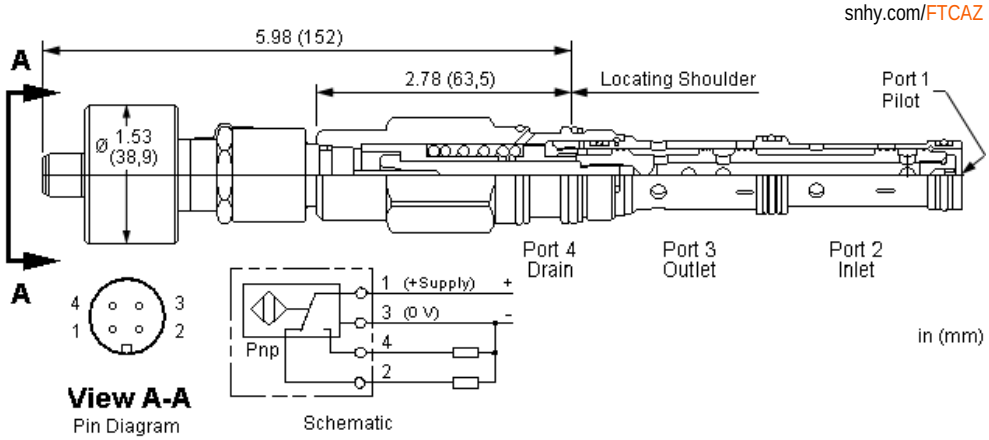

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	3,5 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

NOTES When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTCAZCN

SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
C Normally Closed	**N** Buna-N
	V Viton

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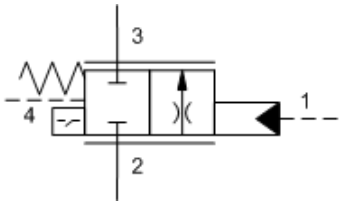

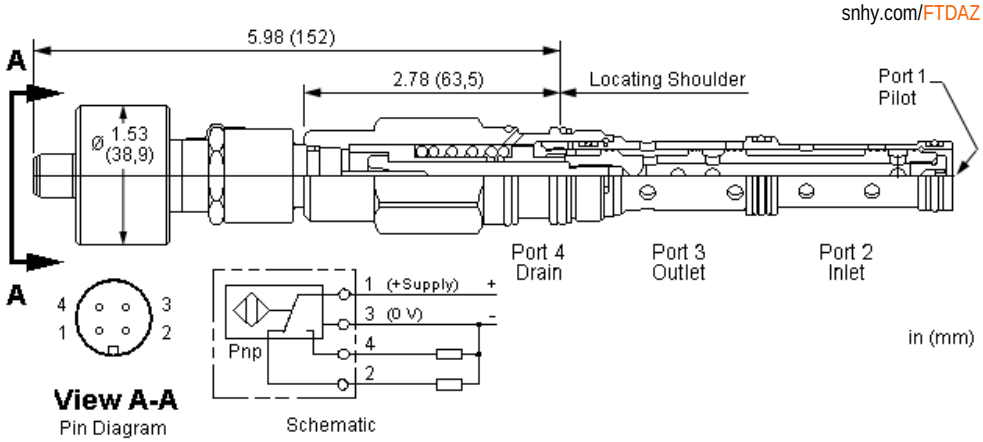

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,82 cc
Seal kit - Cartridge	Buna: 990152007
Seal kit - Cartridge	Viton: 990152006

NOTES When installed in Sun's standard T-52A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTDAZCN

SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
C Normally Closed	**N** Buna-N
	V Viton

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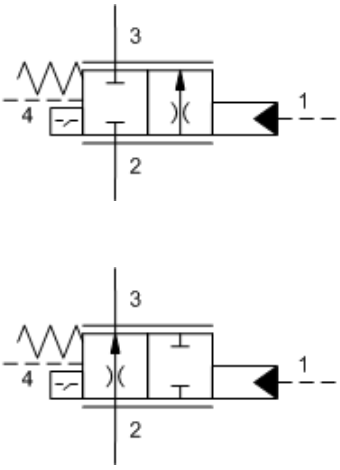

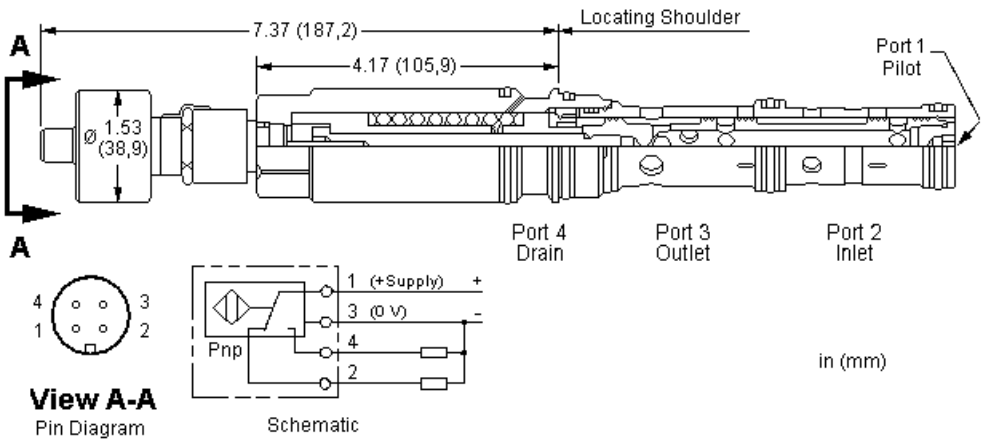

This valve is a 2-way, 2-position proportional throttle. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design, Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide position confirmation.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	5,5 bar
Pilot Pressure Required for Full Shift at Rated Flow	24 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

NOTES When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTEAZCN

SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
C Normally Closed	**N** Buna-N
H Normally Open	**V** Viton

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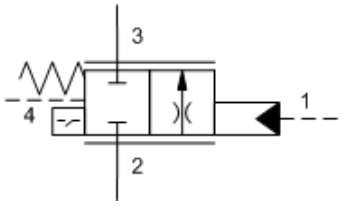

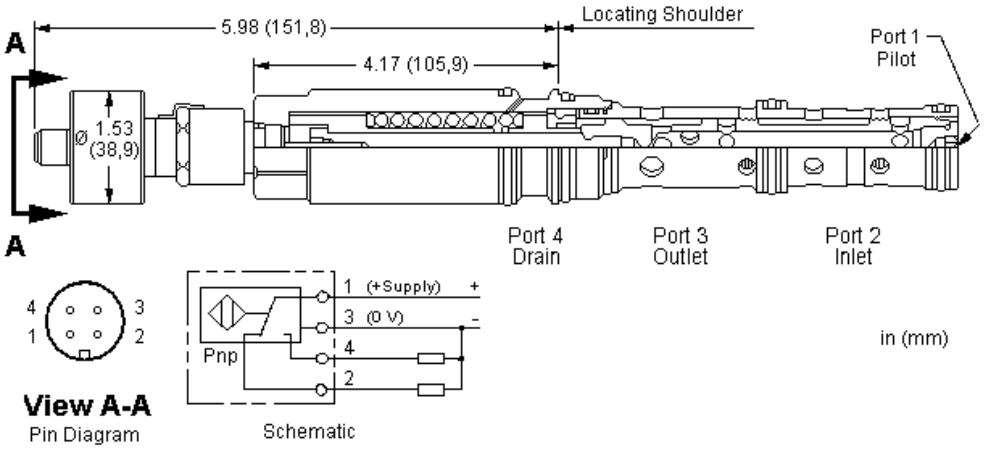

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The metering passage is self-compensating.

This valve uses a dual-path design. Ports 2 and 3 incorporate a double-port area.

This valve incorporates a position switch to provide confirmation that the valve is closed.

TECHNICAL DATA

Minimum Pilot Pressure Required to Shift Valve	4 bar
Pilot Pressure Required for Full Shift at Rated Flow	20 bar
Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	160 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Seal kit - Cartridge	Buna: 990053007
Seal kit - Cartridge	Viton: 990053006

NOTES When installed in Sun's standard T-53A line mount manifold, plug unused ports and expect higher pressure drops.

CONFIGURATION OPTIONS

Model Code Example: FTFAZCN

SPOOL CONFIGURATION (C)

C Normally Closed

SEAL MATERIAL (N)

N Buna-N

V Viton

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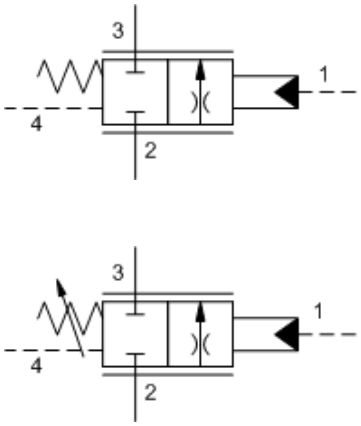

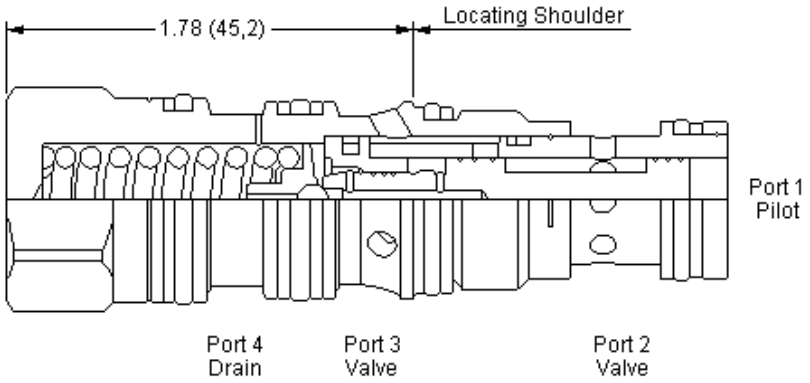

in (mm)

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	EPDM: 990021014
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: FKBAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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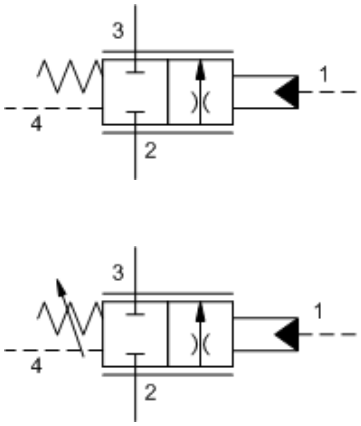

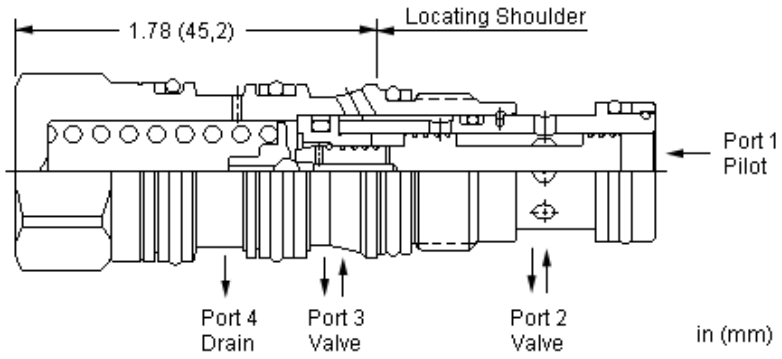

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: FKCAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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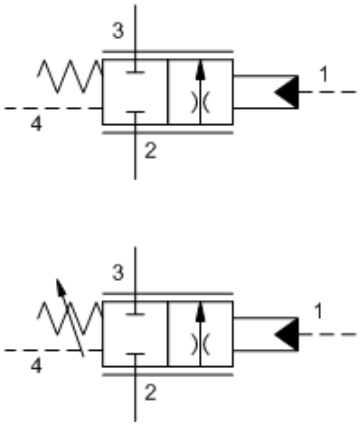

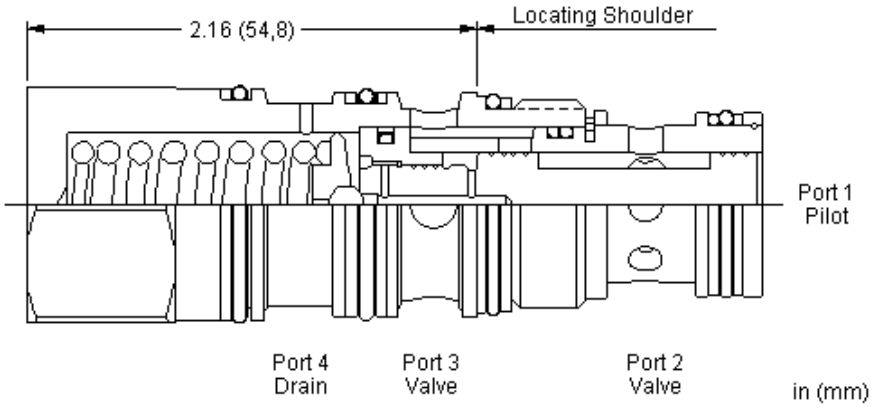

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	.03 in³
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022002
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: FKDAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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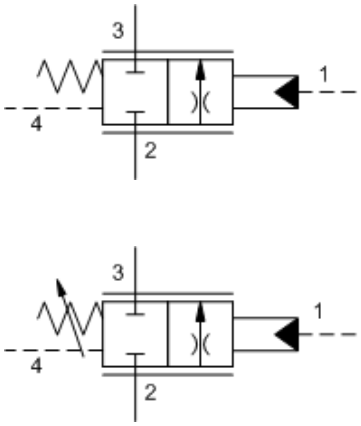

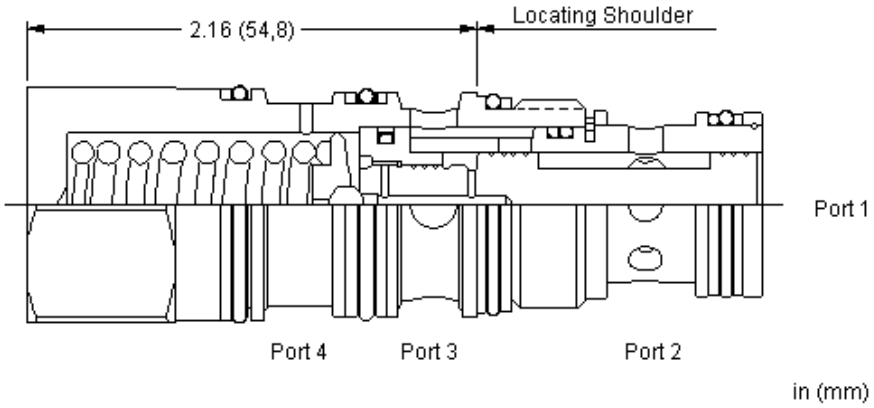

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	4,9 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022002
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: FKEAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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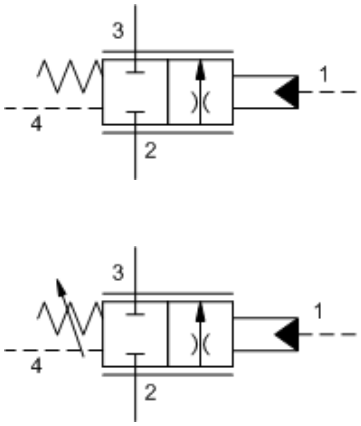

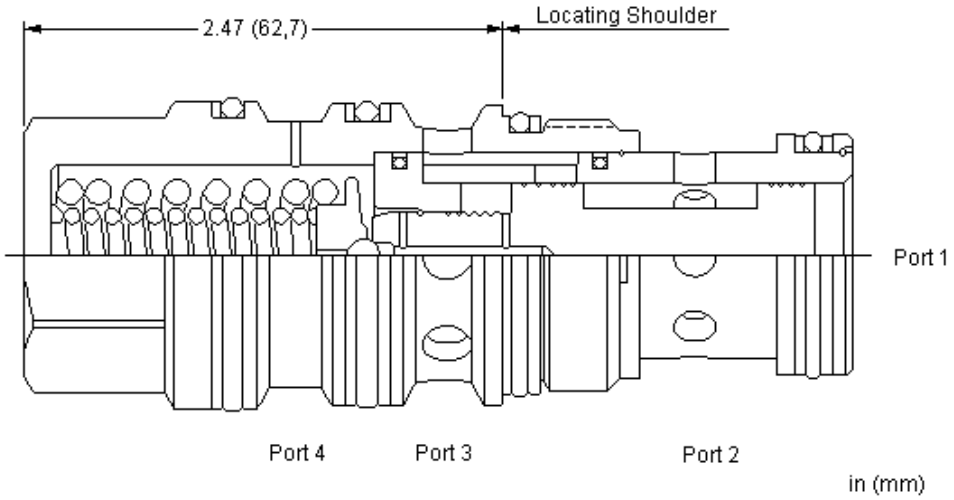

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: FKFAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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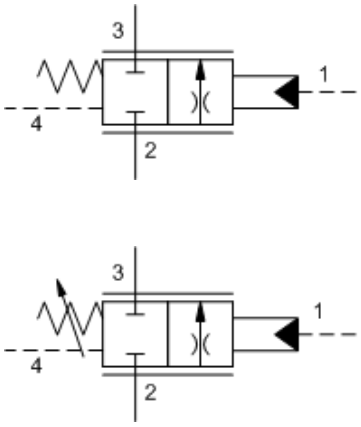

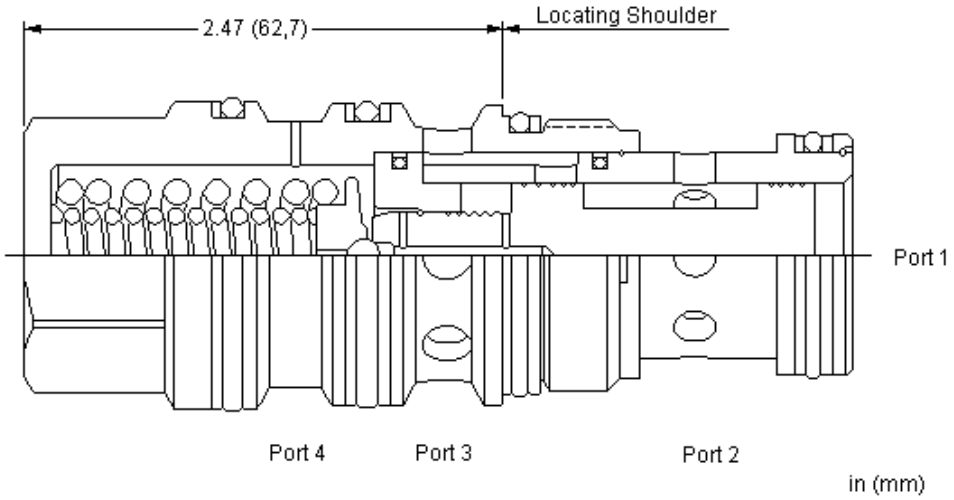

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: FKGAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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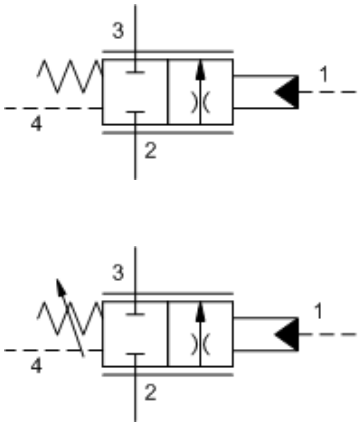

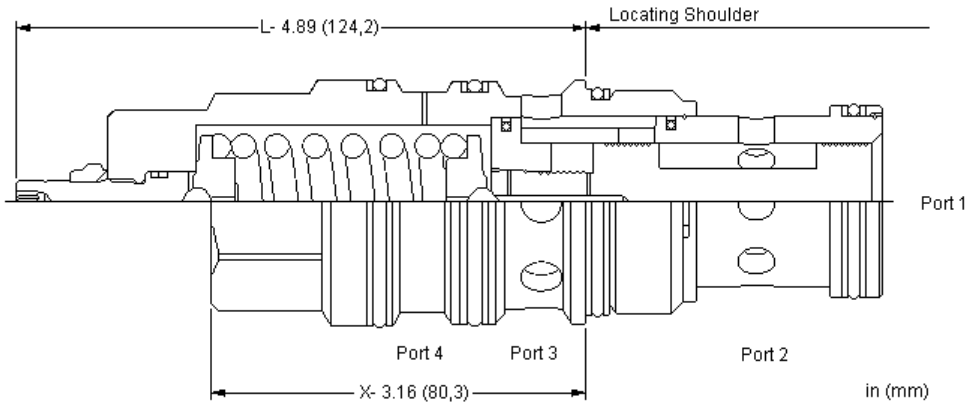

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	98 cc/min.@70 bar
Pilot Volume Displacement	3,3 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: FKHAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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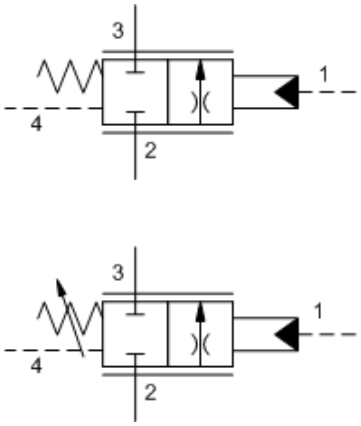

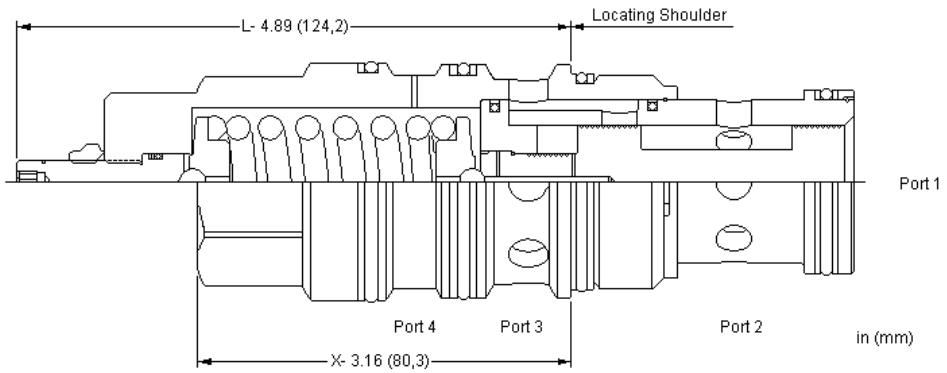

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	98 cc/min.@70 bar
Pilot Volume Displacement	3,3 cc
Minimum Pilot Pressure to Operate	7 bar
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: FKIAXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**C** Normally Closed	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment		**V** Viton	**/AP** Stainless Steel, Passivated

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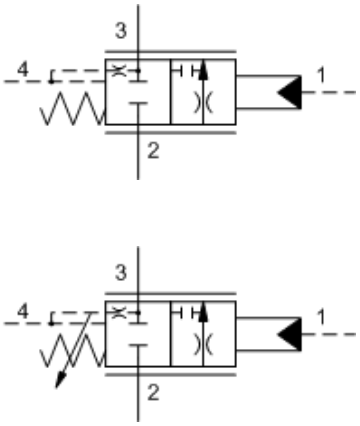

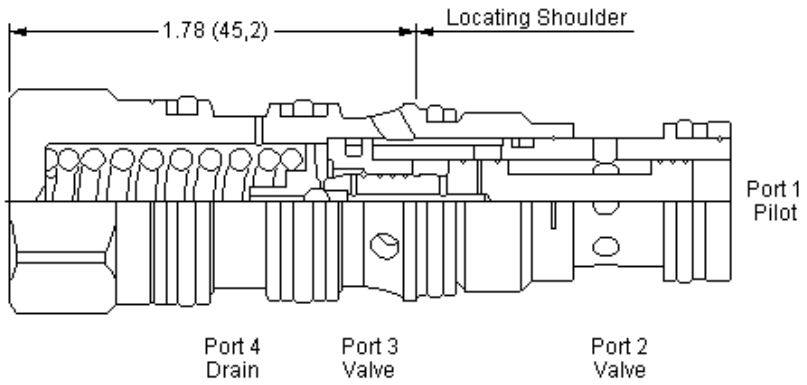

in (mm)

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: FKBBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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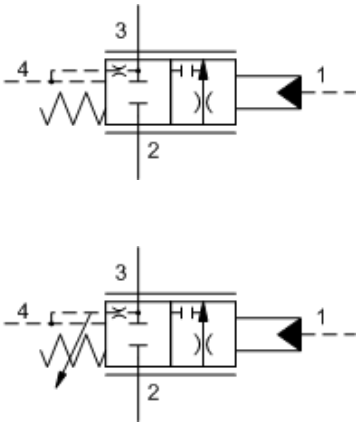

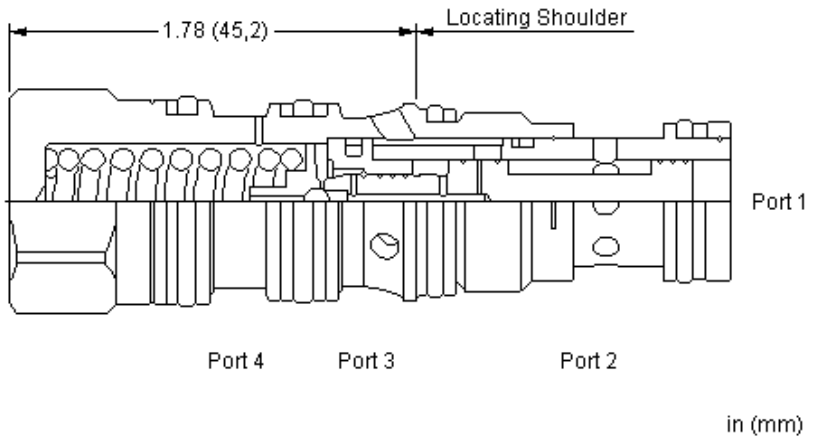

in (mm)

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	0,33 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: FKCBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Standard Screw Adjustment		**V** Viton

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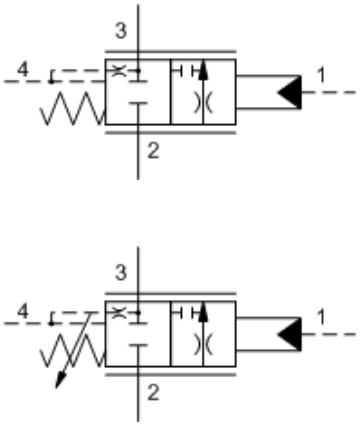

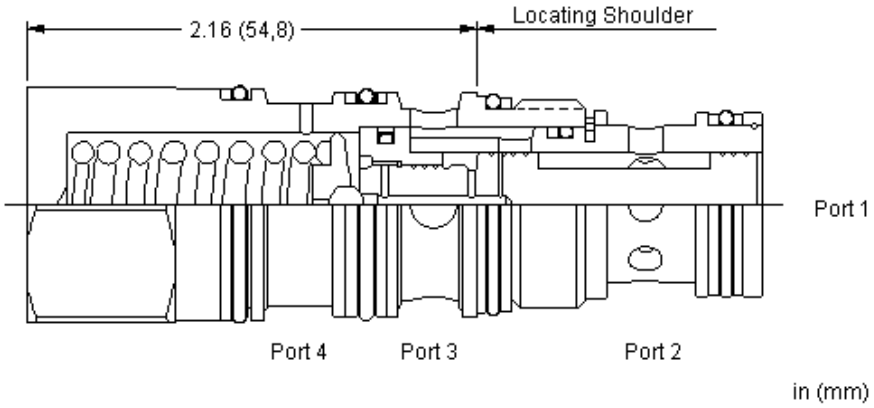

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	4,9 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022002
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: FKDBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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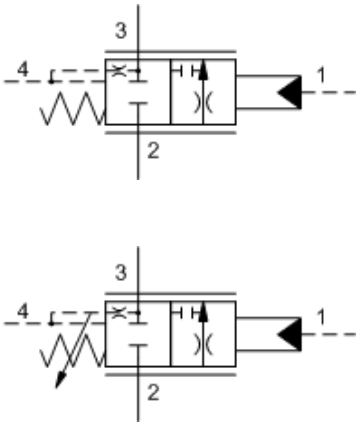

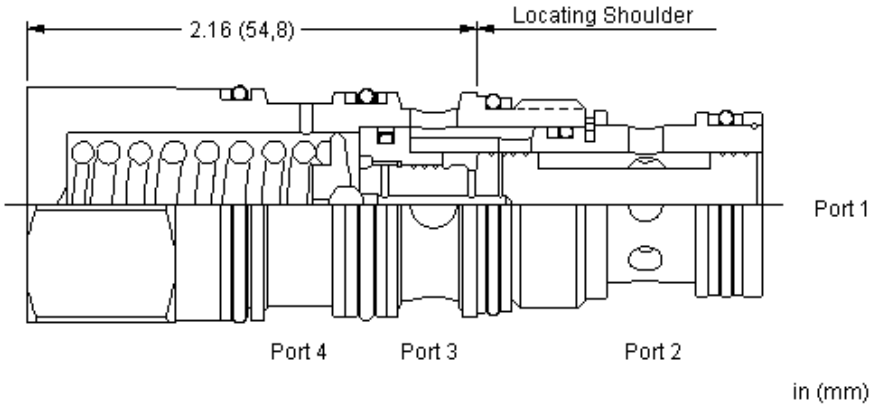

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Pilot Volume Displacement	4,9 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990022002
Seal kit - Cartridge	Polyurethane: 990022002
Seal kit - Cartridge	Viton: 990022006

CONFIGURATION OPTIONS

Model Code Example: FKEBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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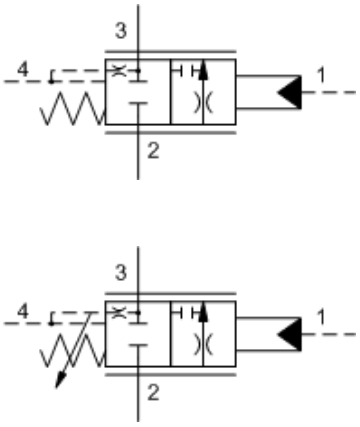

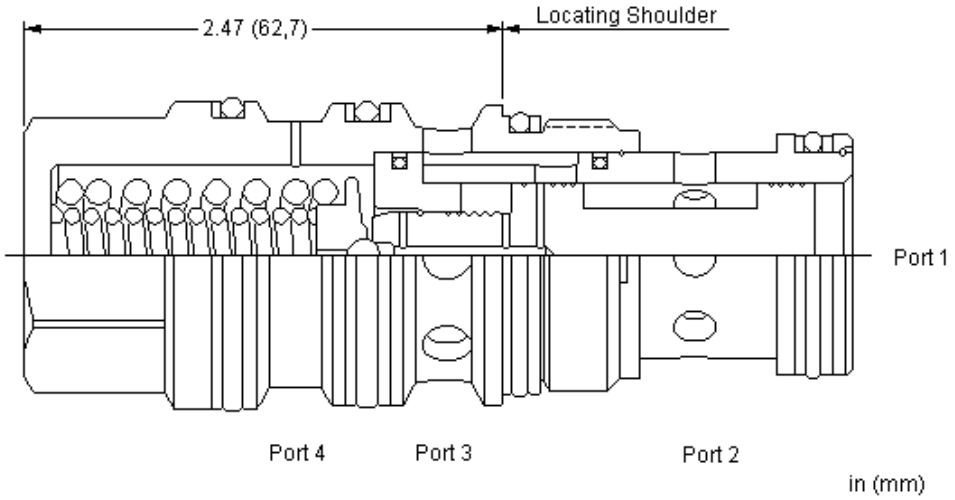

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

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Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	EPDM: 990023014
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: FKFBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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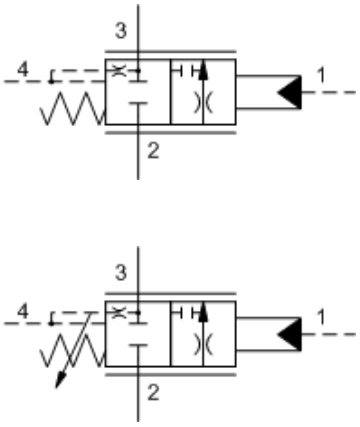

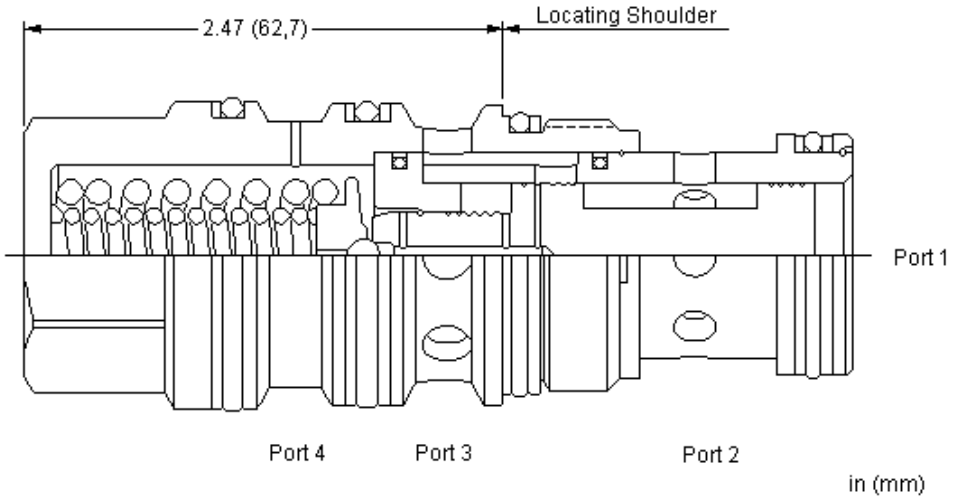

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Pilot Volume Displacement	1,6 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990023007
Seal kit - Cartridge	Polyurethane: 990023002
Seal kit - Cartridge	Viton: 990023006

CONFIGURATION OPTIONS

Model Code Example: FKGBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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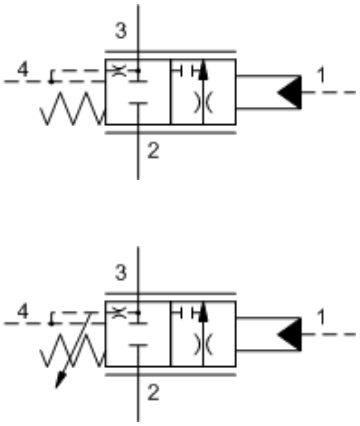

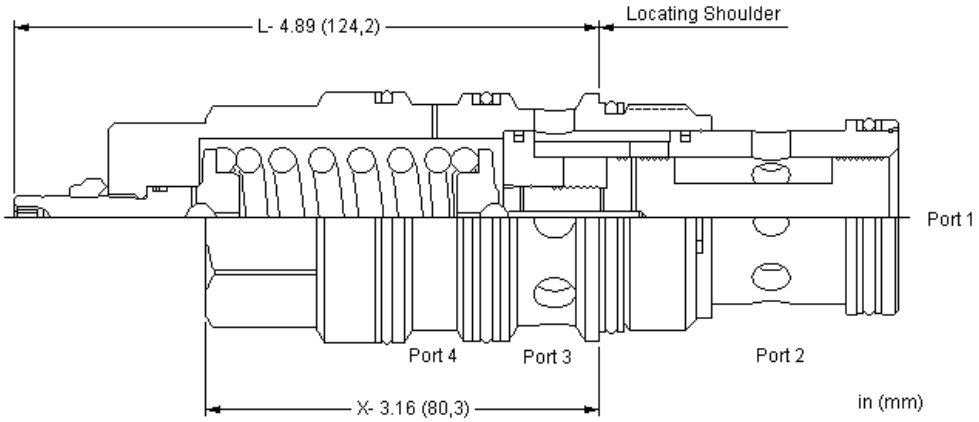

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	98 cc/min.@70 bar
Pilot Volume Displacement	3,3 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	EPDM: 990024014
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: FKHBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**E** EPDM
		V Viton

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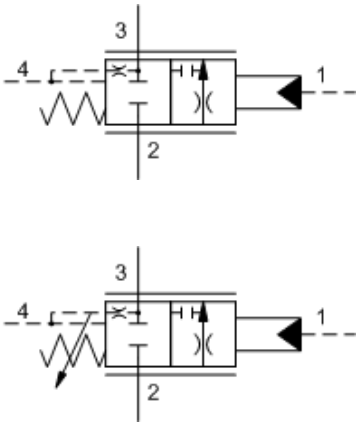

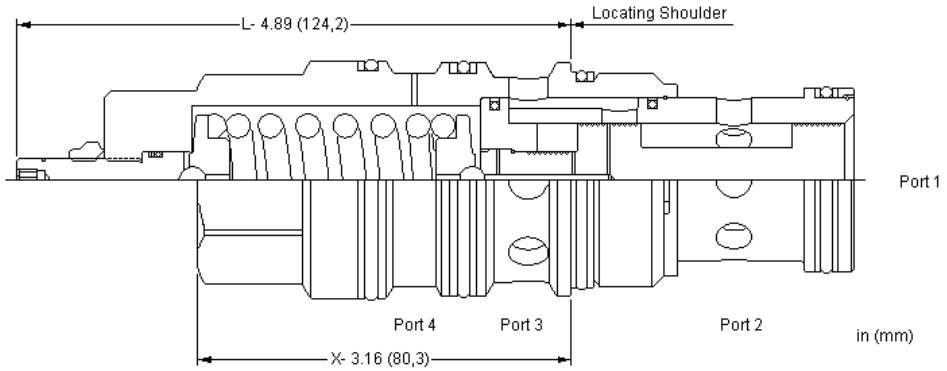

This valve is a 2-way, 2-position proportional throttle. Ports 2 and 3 are normally closed. Pilot pressure at port 1 creates a metering orifice between port 2 and 3 that is proportional to the pressure at 1. The force balance of the flow forces, spring and pilot pressure results in a degree of partial self-compensation as the load pressure changes.

This valve includes a bleed-down feature which connects ports 3 to 4 in the spring-biased position. The bleed-down feature is useful when the valve is used as a meter-in flow control in circuits which include counterbalance valves downstream of port 3. The bleed-down connection is closed as the valve is piloted with increasing pressure at port 1.

Pressure at port 4 directly opposes pressure at port 1.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	98 cc/min.@70 bar
Pilot Volume Displacement	3,3 cc
Minimum Pilot Pressure to Operate	7 bar
Bypass orifice	0,8 mm
Hysteresis	± 2 %
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990024007
Seal kit - Cartridge	Polyurethane: 990024002
Seal kit - Cartridge	Viton: 990024006

CONFIGURATION OPTIONS

Model Code Example: FKIBXCN

CONTROL (X)	SPOOL CONFIGURATION (C)	SEAL MATERIAL (N)
X Not Adjustable	**C** Normally Closed	**N** Buna-N
L Tuning Adjustment		**V** Viton

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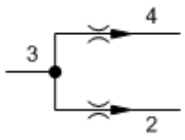

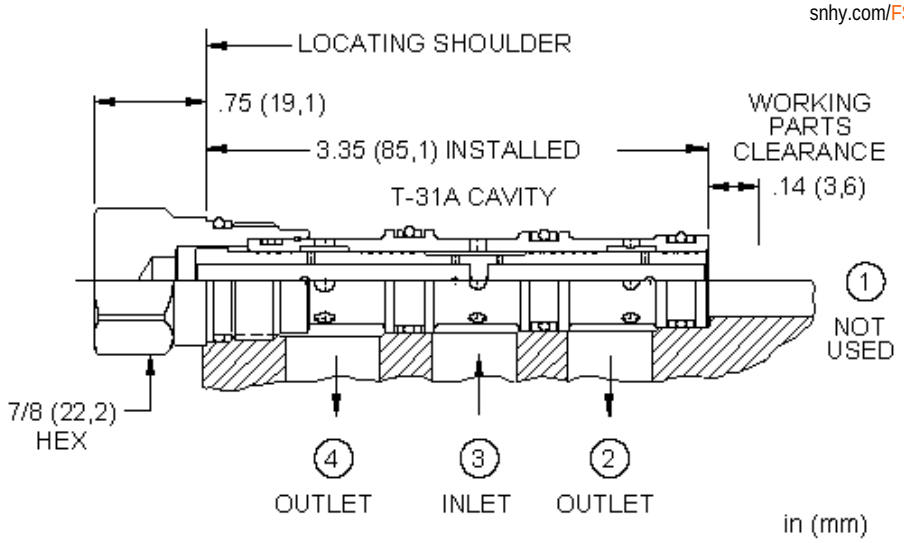

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	±6.5%
Divisional Accuracy at Max Input Flow	±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Rated Input Flow with 50/50 Split	6 - 30 L/min.
Rated Input Flow with 40/60 Split	5,3 - 26,5 L/min.
Rated Input Flow with 33/67 Split	4,5 - 22,7 L/min.
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSCDXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
	B 40/60	**V** Viton	**/AP** Stainless Steel, Passivated
	C 33/67		**/LH** Mild Steel, Zinc-Nickel

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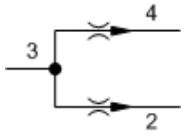

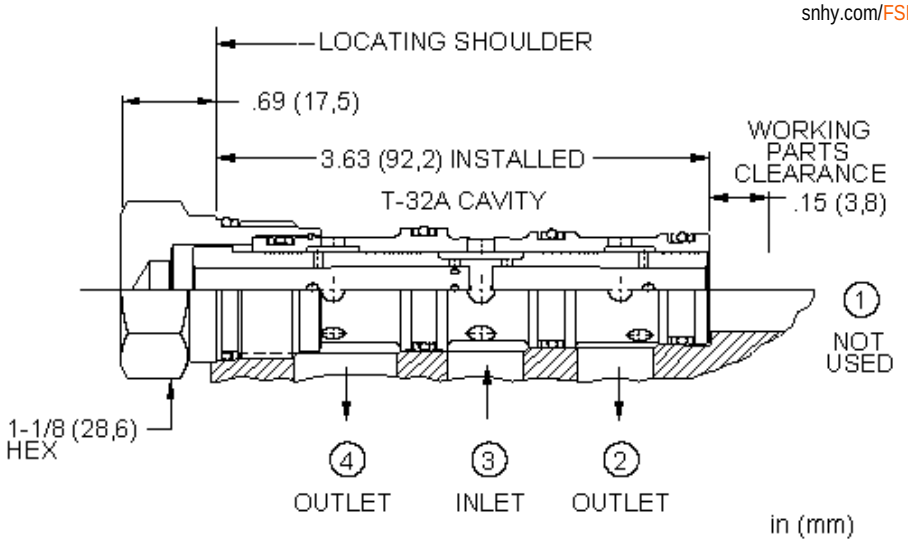

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	±6.5%
Divisional Accuracy at Max Input Flow	±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Rated Input Flow with 50/50 Split	12 - 60 L/min.
Rated Input Flow with 40/60 Split	9,4 - 47 L/min.
Rated Input Flow with 33/67 Split	8,4 - 42 L/min.
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDDXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
	B 40/60	**V** Viton
	C 33/67	

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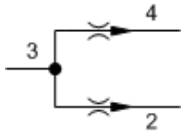

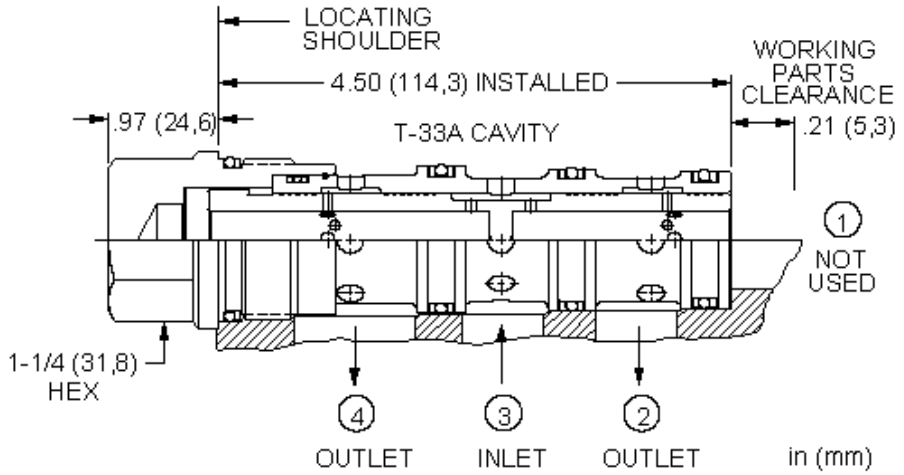

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	±6.5%
Divisional Accuracy at Max Input Flow	±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Rated Input Flow with 50/50 Split	23 - 120 L/min.
Rated Input Flow with 40/60 Split	19 - 95 L/min.
Rated Input Flow with 33/67 Split	17 - 85 L/min.
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSEDXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
	B 40/60	**V** Viton	**/AP** Stainless Steel, Passivated
	C 33/67		

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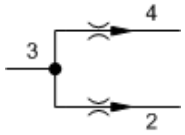

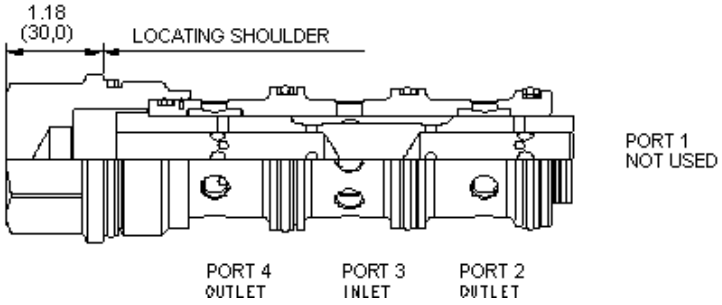

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	±6.5%
Divisional Accuracy at Max Input Flow	±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Rated Input Flow with 50/50 Split	45 - 240 L/min.
Rated Input Flow with 40/60 Split	38 - 200 L/min.
Rated Input Flow with 33/67 Split	36 - 180 L/min.
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFDXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
	B 40/60	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	C 33/67		
	D 25/75		

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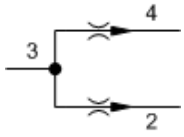

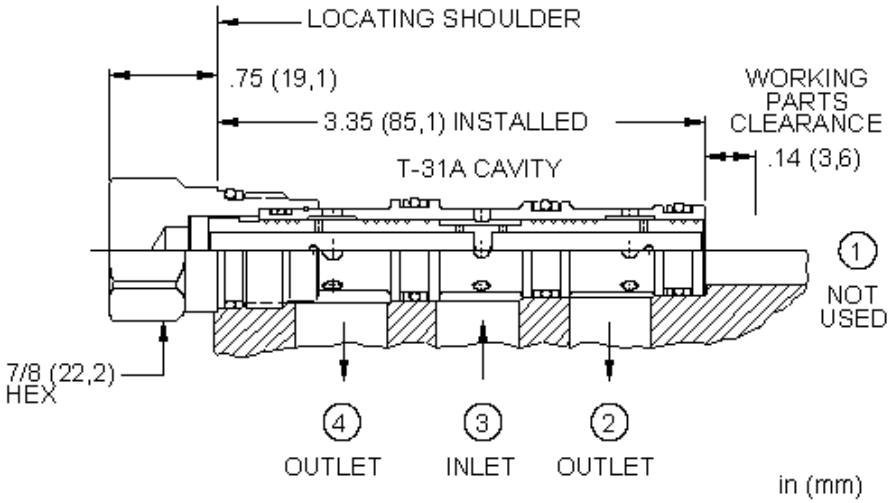

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	±4.5%
Divisional Accuracy at Max Input Flow	±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Rated Input Flow with 50/50 Split	2,5 - 12 L/min.
Rated Input Flow with 40/60 Split	2,8 - 9,5 L/min.
Rated Input Flow with 33/67 Split	1,7 - 8,5 L/min.
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSBDXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
	B 40/60	**V** Viton	**/AP** Stainless Steel, Passivated
	C 33/67		

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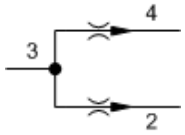

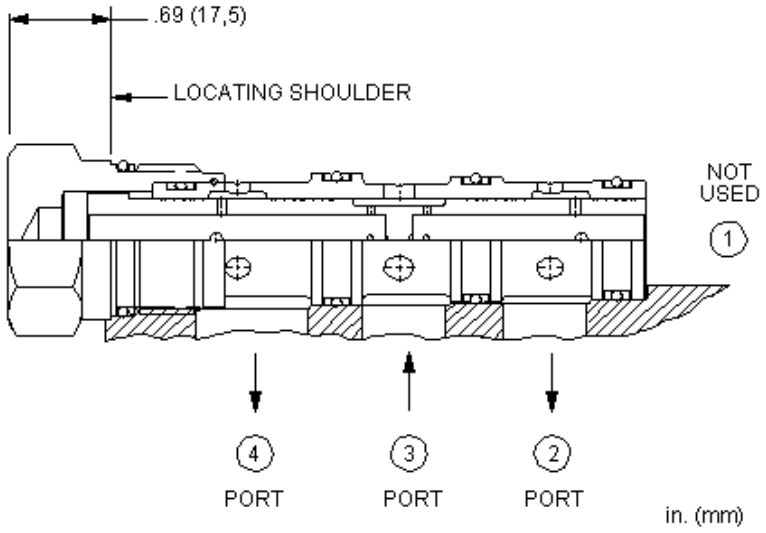

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDCXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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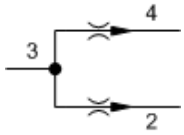

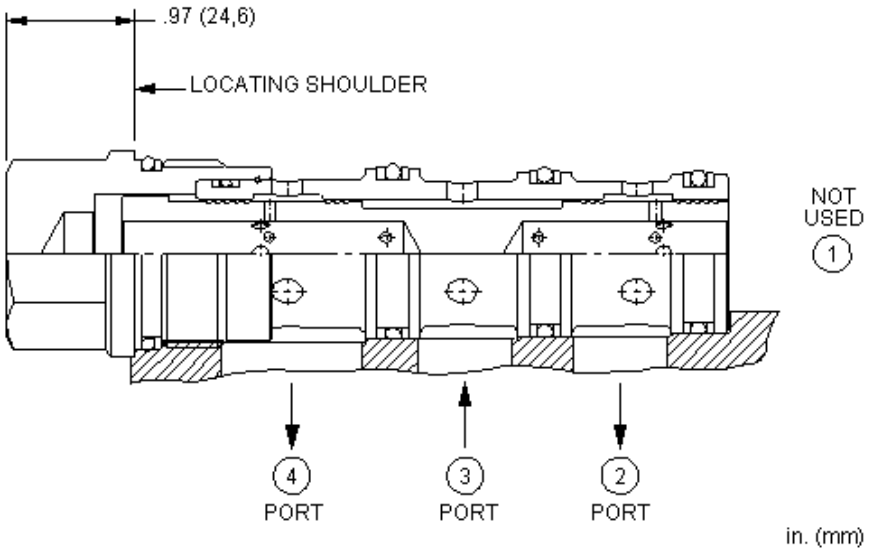

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSECXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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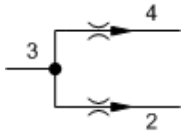

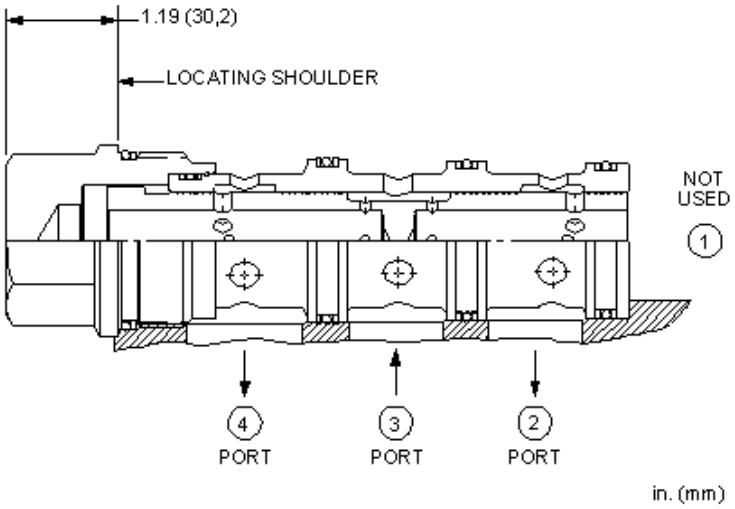

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

TECHNICAL DATA

Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	18 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFCXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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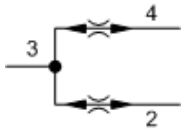

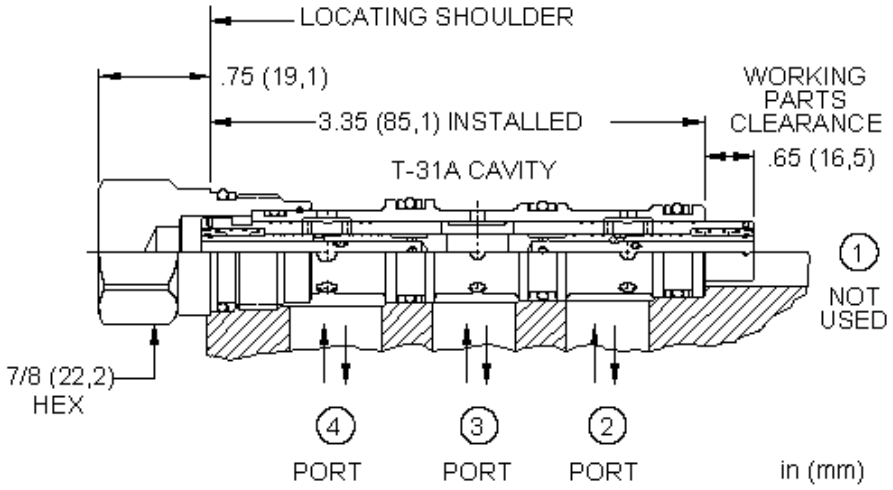

Closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSCAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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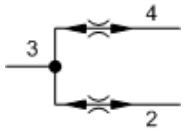

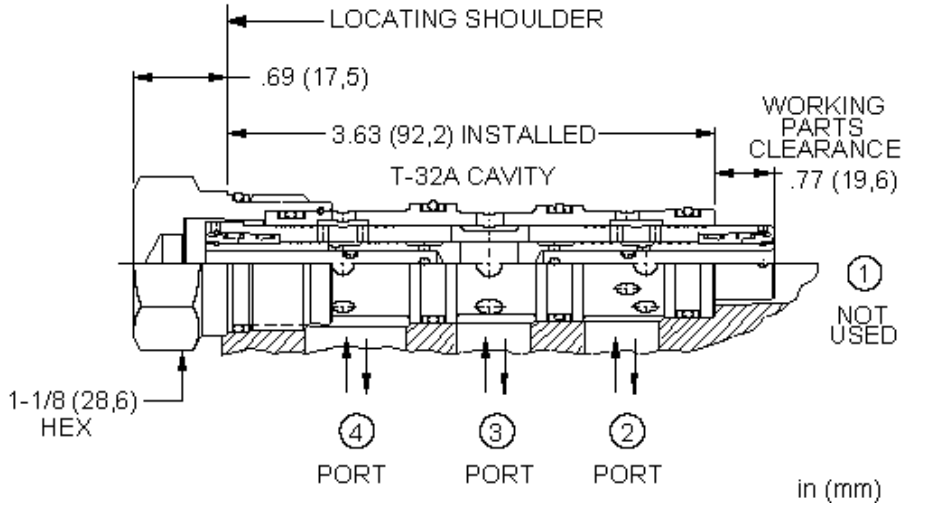

Closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	EPDM: 990032014
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		E EPDM	**/AP** Stainless Steel, Passivated
		V Viton	

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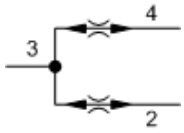

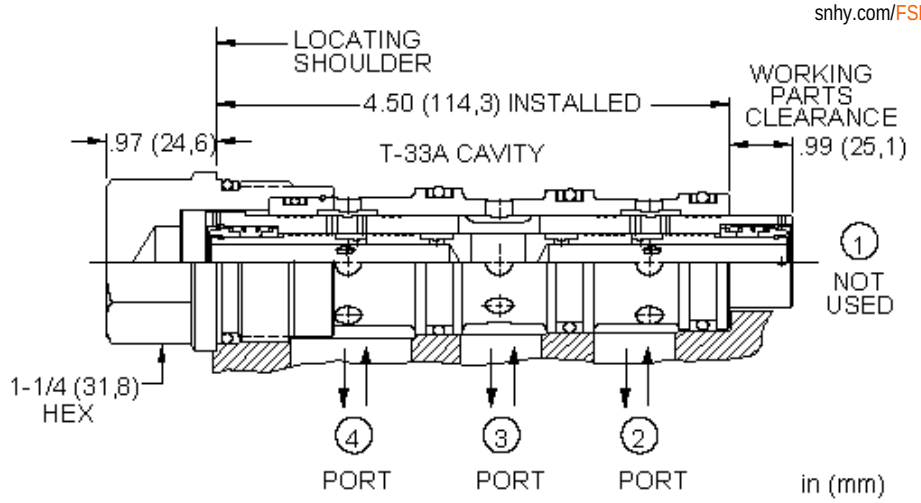

Closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSEAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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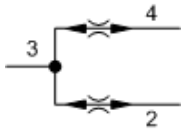

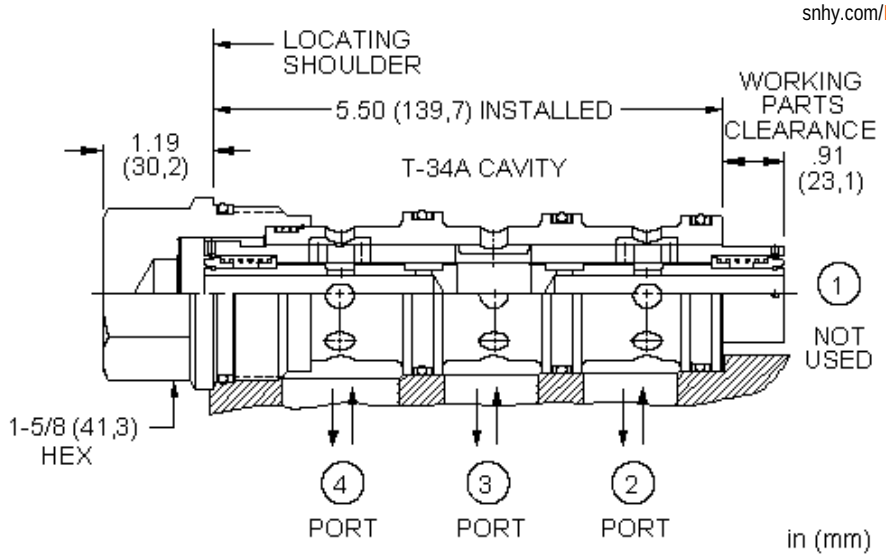

Closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	

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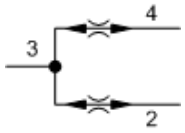

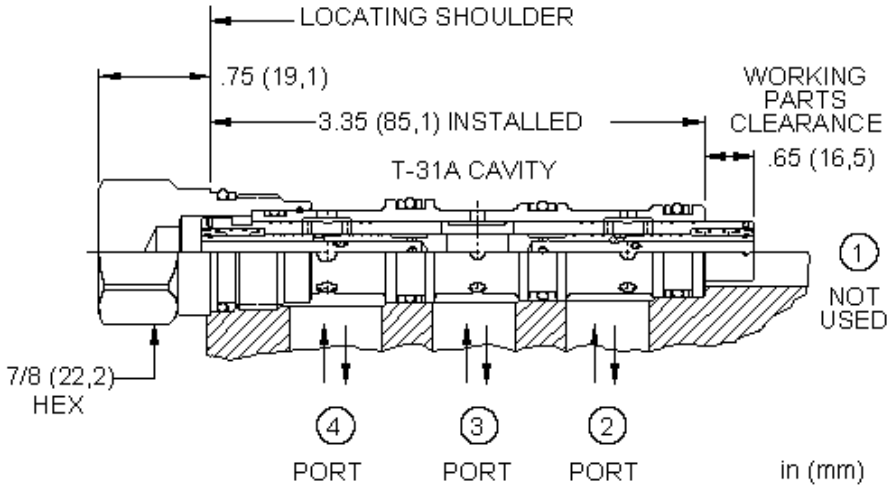

High accuracy, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±3.5%
Divisional Accuracy at Max Input Flow	50% ±2.0%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSAAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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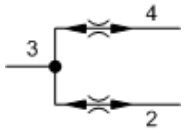

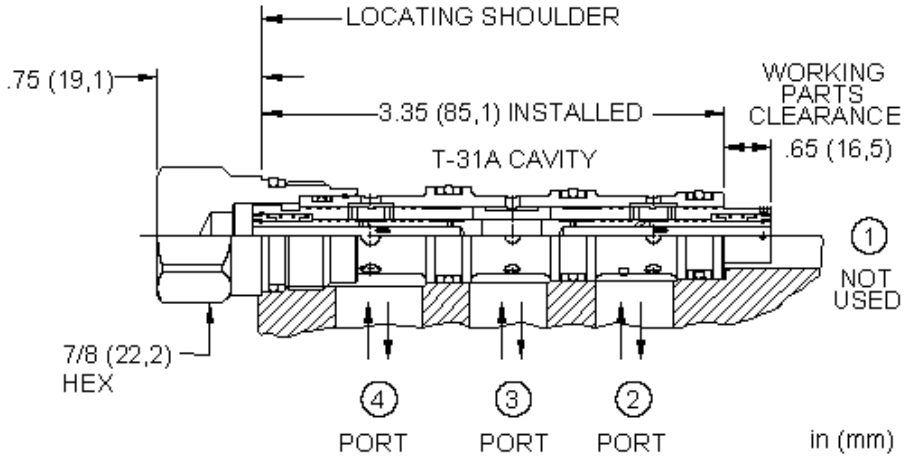

Closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±3.0%
Divisional Accuracy at Max Input Flow	50% ±2.0%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSBAXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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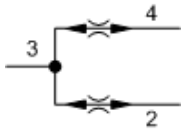

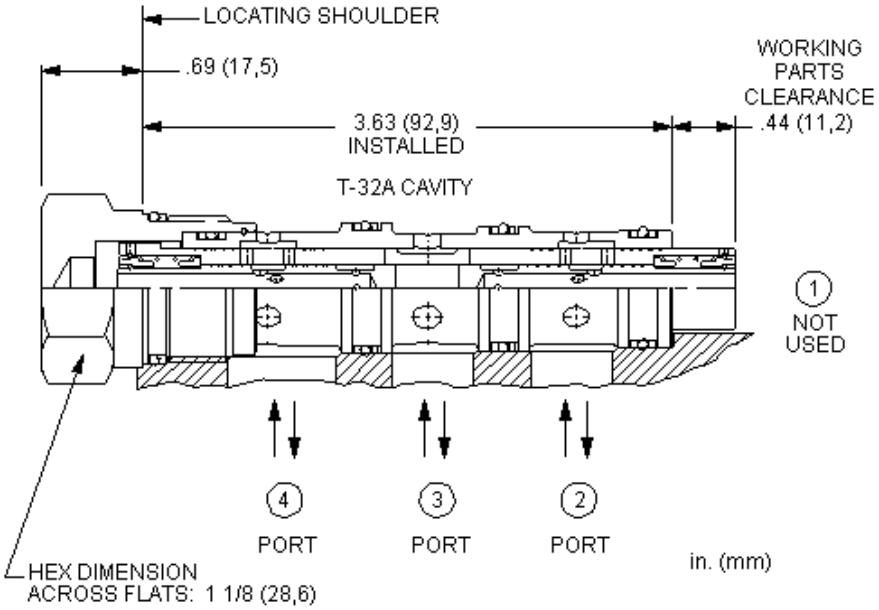

High accuracy, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±2.5%
Divisional Accuracy at Max Input Flow	50% ±1.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDGXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/LH** Mild Steel, Zinc-Nickel

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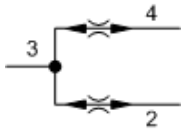

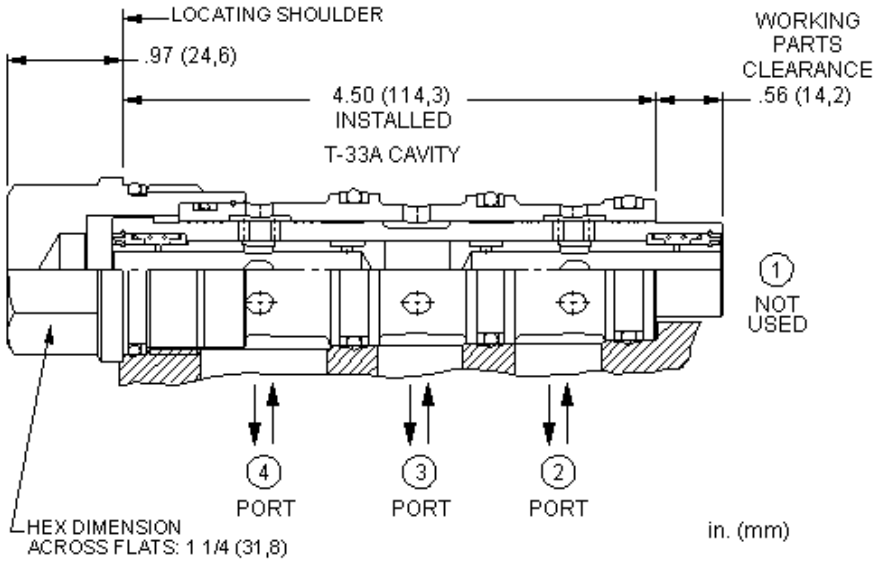

High accuracy, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±2.5%
Divisional Accuracy at Max Input Flow	50% ±1.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSEGXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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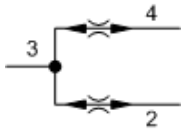

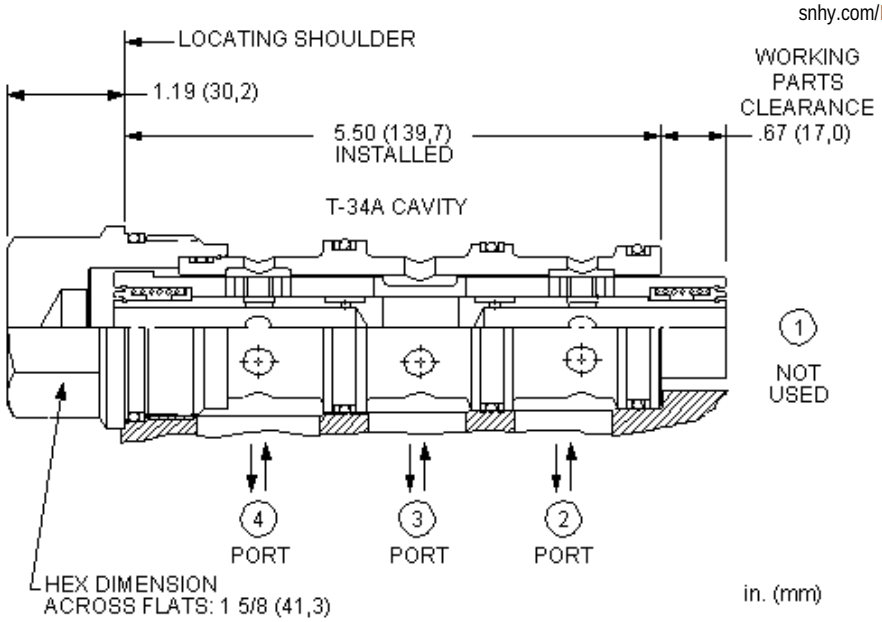

High accuracy, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves may be used to accurately control two or more cylinders or hydraulic motors where bidirectional operation is required.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±2.5%
Divisional Accuracy at Max Input Flow	50% ±1.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFGXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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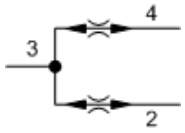

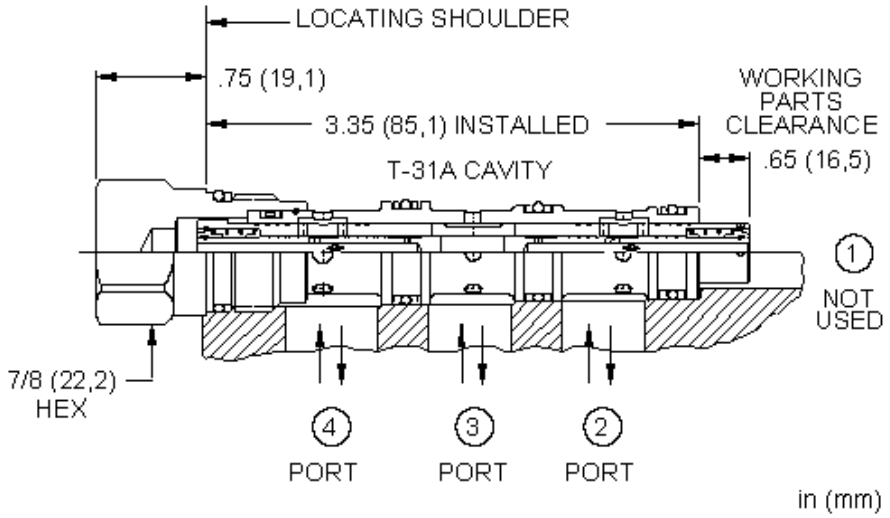

High-capacity, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves have approximate 15% greater capacity than standard closed-center divider/combiners and are designed for use in tractive drive systems. Note: Accuracy on these cartridges is not equivalent to the accuracy of standard closed-center divider/combiners.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±6.5%
Divisional Accuracy at Max Input Flow	50% ±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSCHXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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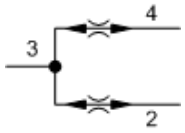

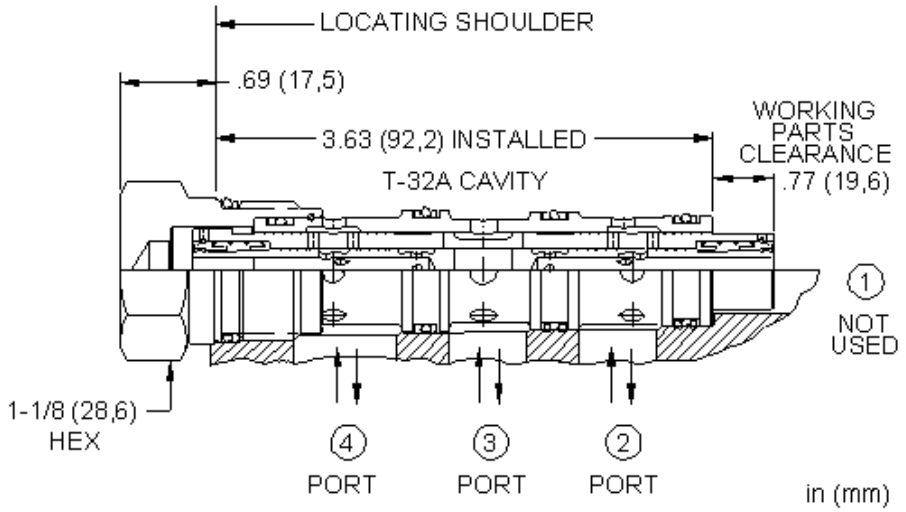

High-capacity, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves have approximate 15% greater capacity than standard closed-center divider/combiners and are designed for use in tractive drive systems. Note: Accuracy on these cartridges is not equivalent to the accuracy of standard closed-center divider/combiners.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±6.5%
Divisional Accuracy at Max Input Flow	50% ±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDHXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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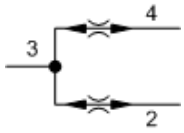

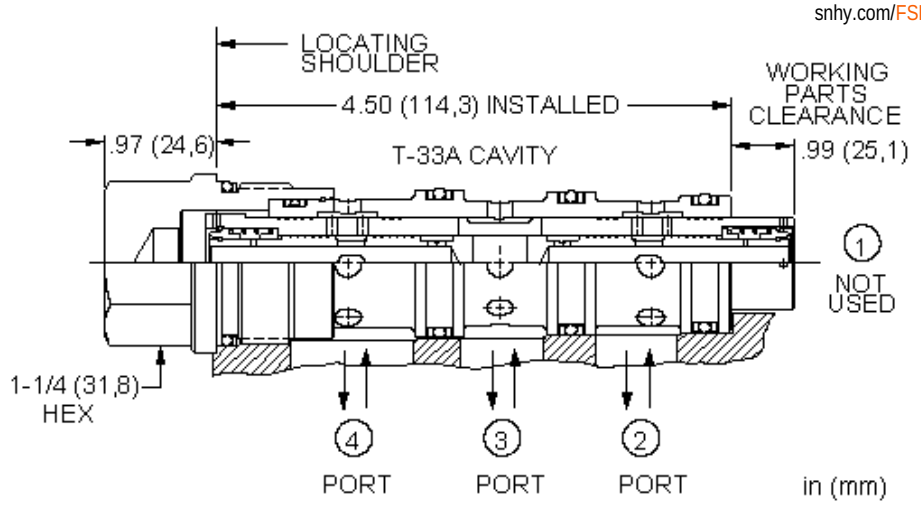

High-capacity, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves have approximate 15% greater capacity than standard closed-center divider/combiners and are designed for use in tractive drive systems. Note: Accuracy on these cartridges is not equivalent to the accuracy of standard closed-center divider/combiners.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±6.5%
Divisional Accuracy at Max Input Flow	50% ±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSEHXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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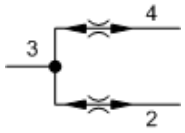

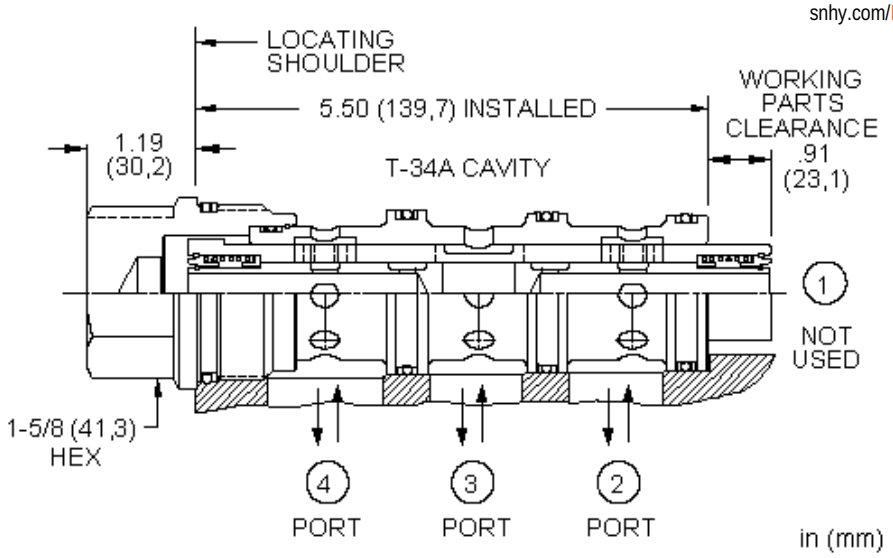

High-capacity, closed-center flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. These valves have approximate 15% greater capacity than standard closed-center divider/combiners and are designed for use in tractive drive systems. Note: Accuracy on these cartridges is not equivalent to the accuracy of standard closed-center divider/combiners.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±6.5%
Divisional Accuracy at Max Input Flow	50% ±3.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFHXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/LH** Mild Steel, Zinc-Nickel

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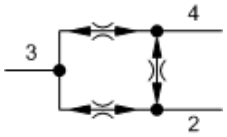

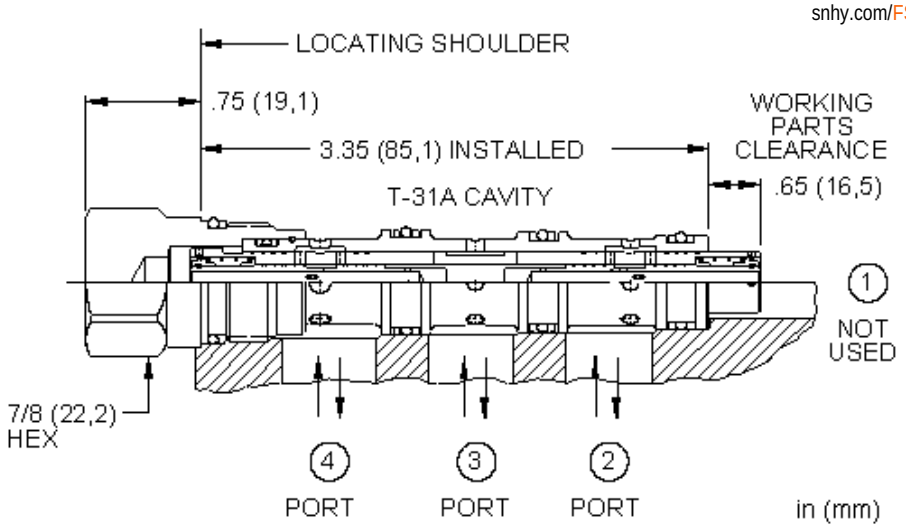

Synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSCSXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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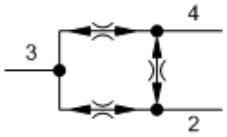

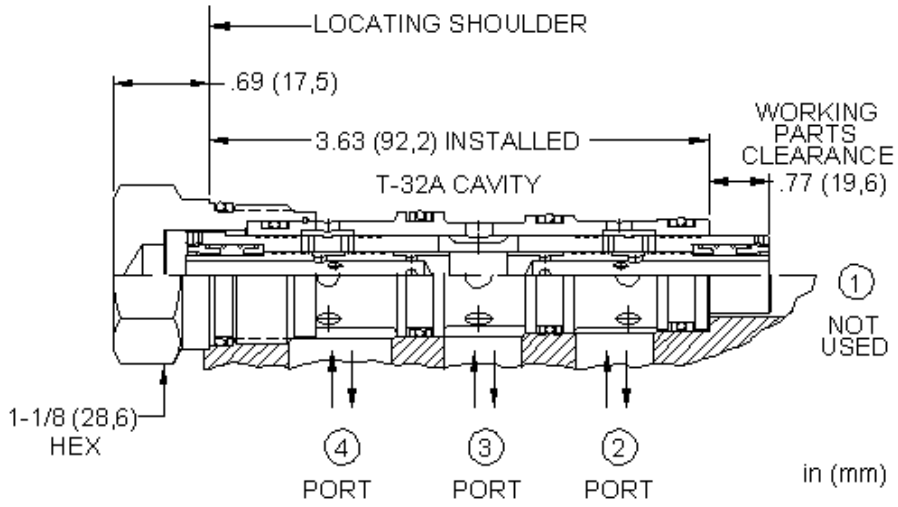

Synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDSXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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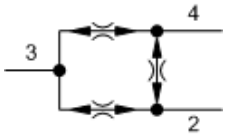

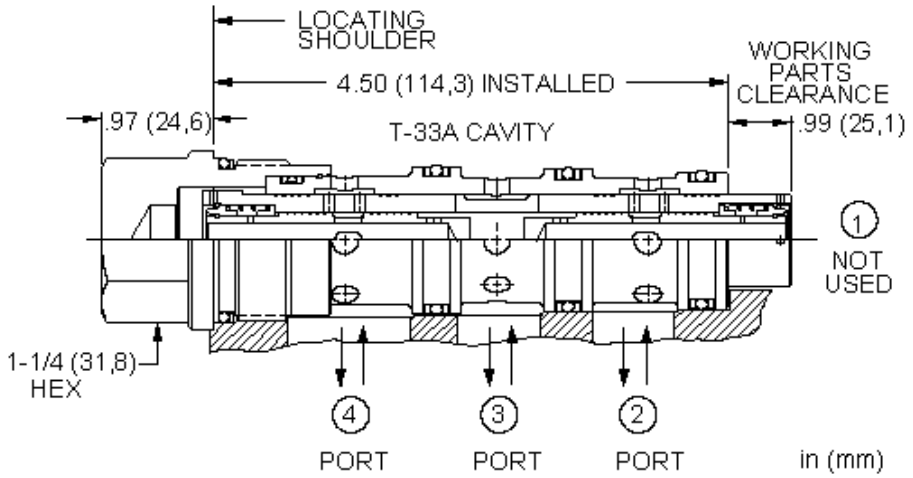

Synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSESXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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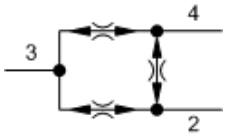

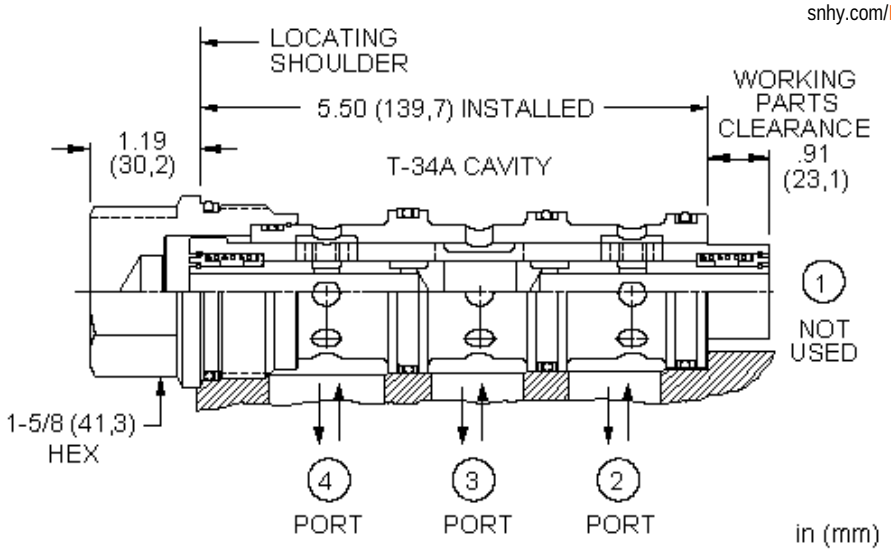

Synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±4.5%
Divisional Accuracy at Max Input Flow	50% ±2.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFSXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)
X Not Adjustable	**A** 50/50	**N** Buna-N
		V Viton

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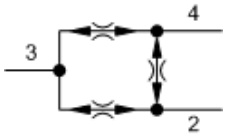

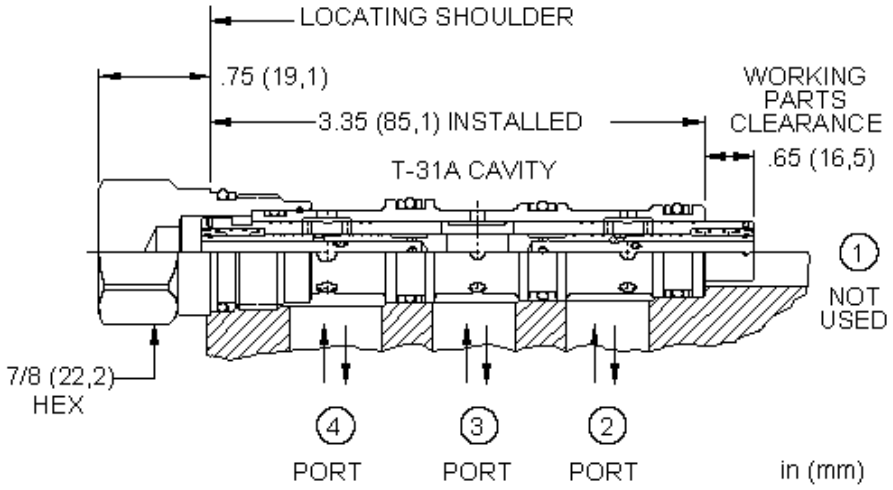

High accuracy, synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±3.5%
Divisional Accuracy at Max Input Flow	50% ±2.0%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSASXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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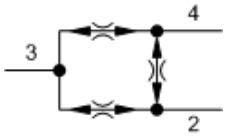

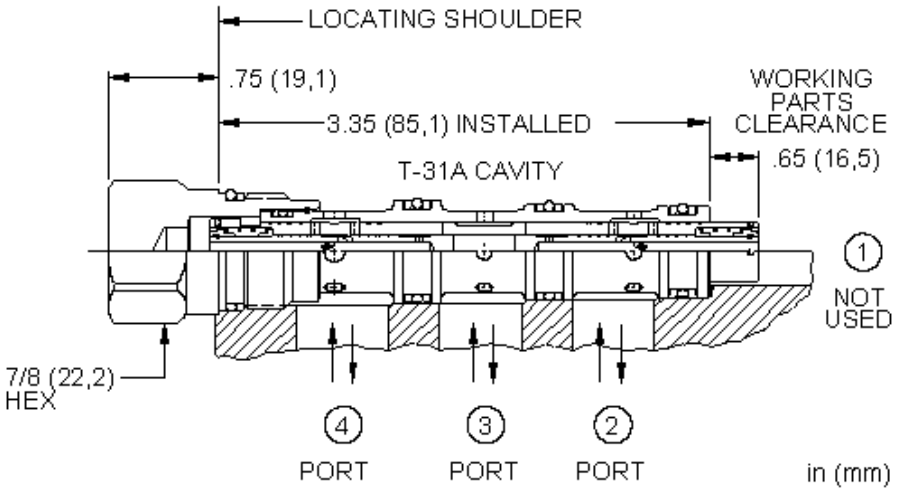

Synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±3.0%
Divisional Accuracy at Max Input Flow	50% ±2.0%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: FSBSXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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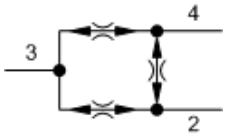

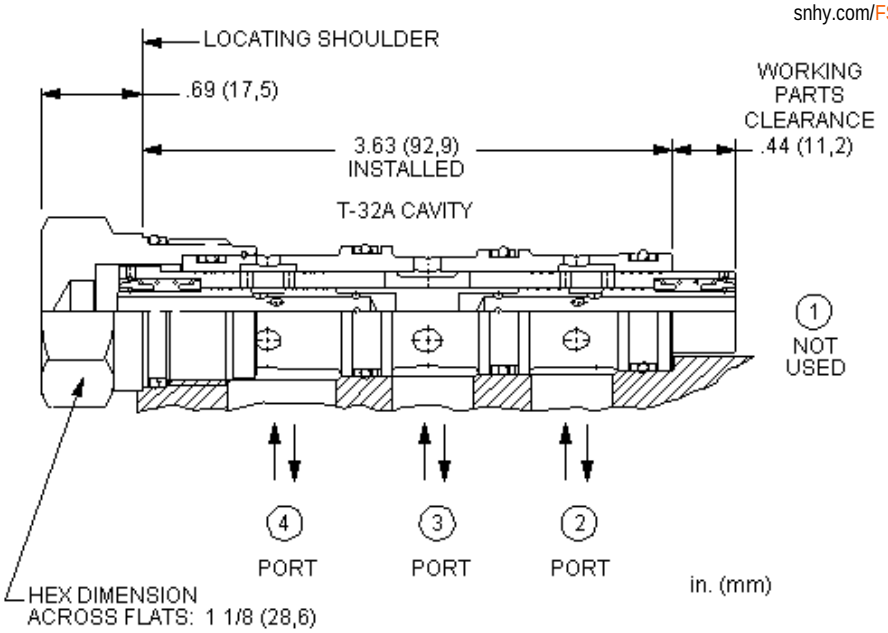

High accuracy, synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±3.0%
Divisional Accuracy at Max Input Flow	50% ±2.0%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: FSDRXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated

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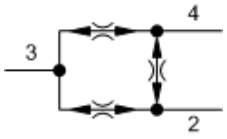

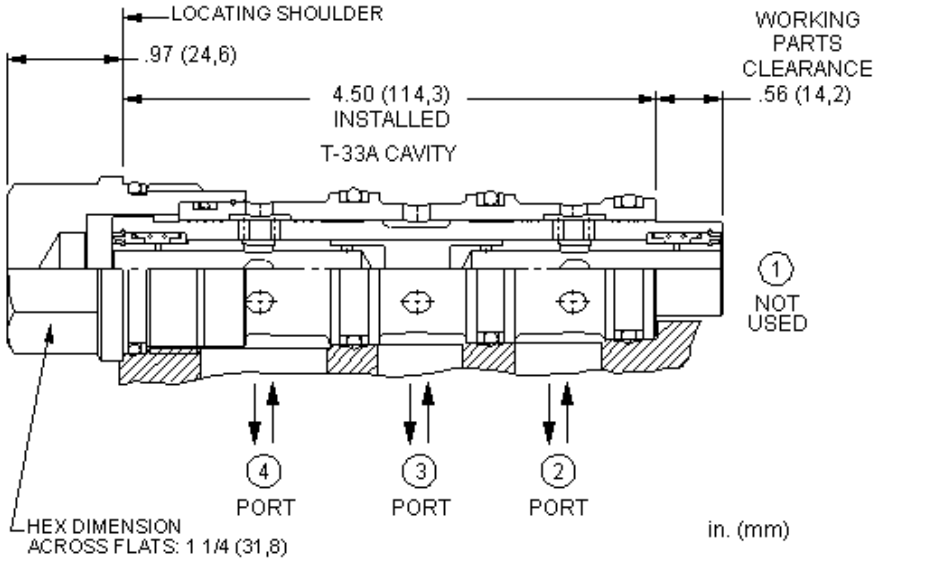

High accuracy, synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±2.5%
Divisional Accuracy at Max Input Flow	50% ±1.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: FSERXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/LH** Mild Steel, Zinc-Nickel

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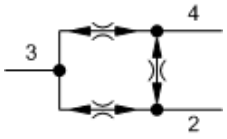

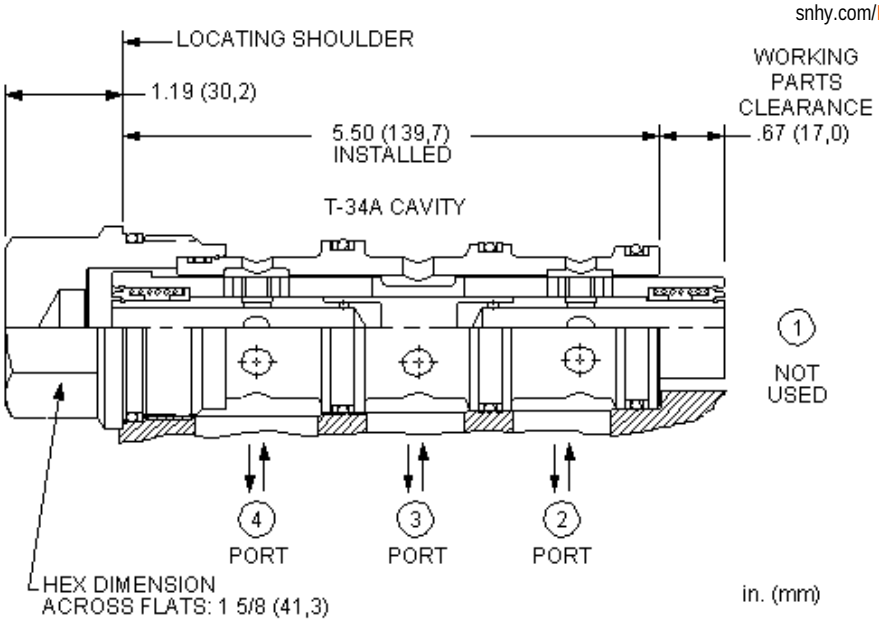

High accuracy, synchronizing flow divider/combiners are sliding-spool, pressure-compensated devices used to split flow in one direction and combine flow in the opposite direction. With a sychronizing feature, these valves can be used to allow two hydraulic cylinders to fully stroke and synchronize at the end of the stroke. When the first cylinder has reached the end of its stroke, a pressure-compensated, reduced flow is metered to or from the second cylinder until it also reaches the end of its stroke.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Divisional Accuracy at Minimum Input Flow	50% ±2.5%
Divisional Accuracy at Max Input Flow	50% ±1.5%
Pressure Drop at Minimum Rated Input Flow	2 bar
Pressure Drop at Maximum Rated Input Flow	24 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: FSFRXAN

CONTROL (X)	FLOW SPLIT (A)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**A** 50/50	**N** Buna-N	Standard Material/Coating
		V Viton	**/AP** Stainless Steel, Passivated
			/LH Mild Steel, Zinc-Nickel

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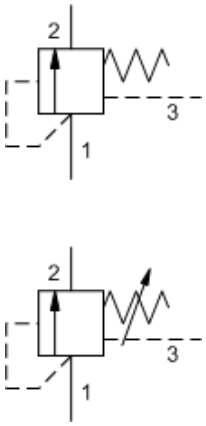

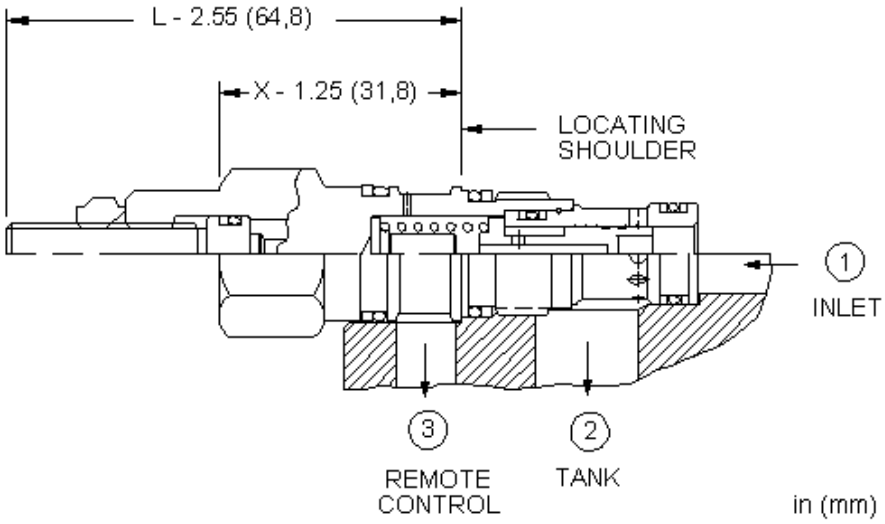

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: LRBCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		

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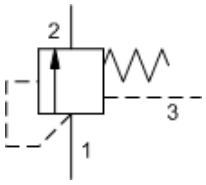

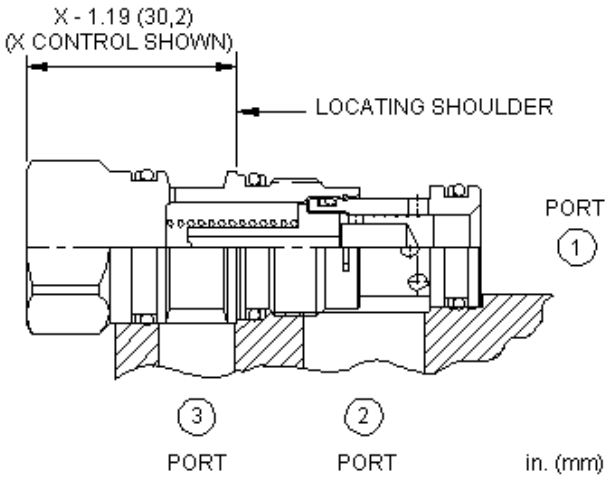

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LRDCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		**/LH** Mild Steel, Zinc-Nickel
	G 150 psi (10,5 bar)		

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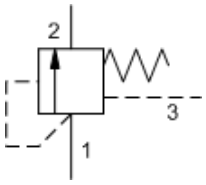

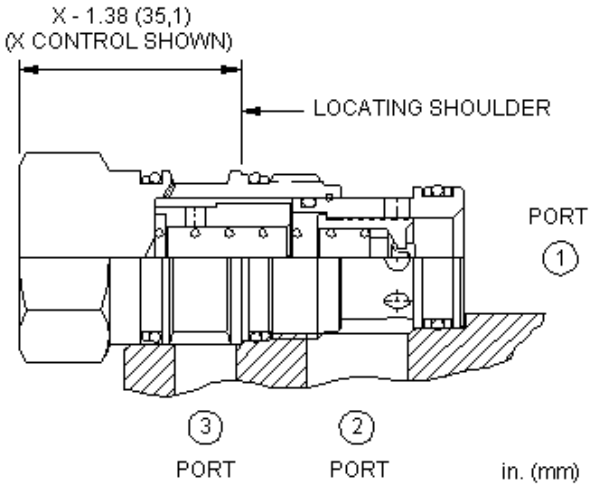

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LRFCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	G 150 psi (10,5 bar)		

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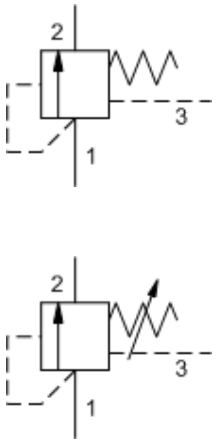

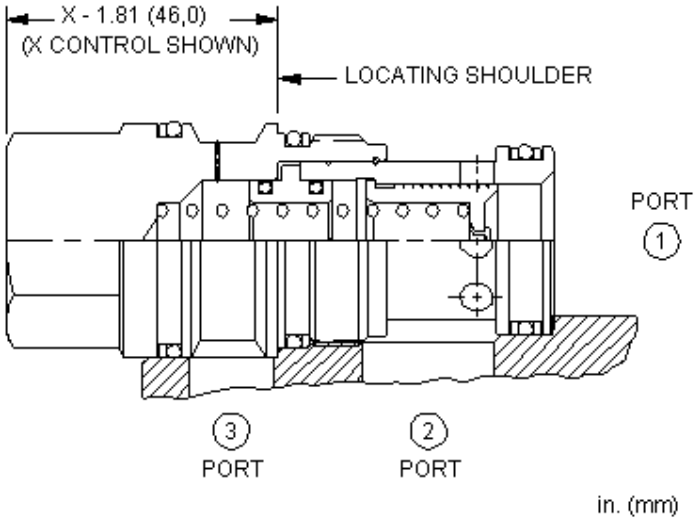

in. (mm)

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LRHCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		
	G 150 psi (10,5 bar)		

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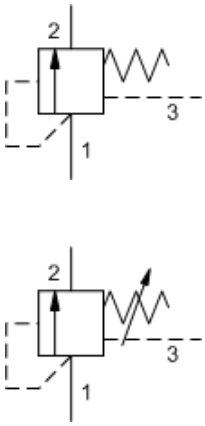

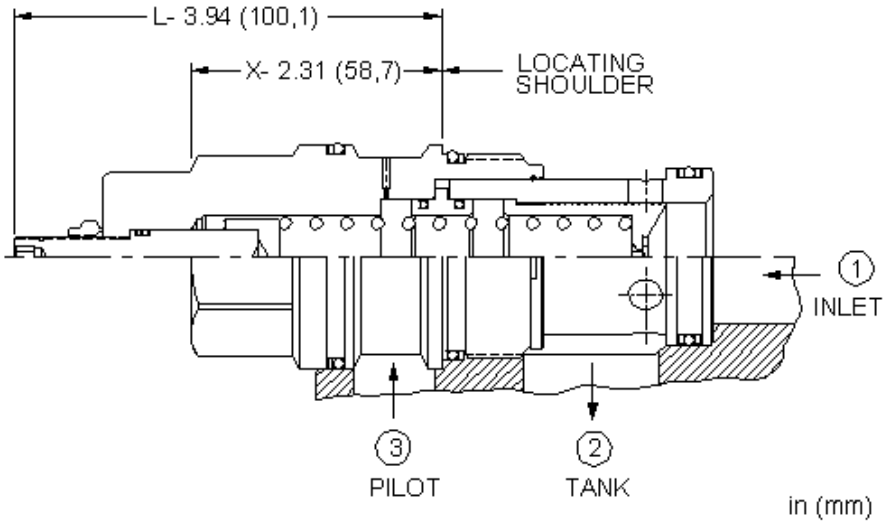

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	EPDM: 990019014
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LRJCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)	**V** Viton	
	G 150 psi (10,5 bar)		

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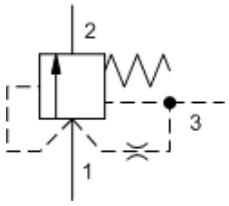

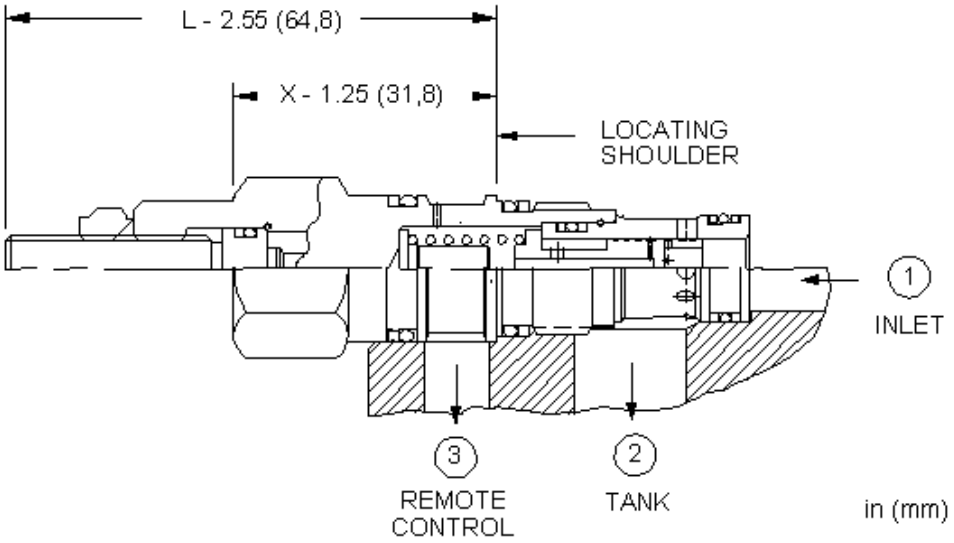

Normally closed modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage relief valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: LRBALDN

CONTROL (L)	DIFFERENTIAL PRESSURE (D)	SEAL MATERIAL (N)
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**N** Buna-N
	F 100 psi (7 bar)	**V** Viton
	H 200 psi (14 bar)	

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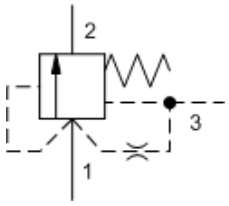

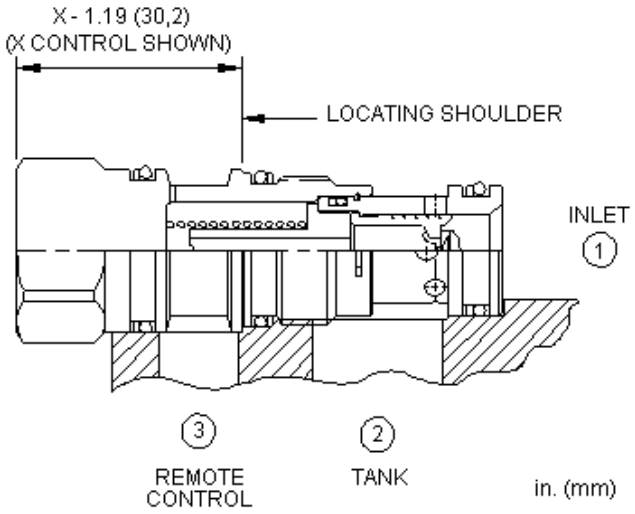

Normally closed modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage relief valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Maximum Valve Leakage at 110 SUS (24 cSt)	15 cc/min.@70 bar
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LRDAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		

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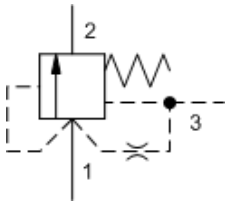

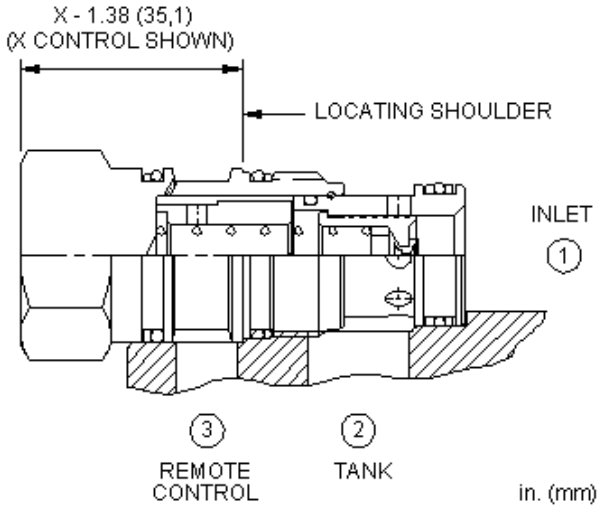

Normally closed modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage relief valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LRFAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		
	G 150 psi (10,5 bar)		

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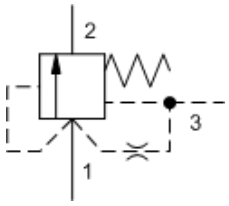

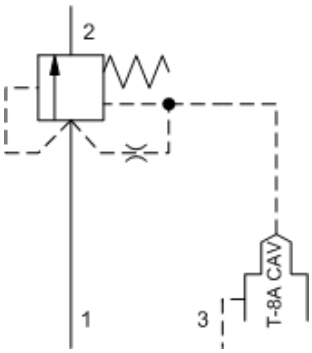

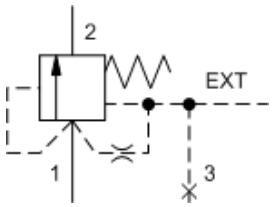

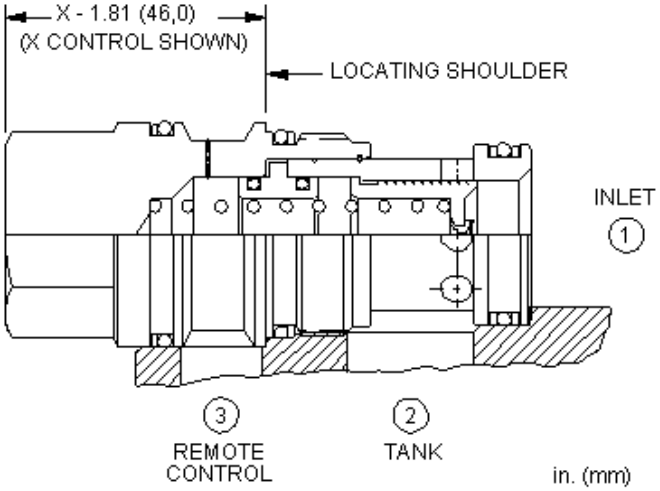

Normally closed modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage relief valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,50 L/min.
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LRHAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
E External 4-SAE Port, Port 3 blocked	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
L Tuning Adjustment	**F** 100 psi (7 bar)		
	G 150 psi (10,5 bar)		

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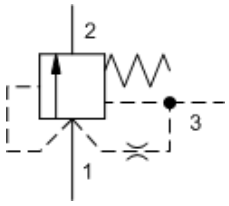

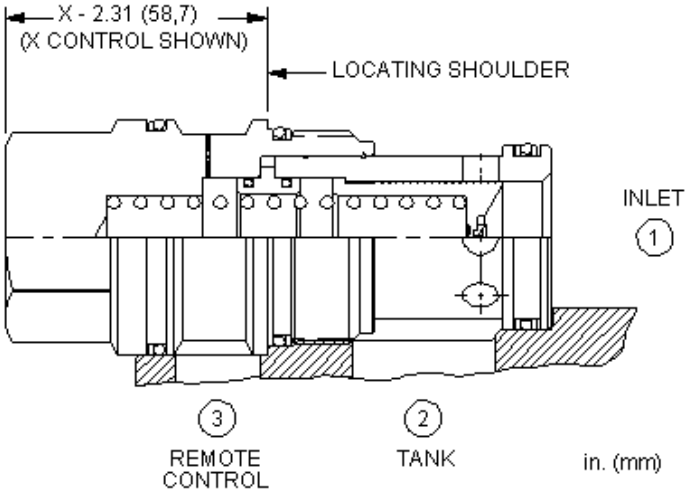

Normally closed modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage relief valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,50 L/min.
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LRJAXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	A 12 psi	**V** Viton	**/AP** Stainless Steel, Passivated
	B 20 psi (1,5 bar)		
	C 30 psi (2 bar)		
	D 50 psi (3,5 bar)		

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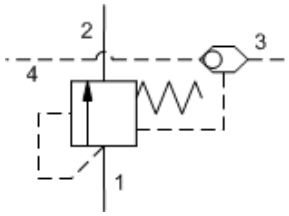

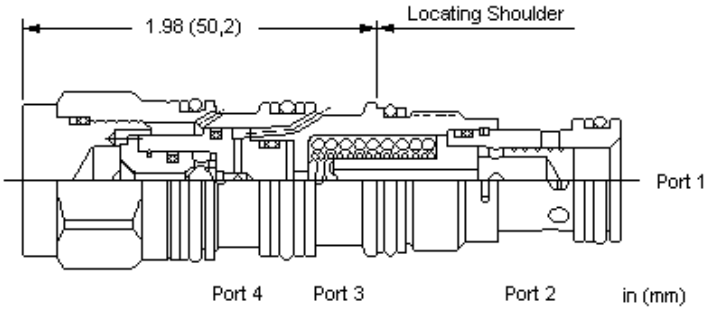

A normally closed modulating element, used as a bypass compensator, ensures a constant pressure drop across an external orifice to create a pressure compensated flow control. The resulting flow remains constant regardless of variations in upstream or downstream pressure.

A ball shuttle connects the after orifice signal from the higher of port 3 or 4 to the pilot area.

TECHNICAL DATA

Nominal Compensating Pressure	14 bar
Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: LRDSXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N
		V Buna-N

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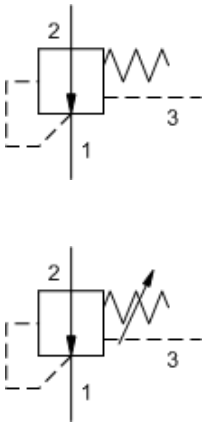

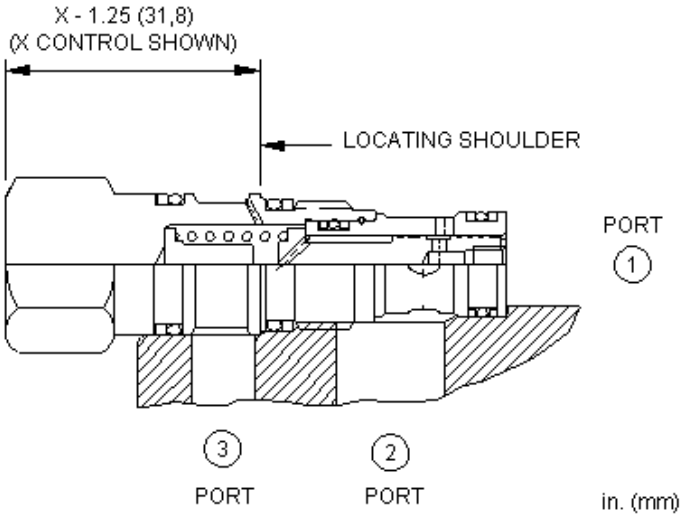

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: LPBCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton
	F 100 psi (7 bar)	

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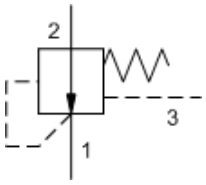

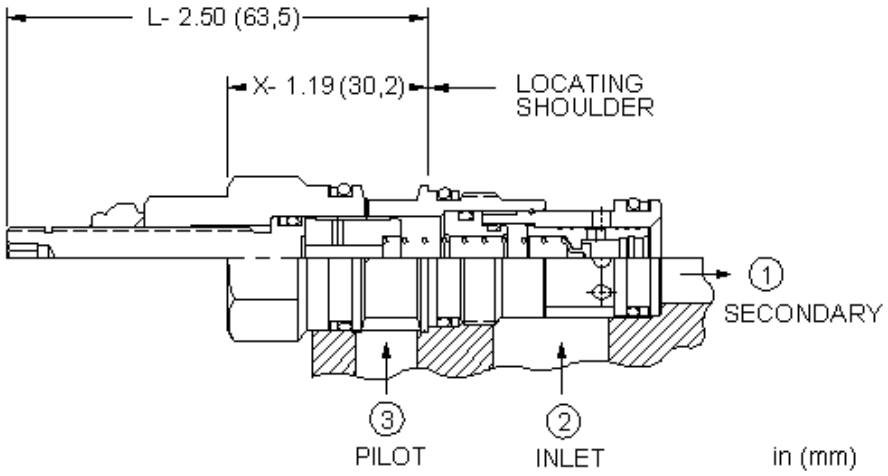

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LPDCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	G 150 psi (10,5 bar)		

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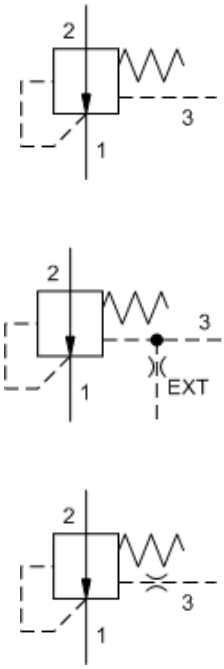

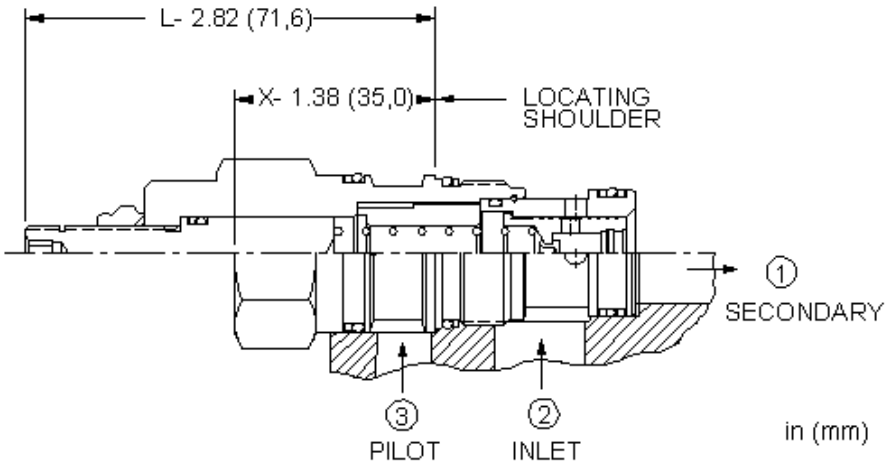

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LPFCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		**/LH** Mild Steel, Zinc-Nickel
	G 150 psi (10,5 bar)		

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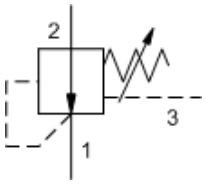

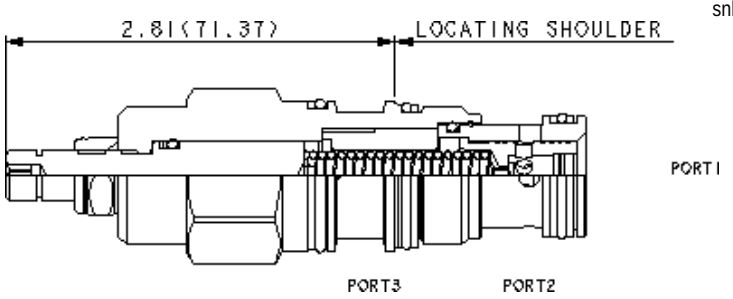

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LPFCLDN

DIFFERENTIAL PRESSURE (D)	SEAL MATERIAL (N)	MATERIAL/COATING
D 50 psi (3,5 bar)	**N** Buna-N	Standard Material/Coating
	V Viton	**/LH** Mild Steel, Zinc-Nickel

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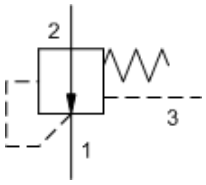

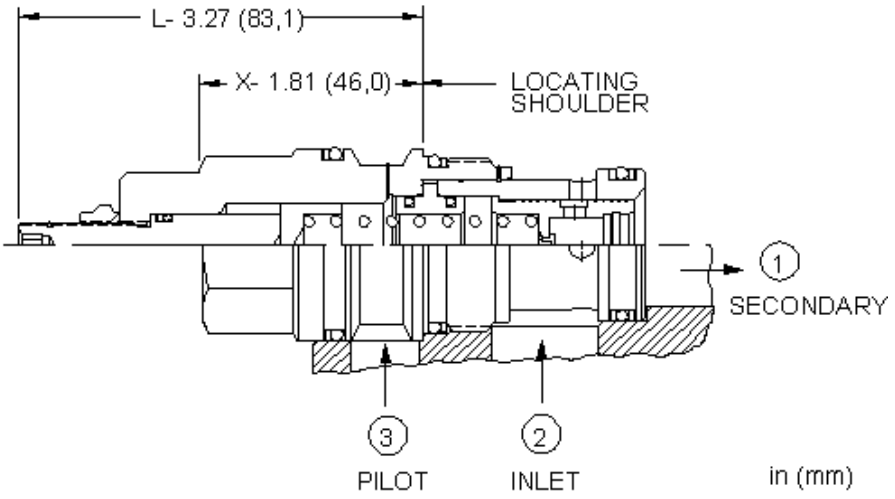

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	EPDM: 990017014
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LPHCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	G 150 psi (10,5 bar)		

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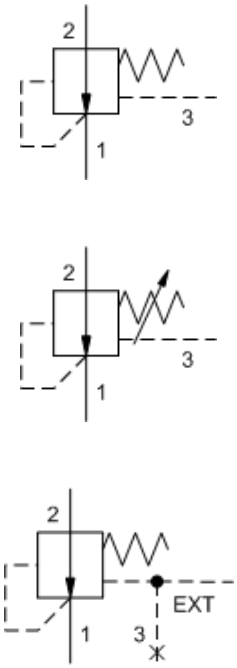

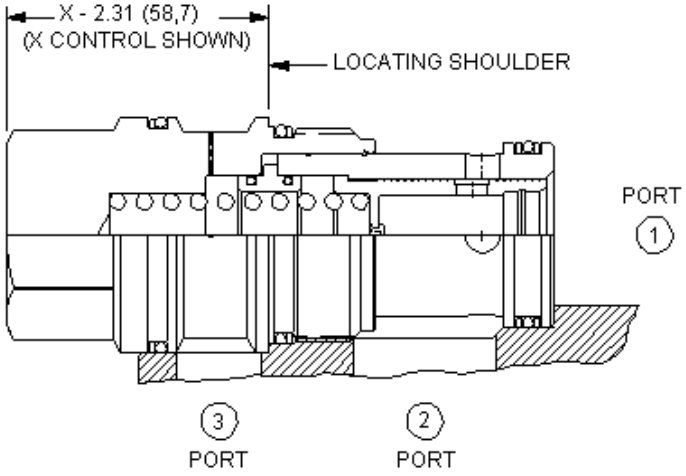

in. (mm)

Normally open modulating elements without an internal orifice act as a restrictive compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

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

CONFIGURATION OPTIONS

Model Code Example: LPJCXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
P External 1/4 NPTF Pilot Port, Port 3 Blocked	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		
	G 150 psi (10,5 bar)		

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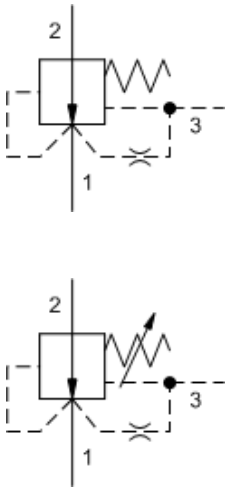

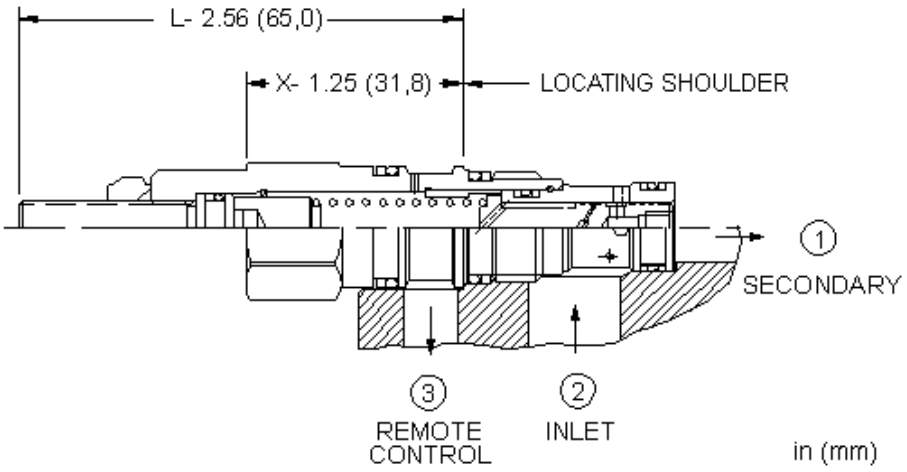

These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006

CONFIGURATION OPTIONS

Model Code Example: LPBAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton
	F 100 psi (7 bar)	

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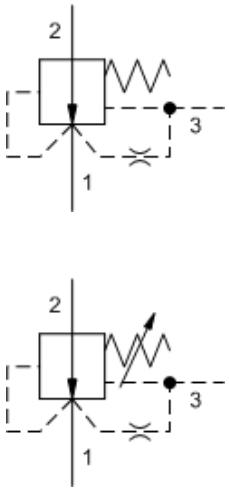

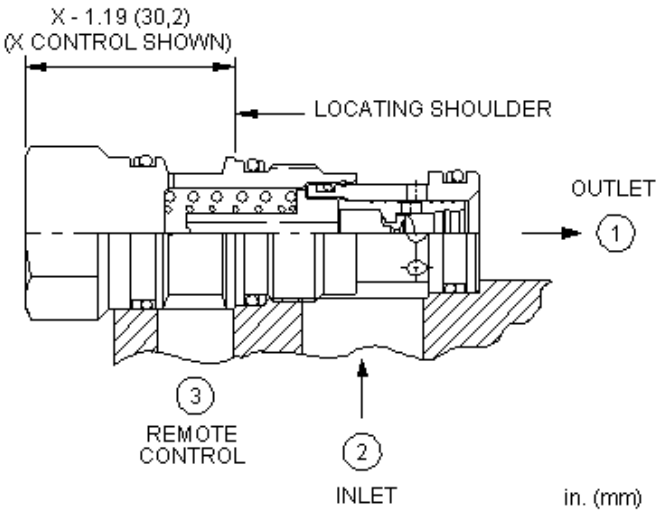

These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: LPDAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		

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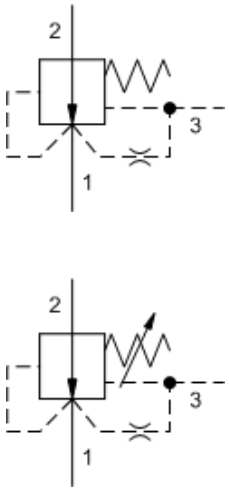

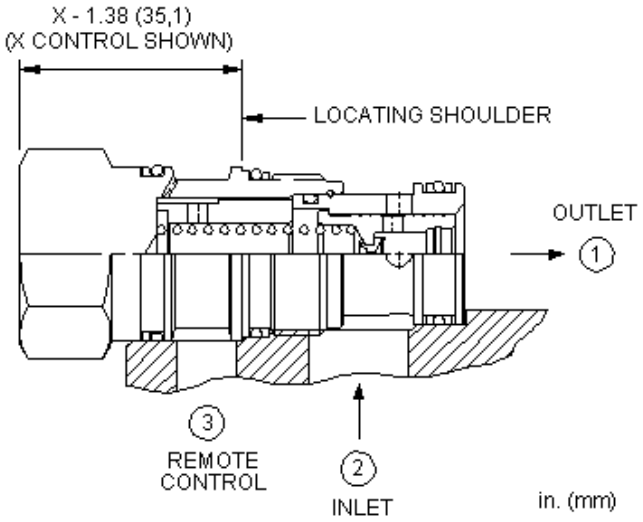

These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,16 - 0,25 L/min.
Control Orifice Diameter	0,4 mm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LPFAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated

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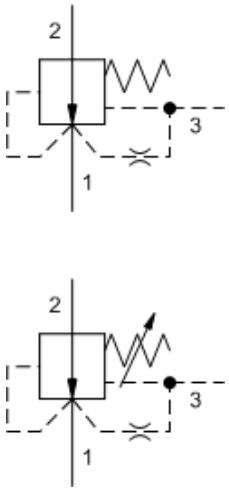

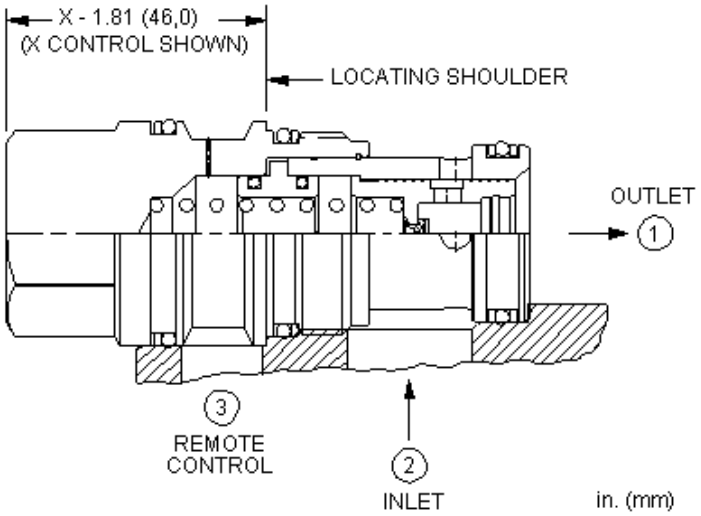

These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,50 L/min.
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990017007
Seal kit - Cartridge	Polyurethane: 990017002
Seal kit - Cartridge	Viton: 990017006

CONFIGURATION OPTIONS

Model Code Example: LPHAXDN

CONTROL (X)	BIAS PRESSURE (D)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**D** 50 psi (3,5 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**F** 100 psi (7 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	G 150 psi (10,5 bar)		
	H 200 psi (14 bar)		

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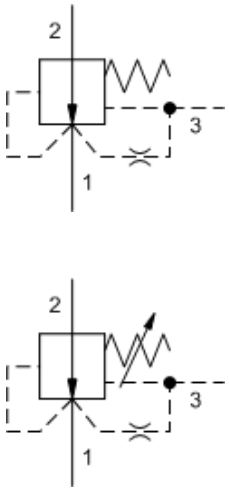

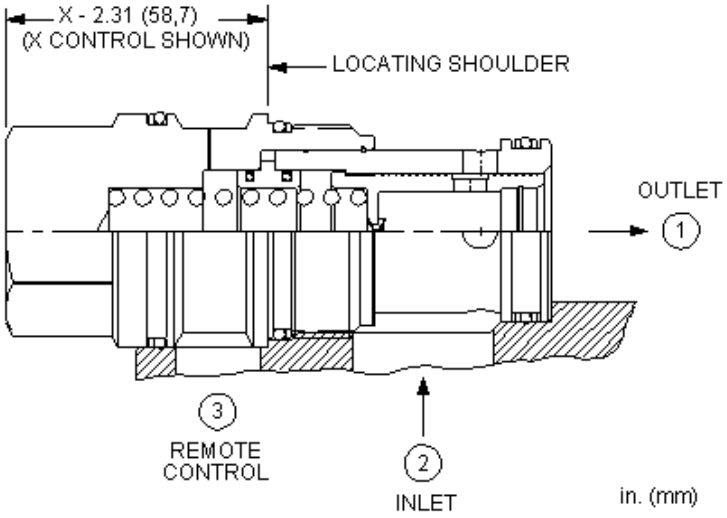

These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,50 L/min.
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

CONFIGURATION OPTIONS

Model Code Example: LPJAXHN

CONTROL (X)	BIAS PRESSURE (H)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N	Standard Material/Coating
L Tuning Adjustment	**D** 50 psi (3,5 bar)	**V** Viton	**/AP** Stainless Steel, Passivated
	F 100 psi (7 bar)		
	G 150 psi (10,5 bar)		

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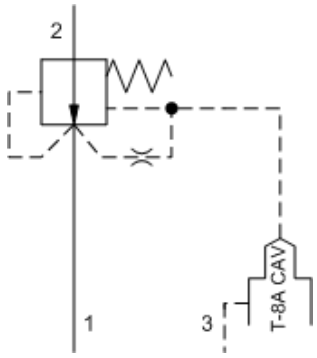
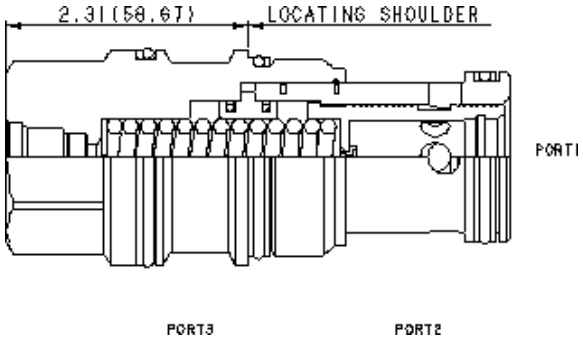
Normally open, modulating element with integral T-8A control cavity and pilot source from port 1

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

snhy.com/LPJA8





These normally open modulating elements with an internal orifice between port 1 and port 3 can be used as a main-stage reducing valve. The valve can be controlled remotely using a pilot relief or pilot solenoid valve.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Control Pilot Flow	0,25 - 0,50 L/min.
Pilot Control Cavity	T-8A
Control Orifice Diameter	0,53 mm
Seal kit - Cartridge	Buna: 990019007
Seal kit - Cartridge	Polyurethane: 990019002
Seal kit - Cartridge	Viton: 990019006

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

CONFIGURATION OPTIONS

Model Code Example: LPJA8DN

BIAS PRESSURE	(D)
D 50 psi (3,5 bar)	

SEAL MATERIAL	(N)
N Buna-N	
V Viton	

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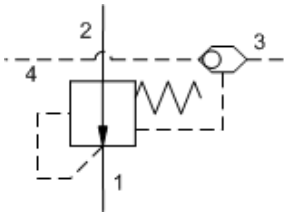

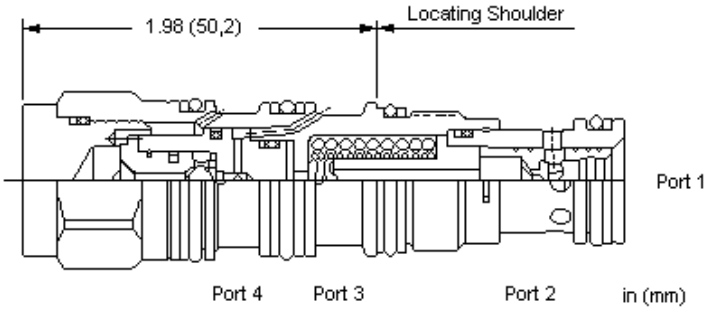

A normally open modulating element, used as a restrictive compensator, ensures a constant pressure drop across an external orifice to create a pressure compensated flow control. The resulting flow remains constant regardless of variations in upstream or downstream pressure.

A ball shuttle connects the after orifice signal from the higher of port 3 or 4 to the pilot area.

TECHNICAL DATA

Nominal Compensating Pressure	14 bar
Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990021007
Seal kit - Cartridge	Polyurethane: 990021002
Seal kit - Cartridge	Viton: 990021006

CONFIGURATION OPTIONS

Model Code Example: LPDSXHN

CONTROL (X)	DIFFERENTIAL PRESSURE (H)	SEAL MATERIAL (N)
X Not Adjustable	**H** 200 psi (14 bar)	**N** Buna-N
		V Viton

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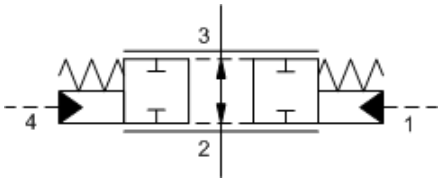

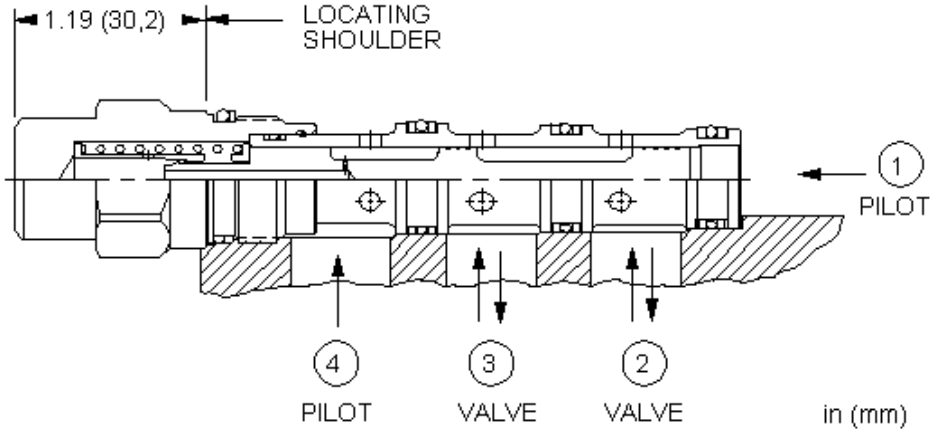

These bi-directional, normally open, modulating elements used with an external orifice, create a bi-directional, pressure compensated flow control.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	EPDM: 990031014
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: LHDTXFN

CONTROL (X)	NOMINAL CONTROL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	D 50 psi (3,5 bar)	**E** EPDM
	E 75 psi (5 bar)	**V** Viton

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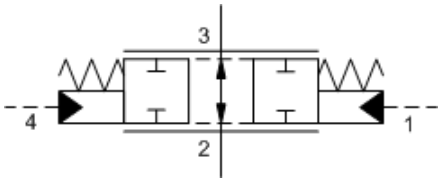

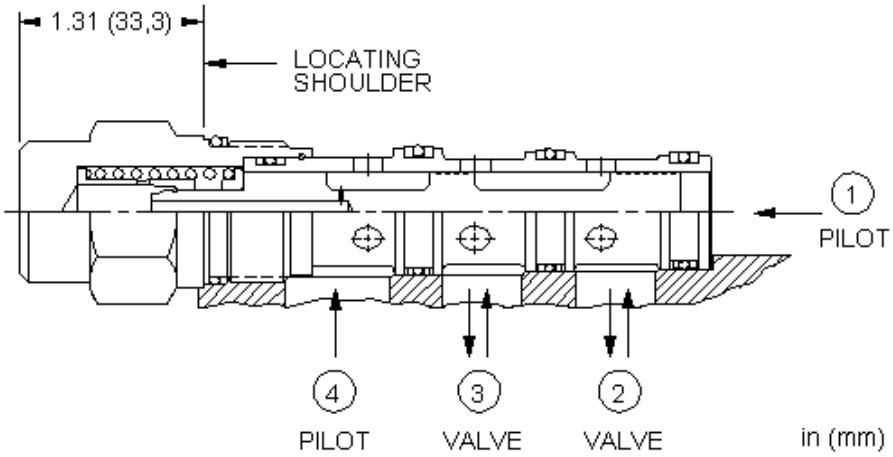

These bi-directional, normally open, modulating elements used with an external orifice, create a bi-directional, pressure compensated flow control.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	EPDM: 990032014
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: LHFTXFN

CONTROL (X)	NOMINAL CONTROL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	D 50 psi (3,5 bar)	**E** EPDM
	E 75 psi (5 bar)	**V** Viton

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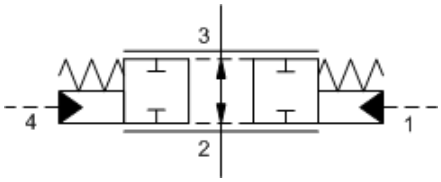

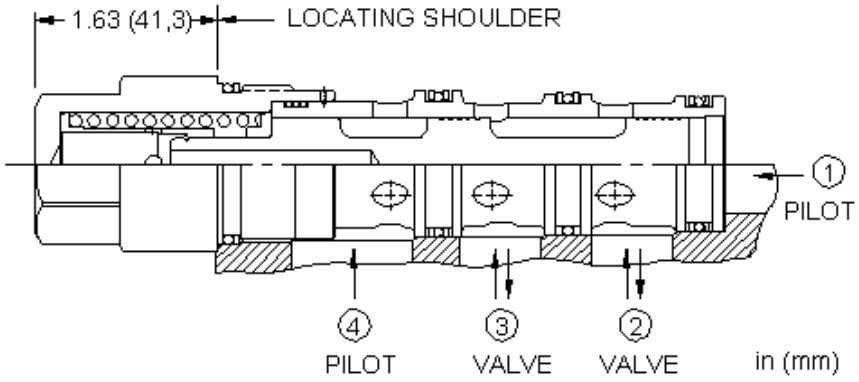

These bi-directional, normally open, modulating elements used with an external orifice, create a bi-directional, pressure compensated flow control.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	EPDM: 990033014
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: LHHTXFN

CONTROL (X)	DIFFERENTIAL PRESSURE (F)	SEAL MATERIAL (N)	MATERIAL/COATING
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N	Standard Material/Coating
	D 50 psi (3,5 bar)	**E** EPDM	**/AP** Stainless Steel, Passivated
	E 75 psi (5 bar)	**V** Viton	

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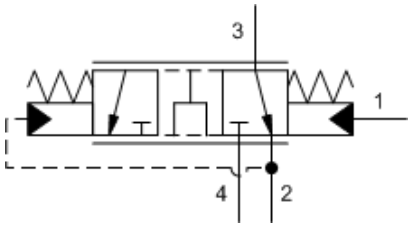

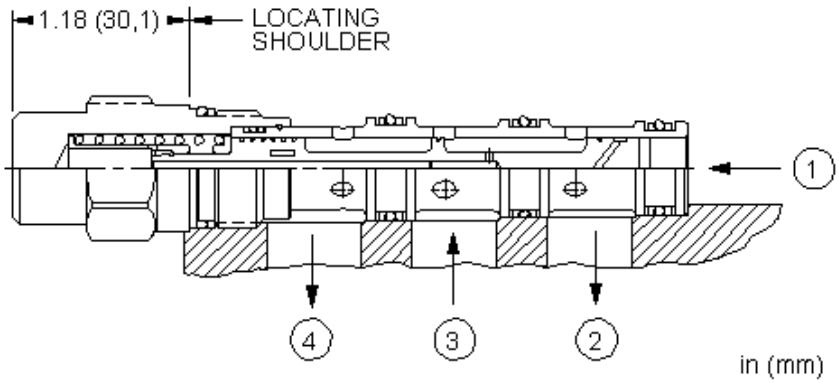

Bypass/restrictive modulating elements, when combined with an external orifice, create a bypass/restrictive flow control. Input flow (port 3) is directed to the priority or control flow at port 2. Once the priority requirements are met, excess flow is bypassed out port 4. The after-orifice signal is connected to port 1. The before-orifice design allows both pressure and flow to be controlled on the priority side of the circuit regardless of pressure in the bypass circuit. These valves work equally well in either closed or open center systems. Their main use is to allow after-market accessories to be driven off the host machine's hydraulic system without adding an additional pump.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990031007
Seal kit - Cartridge	Polyurethane: 990031002
Seal kit - Cartridge	Viton: 990031006

CONFIGURATION OPTIONS

Model Code Example: LHDAXFN

CONTROL (X)	DIFFERENTIAL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	E 75 psi (5 bar)	**E** EPDM
		V Viton

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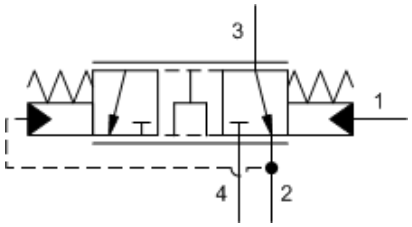

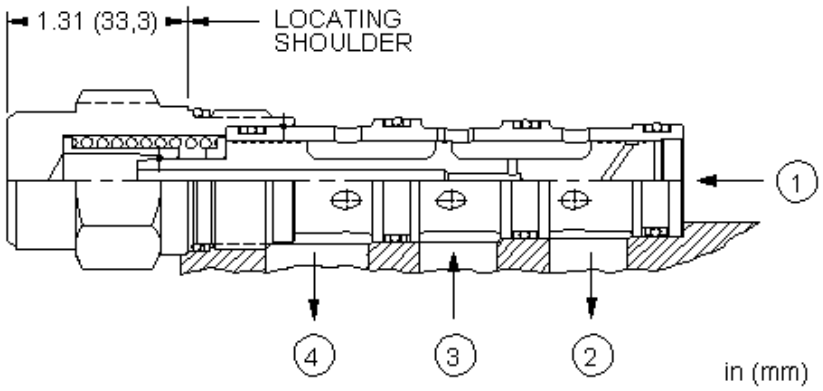

Bypass/restrictive modulating elements, when combined with an external orifice, create a bypass/restrictive flow control. Input flow (port 3) is directed to the priority or control flow at port 2. Once the priority requirements are met, excess flow is bypassed out port 4. The after-orifice signal is connected to port 1. The before-orifice design allows both pressure and flow to be controlled on the priority side of the circuit regardless of pressure in the bypass circuit. These valves work equally well in either closed or open center systems. Their main use is to allow after-market accessories to be driven off the host machine's hydraulic system without adding an additional pump.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990032007
Seal kit - Cartridge	EPDM: 990032014
Seal kit - Cartridge	Polyurethane: 990032002
Seal kit - Cartridge	Viton: 990032006

CONFIGURATION OPTIONS

Model Code Example: LHFAXFN

CONTROL (X)	DIFFERENTIAL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	E 75 psi (5 bar)	**E** EPDM
		V Viton

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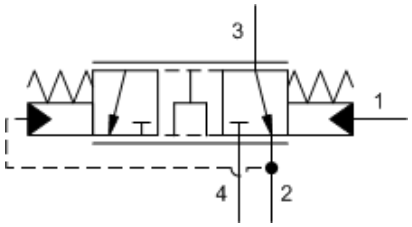

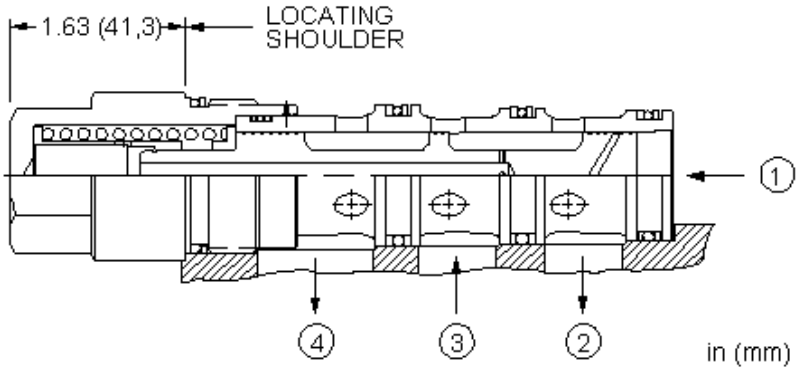

Bypass/restrictive modulating elements, when combined with an external orifice, create a bypass/restrictive flow control. Input flow (port 3) is directed to the priority or control flow at port 2. Once the priority requirements are met, excess flow is bypassed out port 4. The after-orifice signal is connected to port 1. The before-orifice design allows both pressure and flow to be controlled on the priority side of the circuit regardless of pressure in the bypass circuit. These valves work equally well in either closed or open center systems. Their main use is to allow after-market accessories to be driven off the host machine's hydraulic system without adding an additional pump.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990033007
Seal kit - Cartridge	EPDM: 990033014
Seal kit - Cartridge	Polyurethane: 990033002
Seal kit - Cartridge	Viton: 990033006

CONFIGURATION OPTIONS

Model Code Example: LHHAXFN

CONTROL (X)	DIFFERENTIAL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	E 75 psi (5 bar)	**E** EPDM
		V Viton

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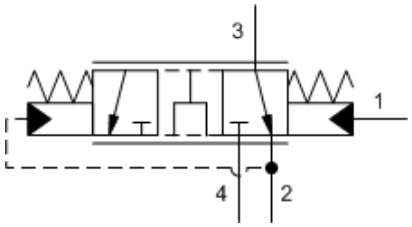

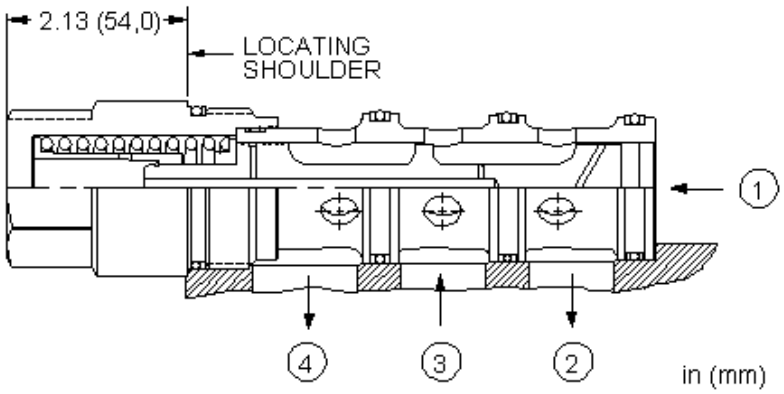

Bypass/restrictive modulating elements, when combined with an external orifice, create a bypass/restrictive flow control. Input flow (port 3) is directed to the priority or control flow at port 2. Once the priority requirements are met, excess flow is bypassed out port 4. The after-orifice signal is connected to port 1. The before-orifice design allows both pressure and flow to be controlled on the priority side of the circuit regardless of pressure in the bypass circuit. These valves work equally well in either closed or open center systems. Their main use is to allow after-market accessories to be driven off the host machine's hydraulic system without adding an additional pump.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990034007
Seal kit - Cartridge	EPDM: 990034014
Seal kit - Cartridge	Polyurethane: 990034002
Seal kit - Cartridge	Viton: 990034006

CONFIGURATION OPTIONS

Model Code Example: LHJAXFN

CONTROL (X)	DIFFERENTIAL PRESSURE (F)	SEAL MATERIAL (N)
X Not Adjustable	**F** 100 psi (7 bar)	**N** Buna-N
	E 75 psi (5 bar)	**E** EPDM
		V Viton

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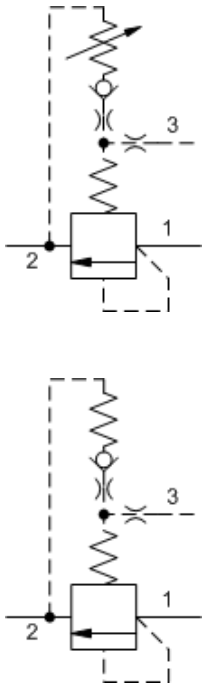

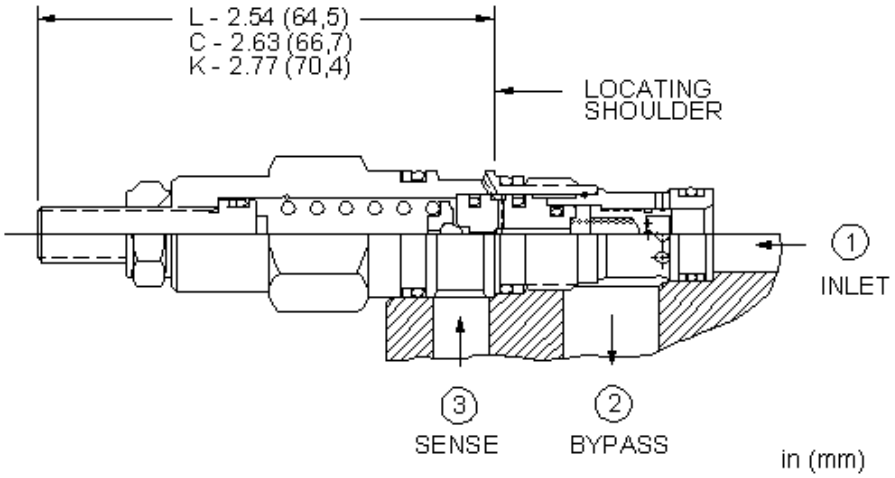

Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
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

CONFIGURATION OPTIONS

Model Code Example: RVBBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob

ADJUSTMENT RANGE (A)

- **A** 75 - 3000 psi (5 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 75 - 1500 psi (5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **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

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

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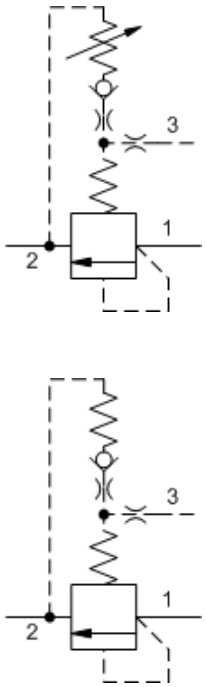

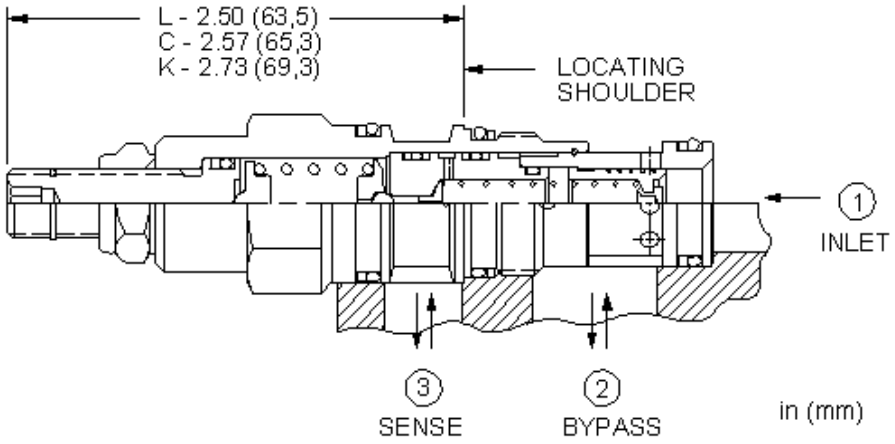

Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	30 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990011007
Seal kit - Cartridge	Polyurethane: 990011002
Seal kit - Cartridge	Viton: 990011006

CONFIGURATION OPTIONS

Model Code Example: RVCBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob

ADJUSTMENT RANGE (A)

- **A** 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

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

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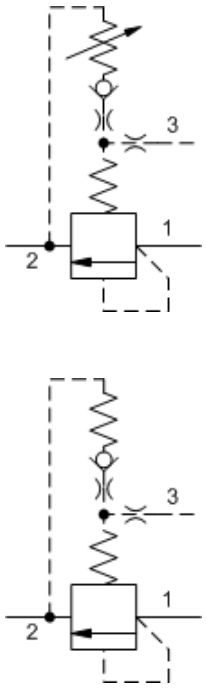

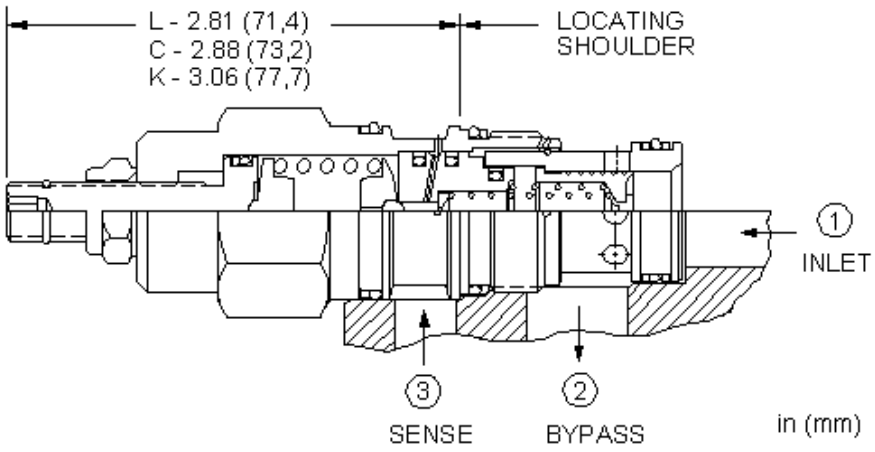

Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	50 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: RVEBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob
- **W** Hex Wrench Adjustment
- **Y** Tri-Grip Handknob

ADJUSTMENT RANGE (A)

- **A** 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 100 - 6000 psi (7 - 420 bar), 1000 psi (70 bar) Standard Setting
- **W** 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

MATERIAL/COATING

- Standard Material/Coating
- **/AP** Stainless Steel, Passivated

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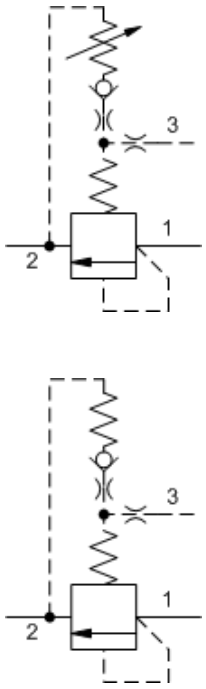

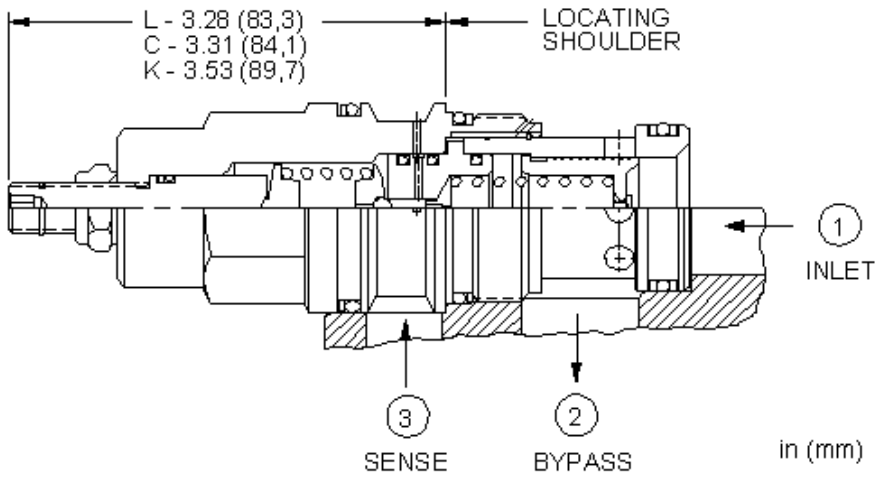

Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	65 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
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

CONFIGURATION OPTIONS

Model Code Example: RVGBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob

OPERATING RANGE (A)

- **A** 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 150 - 1500 psi (10,5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N)

- **N** Buna-N
- **V** Viton

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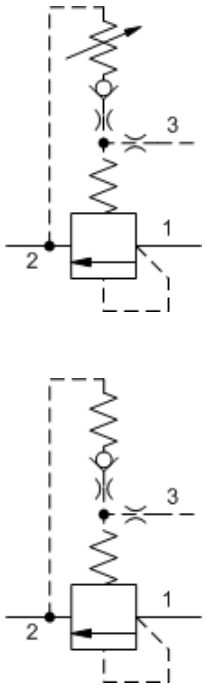

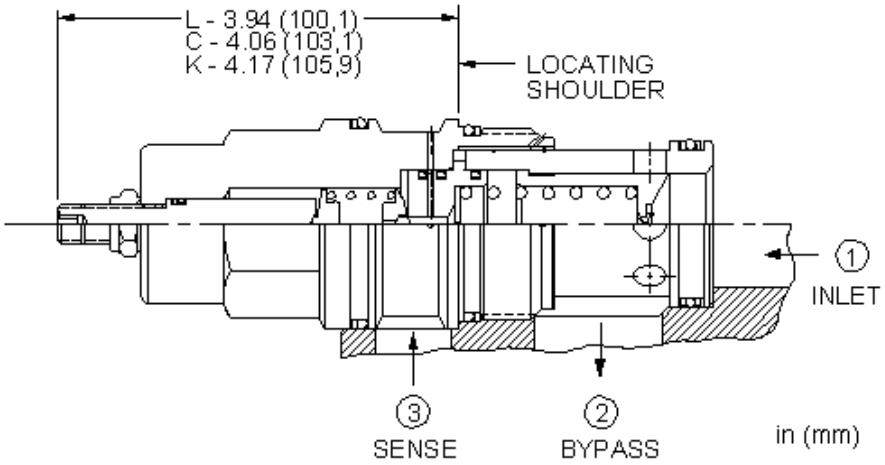

Three-port normally closed modulating elements with relief provide two functions when combined with an external orifice. The mainstage is a bypass compensator that controls a priority flow into the circuit, determined by the external orifice. Input flow in excess of the priority flow is bypassed to tank (port 2). If the inlet (port 1) pressure rises to the valve setting, the valve operates as a normal relief valve.

TECHNICAL DATA

Factory Pressure Settings Established at	15 L/min.
Maximum Operating Pressure	350 bar
Response Time - Typical	10 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	80 cc/min.@70 bar
Adjustment - Number of Clockwise Turns to Increase Setting	5
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

CONFIGURATION OPTIONS

Model Code Example: RVIBLAN

CONTROL (L)

- **L** Standard Screw Adjustment
- **C** Tamper Resistant - Factory Set
- **K** Handknob

ADJUSTMENT RANGE (A)

- **A** 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting
- **B** 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting
- **C** 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting

SEAL MATERIAL (N)

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

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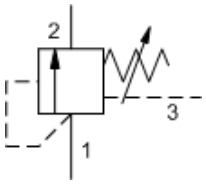

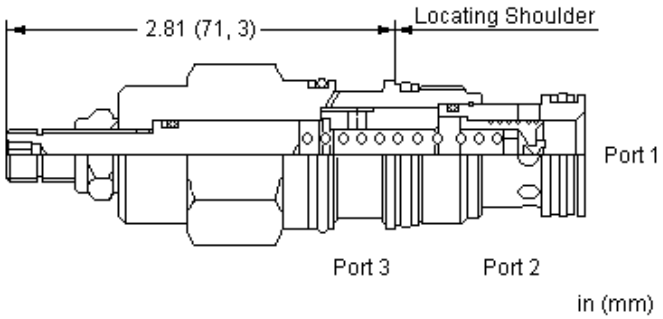

Normally closed modulating elements without an internal orifice act as a bypass compensator to maintain a constant pressure drop across an orifice, regardless of variations in upstream or downstream pressure.

TECHNICAL DATA

Maximum Operating Pressure	350 bar
Seal kit - Cartridge	Buna: 990202007
Seal kit - Cartridge	Polyurethane: 990002002
Seal kit - Cartridge	Viton: 990202006

CONFIGURATION OPTIONS

Model Code Example: LRFCLDN

DIFFERENTIAL PRESSURE (D)

- **D** 50 psi (3,5 bar)
- **F** 100 psi (7 bar)

SEAL MATERIAL (N)

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

MATERIAL/COATING

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

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