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Logic Elements





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Logic Elements Application Notes

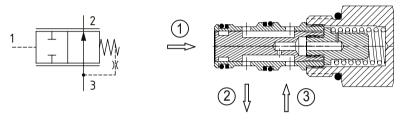
Basic Operation: Pressure Compensators

Pressure Compensators are used to control the pressure drop across an orifice, which can be a fixed orifice, a needle valve / restrictor, a proportional directional valve, or a steering valve. There are three main types: restrictive type (pre- and post-compensated), priority type, and load sense priority type.

- The restrictive type is used as a 2 ported compensator to maintain constant flow rate across variable load conditions.
- The priority type allows the excess flow to be used at pressure in a separate part of a circuit, while maintaining the priority flow.
- The load sense priority type takes a signal from a load sense line and prioritizes the required flow to the actuator.

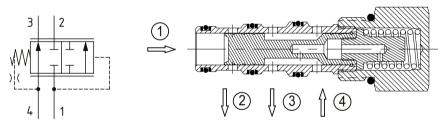
Restrictive Pressure Compensator

Restrictive pressure compensators are normally open, internally drained spool valves with a separate pilot port. By connecting the pilot port 1 upstream of the control orifice and the outlet of the orifice to port 3, the valve will sense the pressure difference. If this pressure difference is higher than the spring pressure setting, the spool will move and restrict the outlet flow to maintain a constant pressure differential and flow across the control orifice.



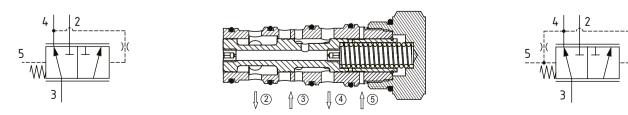
Priority Pressure Compensator

Priority pressure compensators are normally open between port 4 and port 3, with ports 1 and 2 blocked. Port 1 is connected upstream of a control orifice, while port 4 is connected downstream of the orifice. When the pressure differential across the orifice exceeds the spring setting, priority flow is controlled by the restriction created between port 4 and port 3 and the excess flow will pass to port 2. These valves work to maintain a constant priority flow, while diverting the excess flow to a secondary system. The priority flow will remain constant irrespective of changes in the regulated pressure or the excess flow pressure. They are used as part of a circuit where it is important to have a priority flow to a circuit, such as steering, or to keep brake accumulators charged.



Load Sense Priority Pressure Compensator

Load sense priority pressure compensators are used to provide a priority flow to a circuit, such as steering, based on the load sense pressure from an actuator at port 5. With the inlet at port 3, priority flow is controlled at port 4 based on the difference between the load sense pressure and the pressure of the controlled flow. Excess flow passes to another part of the circuit at port 2. The load sense line can be static or dynamic. The static type is used for simple applications where response or circuit stability is not a problem. The dynamic type is used for difficult applications where response and circuit stability are critical. They are commonly used in open circuit load sense steering to provide thermal balancing between the pump flow and steering unit. Additional applications can be in braking circuits as a priority flow regulator, as well as regulation of pilot pressure.



Logic Elements Application Notes



Basic Operation: Logic Elements

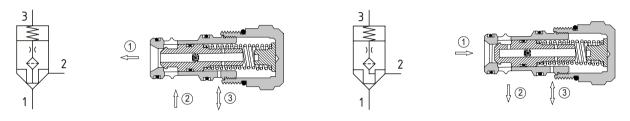
Logic Elements are multipurpose devices that are used in conjunction with other valves in a wide variety of circuits for control of pressure, flow, and direction. They are three ported valves, normally open or closed, poppet or spool, with or without orifice. They can be used in a variety of ways such as compensators, load sense control, high flow relief/pressure reducing functions, bypass, on/off valves, and many more.

Vent to Open Poppet Type Logic Element

The **DPS **B** are normally closed, vent to open, poppet type valves with an internal orifice connecting port 1 to the spring chamber and port 3. Pressure in port 2 will open the valve, allowing flow to pass freely from port 2 to port 1. Pressure in port 1 will keep the valve closed until port 3 is opened to tank through a pilot valve or reaches the setting of a pilot relief valve. It is available with a stroke limiter to limit the opening of the valve.

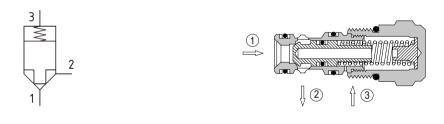
The **DPS **S** are normally closed, vent to open, poppet type valves with an internal orifice connecting port 2 to the spring chamber and port 3. Pressure in port 1 will open the valve allowing flow to pass from port 1 to port 2 freely. Pressure in port 2 will keep the valve closed until port 3 is opened to tank through a pilot valve or reaches the setting of a pilot relief valve. It is available with a stroke limiter to limit the opening of the valve.

Both valve types can be used in conjunction with pilot valves to create directional controls.



Pilot to Close Poppet Type Logic Element

The **DPS2** ****T** are normally closed, pilot to close, poppet type valves, which allow free flow in both directions from port 1 to port 2 and port 2 to port 1 if the pressure at port 3 is minimal. Pressure in port 3 will act over the full area of the poppet, piloting it closed. The ratio between the pressure area on port 3 and port 1 is 2:1, as it is with port 2. This valve can be used in directional valve functions using pilot pressure to close the valve and venting the spring chamber to open it. It is available with a stroke limiter to limit the opening of the valve.



Double Blocking Poppet Type Logic Element

This is a normally closed, vent to open, poppet valve that blocks flow from both 1 to 2 and 2 to 1 when the drain port 3 is blocked. There is an orifice in the spool that connects port 1 to port 3, which allows remote control of the pressure in the spring chamber and therefore the pressure required at port 1 to open the valve. This valve uniquely provides poppet type piloted pressure control function for high flow rates.



Logic Elements Application Notes



Pilot to Close Spool Type Logic Element

Pilot to close Logic Elements are normally closed, spool type valves that are biased closed by a spring. When pressure in port 1 reaches the spring set pressure, the spool will open port 1 to port 2. Pressure at the pilot port 3 adds to the opening pressure of the valve. These valves are one of the most versatile logic element designs and can be used in directional, pressure control, and flow control circuits. They are most commonly used as a bypass pressure compensator for load sense circuits in systems that use a fixed displacement pump. They can also be applied as a post compensator to provide flow sharing system functionality.



Vent to Open Spool Type Logic Element

Vent to open Logic Elements are normally closed, spool type valves that are biased closed by a spring. There is an orifice through the spool connecting port 1 to port 3, which allows remote control of the valve by connecting port 3 to a pressure control or a solenoid valve. These valves can be used as an unloading valve or in pressure control and bypass circuits.



Pilot to Open Spool Type Logic Element

Pilot to open Logic Elements are normally open, spool type valves that are biased open by a spring. Port 1 is open to port 2 until the pressure in port 1 is enough to overcome the spring force offset pressure and plus the pressure in the pilot port 3. They can be used as restrictive type pressure compensators or as a remotely operated pressure reducing valve.

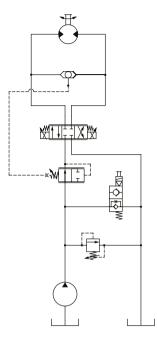


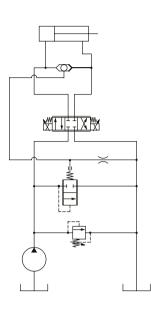
Application Recommendations

- The port 5 load sense line on the Load Sense Priority Pressure Compensator should not be more than 2 meters (6 ft) in length. The control pressure must be high enough to make sure enough flow is available and matched to the steering valve.
- When using the Load Sense Priority Pressure Compensator, changes in pressure in port 2 (excess flow line) can cause compensated flow changes by up to 10%. Relief valves should also be fitted on both outlet lines.
- With 'B', 'S', and 'T' poppet valves, the operating back pressure at port 3 should never be less than 1.3 x the spring set pressure.
- Various spring, stroke, and dampening options are available on most valves, providing flexibility in applications and offering the ability to tune the system.
- · Some valves have the option of a stroke limiter, which is used to create stability or simply to limit flow.
- Using these valves in combination with each other provides opportunities for innovative solutions to directional control and pressure control functions.

Logic Elements Application Notes

Typical Applications

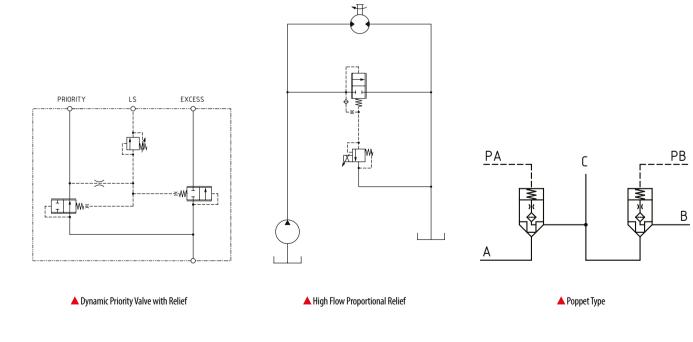




▲ Compensated, Bi-Directional Flow Control

▲ Double acting Cylinder with Proportional Speed Control, Unloading Valve and Circuit Relief

▲ Dump and Relief Valve for a Fixed Pump

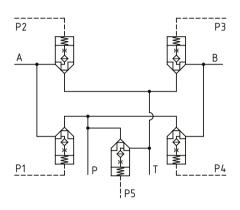


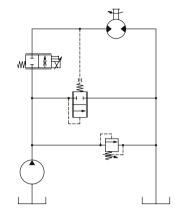


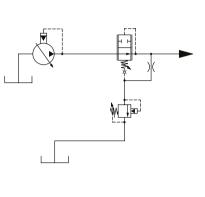


Logic Elements Application Notes

Typical Applications



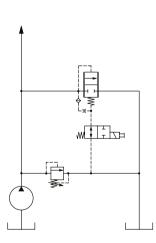




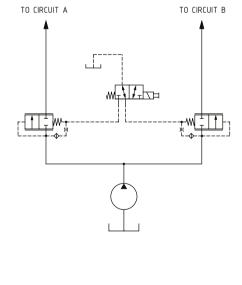
A Poppet Type

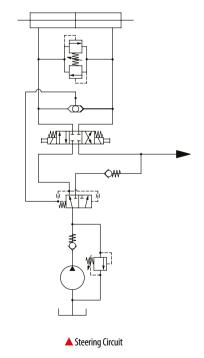
A Proportional Bypass Flow Control

A Proportional Pressure Reducing Valve



A Pump Unloading





Selector Valve

Logic Elements Quick Reference



Pressure Compensator	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP300-4	SDC10-3	Pressure Compensator, Restrictive Type	40 l/min [11 US gpm]	210 bar [3000 psi]	11
	PCS13-10	SDC10-3	Pressure Compensator, Restrictive Type	38 l/min [10 US gpm]	350 bar [5000 psi]	12
2	CP301-4	CP12-3	Pressure Compensator, Restrictive Type	90 l/min [24 US gpm]	210 bar [3000 psi]	13
	PCS13-12	C-12-3	Pressure Compensator, Restrictive Type	58 l/min [15 US gpm]	350 bar [5000 psi]	14
3	CP302-4	SDC16-3	Pressure Compensator, Restrictive Type	130 l/min [34 US gpm]	210 bar [3000 psi]	15
	PCS13-16	SDC16-3	Pressure Compensator, Restrictive Type	114 l/min [30 US gpm]	350 bar [5000 psi]	16
	CP303-4	SDC20-3	Pressure Compensator, Restrictive Type	284 l/min [75 US gpm]	210 bar [3000 psi]	17
Pressure Compensator	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP310-4	SDC10-4	Pressure Compensator, Priority Type	40 l/min [11 US gpm]	210 bar [3000 psi]	18
	PCS14-10	SDC10-4	Pressure Compensator, Priority Type	38 l/min [10 US gpm]	350 bar [5000 psi]	19
3 2	CP311-4	CP12-4	Pressure Compensator, Priority Type	60 l/min [16 US gpm]	210 bar [3000 psi]	20
	PCS14-12	C-12-4	Pressure Compensator, Priority Type	58 l/min [15 US gpm]	350 bar [5000 psi]	21
4 1	CP312-4	SDC16-4	Pressure Compensator, Priority Type	130 l/min [34 US gpm]	210 bar [3000 psi]	22
	PCS14-16	SDC16-4	Pressure Compensator, Priority Type	114 l/min [30 US gpm]	350 bar [5000 psi]	23
	CP313-4	SDC20-4	Pressure Compensator, Priority Type	340 l/min [90 US gpm]	210 bar [3000 psi]	24
Pressure Compensator	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP310-6	SDC10-4	Pressure Compensator, Load Sense, Static, Priority Type	40 L/min [11 US gpm]	210 bar [3000 psi]	25

*Flow ratings are for reference only. Refer to individual product page for performance information.

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Logic Elements Quick Reference

Pressure Compensator	Model No.	Cavity	Description	Flow*	Pressure	Page
4	PFRS-12	C-12-5S	Pressure Compensator, Load Sense, Static, Priority Type	76 l/min [20 US gpm]	280 bar [4000 psi]	26
5)(()	PFRS-16	C-16-5S	Pressure Compensator, Load Sense, Static, Priority Type	150 l/min [40 Us gpm]	280 bar [4000 psi]	27
	PFRS-20	C-20-5S	Pressure Compensator, Load Sense, Static, Priority Type	230 l/min [60 US gpm]	240 bar [3500 psi]	28
Pressure Compensator	Model No.	Cavity	Description	Flow*	Pressure	Page
4 2	PFRD-12	C-12-5S	Pressure Compensator, Load Sense, Dynamic, Priority Type	76 l/min [20 US gpm]	280 bar [4000 psi]	29
	PFRD-16	C-16-5S	Pressure Compensator, Load Sense, Dynamic, Priority Type	150 l/min [40 Us gpm]	280 bar [4000 psi]	30
1	PFRD-20	C-20-5S	Pressure Compensator, Load Sense, Dynamic, Priority Type	230 l/min [60 US gpm]	240 bar [3500 psi]	31
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
3	DPS2-10-B	SDC10-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	60 l/min [16 US gpm]	350 bar [5000 psi]	32
	DPS2-12-B	C-12-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	114 l/min [30 US gpm]	350 bar [5000 psi]	33
	DPS2-16-B	SDC16-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	189 l/min [50 US gpm]	350 bar [5000 psi]	34
•1	DPS2-20-B	C-20-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	303 l/min [80 US gpm]	350 bar [5000 psi]	35
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
3	DPS2-10-S	SDC10-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	60 l/min [16 US gpm]	350 bar [5000 psi]	36
	DPS2-12-S	C-12-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	114 l/min [30 US gpm]	350 bar [5000 psi]	37
	DPS2-16-S	SDC16-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	189 l/min [50 US gpm]	350 bar [5000 psi]	38
'	DPS2-20-S	C-20-3S	Logic Element, Normally Closed, Poppet Type, Vent to Open	303 l/min [80 US gpm]	350 bar [5000 psi]	39
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	VLP 12/P2	NCS 12/3	Logic Element, Normally Closed, Double Blocking, Poppet Type, Vent to Open	160 l/min [42 US gpm]	315 bar [4600 psi]	40

*Flow ratings are for reference only. Refer to individual product page for performance information.



Logic Elements Quick Reference

Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
2	DPS2-10-T	SDC10-3S	Logic Element, Normally Closed, Poppet Type, Pilot to Close	60 l/min [16 US gpm]	350 bar [5000 psi]	41
	DPS2-12-T	C-12-3S	Logic Element, Normally Closed, Poppet Type, Pilot to Close	114 l/min [30 US gpm]	350 bar [5000 psi]	42
	DPS2-16-T	SDC16-3S	Logic Element, Normally Closed, Poppet Type, Pilot to Close	189 l/min [50 US gpm]	350 bar [5000 psi]	43
'	DPS2-20-T	C-20-3S	Logic Element, Normally Closed, Poppet Type, Pilot to Close	303 l/min [80 US gpm]	350 bar [5000 psi]	44

Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	DPS2-8-P	SDC08-3	Logic Element, Normally Closed, Spool Type, Pilot to Close	30 l/min [8 US gpm]	350 bar [5000 psi]	45
	CP700-1	SDC10-3	Logic Element, Normally Closed, Spool Type, Pilot to Close	50 l/min [13 US gpm]	210 bar [3000 psi]	46
2	DPS2-10-P	SDC10-3S	Logic Element, Normally Closed, Spool Type, Pilot to Close	60 l/min [16 US gpm]	290 bar [4200 psi]	47
	HLE10-CPC	SDC10-3S	Logic Element, Normally Closed, Spool Type, Pilot to Close	80 l/min [21 US gpm]	350 bar [5000 psi]	48
CP701-1	CP701-1	CP12-3S	Logic Element, Normally Closed, Spool Type, Pilot to Close	150 l/min [40 US gpm]	350 bar [5000 psi]	49
	DPS2-16-P	SDC16-3S	Logic Element, Normally Closed, Spool Type, Pilot to Close	189 l/min [50 US gpm]	290 bar [4200 psi]	50
	DPS2-20-P	C-20-3S	Logic Element, Normally Closed, Spool Type, Pilot to Close	303 l/min [80 US gpm]	290 bar [4200 psi]	51
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
Logic Element	Model No. DPS2-8-V	Cavity SDC08-3	Description Logic Element, Normally Closed, Spool Type, Vent to Open	Flow* 30 l/min [8 US gpm]	Pressure 350 bar [5000 psi]	Page 52
Logic Element			Logic Element, Normally Closed,	30 l/min	350 bar	
Logic Element	DPS2-8-V	SDC08-3	Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed,	30 l/min [8 US gpm] 50 l/min	350 bar [5000 psi] 210 bar	52
	DPS2-8-V CP700-2	SDC08-3 SDC10-3	Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed,	30 l/min [8 US gpm] 50 l/min [13 US gpm] 60 l/min	350 bar [5000 psi] 210 bar [3000 psi] 290 bar	52
	DPS2-8-V CP700-2 DPS2-10-V	SDC08-3 SDC10-3 SDC10-3S	Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed,	30 l/min [8 US gpm] 50 l/min [13 US gpm] 60 l/min [16 US gpm] 80 l/min	350 bar [5000 psi] 210 bar [3000 psi] 290 bar [4200 psi] 350 bar	52 53 54
	DPS2-8-V CP700-2 DPS2-10-V HLE10-CVO	SDC08-3 SDC10-3 SDC10-3S SDC10-3S	Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open Logic Element, Normally Closed, Spool Type, Vent to Open	30 l/min [8 US gpm] 50 l/min [13 US gpm] 60 l/min [16 US gpm] 80 l/min [21 US gpm]	350 bar [5000 psi] 210 bar [3000 psi] 290 bar [4200 psi] 350 bar [5000 psi] 350 bar	52 53 54 55

*Flow ratings are for reference only. Refer to individual product page for performance information.

Logic Elements Quick Reference

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Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	DPS2-8-R	SDC08-3	Logic Element, Normally Open, Spool Type, Vent to Close	30 l/min [8 US gpm]	350 bar [5000 psi]	59
	CP700-3	SDC10-3	Logic Element, Normally Open, Spool Type, Vent to Close	40 l/min [11 US gpm]	210 bar [3000 psi]	60
	DPS2-10-R	SDC10-3S	Logic Element, Normally Open, Spool Type, Vent to Close	60 l/min [16 US gpm]	290 bar [4200 psi]	61
	HLE10-OVC	SDC10-3S	Logic Element, Normally Open, Spool Type, Vent to Close	60 l/min [16 US gpm]	350 bar [5000 psi]	62
2		Logic Element, Normally Open, Spool Type, Vent to Close	80 l/min [21 US gpm]	350 bar [5000 psi]	63	
	DPS2-16-R	SDC16-3S	Logic Element, Normally Open, Spool Type, Vent to Close	189 l/min [50 US gpm]	290 bar [4200 psi]	64
	DPS2-20-R	C-20-3S	Logic Element, Normally Open, Spool Type, Vent to Close	303 l/min [80 US gpm]	290 bar [4200 psi]	65
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	DPS2-8-F	SDC08-3	Logic Element, Normally Open, Spool Type, Pilot to Open	30 l/min [8 US gpm]	350 bar [5000 psi]	66
	CP700-4	SDC10-3	Logic Element, Normally Open, Spool Type, Pilot to Open	40 l/min [11 US gpm]	210 bar [3000 psi]	67
1 4	DPS2-10-F	SDC10-3S	Logic Element, Normally Open, Spool Type, Pilot to Open	60 l/min [16 US gpm]	290 bar [4200 psi]	68
	HLE10-OPO	SDC10-3S	Logic Element, Normally Open, Spool Type, Pilot to Open	60 l/min [16 US gpm]]	350 bar [5000 psi]	69
2	CP701-4	CP12-3S	Logic Element, Normally Open, Spool Type, Pilot to Open	76 l/min [20 US gpm]	350 bar [5000 psi]	70
	DPS2-16-F	SDC16-3S	Logic Element, Normally Open, Spool Type, Pilot to Open	189 l/min [50 US gpm]	290 bar [4200 psi]	71
	DPS2-20-F	C-20-3S	Logic Element, Normally Open, Spool Type, Pilot to Open	303 l/min [80 US gpm]	290 bar [4200 psi]	72
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	LE402	SDC20-2	Logic Element, Normally Closed, Spool Type, Pilot Valve Adapter	350 l/min [93 US gpm]	350 bar [5000 psi]	73
Logic Element	Model No.	Cavity	Description	Flow*	Pressure	Page
	LEV402	A21773	Logic Element, Normally Closed, Spool Type, Vent to Open with Pilot Valve Adapter	400 l/min [106 US gpm]	250 bar [3600 psi]	74

*Flow ratings are for reference only. Refer to individual product page for performance information.

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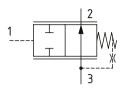
Logic Elements CP300-4

Pressure Compensator, Restrictive Type

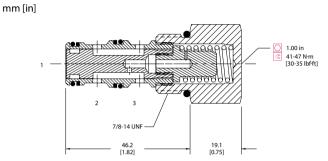
210 bar [3000 psi] • 40 l/min [11 US gpm]

DESCRIPTION AND OPERATION

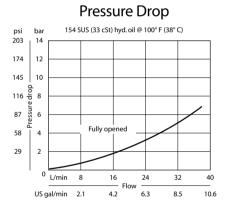
This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.



DIMENSIONS



PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	40 l/min [11 US gpm]
Weight	0.13 kg [0.29 lb]
Cavity	SDC10-3

Code Seal kit B-Buna - N 120027 V-Viton 120028 Housing 100 Code Bar PS 040 100 7.6 100 13.1 100 13.1	040 2.8 [40]	
V-Viton 120028 Housing		
Hausing	120028 080 5.5 [80]	
150 10.3 [150]		
	110 7.6 [110]	
100 12 1 [100]	150 10.3 [150]	
Code Ports & Material Housing Model Code		
0 No Housing		
SE3B AL, 3/8 BSP SDC10-3-SE-3B		
SE4B AL, 1/2 BSP SDC10-3-SE-4B Spool Seal Option		
6S AL, #6 SAE CP10-3-6S O - No Seal	S - Seal included	
8S AL, #8 SAE CP10-3-8S		

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Logic Elements PCS13-10

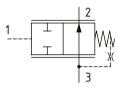
Pressure Compensator, Restrictive Type

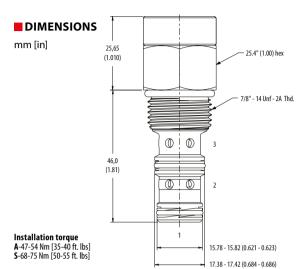
350 bar [5000 psi] • 38 l/min [10 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.

SCHEMATIC

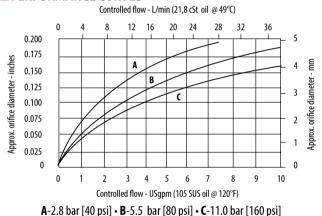




PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	38 l/min [10 US gpm]
Weight	0.12 kg [0.26 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



Seal O	ption			Diffe	erential Pressure	
Code	9	Seal kit				. .
0mit-l	Buna - N 8	889624	Housing Material	Code		
V -Vitor	n 8		Omit-No housing	<u>40</u>	2.8	[40]
			A-Aluminum S-Steel	80	5.5	[80]
Housir	Ig		J-Steel	160	11.0	[160]
Code	Ports	Aluminun Heavy du				
0	No housing					
2G	1/4″ BSP	876705	02-175127			
3G	3/8″ BSP	876714	02-175128	Const Const Over	4 m	
6H	#6 SAE	876704		Spool Seal Opt Omit - No seal		
8H	#8 SAE	876711		S - Seal include		
6T	#6 SAE		02-175124			
8T	#8 SAE		02-175125			



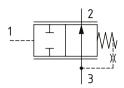
Logic Elements CP301-4

Pressure Compensator, Restrictive Type

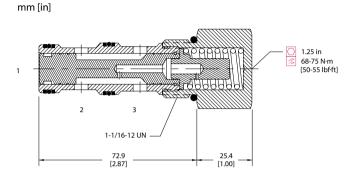
210 bar [3000 psi] • 90 l/min [24 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.



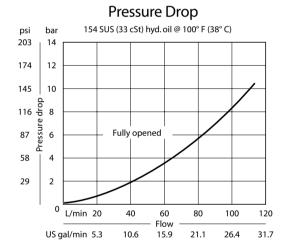
DIMENSIONS



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	90 l/min [24 US gpm]
Weight	0.30 kg [0.67 lb]
Cavity	CP12-3

PERFORMANCE CURVES



Seal Option	1					Differential	Pressure		
Code	Seal kit					Code	Bar	Psi	
B -Buna - N	120053					050	3.5	[50]	
V -Viton	120052					080	5.5	[80]	
						100	6.9	[100]	
						150	10.3	[150]	
Housing						190	13.1	[190]	
Code	Ports & Materia	l Housing Model Code	_						
0	No Housing				Spool Sea	Ontion			
105	AL, #10 SAE	CP12-3-10S			0 - No Seal				-
125	AL, #12 SAE	CP12-3-12S	_		S - Seal inc				
4B	AL, 1/2 BSP	CP12-3-4B	_						
6B	AL, 3/4 BSP	CP12-3-6B							

Danfoss

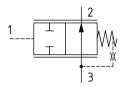
Logic Elements PCS13-12

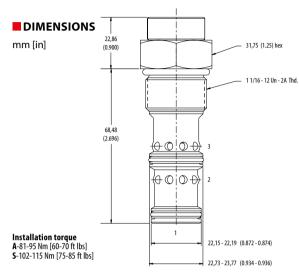
Pressure Compensator, Restrictive Type

350 bar [5000 psi] • 58 l/min [15 US gpm]

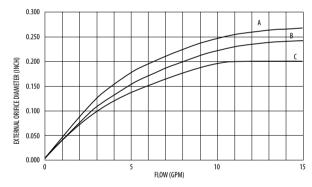
DESCRIPTION AND OPERATION

This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.





PERFORMANCE CURVES



A-2.8 bar [40 psi] • B-5.5 bar [80 psi] • C-11.0 bar [160 psi]

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	58 l/min [15 US gpm]
Weight	0.30 kg [0.55 lb]
Cavity	C-12-3

Seal O	ption				Differential Pressure
Code	Seal	kit	Housin	ng Material	
Omit-E	Buna - N 99003	333-000		No housing	Code Bar Psi
V-Vitor	n 99003	334-000	A-Alun		40 2.8 [40]
			S -Steel		80 5.5 [80]
Housin	a				120 8.3 [120]
	.9				160 11.0 [160]
Code	Ports	Aluminı Heavy d		Steel	
0	No housing				
4G	1/2″ BSP	02-1618	17	02-169815	Spool Seal Option
6G	3/4″ BSP	02-1618	16	02-169814	Omit - No seal
10H	#10 SAE	02-1606	42		S - Seal included
12H	#12 SAE	02-1606	46		
10T	#10 SAE			02-161070	
12T	#12 SAE			02-169816	

Danfoss

Logic Elements CP302-4

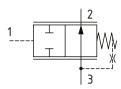
Pressure Compensator, Restrictive Type

210 bar [3000 psi] • 130 l/min [34 US gpm]

DESCRIPTION AND OPERATION

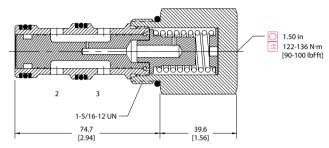
This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.

SCHEMATIC



DIMENSIONS

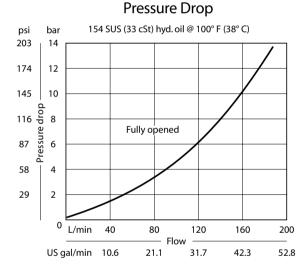




PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	130 l/min [34 US gpm]
Weight	0.56 kg [1.24 lb]
Cavity	SDC16-3



MODEL CODE

Seal Option						Different	tial Pressure		
Code	Seal kit					Code	Bar	Psi	
B -Buna - N	120202					040	2.8	[40]	
V -Viton	120203					080	5.5	[80]	
						100	6.9	[100]	
						150	10.3	[150]	
Housing]	230	15.9	[230]	
Code	Ports & Material	Housing Model Code	_						
0	No Housing								
HE6B	AL, 3/4 BSP	SDC16-3-HE-6B	_			Spool Seal Option			
HE8B	AL, 1 BSP	SDC16-3-HE-8B	_			0 - No seal S - Seal included			
125	AL, #12 SAE	CP16-3-12S	_						
16S	AL, #16 SAE	CP16-3-16S							

BC332375783111en-000202



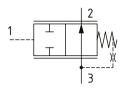
Logic Elements PCS13-16

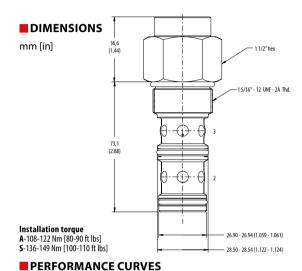
Pressure Compensator, Restrictive Type

350 bar [5000 psi] • 114 l/min [30 US gpm]

DESCRIPTION AND OPERATION

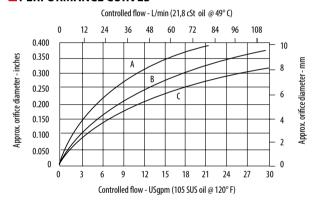
This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.





PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	114 l/min [30 US gpm]
Weight	0.38 kg [0.84 lb]
Cavity	SDC16-3



A-2.8 bar [40 psi] • **B**-5.5 bar [80 psi] • **C**-11.0 bar [160 psi]

Seal O	ption					Different	ial Pressur	e	
Code		Seal kit				Code	Bar	Psi	
0mit-	Buna - N	565811	Housing Material			40	2.8	[40]	
V-Vito	n	889610	Omit -No housing A -Aluminum			80	5.5	[80]	
Housir	ng		S -Steel			160	11.0	[160]	
Code	Ports	Aluminum Heavy duty	Steel			Spool Seal Option			
0	No Housi	ng				Omit - No seal			
10H	#10 SAE	876721				S - Seals included			
12H	#12 SAE	876723							
4G	1/2″ BSP	876720	02-175131						
6G	3/4″ BSP	876722	02-175132						
10T	#10 SAE		02-175129						
12T	#12 SAE		02-175130						



Logic Elements CP303-4

Pressure Compensator, Restrictive Type

210 bar [3000 psi] • 284 l/min [75 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported spool valve, where port 3 is connected to port 2 and port 1 is the pilot port. The spring chamber is connected to port 3 through an orifice. When port 3 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a restrictive pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool restricts flow from port 3 to port 2 and compensates for any change in pressure difference across the valve.

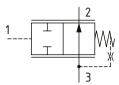
210 bar [3000 psi]

1.11 kg [2.45 lb]

SDC20-3

284 l/min [75 US gpm]

SCHEMATIC



PERFORMANCE DATA

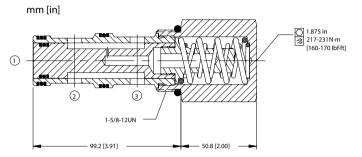
Rated pressure

Rated flow

Weight

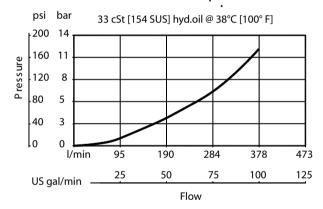
Cavity

DIMENSIONS



PERFORMANCE CURVES

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	C))			



Seal Optio	n					Differential	Pressure	
Code	Seal kit					Code	Bar	Psi
B -Buna - N	120200					050	3.4	[50]
V -Viton	120201					080	5.5	[80]
						100	6.9	[100]
						130	9.0	[130]
Housing						150	10.3	[150]
Code	Ports & Materia	l Housing Model Code	_					
0	No Housing		_					
16S	AL, #16 SAE	CP20-3-16S			Spool Sea	al Option		
20S	AL, #20 SAE	CP20-3-20S			0 - No Sea S - Seal in			
8B	AL, 1 BSP	CP20-3-8B			Jedi III	ciuucu		
10B	AL, 1-1/4 BSP	CP20-3-10B	_					

Logic Elements CP310-4

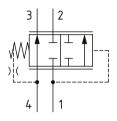
Pressure Compensator, Priority Type

210 bar [3000 psi] • 40 l/min [11 US gpm]

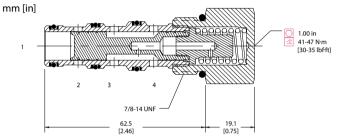
DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

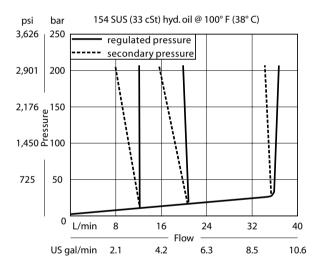
SCHEMATIC



DIMENSIONS



PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	40 l/min [11 US gpm]
Weight	0.15 kg [0.32 lb]
Cavity	SDC10-4

Seal Option	n			Differential	Pressure		
Code	Seal kit	_		Code	Bar	Psi	
B -Buna - N	120023	_		040	2.8	[40]	
V -Viton	120024			080	5.5	[80]	
				110	7.6	[110]	
				150	10.3	[150]	
Housing				190	13.1	[190]	
Code	Ports & Material	Housing Model Code					
0	No Housing						
L3B	AL, 3/8 BSP	SDC10-4-L-3B					
L4B	AL, 1/2 BSP	SDC10-4-L-4B					
65	AL, #6 SAE	CP10-4-65					
85	AL, #8 SAE	CP10-4-85					



Logic Elements PCS14-10

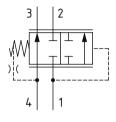
Pressure Compensator, Priority Type

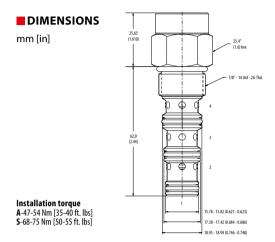
350 bar [5000 psi] • 38 l/min [10 US gpm]

DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

SCHEMATIC



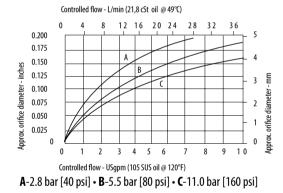


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PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	38 l/min [10 US gpm]
Weight	0.14 kg [0.32 lb]
Cavity	SDC10-4

PERFORMANCE CURVES



MODEL CODE

Seal 0	ption				
Code	:	Seal kit			
0mit-	Buna - N 🗧	889651		4. A	
V -Vito	n a	889653	 Housing M Omit-No h 		
Housi	ng		A -Aluminu S -Steel		
Code	Ports	Aluminum St	andard duty	Aluminum Heavy du	ity Steel
0	No housi	ng			
	No housi 3/8″ BSP				
3B					02-175137
о 3В 6Т	3/8″ BSP	02-179705			02-175137 02-175138
3B 6T 8T	3/8″ BSP #6 SAE	02-179705 566161		876709	
0 3B 6T 8T 2G 3G	3/8″ BSP #6 SAE #8 SAE	02-179705 566161		876709 876715	02-175138
3B 6T 8T 2G	3/8" BSP #6 SAE #8 SAE 1/4" BSP	02-179705 566161			02-175138

3B 40 Differential Pressure Code Bar Psi 40 2.8 [40] 80 5.5 [80] 160 11.0 [160]



Logic Elements CP311-4

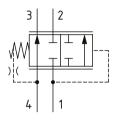
Pressure Compensator, Priority Type

210 bar [3000 psi] • 60 l/min [16 US gpm]

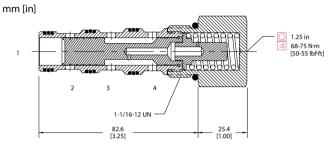
DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

SCHEMATIC



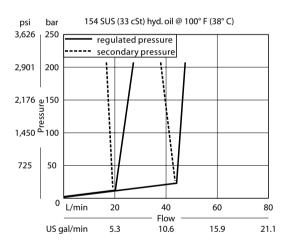
DIMENSIONS



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	60 l/min [16 US gpm]
Weight	0.31 kg [0.69 lb]
Cavity	CP12-4

PERFORMANCE CURVES



Seal Option	1			Differential	Pressure		
Code	Seal kit			Code	Bar	Psi	
B -Buna - N	120262			050	3.5	[50]	
V -Viton	120263			080	5.5	[80]	
				100	6.9	[100]	
Housing				150	10.3	[150]	
Code	Ports & Material	Housing Model Code	_				
0	No Housing		-				
85	AL, #8 SAE	CP12-4-8S					
105	AL, #10 SAE	CP12-4-10S	-				
125	AL, #12 SAE	CP12-4-12S	-				
3B	AL, 3/8 BSP	CP12-4-3B	-				
4B	AL, 1/2 BSP	CP12-4-4B	-				





Logic Elements PCS14-12

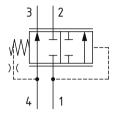
Pressure Compensator, Priority Type

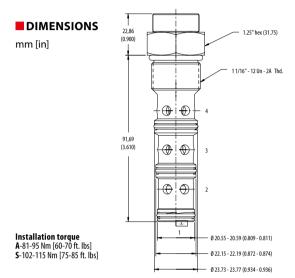
350 bar [5000 psi] • 58 l/min [15 US gpm]

DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

SCHEMATIC



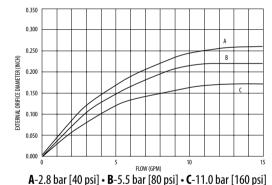


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PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	58 l/min [15 US gpm]
Weight	0.36 kg [0.80 lb]
Cavity	C-12-4

PERFORMANCE CURVES



Seal Option					Differential	Pressure	
Code S	eal kit				Code	Bar	Psi
Omit -Buna - N 9	900335-000				40	2.8	[40]
V -Viton 9	900336-000				80	5.5	[80]
					120	8.3	[120]
Housing Material					160	11.0	[160]
Omit-No housing			Но	ising			
A -Aluminum S -Steel			Coo	e Ports	Alumir	um Heavyd	uty Steel
			0	No hou	sing		
			4G	1/2″ BS	iP 598643	1-001	
			6G	3/4″ BS	P 598643	2-001	5991073-001
			8H	#8 SAE	598643	3-001	
			10	#10 SAI	E 598643	4-001	5991074-001
			121	#12 SA	E 598643	6-001	5991075-001

Logic Elements CP312-4

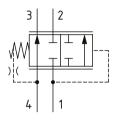
Pressure Compensator, Priority Type

210 bar [3000 psi] • 130 l/min [34 US gpm]

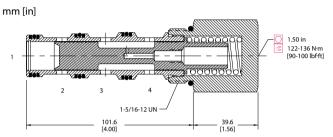
DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

SCHEMATIC



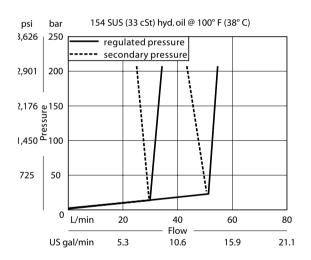
DIMENSIONS



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	130 l/min [34 US gpm]
Weight	0.60 kg [1.32 lb]
Cavity	SDC16-4

PERFORMANCE CURVES



Seal Optio	n				Differential	Pressure		
Code	Seal kit				Code	Bar	Psi	
B -Buna - M	l 120025				040	2.8	[40]	
V -Viton	120026				080	5.5	[80]	
					110	7.6	[110]	
					150	10.3	[150]	
Housing								
Code	Ports & Material	Housing Model Code	_					
0	No Housing							
6B	AL, 3/4 BSP	CP16-4-6B						
8B	AL, 1 BSP	CP16-4-8B	-					
125	AL, #12 SAE	CP16-4-12S	-					
165	AL, #16 SAE	CP16-4-16S	-					



Logic Elements PCS14-16

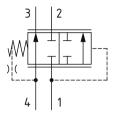
Pressure Compensator, Priority Type

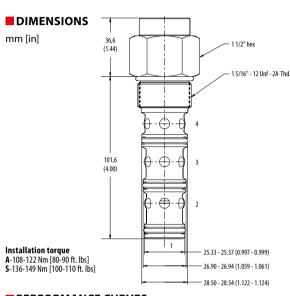
350 bar [5000 psi] • 114 l/min [30 US gpm]

DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

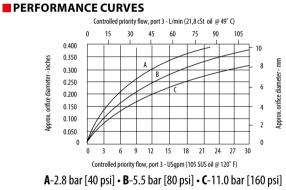
SCHEMATIC





PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	114 l/min [30 US gpm]
Weight	0.50 kg [1.12 lb]
Cavity	SDC16-4



Seal O Code		eal kit	Housing M	laterial			Differ	ential P	ressure	
0mit-E	Buna - N 88	89660	Omit-No ho				Code	Bar	Psi	
V -Vitor	n 02	2-175435	A -Aluminur S -Steel	m			40	2.8	[40]	
Housin	g		J-JIEEI				80	5.5	[80]	
Code	Ports	Aluminum S	tandard duty	Aluminum Heavy duty	Steel]	160	11.0	[160]	
0	No housin	g								
10T	#10 SAE				02-175141					
12T	#12 SAE	566411			02-175142					
6B	3/4″ BSP	02-175468								
10H	#10 SAE			876729						
12H	#12 SAE			876731						
4G	1/2″ BSP			876728	02-175143					
6G	3/4″ BSP			876730	02-175144					



Logic Elements CP313-4

Pressure Compensator, Priority Type

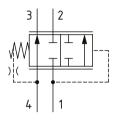
210 bar [3000 psi] • 340 l/min [90 US gpm]

DESCRIPTION AND OPERATION

This is a 4-ported spool valve where flow from port 1 to port 2 is blocked and port 4 is connected to port 3. The spring chamber is connected to port 4 through an orifice in the spool. When port 4 is connected to the outlet of a control orifice and port 1 is connected upstream of the orifice, the valve functions as a priority pressure compensator. When the pressure drop across the orifice is equal to the spring set pressure, the spool begins to restrict the flow to port 3, while opening port 1 to port 2 to allow excess flow to pass to another part of the circuit. If the pressure in the second part of the circuit rises above the pressure in port 3, the spool will move back to restrict the flow from port 1 to port 2 and maintain the priority flow to port 3 regardless of pressure changes between port 3 and port 2. These valves are ideal for use in circuits where a priority flow is needed to a function while allowing the excess flow to be used for other purposes.

DIMENSIONS

SCHEMATIC



PERFORMANCE DATA

mm [in]

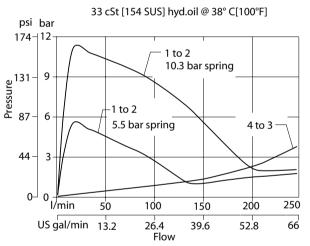
F

Rated pressure 210 bar [3000 psi] Rated flow 340 l/min [90 US gpm] Weight 1.30 kg [2.80 lb] Cavity SDC20-4

PERFORMANCE CURVES

Pressure Drop

1 [5.56



MODEL CODE

Seal Optio	n			Differential	Pressure		
Code	Seal kit	_		Code	Bar	Psi	
B -Buna - N	120181	_		050	3.4	[50]	
V -Viton	120182			080	5.5	[80]	
				100	6.9	[100]	
				130	9.0	[130]	
Housing				150	10.3	[150]	
Code	Ports & Material	Housing Model Code					
0	No Housing						
8B	AL, 1 BSP	CP20-4-8B					
10B	AL, 1-1/4 BSP	CP20-4-10B					
16S	AL, #16 SAE	CP20-4-16S					
205	AL, #20 SAE	CP20-4-20S					



1

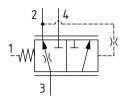
Logic Elements CP310-6

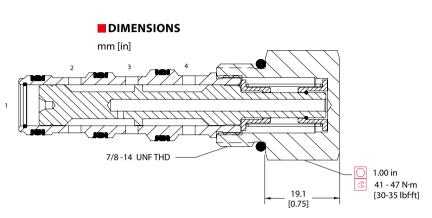
Pressure Compensator, Load Sense, Static, Priority Type

210 bar [3000 psi] • 40 l/min [11 US gpm]

DESCRIPTION AND OPERATION

This is a 4-ported, static, priority load sense pressure compensator. Flow passes from the inlet port 3 to the priority port 2, which is connected to the inlet of a control orifice. Port 1 is the load sense port which connects to the outlet of the control orifice. The valve maintains the priority flow to port 2 regardless of inlet pressure change or load pressure changes, while also allowing excess flow to pass to the rest of the system through port 4. This valve is ideal for use in a system where the excess flow at port 4 needs to work at a higher pressure than the pressure of the priority flow at port 2. Additionally, the valve will allow flow to the excess port 4 when the priority port 2 is blocked.



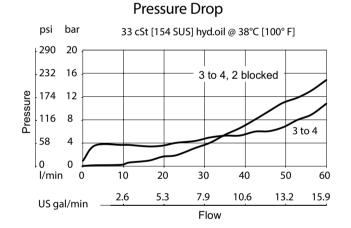


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PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	40 l/min [11 US gpm]
Weight	0.15 kg [0.32 lb]
Cavity	SDC10-4

PERFORMANCE CURVES



Seal Option					Differen	ntial Pre	ssure	
Code	Seal kit				Code	Bar	Psi	
B -Buna - N	120023				080	5.5	[80]	
V-Viton	120024				150	10.3	[150 psi]	
		Housing Model Code						
0	No Housing		-					
L3B	AL, 3/8 BSP	SDC10-4-L-3B	_					
L4B	AL, 1/2 BSP	SDC10-4-L-4B						
6S	AL, #6 SAE	CP10-4-6S						
85	AL, #8 SAE	CP10-4-8S						

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Logic Elements PFRS-12

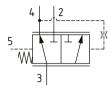
Pressure Compensator, Load Sense, Static, Priority Type

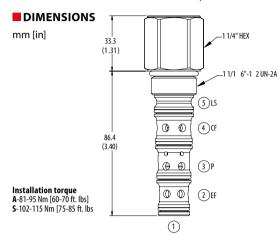
280 bar [4000 psi] • 76 l/min [20 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, static, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2.

SCHEMATIC





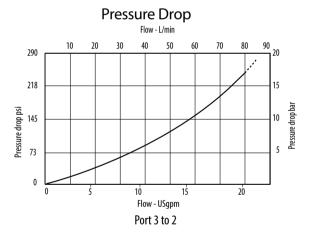
PERFORMANCE DATA

Rated pressure	280 bar [4000 psi]
Rated flow	76 l/min [20 US gpm]
Leakage	164 ml/min [10 in3/min] @ 210 bar [3000 psi]
Weight	0.36 kg [0.79 lb]
Cavity	(-12-55

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.

PERFORMANCE CURVES



Seal Op	tion					Different	ial Pressur	e	
Code	Seal kit					Code	Bar	Psi	
J -Ureth	ane 202914-9	921				055	3.8	[55]	
Housin	g Material					078	5.4	[78]	
0-No ho A-Alum S-Steel Housin Code	inum	Port 5	Aluminum	Steel					
000	No housing								
10T	#10 SAE	#4 SAE	4998820-001	4998821-001					
	#12 SAE	#4 SAE	4998820-002	4998821-002					
12T		1/4" BSP	4998820-003	4998821-003					
12T 04G	1/2" BSP								



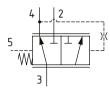
Logic Elements PFRS-16

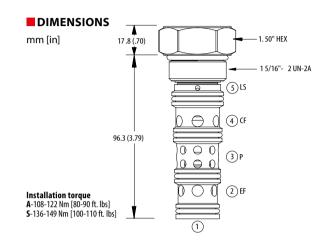
Pressure Compensator, Load Sense, Static, Priority Type

280 bar [4000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, static, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2.





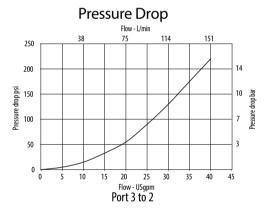
PERFORMANCE DATA

Rated pressure	280 bar [4000 psi]
Rated flow	150 l/min [40 US gpm]
Leakage	164 ml/min [10 in ³ /min] @ 210 bar [3000 psi]
Weight	0.47 kg [1.05 lb]
Cavity	C-16-5S

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.

PERFORMANCE CURVES



					Differential	Pressure		
					Code	Bar	Psi	
					065	4.5	[65]	
					130	8.9	[130]	
Seal Option					160	11.0	[160]	
Code	Seal kit							
U -Urethane	202915-922							
	al			Housing				
0 - No housing A - Aluminum	al			Housing Code	Port 2, 3 & 4	Port 5	Aluminum	Steel
0 - No housing A - Aluminum	al	 		-	Port 2, 3 & 4 No housing	Port 5	Aluminum	Steel
0 - No housing A - Aluminum	al	 		Code			Aluminum 4994880-001	Steel 4994881-001
0 - No housing A - Aluminum	al	 		Code 000	No housing	#4 SAE		4994881-001
Housing Materia O - No housing A - Aluminum S - Steel	al	 		Code 000 12T	No housing #12 SAE	#4 SAE #4 SAE	4994880-001	4994881-001

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Logic Elements PFRS-20

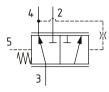
Pressure Compensator, Load Sense, Static, Priority Type

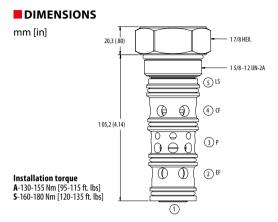
240 bar [3500 psi] • 230 l/min [60 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, static, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2.

SCHEMATIC





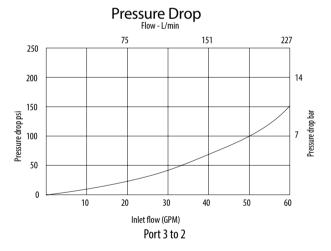
PERFORMANCE DATA

Rated pressure	240 bar [3500 psi]
Rated flow	230 l/min [60 US gpm]
Leakage	164 ml/min [10 in ³ /min] @ 210 bar [3000 psi]
Weight	0.86 kg [1.9 lb]
Cavity	C-20-5S

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.

PERFORMANCE CURVES



					Differentia	l Pressure		
					Code	Bar	Psi	
					080	5.5	[80]	
					100	6.9	[100]	
Seal Option								
Code	Seal kit							
II_lirethane	02-187543							
U -Urethane	02-187543			Housing				
U -Urethane	02-18/543				Port 2, 3 & 4	Port 5	Aluminum	Steel
	02-187543				Port 2, 3 & 4 No housing	Port 5	Aluminum	Steel
Housing Material	02-187543			Code		Port 5 #4 SAE	Aluminum 4998822-001	Steel 4998823-001
Housing Material O - No Housing A - Aluminum	02-18/543	 		Code 000	No housing			
Housing Material O - No Housing	02-18/543			Code 000 12T	No housing #12 SAE	#4 SAE	4998822-001 4998822-002	4998823-001

Logic Elements PFRD-12

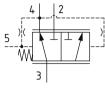
Pressure Compensator, Load Sense, Dynamic, Priority Type

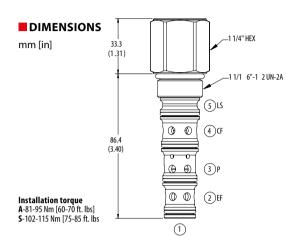
280 bar [4000 psi] • 76 l/min [20 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, dynamic, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice and to port 5. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2. Some oil will pass from port 5 to port 1, which provides additional stability to the system.

SCHEMATIC





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PERFORMANCE DATA

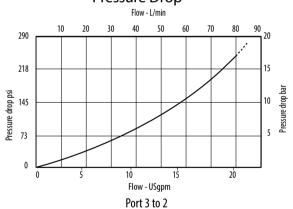
Rated pressure	280 bar [4000 psi]
Rated flow	76 l/min [20 US gpm]
Leakage	164 ml/min [10 in3/min] @ 210 bar [3000 psi]
Weight	0.36 kg [0.79 lb]
Cavity	(-12-55

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.

Pressure Drop

PERFORMANCE CURVES



Seal Op	tion					Different	ial Pressur	e	
Code	Seal kit					Code	Bar	Psi	
U -Ureth	ane 202914-9	921				075	5.2	[75]	
Housin	g Material					110	7.6	[110]	
0-No ho A-Alum S-Steel <u>Housin</u> Code	inum	Port 5	Aluminum	Steel		145	10.0	[145]	
000	No housing								
10T	#10 SAE	#4 SAE	4998820-001	4998821-001					
	#12 SAE	#4 SAE	4998820-002	4998821-002					
12T		1/4" BSP	4998820-003	4998821-003					
12T 04G	1/2" BSP	.,							

Logic Elements PFRD-16

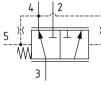
Pressure Compensator, Load Sense, Dynamic, Priority Type

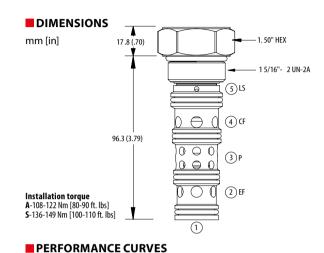
280 bar [4000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, dynamic, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice and to port 5. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2. Some oil will pass from port 5 to port 1, which provides additional stability to the system

SCHEMATIC





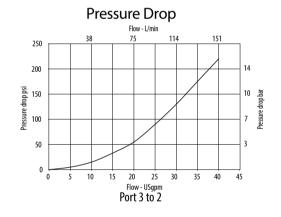
Danfoss

PERFORMANCE DATA

Rated pressure	280 bar [4000 psi]
Rated flow	150 l/min [40 US gpm]
Leakage	164 ml/min [10 in ³ /min] @ 210 bar [3000 psi]
Weight	0.47 kg [1.05 lb]
Cavity	C-16-5S

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.



Basic Code			Differential	Pressure		
PFRS - Static signal			Code	Bar I	Psi	
PFRD- Dynamic signal			080	5.5	[80]	
			110	7.6	[110]	
Seal Option			130	9.0	[130]	
Code Seal kit						
U -Urethane 202915-922						
		Housing				
Housing Material		Code	Port 2, 3 & 4	Port 5	Aluminum	Steel
0 - No housing A - Aluminum		000	No housing			
S - Steel		12T	#12 SAE	#4 SAE	4994880-001	4994881-001
		16T	#16 SAE	#4 SAE	4994880-002	4994881-002
		06G	3/4" BSP	1/4" BSP	4994880-003	4994881-003
		08G	1" BSP			4994881-004

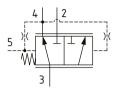
Logic Elements PFRD-20

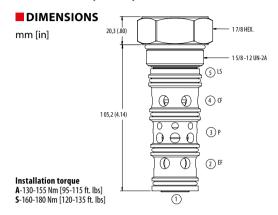
Pressure Compensator, Load Sense, Dynamic, Priority Type

240 bar [3500 psi] • 230 l/min [60 US gpm]

DESCRIPTION AND OPERATION

This is a 5-ported, dynamic, priority load sense pressure compensator that supplies fluid on demand to an actuator or a steering valve. Flow passes from the inlet port 3 to the controlled flow port 4. Pressure in port 4 is connected to port 1 (which is plugged) through an orifice and to port 5. When the pressure in port 1 is higher than the load sense pressure in port 5, the spool moves against the spring and begins to open port 2 and allows excess flow to pass to the rest of the system. When the flow is no longer required through the controlled port and the load sense line falls, all of the oil will pass to the excess flow port 2. Some oil will pass from port 5 to port 1, which provides additional stability to the system.





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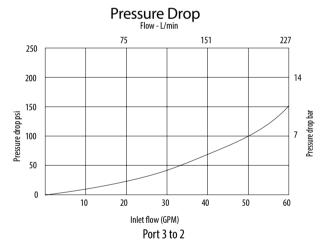
PERFORMANCE DATA

Rated pressure	240 bar [3500 psi]
Rated flow	230 l/min [60 US gpm]
Leakage	164 ml/min [10 in ³ /min] @ 210 bar [3000 psi]
Weight	0.86 kg [1.9 lb]
Cavity	C-20-5S

Note: Port 1 is unused and should be plugged.

Note: Minimum inlet flow should not be less than 1/4 maximum of inlet flow.

PERFORMANCE CURVES



Basic Code					Differential	Pressure		
PFRS - Static signal					Code	Bar Ps	i	
PFRD- Dynamic signal					085	5.9 [8	5]	
					110	7.6 [1	10]	
Seal Option	Conthin							
Code	Seal kit							
U -Urethane	02-187543			lousing				
				Code	Port 2, 3 & 4	Port 5	Aluminum	Steel
			-	000	No housing			
Housing Material			-	12T	#12 SAE	#4 SAE	4998822-001	4998823-001
			-	16T	#16 SAE	#4 SAE	4998822-002	4998823-002
0 - No Housing A - Aluminum			-	06G	3/4" BSP	1/4" BSP	4998822-003	4998823-003

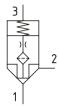
Logic Elements DPS2-10-B

Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 1 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2, but flow can still take place from port 2 to port 1. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 and 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/off valve or in a pressure control function.

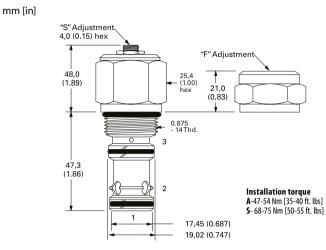
SCHEMATIC



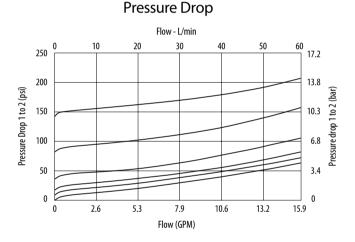
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	60 l/min [16 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S

DIMENSIONS



PERFORMANCE CURVES



Seal Opt	ion									
Code	Sea	l kit	Adjustment Op	tion						
Omit -Bu	na - N 8896	550	F- Fixed		Hannia Material					
V-Viton 88		552	S- Stroke Adjusti	ments	Housing Material Omit - No Housing					
Housing					A - Aluminum S - Steel		Differential Pressure		ure	
Code	Ports 1 & 2	Port 3	Aluminum	Stee			Code	Bar	Psi	
			Heavy Duty				005	0.35	[5]	
0			Housing				010	0.7	[10]	
2G	1/4" BSP	1/4″ BSP	876707				020	1.40	[20]	
3G	3/8" BSP	1/4″ BSP	876710	02-163	313		040	2.80	[40]	
4G	1/2" BSP	1/4″ BSP		02-163	324		080	5.50	[80]	
6H	#6 SAE	#6 SAE	876706				160	11.0	[160]	
8H	#8 SAE	#6 SAE	876712							
6T	#6 SAE	#6 SAE		02-17	961					
8T	#8 SAE	#6 SAE		02-163	322					
10T	#10 SAE	#6 SAE		02-163	323					



Quick Reference

Index



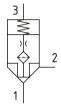
Logic Elements DPS2-12-B

Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 114 I/min [30 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 1 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2, but flow can still take place from port 2 to port 1. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 and 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC



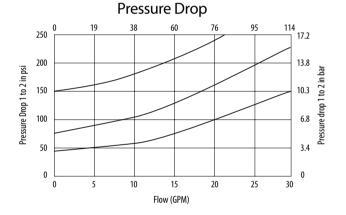
mm [in] 34,5 (1.36) 34,5 (1.36) 38,2 (2.29) 38,2 (2.29) 38,2 (2.29) 38,2 (2.29) 22,2 (0.873) 5-102-115 Nm [75-85 ft. lbs] 22,7 (0.935)

PERFORMANCE CURVES

DIMENSIONS



Rated pressure	350 bar [5000 psi]
Rated flow	114 l/min [30 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.31 kg [0.68 lb]
Cavity	C-12-3S



Seal Option					Differenti	al Pressure	2	
Code	Seal kit				Code	Bar		
Omit-Buna - N	02-165872				040	2.80		
V -Viton	02-165886				080	5.50		
					160	11.0		
Adjustment Opt F- Fixed Housing Materia		 		Housing			Aluminium	
Omit - No housin				Code	Port 1 & 2	Port 3	Heavy duty	Steel
A - Aluminum	5			0	No housing			
				10T	#10 SAE	#6 SAE	02-178268	02-160996
				12T	#12 SAE	#6 SAE	02-178269	02-160997
S - Steel				4G	1/2" BSP	3/8" BSP	02-178270	02-160994

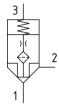
Logic Elements DPS2-16-B

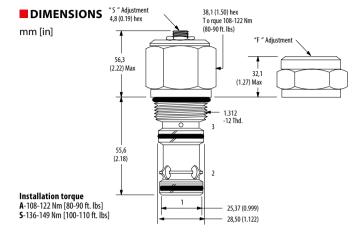
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 1 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2, but flow can still take place from port 2 to port 1. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 and 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC

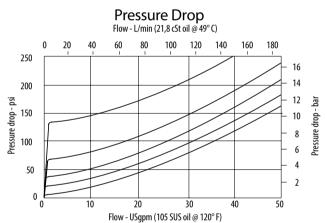




PERFORMANCE DATA

Rated pressure (AA option only)	350 bar [5000 psi]
Rated Pressure (standard)	210 bar [3000 psi]
Rated flow	189 l/min [50 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.35 kg [0.78 lb]
Cavity	SDC16-3S

PERFORMANCE CURVES



Seal Opt	tion					d Pressure				
Code	S	eal kit	Housing Mater	Housing Material						
Omit-Buna - N 889659 V-Viton 02-165871		39659	Omit - No Hous		Omit- AA-35					
		A - Aluminum								
Housing			S - Steel							
iousing	Aluminum									
Code	Ports 1 & 2	Port 3	Heavy Duty	Steel	Code Ba	ar	Psi			
0		No	Housing		040 2.8		[40]			
4G	1/2" BSP	3/8″ BSP	02-160676	02-175118	080 5.5		[80]			
6G	3/4" BSP	3/8″ BSP	876726	02-175119	160 11		[160]			
10H	#10 SAE	#6 SAE	876725				[100]			
12H	#12 SAE	#6 SAE	786727		stment Option					
10T	#10 SAE	#6 SAE		02-175116	xed					
12T	#12 SAE	#6 SAE		02-175117	roke Adjustment					



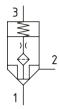
Logic Elements DPS2-20-B

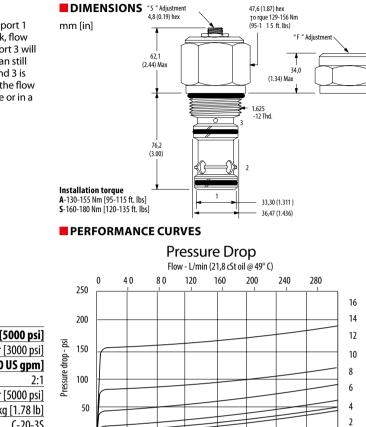
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 303 l/min [80 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 1 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2, but flow can still take place from port 2 to port 1. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 and 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC





DIMENSIONS "S" Adjustment 4,8 (0.19) hex

PERFORMANCE DATA

Rated pressure (AA option only)	350 bar [5000 psi]
Rated Pressure (standard)	210 bar [3000 psi]
Rated flow	303 l/min [80 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.81 kg [1.78 lb]
Cavity	C-20-3S

MODEL CODE

Seal OptionCodeSeal kitOmit-Buna - N02-113153V-Viton02-112969								Rated Pressur			
							Omit - 210 bar [3000 psi] AA - 350 bar [5000 psi]				
		Housing Mate Omit - No Hous A - Aluminum S - Steel									
Housing							Differenti	al Pressure	sure		
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel				Code	Bar	Psi	
0		No	Housing					040	2.80	[40]	
6G	3/4" BSP	3/8″ BSP	876740	02-175122				080	5.5	[80]	
8G	1" BSP	3/8″ BSP	876742	02-175123				160	11.0	[160]	
12H	#12 SAE	#6 SAE	876741								
16H	#16 SAE	#6 SAE	876743								
12T	#12 SAE	#6 SAE		02-175120							
16T	#16 SAE	#6 SAE		02-175121							

0

0

10

20

30

40

Flow - USgpm (105 SUS oil @ 120° F)

50



bar

Pressure drop -

0 80

70

60



"F" Adjustment

Logic Elements DPS2-10-S

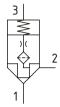
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 60 l/min [16 US gpm]

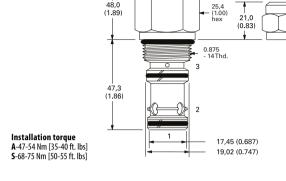
DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 2 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 2 to port 1, but flow can still take place from port 1 to port 2. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as

an on/ off valve or in a pressure control function.

SCHEMATIC



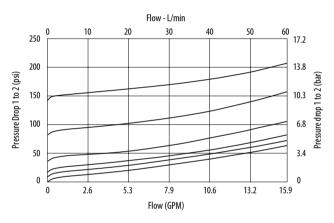


"S" Adjustment 4,0 (0.15) hex

PERFORMANCE CURVES

DIMENSIONS

mm [in]



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	60 l/min [16 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S

Seal Opt	tion							
Code	Sea	kit	Adjustment Op	tion				
Omit-Buna - N 889650		F- Fixed		Housing Material				
V-Viton 88		552	S- Stroke Adjustr	nents -	Omit - No Housing			
					A - Aluminum S - Steel			
Housing	I					Differ	ential Pre	ssure
Code	Ports 1 & 2	Port 3	Aluminum	Steel		Code	Bar	Psi
			Heavy Duty		_	005	0.35	[5]
0		No	Housing		_	010	0.7	[10]
2G	1/4" BSP	1/4″ BSP	876707		_	020	1.40	[20]
3G	3/8" BSP	1/4″ BSP	876710	02-163313	3	040	2.80	[40]
4G	1/2" BSP	1/4″ BSP		02-163324	4	080	5.50	[80]
6H	#6 SAE	#6 SAE	876706			160	11.0	[160]
8H	#8 SAE	#6 SAE	876712					
6T	#6 SAE	#6 SAE		02-171961				
8T	#8 SAE	#6 SAE		02–163322	2			
10T	#10 SAE	#6 SAE		02-163323	3			



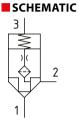
Logic Elements DPS2-12-S

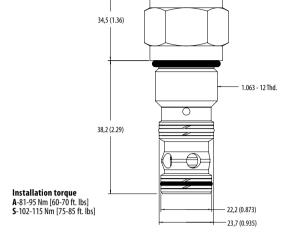
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 114 l/min [30 US gpm]

DESCRIPTION AND OPERATION

an on/ off valve or in a pressure control function.

This is a 3-ported, vent to open, poppet type logic element with port 2 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 2 to port 1, but flow can still take place from port 1 to port 2. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as





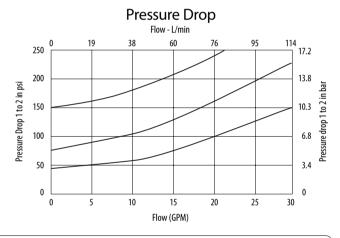
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	114 l/min [30 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.31 kg [0.68 lb]
Cavity	(-12-35

PERFORMANCE CURVES

DIMENSIONS

mm [in]



Seal Option					Differenti	al Pressur	e	
Code	Seal Kit				Code	Bar	· F	Psi
Omit-Buna - N	02-165872				040	2.80) [40]
V -Viton	02-165886				080	5.50) [80]
					160	11.0) [160]
Adjustment Op	tion			Housing				
F-Fixed				Code	Port 1 & 2	Port 3	Aluminium Heavy duty	
				0	No housing			
Housing Mater	rial			10T	#10 SAE	#6 SAE	02-178268	02-1609
Omit- No housir	ıg			12T	#12 SAE	#6 SAE	02-178269	02-1609
A - Aluminum S - Steel				4G	1/2" BSP	3/8" BSP	02-178270	02-1609
				6G	3/4" BSP	3/8" BSP	02-178271	02-1609

Logic Elements DPS2-16-S

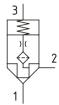
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 2 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 2 to port 1,

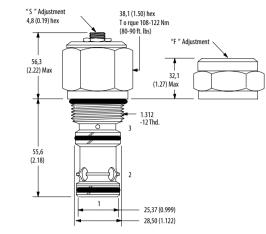
but flow can still take place from port 1 to port 2. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/ off valve or in a pressure control function.

SCHEMATIC

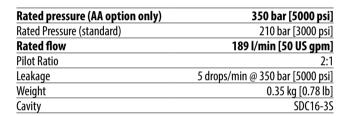


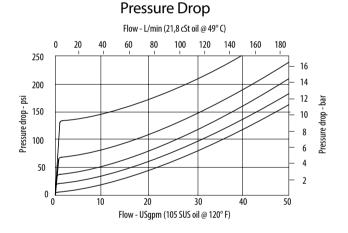
PERFORMANCE DATA

DIMENSIONS



PERFORMANCE CURVES





Seal Op [.] Code	Seal	V:+-					
			Handa a Mata	4.1		Rated Pressure Omit - 210 bar [2000 pcil
V -Viton 02-165871		Housing Mater			3000 psi]		
		Omit - No Hous A - Aluminum S - Steel	ing				
lousing	I				Differentia	l Pressure	
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel	Code	Bar	Psi
0		No	Housing		040	2.80	[40]
4G	1/2" BSP	3/8″ BSP	02-160676	02-175118	080	5.5	[80]
6G	3/4" BSP	3/8″ BSP	876726	02-175119	160	11.0	[160]
10H	#10 SAE	#6 SAE	876725				
12H	#12 SAE	#6 SAE	786727				
10T	#10 SAE	#6 SAE		02-175116			
12T	#12 SAE	#6 SAE		02-175117			
* Alumin	um bodies are to nal housings ava		ressures less than 21	0 bar [3000 psi].	Adjustment Option		



Logic Elements DPS2-20-S

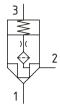
Logic Element, Normally Closed, Poppet Type, Vent to Open 350 bar [5000 psi] • 303 l/min [80 US gpm]

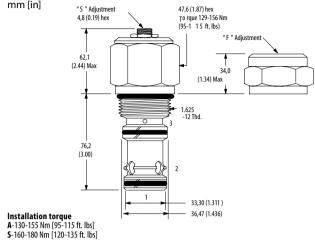
DESCRIPTION AND OPERATION

This is a 3-ported, vent to open, poppet type logic element with port 2 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 or from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 2 to port 1, but flow can still take place from port 1 to port 2. The area ratio between

port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the flow or pressure out of port 3, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC

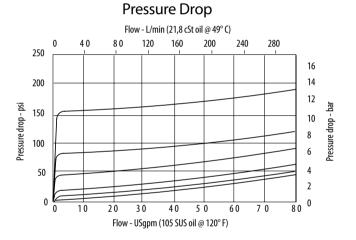




PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure (AA option only)	350 bar [5000 psi]
Rated pressure (standard)	210 bar [3000 psi]
Rated flow	303 l/min [80 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.81 kg [1.78 lb]
Cavity	C-20-3S



MODEL CODE

Seal Opt	tion				Rated Pi	ressure
Code	Se	al kit	Housing Mater	rial		10 bar [3000 psi]
Omit-Bu	ına - N 02	-113153		mit - No Housing		bar [5000 psi]
V -Viton	02	-112969	A - Aluminum S - Steel		Differential Pressure	
U ou cin m			J Steel		Code Bar	Psi
Housing					040 2.80	[40]
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel	080 5.5	[80]
0		No	Housing		160 11.0	[160]
6G	3/4" BSP	3/8″ BSP	876740	02-175122		
8G	1" BSP	3/8″ BSP	876742	02-175123		
12H	#12 SAE	#6 SAE	876741			
16H	#16 SAE	#6 SAE	876743			
12T	#12 SAE	#6 SAE		02-175120	Adjustment Option	
16T	#16 SAE	#6 SAE		02-175121	F- Fixed	



DIMENSIONS

mm [in]

Index

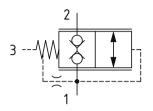
Logic Elements VLP 12/P2

Logic Element Poppet, Double Blocking Closed, Vent to Open

315 bar [4600 psi] • 160 l/min [42 US gpm]

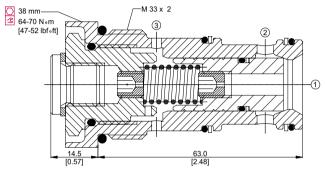
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, double blocking poppet type logic element, with port 1 connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. The area ratio between port 1 and 3 is 1 to 1 and port 2 is balanced between the seat diameter and the seal poppet diameter. By controlling the flow or pressure out of port 3 the valve can be used as an on/ off valve or in a pressure control function.



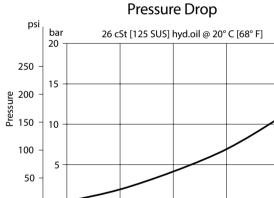
DIMENSIONS

mm [in]



PERFORMANCE DATA

Rated pressure	315 bar [4600 psi]
Rated flow	160 l/min [42 US gpm]
Differential Pressure	2 bar [29 psi]
Weight	0.30 kg [0.66 lb]
Cavity	NCS12/3



50

10

100

30

20

flow

150

40

200

50

PERFORMANCE CURVES

MODEL CODE

Housing					Seal Option		
Code	Ports & Material	Housing Model Code			Code	Seal kit	_
0	No Housing		-		Omit-Buna - N	230000130	_
SE1/2	AL, 1/2 BSP	NCS12/3-SE-1/2	-		V -Viton	230000360	_
SE3/4	AL, 3/4 BSP	NCS12/3-SE-3/4	_				
SE8S	AL, #8 SAE	NCS12/3-SE-8S	-				
SE12S	AL, #12 SAE	NCS12/3-SE-12S	-				

0 0

I/min = 0



Logic Elements DPS2-10-T

Logic Element, Normally Closed, Poppet Type, Pilot to Close 350 bar [5000 psi] • 60 l/min [16 US gpm]

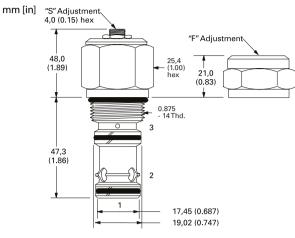
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close, poppet type logic element. By opening port 3 to tank, flow can pass from port 2 to port 1 or from port 1 to port 2. Applying pressure to port 3 will prevent the valve from opening in either direction. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the pressure in port 3 the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC

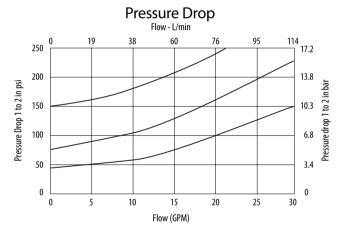


DIMENSIONS



<u>Danfoss</u>

PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	60 l/min [16 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S

Seal Opt	ion				T - <u>F</u> - <u>A</u> - <u>2G</u> - <u>040</u>	
Code Seal kit Omit-Buna - N 889650						
		Adjustment Op F- Fixed	tion			
V -Viton	889	652	S- Stroke Adjustn	nents		
Housing					Differential Pressure	
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Stee	Code Bar	Psi
0		No	Housing		005 0.35	[5]
					010 0.7	[10]
2G	1/4" BSP	1/4″ BSP	876707		020 1.40	[20]
3G	3/8" BSP	1/4″ BSP	876710	02–163	040 2.80	[40]
4G	1/2" BSP	1/4″ BSP		02-163	080 5.50	[80]
6H	#6 SAE	#6 SAE	876706		160 11.0	[160]
8H	#8 SAE	#6 SAE	876712			
6T	#6 SAE	#6 SAE		02-171		
8T	#8 SAE	#6 SAE		02–163		
10T	#10 SAE	#6 SAE		02-163		



Index



Logic Elements DPS2-12-T

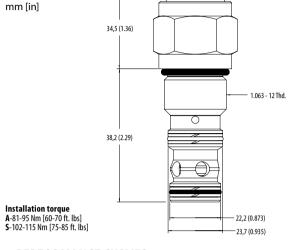
Logic Element, Normally Closed, Poppet Type, Pilot to Close 350 bar [5000 psi] • 114 l/min [30 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close, poppet type logic element. By opening port 3 to tank, flow can pass from port 2 to port 1 or from port 1 to port 2. Applying pressure to port 3 will prevent the valve from opening in either direction. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the pressure in port 3 the valve can be used as an on/ off valve or in a pressure control function.

SCHEMATIC



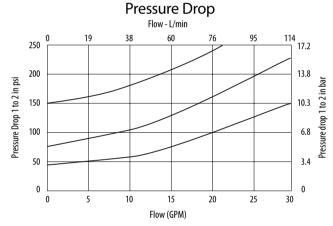


PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	114 l/min [30 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.31 kg [0.68 lb]
Cavity	C-12-35



DIMENSIONS



MODEL CODE

Seal Option				Different	ial Pressur	e	
Code	Seal kit			Code	Ba	r	I
Omit-Buna - N	02-165872			040	2.8	0	l
V -Viton	02-165886			080	5.5	0	[
				160	11.	0	[
Adjustment Opt	on						
F-Fixed			Housing				
Housing Materia	L		Code	Port 1 & 2	Port 3	Aluminium Heavy duty	
Omit - No housing			0	No housing			
A - Aluminum	,		10T	#10 SAE	#6 SAE	02-178268	02-
S - Steel			12T	#12 SAE	#6 SAE	02-178269	02-1
			4G	1/2" BSP	3/8" BSP	02-178270	02-1
						02-178271	

Index



Logic Elements DPS2-16-T

Logic Element, Normally Closed, Poppet Type, Pilot to Close

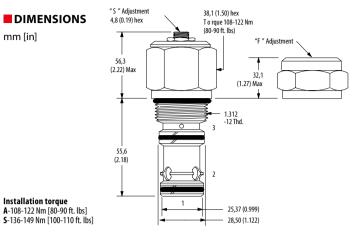
350 bar [5000 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close, poppet type logic element. By opening port 3 to tank, flow can pass from port 2 to port 1 or from port 1 to port 2. Applying pressure to port 3 will prevent the valve from opening in either direction. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the pressure in port 3 the valve can be used as an on/ off valve or in a pressure control function.

SCHEMATIC

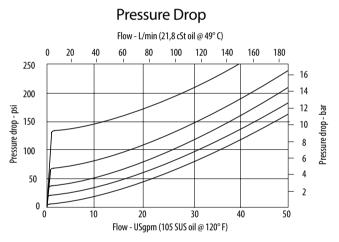




PERFORMANCE DATA

Rated pressure (AA option only)	350 bar [5000 psi]
Rated Pressure (standard)	210 bar [3000 psi]
Rated flow	189 l/min [50 US gpm]
Pilot Ratio	2:1
Leakage	5 drops/min @ 350 bar [5000 psi]
Weight	0.35 kg [0.78 lb]
Cavity	SDC16-3S

PERFORMANCE CURVES



Seal Op	tion						Rated Pressure	
Code	Sea	l kit	Housing Mater	ial			Omit - 210 bar [
Omit-Buna - N 889659 Omit - No Housing				AA - 350 bar [500)0 psi]			
V -Viton	02-1	65871	A - Aluminum	ing				
			S - Steel					
Housin	g							
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel		Differenti	al Pressure	
0		No	Housing			Code	Bar	Psi
4G	1/2" BSP	3/8″ BSP	02-160676	02-175118		040	2.80	[40]
6G	3/4" BSP	3/8″ BSP	876726	02-175119		080	5.5	[80]
10H	#10 SAE	#6 SAE	876725			160	11.0	[160]
12H	#12 SAE	#6 SAE	786727					
10T	#10 SAE	#6 SAE		02-175116				
12T	#12 SAE	#6 SAE		02-175117	Adius	tment Option		

350 bar [5000 psi]

303 l/min [80 US gpm]

5 drops/min @ 350 bar [5000 psi]

210 bar [3000 psi]

0.81 kg [1.78 lb]

2:1

C-20-3S

Logic Elements DPS2-20-T

Logic Element, Normally Closed, Poppet Type, Pilot to Close 350 bar [5000 psi] • 303 l/min [80 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close, poppet type logic element. By opening port 3 to tank, flow can pass from port 2 to port 1 or from port 1 to port 2. Applying pressure to port 3 will prevent the valve from opening in either direction. The area ratio between port 1 and 3 is 1:2 and the ratio between port 1 to 2 is also 1:2. By controlling the pressure in port 3 the valve can be used as an on/ off valve or in a pressure control function.

SCHEMATIC



Rated flow

Pilot Ratio

Leakage

Weight

Cavity

PERFORMANCE DATA

Rated Pressure (standard)

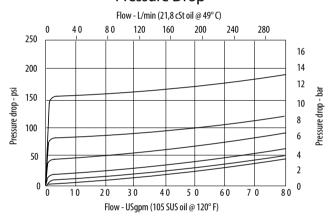
Rated pressure (AA option only)

"F"Adiustment 62,1 (2.44) Max 34,0 (1.34) Max 1.625 -12 Thd. 76,2 (3.00) 2 Installation torque A-130-155 Nm [95-115 ft. lbs] 33,30 (1.311) S-160-180 Nm [120-135 ft. lbs] 36,47 (1.436)

PERFORMANCE CURVES

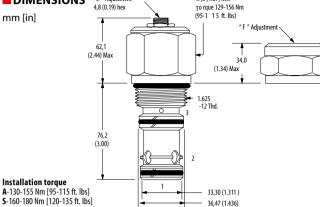
DIMENSIONS "S" Adjustment

Pressure Drop



MODEL CODE

ode	tion	al kit			Rated Pressure	
					Omit - 210 bar [
mit-Bu		113153			AA - 350 bar [50	
-Viton	02-	112969				
lousing	g Material				Differential Pressure	
mit - N	No Housing				Code Bar	Psi
- Steel					040 2.80	[40]
lousing	9				080 5.5	[80]
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel	160 11.0	[160]
0		No	Housing			
6G	3/4" BSP	3/8″ BSP	876740	02-175122		
8G	1" BSP	3/8″ BSP	876742	02-175123	ustment Option	
12H	#12 SAE	#6 SAE	876741		ixed troke Adjustment	
16H	#16 SAE	#6 SAE	876743		none nujustillelli	
12T	#12 SAE	#6 SAE		02-175120		
	#16 SAE	#6 SAE		02-175121		



47,6 (1.87) hex



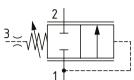
Logic Elements DPS2-8-P

Logic Element, Normally Closed, Spool Type, Pilot to Close 350 bar [5000 psi] • 30 l/min [8 US gpm]

DESCRIPTION AND OPERATION

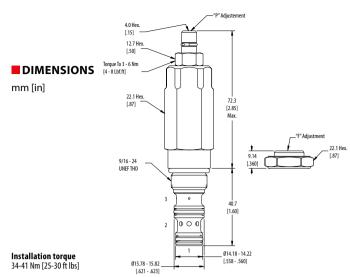
This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

SCHEMATIC

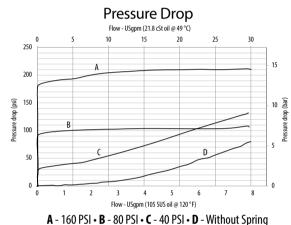


PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	30 l/min [8 US gpm]
Leakage	82 ml/min [5 in ³ /min] @ 350 bar [5000 psi]
Weight	0.07 kg [0.16 lb]
Cavity	SDC08-3



PERFORMANCE CURVES



Seal Opt	tion						al Pressure	
Code	Seal kit					Code	Bar	Psi
Omit-Bu	una - N 02-160755	-				040	2.80	[40]
V -Viton	02-160756	-				080	5.50	[80]
		-				160	11.0	[160]
						300	5.5-20.7	[80-300]*
-						* Only for "P	»" Adjustment pressure se	
Omit - N A - Alum S - Steel Housing	ko housing ninum 3				F- Fixed	* Only for "P nent Option		
Omit - N A - Alum S - Steel	vo housing ninum 9 Port size	Aluminum	Steel		F- Fixed	* Only for "P nent Option		
Omit - N A - Alum S - Steel Housing	ko housing ninum 3	Aluminum	Steel		F- Fixed	* Only for "P nent Option		
Omit - N A - Alum S - Steel Housing Code	vo housing ninum 9 Port size	Aluminum 02-160741	Steel 02-160745		F- Fixed	* Only for "P nent Option		
Omit - N A - Alum S - Steel Housing Code 0	No housing ninum 9 Port size No housing				F- Fixed	* Only for "P nent Option		
Omit - N A - Alum S - Steel Housing Code 0 4T	No housing hinum Port size No housing #4 SAE	02-160741	02-160745		F- Fixed	* Only for "P nent Option		



Index

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Logic Elements CP700-1

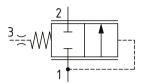
Logic Element, Normally Closed, Spool Type, Pilot to Close

210 bar [3000 psi] • 50 l/min [13 US gpm]

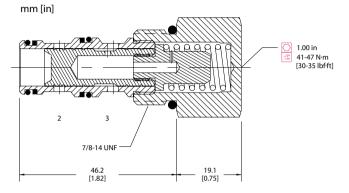
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

SCHEMATIC



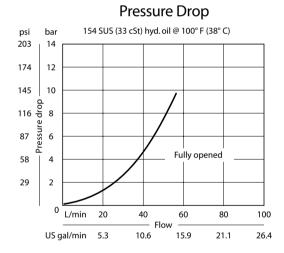
DIMENSIONS



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	50 l/min [13 US gpm]
Weight	0.12 kg [0.27 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



Seal Option	1			Differential	Pressure		
Code	Seal kit			Code	Bar	Psi	
B -Buna - N	120027			040	2.8	[40]	
V -Viton	120028			080	5.5	[80]	
				110	7.6	[110]	
				150	10.3	[150]	
Housing				190	13.1	[190]	
Code	Ports & Material	Housing Model Code					
0	No Housing						
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B					
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B					
6S	AL, #6 SAE	CP10-3-6S					
85	AL, #8 SAE	CP10-3-8S					



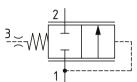
Logic Elements DPS2-10-P

Logic Element, Normally Closed, Spool Type, Pilot to Close 290 bar [4200 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

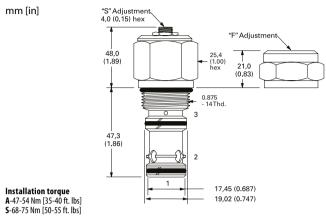
SCHEMATIC



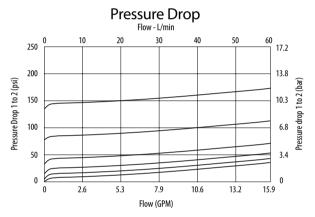
PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	60 l/min [16 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S

DIMENSIONS



PERFORMANCE CURVES



				Different	ial Pressure		
Seal Option				Code	Bar		Psi
Code Seal kit				005	0.35		[5]*
Omit-Buna - N 889650				010	0.7		[10]*
V -Viton 889652				020	1.40		[20]*
				040	2.80		[40]
				080	5.50		[80]
Adjustment Option				160	11.0		[160]
F- Fixed S- Stroke Adjustment			Housing	times the s	iting back pres pring set press	sure at port 3 shoul ure.	ld never be le
Housing Material			Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel
Omit - No Housing			0		No	Housing	
A - Aluminum S - Steel			2G	1/4" BSP	1/4″ BSP	876707	
Joken			3G	3/8" BSP	1/4″ BSP	876710	02-1633
			4G	1/2" BSP	1/4″ BSP		02-1633
			6H	#6 SAE	#6 SAE	876706	
			8H	#8 SAE	#6 SAE	876712	
			6T	#6 SAE	#6 SAE		02-1719
			8T	#8 SAE	#6 SAE		02-1633
			10T	#10 SAE	#6 SAE		02-1633

Index



Logic Elements HLE10-CPC

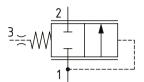
Logic Element, Normally Closed, Spool Type, Pilot to Close

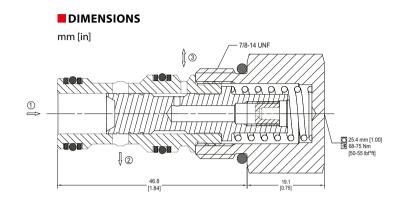
350 bar [5000 psi] • 80 l/min [21 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

SCHEMATIC



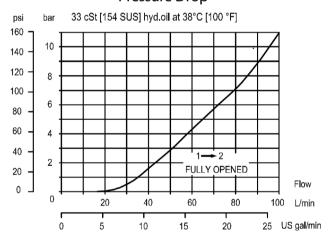


PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	80 l/min [21 US gpm]
Weight	0.14 kg [0.31 lb]
Cavity	SDC10-3S

Pressure Drop



Differential P	ressure		1	Housing		
Code	Bar Psi			Code	Ports & Material	Housing Model Code
2.75	2.75 [40]			00	No housing	
5.5	5.5 [80]			6S	AL, #6 SAE	SDC10-3S-6S
7.5	7.5 [110]			8S	AL, #8 SAE	SDC10-3S-8S
10.0	10.0 [150]			3B	AL, 3/8 BSP	SDC10-3S-3B
13.0	13.0 [190]			4B	AL, 1/2 BSP	SDC10-3S-4B
15.0	15.0 [220]			S6S	STEEL, #6 SAE	SDC10-3S-S6S
				S8S	STEEL, #8 SAE	SDC10-3S-S8S
Seal Option			4	* Aluminum	bodies are to be used f	or pressures less than 210 bar [3

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Logic Elements CP701-1

Logic Element, Normally Closed, Spool Type, Pilot to Close

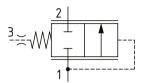
350 bar [5000 psi] • 150 l/min [40 US gpm]

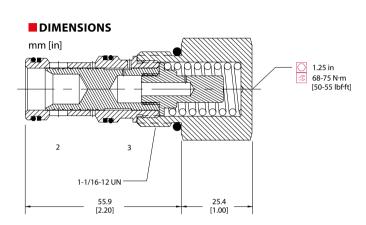
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

1

SCHEMATIC

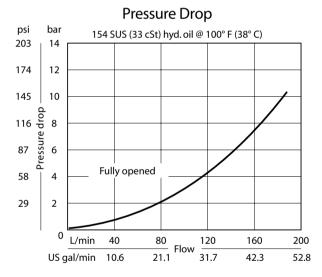




PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

PERFORMANCE CURVES



Seal Option						Differential Pressure				
Code	Seal kit				Code	Bar	Psi			
B -Buna - N	120335				030	2.1	[30]			
/ -Viton	120336				050	3.5	[50]			
					080	5.5	[80]			
					100	6.9	[100]			
Housing					150	10.3	[150]			
Code	Ports & Material	Housing Model Code	Pilot port		170	11.7	[170]			
0	No Housing									
4B	AL, 1/2 BSP	CP12-3S-4B/2B	1/4 BSP							
6B	AL, 3/4 BSP	CP12-3S-6B/2B	1/4 BSP							
10S	AL, #10 SAE	CP12-3S-10S/4S	#4 SAE							
125	AL, #12 SAE	CP12-3S-12S/4S	#4 SAE							

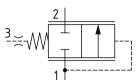
Logic Elements DPS2-16-P

Logic Element, Normally Closed, Spool Type, Pilot to Close 290 bar [4200 psi] • 189 l/min [50 US gpm]

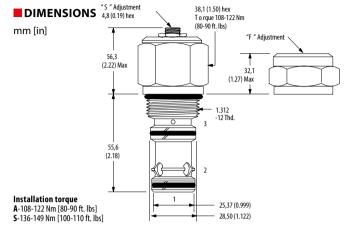
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

SCHEMATIC

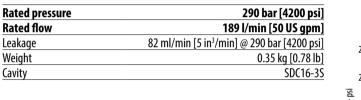


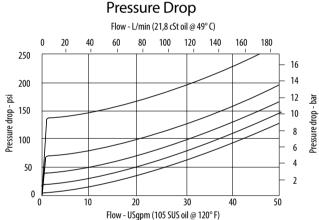
PERFORMANCE DATA



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PERFORMANCE CURVES





MODEL CODE

Seal Op	tion							
Code	Sea	l kit						
Omit-Bu	una - N 889	659	Housing Mate	rial				
V -Viton	02-1	165871	Omit - No Hous			Differenti	al Pressure	
			S - Steel			Code	Bar	Psi
Housing	J					005	0.35	[5]*
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel		020	1.40	[20] *
0		No	Housing			040	2.80	[40]
4G	1/2" BSP	3/8″ BSP	02-160676	02-175118		080	5.5	[80]
						160	11.0	[160]
6G	3/4" BSP	3/8″ BSP	876726	02–175119		* The operat	ing back pressure at po	ort 3 should never be less
10H	#10 SAE	#6 SAE	876725			1.3 times t	he spring set pressure.	
12H	#12 SAE	#6 SAE	786727					
10T	#10 SAE	#6 SAE		02-175116	Adius	tment Option		
12T	#12 SAE	#6 SAE		02–175117	F- Fix			

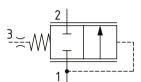
Logic Elements DPS2-20-P

Logic Element, Normally Closed, Spool Type, Pilot to Close 290 bar [4200 psi] • 303 l/min [80 US gpm]

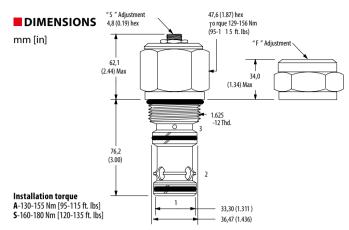
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, pilot to close spool type logic element. By opening port 3 to tank, flow can pass from port 1 to port 2. Flow is blocked from port 1 to port 2 unless the pressure is high enough in port 1 to overcome the spring set pressure. Applying pressure to port 3 will increase the pressure required in port 1 to open the valve by a factor of 1 to 1. This valve is ideal for use as a pressure compensator, bypass valve, or a pilot to close valve in regenerative circuits.

SCHEMATIC



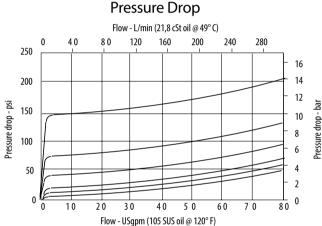
PERFORMANCE DATA



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PERFORMANCE CURVES





MODEL CODE

Seal Opt	ion							
Code	Sea	kit						
Omit-Bu	na - N 02-1	13153				D.(()	10	
V -Viton	02-1	12969	Housing Mater				al Pressure	
			Omit - No Hous A - Aluminum	ing		Code	Bar	Psi
			S - Steel			005	0.35	[5] *
Housing	I					010	0.7	[10]*
			Aluminum	<i>a</i> , 1		020	1.40	[20] *
Code	Ports 1 & 2	Port 3	Heavy Duty	Steel		040	2.80	[40]
0		No	Housing			080	5.5	[80]
6G	3/4" BSP	3/8″ BSP	876740	02-175122		160	11.0	[160]
8G	1" BSP	3/8″ BSP	876742	02-175123		* The operat	ing back pressure a	t port 3 should never be
12H	#12 SAE	#6 SAE	876741			1.3 times t	he spring set press	ure.
16H	#16 SAE	#6 SAE	876743					
12T	#12 SAE	#6 SAE		02–175120	Adjustm	ent Option		
16T	#16 SAE	#6 SAE		02-175121	F- Fixed	Adjustment		

Index

350 bar [5000 psi]

0.07 kg [0.20 lb]

SDC08-3

30 l/min [8 US gpm]

82 ml/min [5 in3/min] @ 350 bar [5000 psi]

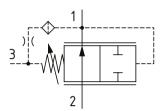
Logic Elements DPS2-8-V

Logic Element, Normally Closed, Spool Type, Vent to Open 350 bar [5000 psi] • 30 l/min [8 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC



PERFORMANCE DATA

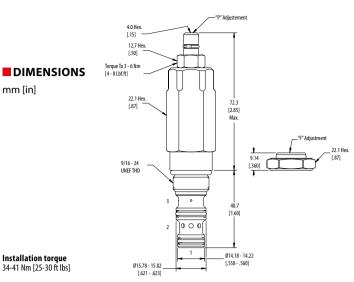
Rated pressure

Rated flow

Leakage

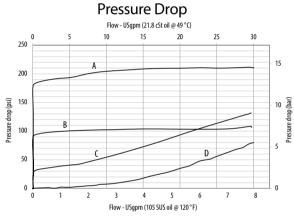
Weight

Cavity



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PERFORMANCE CURVES



A - 160 PSI • B - 80 PSI • C - 40 PSI • D - Without Spring

Seal Option					Differentia	l Pressure	
Code	Seal kit				Code	Bar	Psi
Omit-Buna - N	02-160755				040	2.80	[40]
V -Viton	02-160756				080	5.50	[80]
					160	11.0	[160]
Housing Mat	erial				300	5.5-20.7	[80-300]*
A -Aluminum S -Steel	-			F- Fixed	ent Option		re setting, factory se
S-Steel Housing	Dentering	Alumianum		F- Fixed			
S-Steel Housing Code	Port size	Aluminum	Steel	F- Fixed	ent Option		
S-Steel Housing Code 0	No housing			F- Fixed	ent Option		
S-Steel Housing Code 0 4T	No housing #4 SAE	02-160741	02-160745	F- Fixed	ent Option		
S-Steel Housing Code 0 4T 6T	No housing #4 SAE #6 SAE	02-160741 02-160742	02-160745 02-160746	F- Fixed	ent Option		
S-Steel Housing Code 0 4T	No housing #4 SAE	02-160741	02-160745	F- Fixed	ent Option		

Index

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Logic Elements CP700-2

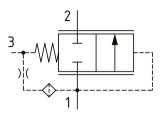
Logic Element, Normally Closed, Spool Type, Vent to Open

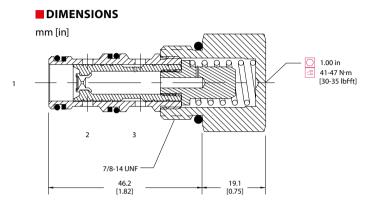
210 bar [3000 psi] • 50 l/min [13 US gpm]

DESCRIPTION AND OPERATION

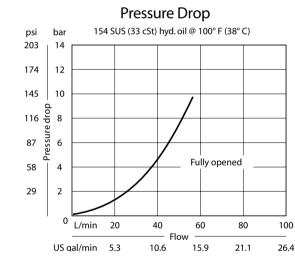
This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC





PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	50 l/min [13 US gpm]
Weight	0.13 kg [0.28 lb]
Cavity	SDC10-3

Seal Optior	1				Differential	Pressure		
Code	Seal kit			-	Code	Bar	Psi	
B -Buna - N	120027				040	2.8	[40]	
V -Viton	120028				080	5.5	[80]	
					110	7.6	[110]	
					150	10.3	[150]	
Housing					190	11.7	[190]	
Code	Ports & Materia	al Housing Model Code	_					
0	No Housing		_					
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B						
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B	-					
65	AL, #6 SAE	CP10-3-6S	_					
85	AL, #8 SAE	CP10-3-8S	_					

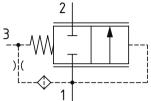
Logic Elements DPS2-10-V

Logic Element, Normally Closed, Spool Type, Vent to Open 290 bar [4200 psi] • 60 l/min [16 US gpm]

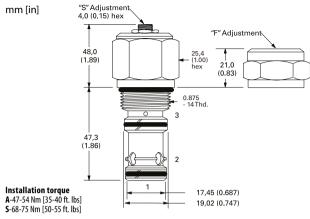
DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

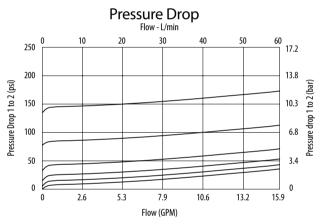




DIMENSIONS



PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	60 l/min [16 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S

Seal Opt						Differentia	al Pressure	
Code		l kit	Adjustment Op	tion		Code	Bar	Psi
Omit-Bu		650	F- Fixed	cioni		005	0.35	[5] *
V -Viton	889	652	S- Stroke Adjustr	ment	Housing Material	010	0.7	[10] *
					Omit-No housing A-Aluminum	020	1.40	[20] *
					S -Steel	040	2.80	[40]
Housing						080	5.50	[80]
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel		160	11.0	[160]
0		No	Heavy Duty Housing	Steel		160 * The operat	11.0 ting back pressure a e spring set pressure	t port 3 should neve
	Ports 1 & 2 1/4" BSP 3/8" BSP		Heavy Duty	Steel 02–163313		160 * The operat	ing back pressure a	t port 3 should neve
0 2G	1/4" BSP	No 1/4″ BSP	Heavy Duty Housing 876707	· · · · · ·	_	160 * The operat	ing back pressure a	t port 3 should neve
0 2G 3G	1/4" BSP 3/8" BSP	No 1/4″ BSP 1/4″ BSP	Heavy Duty Housing 876707	02–163313	_	160 * The operat	ing back pressure a	t port 3 should neve
0 2G 3G 4G	1/4" BSP 3/8" BSP 1/2" BSP	No 1/4" BSP 1/4" BSP 1/4" BSP	Heavy Duty Housing 876707 876710	02–163313	_	160 * The operat	ing back pressure a	t port 3 should neve
0 2G 3G 4G 6H	1/4" BSP 3/8" BSP 1/2" BSP #6 SAE	No 1/4″ BSP 1/4″ BSP 1/4″ BSP #6 SAE	Heavy Duty Housing 876707 876710 876706	02–163313		160 * The operat	ing back pressure a	t port 3 should neve
0 2G 3G 4G 6H 8H	1/4" BSP 3/8" BSP 1/2" BSP #6 SAE #8 SAE	No 1/4" BSP 1/4" BSP 1/4" BSP #6 SAE #6 SAE	Heavy Duty Housing 876707 876710 876706	02–163313 02–163324		160 * The operat	ing back pressure a	t port 3 should neve



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Logic Elements HLE10-CVO

Logic Element, Normally Closed, Spool Type, Vent to Open

350 bar [5000 psi] • 80 l/min [21 US gpm]

DESCRIPTION AND OPERATION

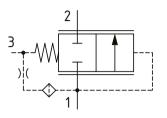
This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

350 bar [5000 psi]

0.14 kg [0.31 lb]

SDC10-3S

80 l/min [21 US gpm]



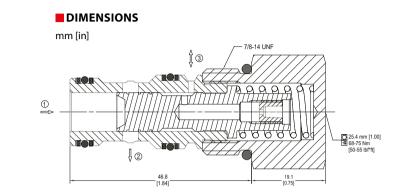
PERFORMANCE DATA

Rated pressure

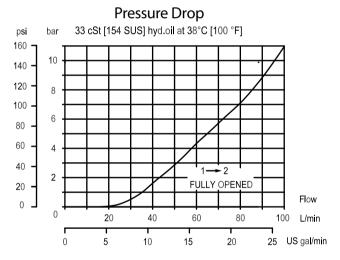
Rated flow

Weight

Cavity



PERFORMANCE CURVES



* INCLUDES SDC10-3S CAVITY WITH SAE #8 PORTS

MODEL CODE

Differential P	ressure			Housing		
Code	Bar	Psi		Code	Ports & Materia	Housing Model Code
2.75	2.75	[40]		00	No housing	
5.5	5.5	[80]		65	AL, #6 SAE	SDC10-3S-6S
7.5	7.5	[110]		85	AL, #8 SAE	SDC10-3S-8S
10.0	10.0	[150]		3B	AL, 3/8 BSP	SDC10-3S-3B
13.0	13.0	[190]		4B	AL, 1/2 BSP	SDC10-3S-4B
15.0	15.0	[220]		S6S	STEEL, #6 SAE	SDC10-3S-S6S
18.0	18.0	[260]		\$85	STEEL, #8 SAE	SDC10-3S-S8S
Seal Option					bodies are to be used f housings available	or pressures less than 210 bar [3
Code	Seal kit					

Logic Elements CP701-2

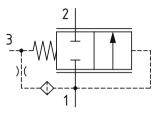
Logic Element, Normally Closed, Spool Type, Vent to Open

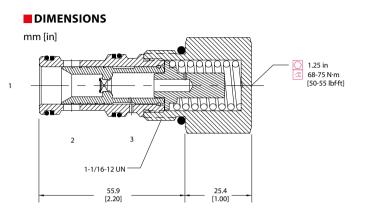
350 bar [5000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

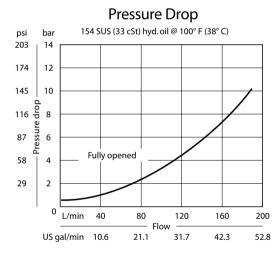
SCHEMATIC





Dantoss

PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

MODEL CODE

Seal Option	n			Diff	erential Pressure	
Code	Seal kit			Cod	e Bar	Psi
B -Buna - N	120335			030	2.1	[30]
V -Viton	120336			050	3.5	[50]
				080	5.5	[80]
				100	6.9	[100]
Housing				150	10.3	[150]
Code	Ports & Material	Housing Model Code	Pilot port			
0	No Housing					
4B	AL, 1/2 BSP	CP12-3S-4B/2B	1/4 BSP			
6B	AL, 3/4 BSP	CP12-3S-6B/2B	1/4 BSP			
105	AL, #10 SAE	CP12-3S-10S/4S	#4 SAE			
125	AL, #12 SAE	CP12-3S-12S/4S	#4 SAE			

290 bar [4200 psi]

0.35 kg [0.78 lb]

SDC16-3S

189 l/min [50 US gpm]

82 ml/min [5 in3/min] @ 290 bar [4200 psi]

Index

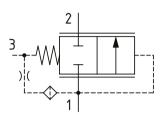
Logic Elements DPS2-16-V

Logic Element, Normally Closed, Spool Type, Vent to Open 290 bar [4200 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC



PERFORMANCE DATA

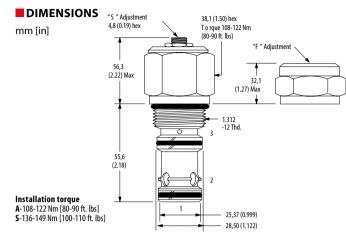
Rated pressure

Rated flow

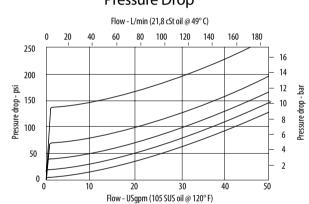
Leakage

Weight

Cavity



PERFORMANCE CURVES



MODEL CODE

	ential Pressure	
A to D N ADDARD Howing Material		
Cue	Bar	Psi
V-Viton 02-165871 Omit-No housing 005	0.35	[5] *
S-Steel 020	1.40	[20] *
Housing 040	2.80	[40]
Code Ports 1 & 2 Port 3 Aluminum Heavy Duty Steel 080	5.5	[80]
0 No Housing 160	11.0	[160]
1/1 1/3" PCD 2/9" PCD 02 160676 02 175119 * The C	perating back pressure at p mes the spring set pressure	oort 3 should never be
6G 3/4" BSP 3/8" BSP 876726 02–175119	nies the spring set pressure	-
10H #10 SAE #6 SAE 876725		
12H #12 SAE #6 SAE 786727 Adjustment Opti		
10T #10 SAE #6 SAE 02–175116 F- Fixed		
	ent	

CURVES Pressure Drop





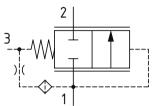
Logic Elements DPS2-20-V

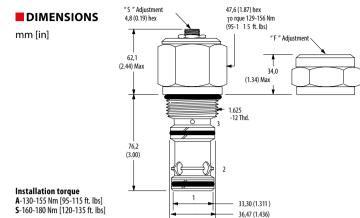
Logic Element, Normally Closed, Spool Type, Vent to Open 290 bar [4200 psi] • 303 l/min [80 US gpm]

DESCRIPTION AND OPERATION

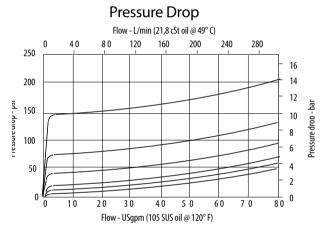
This is a 3-ported, normally closed, vent to open spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow can pass from port 1 to port 2 but not from port 2 to port 1. Closing port 3 will prevent the valve from opening from port 1 to port 2. By controlling the flow or pressure out of port 3 with a secondary valve, the valve can be used as an on/off valve or in a pressure control function.

SCHEMATIC





PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	303 l/min [80 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.81 kg [1.78 lb]
Cavity	C-20-3S

Seal Opt	tion					Different	ial Pressure	
Code	Seal	cit				Code	Bar	Psi
Omit -Bu	una - N 02-11	3153	Housing Mate			005	0.35	[5] *
V -Viton	02-112	2969	Omit-No housir A-Aluminum	ng		010	0.7	[10] *
			S -Steel			020	1.40	[20] *
Housing	9					040	2.80	[40]
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel		080	5.5	[80]
0		N	b Housing			160	11.0	[160]
 6G	3/4" BSP	3/8″ BSP	876740	02–175122			ating back pressure at port	t 3 should never b
						1.3 times	the spring set pressure.	
8G	1" BSP	3/8" BSP	876742	02–175123	Adju	stment Option		
12H	#12 SAE	#6 SAE	876741		F- Fix	ed		
16H	#16 SAE	#6 SAE	876743		S - Str	oke Adjustment		
12T	#12 SAE	#6 SAE		02-175120				
16T	#16 SAE	#6 SAE		02-175121				

Index

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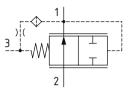
Logic Elements DPS2-8-R

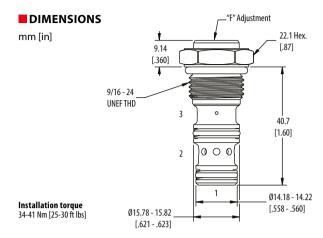
Logic Element, Normally Open, Spool Type, Vent to Close 350 bar [5000 psi] • 30 l/min [8 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC

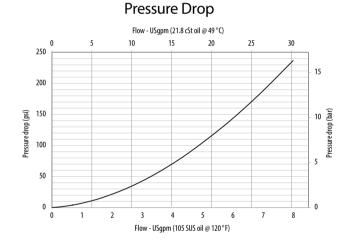




PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	30 l/min [8 US gpm]
Leakage	82 ml/min [5 in3/min] @ 350 bar [5000 psi]
Weight	0.07 kg [0.20 lb]
Cavity	SDC08-3

PERFORMANCE CURVES



Seal Opt	tion							Differential	Pressure	
Code	Seal kit							Code	Bar	Psi
Omit-Bu	ına - N 02-160755	Housing Material						040	2.80	[40]
V -Viton	02-160756	Omit-No housing			1			080	5.50	[80]
		A -Aluminum S -Steel						160	11.0	[160]
Housing	l									
Code	Port size	Aluminum	Steel			_				
0	No housing									
4T	#4 SAE	02-160741	02-160745							
6T	#6 SAE	02-160742	02-160746							
2G	1/4" BSP	02-160739	02-160743				Adjustm	ent Option		
3G	3/8" BSP	02-160740	02-160744				F- Fixed			



Logic Elements CP700-3

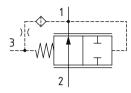
Logic Element, Normally Open, Spool Type, Vent to Close

210 bar [3000 psi] • 40 l/min [11 US gpm]

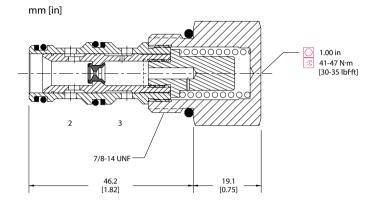
DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC



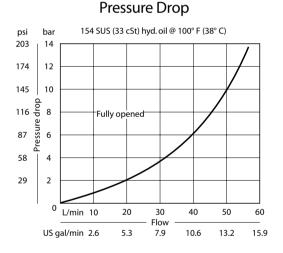
DIMENSIONS



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	40 l/min [11 US gpm]
Weight	0.13 kg [0.28 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



Seal Optio	n			Differential	Pressure		
Code	Seal kit			Code	Bar	Psi	
B -Buna - N	l 120027			040	2.8	[40]	
V -Viton	120028			080	5.5	[80]	
				110	7.6	[110]	
				150	10.3	[150]	
Housing				200	13.8	[200]	
Code	Ports & Material	Housing Model Code					
0	No Housing						
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B					
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B					
65	AL, #6 SAE	CP10-3-6S					
85	AL, #8 SAE	CP10-3-85					

Index

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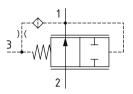
Logic Elements DPS2-10-R

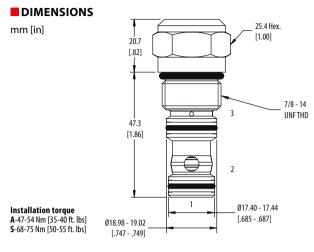
Logic Element, Normally Open, Spool Type, Vent to Close 290 bar [4200 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC

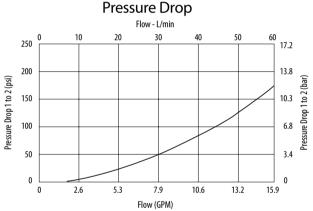




PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	60 l/min [16 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S





MODEL CODE

Seal Opt	tion					
Code	Sea	l kit	Adjustment Op	tion		
Omit-Bu	ına - N 889	550	F- Fixed		aterial	
V -Viton	889	552			busing	
Housing	I				n Differential Pressu	re
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel	Code Ba	
0		No	Housing		005 0.3	
2G	1/4" BSP	1/4″ BSP	876707		010 0.7 020 1.4	
3G	3/8" BSP	1/4″ BSP	876710	02-163313	040 2.8	
4G	1/2" BSP	1/4″ BSP		02-163324	040 2.0	
6H	#6 SAE	#6 SAE	876706		160 11.	
8H	#8 SAE	#6 SAE	876712			pressure at port 3 should never be le
6T	#6 SAE	#6 SAE		02-171961	1.3 times the spring set	t pressure.
8T	#8 SAE	#6 SAE		02-163322		
10T	#10 SAE	#6 SAE		02-163323		

Danfoss

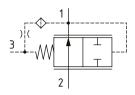
Logic Elements HLE10-OVC

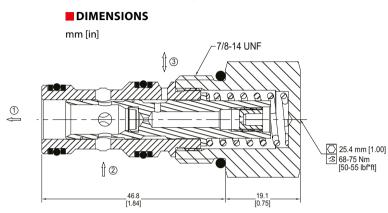
Logic Element, Normally Open, Spool Type, Vent to Close

350 bar [5000 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

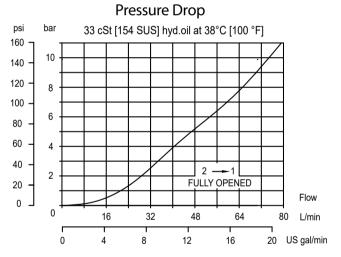




PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	60 l/min [16 US gpm]
Weight	0.14 kg [0.31 lb]
Cavity	SDC10-3S

PERFORMANCE CURVES



MODEL CODE

Differential Pr	essure			Housing		
Code	Bar	Psi		 Code	Ports & Material	Housing Model Code
2.75	2.75	[40]		00	No housing	
5.5	5.5	[80]		65	AL, #6 SAE	SDC10-3S-6S
7.5	7.5	[110]		85	AL, #8 SAE	SDC10-3S-8S
10.0	10.0	[150]		3B	AL, 3/8 BSP	SDC10-3S-3B
14.0	14.0	[200]		4B	AL, 1/2 BSP	SDC10-3S-4B
19.0	19.0	[275]		S6S	STEEL, #6 SAE	SDC10-3S-S6S
				\$85	STEEL, #8 SAE	SDC10-3S-S8S
Seal Option					bodies are to be used f housings available	or pressures less than 210 bar [
Code	Seal kit					



Logic Elements CP701-3

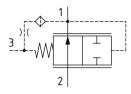
Logic Element, Normally Open, Spool Type, Vent to Close

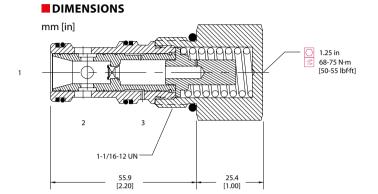
350 bar [5000 psi] • 80 l/min [21 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC

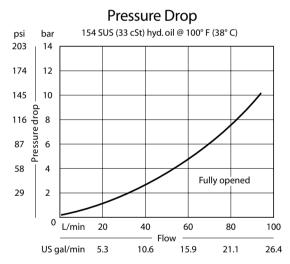




PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	80 l/min [21 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

PERFORMANCE CURVES



Seal Optio	n				Differential	Pressure		
Code	Seal kit				Code	Bar	Psi	
B -Buna - N	120335				030	2.1	[30]	
V -Viton	120336				050	3.5	[50]	
					080	5.5	[80]	
					100	6.9	[100]	
Housing					150	10.3	[150]	
Code	Ports & Material	Housing Model Code	Pilot port					
0	No Housing							
4B	AL, 1/2 BSP	CP12-3S-4B/2B	1/4 BSP					
6B	AL, 3/4 BSP	CP12-3S-6B/2B	1/4 BSP					
105	AL, #10 SAE	CP12-3S-10S/4S	#4 SAE					
125	AL, #12 SAE	CP12-3S-12S/4S	#4 SAE					

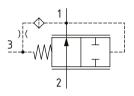
Logic Elements DPS2-16-R

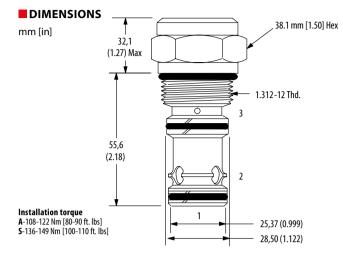
Logic Element, Normally Open, Spool Type, Vent to Close 290 bar [4200 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC



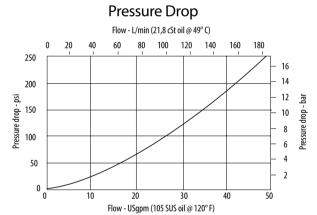


Danfoss

PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow @ 7 bar [100 psi]	189 l/min [50 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.35 kg [0.78 lb]
Cavity	SDC16-3S

PERFORMANCE CURVES



Code	Seal kit					
Omit-Buna - N	889659	Housing Mate	erial			
V-Viton	02-165871	Omit -No housi A -Aluminum	ng			
Housing		S -Steel		Differe	ential Pressure	
Code Ports 1	& 2 Port 3	Aluminum Heavy Duty	Steel	Code	Bar	Psi
0	N	o Housing		005	0.35	[5] *
4G 1/2" B		02-160676	02–175118	020	1.40	[20] *
6G 3/4" B		876726	02-175119	040	2.80	[40]
			02-1/3119	080	5.5	[80]
10H #10 S		876725		160	11.0	[160]
12H #12 S	E #6 SAE	786727		* The c	nerating back pressure	at port 3 should never be I
10T #10 S	E #6 SAE		02-175116		mes the spring set press	
12T #12 S	E #6 SAE		02-175117			

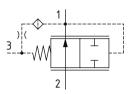
Logic Elements DPS2-20-R

Logic Element, Normally Open, Spool Type, Vent to Close 290 bar [4200 psi] • 303 l/min [80 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, vent to close, spool type logic element. Port 1 is connected to port 3 through an orifice. By opening port 3 to tank, flow is blocked from port 1 to port 2 and port 2 to port 1. Closing port 3 will keep the valve open from port 1 to port 2 and port 2 to 1. By controlling the flow or pressure out of port 3 with a secondary valve, this can be used as an on/off valve or as a pressure reducing valve.

SCHEMATIC

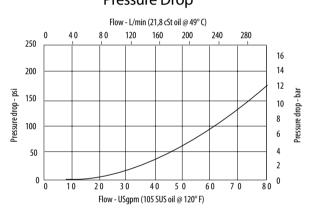


PERFORMANCE DATA

47.6 mm [1.87] Hex DIMENSIONS mm [in] 34,0 (1.34) Max 1.625-12 Thd. \overline{O} 3 76,2 (3.00) 2 Installation torque A-130-155 Nm [95-115 ft. lbs] S-160-180 Nm [120-135 ft. lbs] 1 33,30 (1.311)

Rated pressure 290 bar [4200 psi] Rated flow 303 l/min [80 US gpm] Leakage 82 ml/min [5 in3/min] @ 290 bar [4200 psi] Weight 0.81 kg [1.78 lb] Cavity C-20-35





Seal Opt	tion						Difforentia	al Pressure	
Code	Se	al kit	Housing Mate	rial		L	Code	Bar	Psi
Omit-Bu	ina - N 02	-113153	Omit-No housi				005	0.35	[5] *
V -Viton	02	-112969	A -Aluminum	'9					
			S -Steel				010	0.7	[10] *
Housing							020	1.40	[20] *
nousing							040	2.80	[40]
Code	Ports 1 & 2	Port 3	Aluminum Heavy Duty	Steel			080	5.5	[80]
0		No	Housing				160	11.0	[160]
6G	3/4" BSP	3/8″ BSP	876740	02–175122					at port 3 should never be le
8G	1" BSP	3/8″ BSP	876742	02–175123			1.3 umes	the spring set press	sure.
12H	#12 SAE	#6 SAE	876741						
16H	#16 SAE	#6 SAE	876743		Ad	ljustmer	nt Option		
12T	#12 SAE	#6 SAE		02–175120	F-	Fixed]			
16T	#16 SAE	#6 SAE		02-175121					



Index

350 bar [5000 psi]

0.07 kg [0.20 lb]

SDC08-3

30 l/min [8 US gpm]

82 ml/min [5 in3/min] @ 350 bar [5000 psi]

Logic Elements DPS2-8-F

Logic Element, Normally Open, Spool Type, Pilot to Open 350 bar [5000 psi] • 30 l/min [8 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC

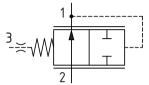
Rated pressure

Rated flow

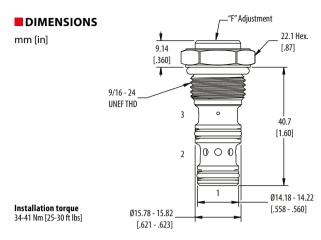
Leakage

Weight

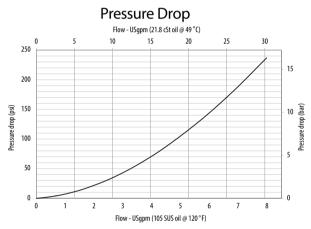
Cavity



PERFORMANCE DATA



PERFORMANCE CURVES



Seal Opt	tion							
Code	Seal kit					Differentia	al Pressure	
Omit-Bu		_				Code	Bar	Psi
V-Viton	02-160756	_				040	2.80	[40]
V-VILUII	02-100750	_				080	5.50	[80]
						160	11.0	[160]
Housing Omit-No A-Alumir S-Steel	y Material) housing num							
Omit-No A-Alumir S-Steel Housing	housing num	Aluminum	Ganal		Adjust F- Fixed	t <mark>ment Option</mark> d		
Omit-No A-Alumir S-Steel Housing Code	o housing num Port size	Aluminum	Steel					
Omit-No A-Alumir S-Steel Housing Code 0	nousing num Port size No housing							
Omit-No A-Alumir S-Steel Housing Code 0 4T	housing num Port size No housing #4 SAE	02-160741	02-160745					
Omit-No A-Alumir S-Steel Housing Code	nousing num Port size No housing							



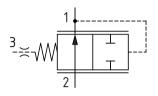
Logic Elements CP700-4

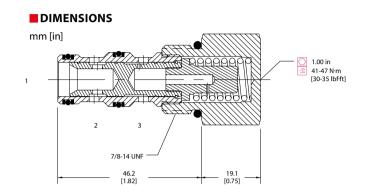
Logic Element, Normally Open, Spool Type, Pilot to Open 210 bar [3000 psi] • 40 l/min [11 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC





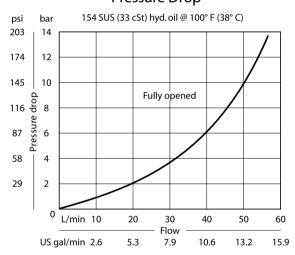
Danfoss

PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	40 l/min [11 US gpm]
Weight	0.13 kg [0.28 lb]
Cavity	SDC10-3

Pressure Drop



Seal Optio	n				Differential	Pressure		
Code	Seal kit				Code	Bar	Psi	
B -Buna - N	120009				040	2.8	[40]	
V -Viton	120010				080	5.5	[80]	
					110	7.6	[110]	
					150	10.3	[150]	
Housing					200	13.8	[200]	
Code	Ports & Materia	l Housing Model Code	_					
0	No Housing		_					
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B						
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B						
65	AL, #6 SAE	CP10-3-6S	_					
85	AL, #8 SAE	CP10-3-8S	_					



25.4 Hex.

[1.00]

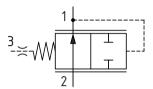
Logic Elements DPS2-10-F

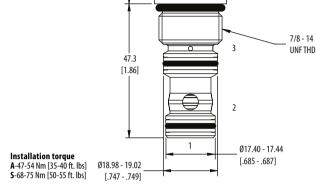
Logic Element, Normally Open, Spool Type, Pilot to Open 290 bar [4200 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC





20.7

[.82]

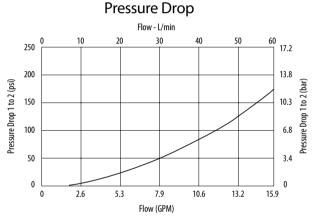
PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	60 l/min [16 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.14 kg [0.30 lb]
Cavity	SDC10-3S



DIMENSIONS

mm [in]



							Differentia	al Pressure	
Seal Op							Code	Bar	Psi
Code	Seal	kit	Adjustment Op	otion			005	0.35	[5] *
Omit -Bu			F- Fixed	Housing	Material		010	0.7	[10] *
/ -Viton	8896	52		Omit-No l			020	1.40	[20] *
Housing				A -Alumini S -Steel	um		040	2.80	[40]
			Aluminum				080	5.50	[80]
Code	Ports 1 & 2	Port 3	Heavy Duty	Steel			160	11.0	[160]
0		No	Housing						re at port 3 shoul
2G	1/4" BSP	1/4″ BSP	876707				1.3 times the	e spring set pres	sure.
		1/4 001	0/0/0/						
3G	3/8" BSP	1/4″ BSP	876710	02–163313					
				02–163313 02–163324					
3G	3/8" BSP	1/4″ BSP							
3G 4G	3/8" BSP 1/2" BSP	1/4″ BSP 1/4″ BSP	876710						
3G 4G 6H	3/8" BSP 1/2" BSP #6 SAE	1/4" BSP 1/4" BSP #6 SAE	876710 876706						
3G 4G 6H 8H	3/8" BSP 1/2" BSP #6 SAE #8 SAE	1/4" BSP 1/4" BSP #6 SAE #6 SAE	876710 876706	02–163324					

Index



Logic Elements HLE10-OPO

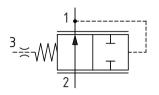
Logic Element, Normally Open, Spool Type, Pilot to Open

350 bar [5000 psi] • 60 l/min [16 US gpm]

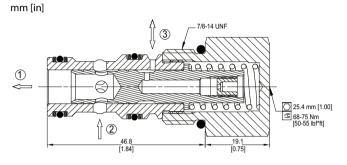
DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC



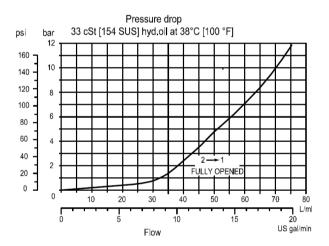
DIMENSIONS



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	60 l/min [16 US gpm]
Weight	0.14 kg [0.31 lb]
Cavity	SDC10-35

PERFORMANCE CURVES



MODEL CODE

Differential Pr	essure			Housing		
Code	Bar	Psi		Code	Ports & Materia	Housing Model Code
2.75	2.75	[40]		00	No housing	
5.5	5.5	[80]		65	#6 SAE, AL	SDC10-3S-6S
7.5	7.5	[110]		85	#8 SAE, AL	SDC10-3S-8S
10.0	10.0	[150]		S6S	#6 SAE, DUCTILE	SDC10-3S-S6S
13.0	13.0	[190]		\$85	#8 SAE, DUCTILE	SDC10-3S-S8S
15.0	15.0	[218]		3B	3/8 BSP, AL	SDC10-3S-3B
				4B	1/2 BSP, AL	SDC10-3S-4B
Seal Option					m bodies are to be used f al housings available	or pressures less than 210 bar
Code	Seal kit					

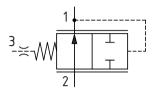
Logic Elements CP701-4

Logic Element, Normally Open, Spool Type, Pilot to Open 350 bar [5000 psi] • 76 l/min [20 US gpm]

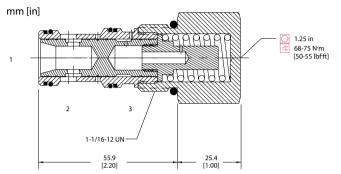
DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

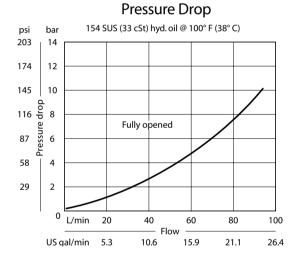
SCHEMATIC



DIMENSIONS



PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	76 l/min [20 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

Seal Optio	n				Differential	Pressure		
Code	Seal kit				Code	Bar	Psi	
B -Buna - N	120335				030	2.1	[30]	
V -Viton	120336				050	3.5	[50]	
					080	5.5	[80]	
					100	6.9	[100]	
Housing					150	10.3	[150]	
Code	Ports & Material	Housing Model Code	Pilot port					
0	No Housing							
4B	AL, 1/2 BSP	CP12-3S-4B/2B	1/4 BSP					
6B	AL, 3/4 BSP	CP12-3S-6B/2B	1/4 BSP					
105	AL, #10 SAE	CP12-3S-10S/4S	#4 SAE					
125	AL, #12 SAE	CP12-3S-12S/4S	#4 SAE					





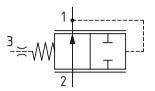
Logic Elements DPS2-16-F

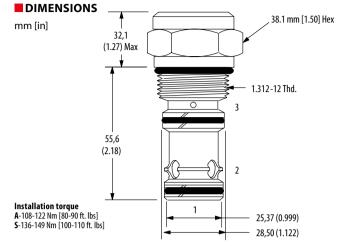
Logic Element, Normally Open, Spool Type, Pilot to Open 290 bar [4200 psi] • 189 l/min [50 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC

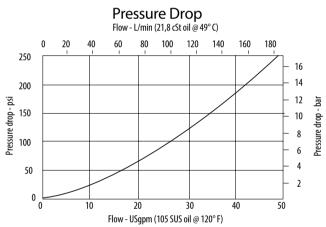




PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	189 l/min [50 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.35 kg [0.78 lb]
Cavity	SDC16-3S



MODEL CODE

Seal Opt	tion						
Code		al kit	Housing Mate	Housing Material			
Omit -Bu	ına - N 88	9659	Omit-No housing			tial Pressure	
V -Viton	02	-165871	A-Aluminum S-Steel				
Housing			3-31661		Code 005	Bar 0.35	Psi [5] *
			Aluminum		020	1.40	[20] *
Code	Ports 1 & 2	Port 3	Heavy Duty	Steel	040	2.80	[40]
0		No	o Housing		080	5.5	[80]
4G	1/2" BSP	3/8″ BSP	02-160676	02-175118	160	11.0	[160]
6G	3/4" BSP	3/8″ BSP	876726	02-175119			at port 3 should never be
10H	#10 SAE	#6 SAE	876725		1.3 time	s the spring set pres	sure.
12H	#12 SAE	#6 SAE	786727				
10T	#10 SAE	#6 SAE		02-175116	Adjustment Option		
12T	#12 SAE	#6 SAE		02-175117	F- Fixed		

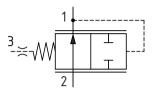
Logic Elements DPS2-20-F

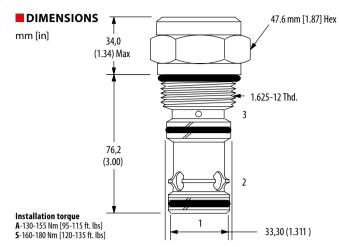
Logic Element, Normally Open, Spool Type, Pilot to Open 290 bar [4200 psi] • 303 l/min [80 US gpm]

DESCRIPTION AND OPERATION

This is a 3-ported, normally open, pilot to open, spool type logic element. Flow is open from port 2 to port 1, until pressure in port 1 is sufficient to overcome the spring set pressure plus any pressure in port 3. The pressure in port 3 can be controlled remotely making the valve ideal for use as a normally open on/off element in a pressure reducing function. This valve is most commonly used as a pressure compensator in conjunction with a proportional directional valve.

SCHEMATIC

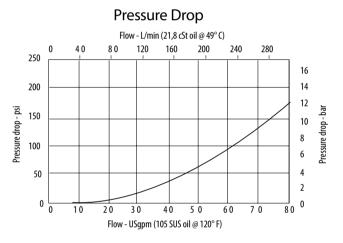




PERFORMANCE DATA

Rated pressure	290 bar [4200 psi]
Rated flow	303 l/min [80 US gpm]
Leakage	82 ml/min [5 in3/min] @ 290 bar [4200 psi]
Weight	0.81 kg [1.78 lb]
Cavity	C-20-3S

PERFORMANCE CURVES



MODEL CODE

Seal Op	tion								
Code		al kit							
Omit-Buna - N		-113153	Housing Material						
V -Viton 02-112969		-112969	Omit-No housing			Differential Pressure			
			A -Aluminum S -Steel			Co	de	Bar	Psi
Housin	n					00	5	0.35	[5] *
	· · · · · · · · · · · · · · · · · · ·		Aluminum		J	01	0	0.7	[10] *
Code	Ports 1 & 2	Port 3	Heavy Duty	Steel		02	0	1.40	[20] *
0		No	o Housing			04	0	2.80	[40]
6G	3/4" BSP	3/8″ BSP	876740	02-175122		08	0	5.5	[80]
8G	1" BSP	3/8″ BSP	876742	02-175123		16	0	11.0	[160]
12H	#12 SAE	#6 SAE	876741						at port 3 should never be
16H	#16 SAE	#6 SAE	876743			1	1.3 times th	he spring set press	sure.
12T	#12 SAE	#6 SAE		02-175120					
16T	#16 SAE	#6 SAE		02-175121	A	djustment O	ption		

72

Index

Logic Elements LE402

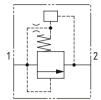
Logic Element, Normally Closed, Spool Type, Pilot Valve Adapter

350 bar [5000 psi] • 350 l/min [93 US gpm]

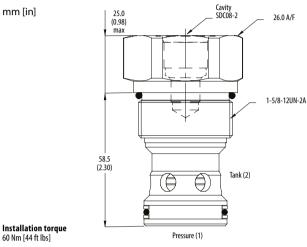
DESCRIPTION AND OPERATION

This is a high flow, 2-port logic element where a pilot control valve can be installed into the cavity on the top of the valve. The valve is normally closed from port 1 to 2, with an orifice through the spool connecting port 1 to the inlet port 1 of the control valve. Installing a direct acting relief valve will make this valve a high flow relief valve, a solenoid valve a high flow on/off valve, and a proportional control valve a high flow proportional control valve.

SCHEMATIC



DIMENSIONS

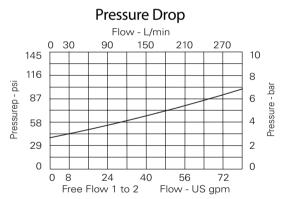


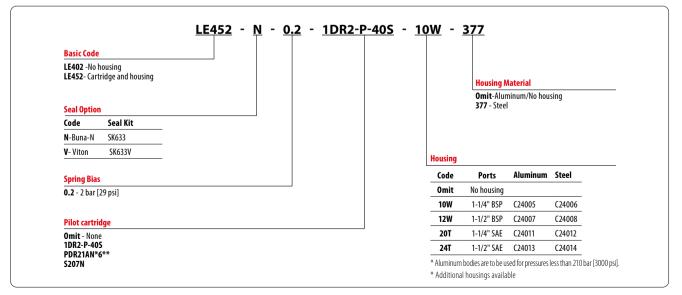
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PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	350 l/min [93 US gpm]
Pilot Valve Cavity	SDC08-2
Leakage	350 ml/min nominal
Weight	0.29 kg [0.63 lb]
Cavity	SDC20-2

PERFORMANCE CURVES





Logic Elements LEV402

Logic Element, Normally Closed, Spool Type, Vent to Open with Pilot Valve Adapter

250 bar [3600 psi]

210 bar [3000 psi]

350 ml/min nominal 0.70 kg [1.54 lb]

SDC08-2

A21773

400 l/min [106 US gpm]

250 bar [3600 psi] • 400 l/min [106 US gpm]

DESCRIPTION AND OPERATION

This is a high flow, 3-port logic element where a pilot control valve can be installed into the cavity on the top of the valve. The valve is normally closed from port 1 to 2 with an orifice through the spool connecting port 1 to the inlet port 1 of the control valve and to port 3. Installing a direct acting relief valve will make this valve a high flow relief valve, a solenoid valve a high flow on/off valve, and a proportional control valve a high flow proportional control valve. A second, optional control valve can be connected remotely to port 3. This is ideal for two pressure control or proportional control with a maximum pressure limit.

SCHEMATIC



Rated pressure

Max port 3 pressure

Pilot Valve Cavity

Rated flow

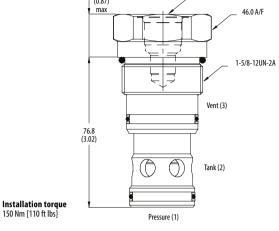
Leakage

Weight

Cavity

PERFORMANCE DATA

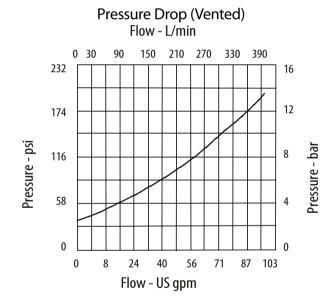
DIMENSIONS mm [in]



Cavity SDC08-2

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PERFORMANCE CURVES



MODEL CODE

Basic Code LEV402-No housing LEV452-Cartridge and housing	Housing Material Omit -Aluminum/No housing 377 -Steel	Omit -Aluminum/No housing				
Seal Option	Housing					
Code Seal Kit	Code Ports Aluminum Steel					
N-Buna-N SK1232	Omit No housing					
V- Viton SK1232V	10W 1-1/4" BSP, C24005 C24006					
Spring Bias	12W 1-1/2" BSP, C24007 C24008					
0.2 - 2 bar [29 psi]	20T 1-1/4" SAE, 1/4" SAE vent C24011 C24012					
Pilot cartridge Omit - None	24T 1-1/2" SAE, C24013 C24014					

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