SQ

Sequence and Unloading Valves





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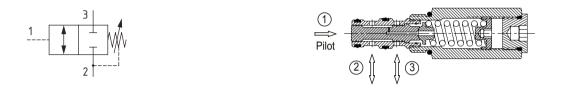
Sequence and Unloading Valves Application Notes

Basic Operation: Sequence Valves

Sequence valves come in two forms: Hydraulically piloted spool valves and pressure sequence valves. Hydraulically piloted spool valves will open or close based on a pressure applied to a pilot port. The spring chamber is referenced to tank or to atmosphere, allowing the outlet pressure to rise in line with the inlet pressure. Pressure sequence valves allow flow through the valve when the inlet pressure rises above the setting, allowing flow to a secondary function which can be used at pressure. These are available as direct acting and pilot operated valves. Sequence valves are similar in design to relief valves, with the difference being the addition of a spring chamber drain port. Sequence valves can be used to sequence a secondary operation within a system, as pressure compensators, or as load sense bypass valves.

Hydraulically Pilot Operated Spool Type

The normally closed, pilot operated, spool type sequence valve opens port 2 to 3 when a set pilot pressure is reached. The normally open valve will close port 2 to 3 when the set pilot pressure is reached. In the three-port configuration, the spring chamber will be referenced to atmosphere. With the four-port configuration, the spring chamber should be connected hydraulically to tank. These valves can be used to sequence a function in a separate part of the circuit by taking pilot pressure from another function.



Direct Acting Pressure Sequence Type

The direct acting pressure sequence valve is a normally closed, spool type controlling flow from the inlet port 1 to the sequenced port 2. When the pressure rises above the setting, the valve opens allowing flow port 1 to 2. With port 3 connected directly to tank, the valve will stay open if the pressure in port 1 is higher than the valve setting. Flow can then take place from port 1 to 2 or port 2 to 1, from high to low pressure. The valve can be used in standard sequencing circuits, as a load sense compensator, or in regenerative systems where flow passes from port 2



Pilot Operated Pressure Sequence Type

The pilot operated sequence valve blocks flow from port 1 to 2, until there is sufficient pressure to move the pilot poppet off its seat and overcome the opposing spring force. This creates a pressure differential across the spool, causing the spool to move back against a light spring. The two-stage design allows for smooth operation at varying flows while maintaining a consistent setting. With port 3 connected directly to tank, the valve will remain open as long as the inlet pressure is higher than the setting. This design is ideal for sequencing cylinders or motors in clamp and cut or lift and tip circuits. Select models are also available with an integrated reverse free-flow check.





Sequence and Unloading Valves Application Notes



Pilot Operated Kick Down Pressure Sequence Valve

The pilot operated kick down sequence valve blocks flow from port 1 to 2 until there is sufficient pressure to move the pilot poppet off its seat and overcome the opposing spring force. This creates a pressure differential across the spool, causing the spool to move back against a light spring. This automatically opens the main spool spring chamber to port 2 allowing the inlet pressure to decrease to the pressure in port 2. The valve will remain open until flow through the valve is shut off. This valve saves energy, as the inlet pressure decreases to the working pressure of the secondary function.

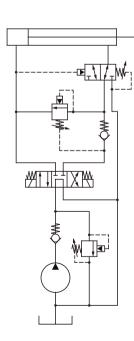


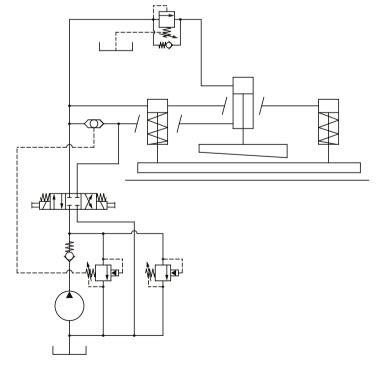
Application Recommendations

Sequence Valves:

- Spool type sequence valves are used to sequence an operation based on an external pressure from a separate circuit. Typical applications could be to reduce the speed of a feed cylinder, while monitoring the drive pressure on a drill as an anti-stall device.
- Pressure sequence valves are used when sequencing is activated from the same pressure source as the initial operation. For example, in a clamp and drill application, pressure is applied to the clamps first and is maintained on the clamps the drilling operation.
- A kick-down valve can be used when the initial operation does not need the pressure to be maintained. In the case of a clamp, the pressure may
 be held in by a pilot operated check valve or overcenter valve. The inlet pressure can then be reduced to the pressure required by the secondary
 function.
- Pressure sequence valves can be used as compensators for by-pass style flow regulators or as logic elements in a pump load sense situation.

Typical Applications





▲ Regenerative Circuit

Clamp and Cut Circuit

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Sequence and Unloading Valves Application Notes

Basic Operation: Unloading Valves

Unloading valves are used to unload pump flow when an accumulator circuit is fully charged. The excess flow can pass directly to tank at minimum pressure drop or be used for a secondary circuit. The low flow pilot valve can be used in load sense systems or in combination with a logic element. The larger valves include the logic element and full flow relief function in a single cartridge. When the pressure in the pilot port falls, the valve will close allowing the re-charging of the accumulator circuit.

Low Flow Pilot Unloading Valve

The low flow pilot unloading valve is designed to be used in conjunction with a larger element or in a load sensing system. The valve blocks the flow from port 2 to port 3, until the pressure at port 1 is enough to pilot the ball off its seat. The area of the pilot piston is larger than the seat area, so when the pressure decays in the pilot line, the valve will close (re-seat) at a percentage lower than the setting, allowing pressure to rise again in port 2. This valve is available with various re-seat value percentages. By sensing the pressure downstream of a check valve, the valve will react to the pressure in the secondary system which may contain an accumulator maintaining stored pressure within set parameters.



Unloading Valve & Priority Unloading Valve

With the standard unloading valve, inlet pressure is seen on the nose of the valve and system pressure (downstream of the system check valve) operates on the system pilot port. When inlet pressure rises to the valve setting, the relief section opens and the system pressure at the pilot port acts on the pilot piston to hold the valve in the open position. The ratio between the pilot piston diameter and the seat diameter of the relief section ensures that the valve will remain fully open, until the system pressure drops to approximately 85% of the set pressure. The priority unloading valve has a separate spring chamber drain that allowsthe flow downstream to be used at a pressure without affecting the setting of the valve.



Application Recommendations

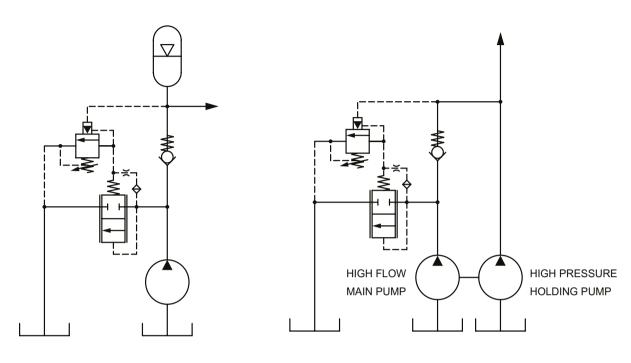
Unloading Valves:

- Unloading valves are often used in conjunction with accumulators. They sense the pressure in the accumulator and unload the pump flow at
 minimal pressure when the accumulator if fully charged, which increases the system efficiency. When the pressure falls in the accumulator, the
 unloading valve will close, allowing the pump to re-charge the system.
- Priority unloading valves have the addition of a drain port, so that the outlet pressure does not affect the setting of the valve. This allows the
 downstream oil to be used at pressure for a separate function. With this valve type, the accumulator circuit will always maintain priority. The
 downstream oil can only rise to the setting of the unloading valve, preventing the secondary circuit from having a pressure higher than the
 accumulator circuit. When using these valves, ensure that there is sufficient capacitance in the system to prevent the valve from rapidly unloading
 and re-loading the system. Too much leakage will cause the valve to enter a relieving mode and impact its ability to unload.

Sequence and Unloading Valves Application Notes



Typical Applications



▲ Unloading Valve Circuit

▲ Two Pump Unloading Circuit

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Sequence and Unloading Valves Quick Reference



Sequence Valve	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP240-8	SDC10-3	Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain	55 l/min [14 US gpm]	210 bar [3000 psi]	9
	CP241-8	CP12-3S	Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain	150 l/min [40 US gpm]	210 bar [3000 psi]	10
3	1DS100	A880	Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain	150 l/min [40 US gpm]	350 bar [5000 psi]	11
Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
-	PSV4-8	SDC08-3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain	15 l/min [4 US gpm]	350 bar [5000 psi]	12
3	PSV2-8	SDC08-3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain	23 l/min [6 US gpm]	210 bar [3000 psi]	13

1	PSV4-10	SDC10-3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain	15 l/min [4 US gpm]	210 bar [3000 psi]	14
	PSV2-10	SDC10-3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain	23 l/min [6 US gpm]	210 bar [3000 psi]	15
Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
1 2 11 1 11 1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CP240-5	SDC10-4	Sequence Valve, Normally Open, Spool Type, Hydraulic Pilot, External Drain	25 l/min [7 US gpm]	210 bar [3000 psi]	17

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	VDP 06/NC	NCS 06/3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Atmospheric Vent	25 l/min [7 US gpm]	315 bar [4600 psi]	18

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
$1 \begin{bmatrix} 2 \\ T \\ T \end{bmatrix} \qquad \qquad$	VDP 06/NA	NCS 06/3	Sequence Valve, Normally Open, Spool Type, Hydraulic Pilot, Atmospheric Vent	25 l/min [7 US gpm]	315 bar [4600 psi]	19

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP240-2	SDC10-3	Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain	35 l/min [9 US gpm]	210 bar [3000 psi]	20

*Flow ratings are for reference only. Refer to individual product page for performance information. BC332375508106en-000202 6

Sequence and Unloading Valves Quick Reference



Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
2	PSV5-10	SDC10-3	Sequence Valve, Normally Closed, Spool Type, Internal Pilot, Internal Drain	8 l/min [2 US gpm]	210 bar [3000 psi]	21
	PSV1-10	SDC10-3	Sequence Valve, Normally Closed, Spool Type, Internal Pilot, Internal Drain	23 l/min [6 US gpm]	210 bar [3000 psi]	22
Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP240-21	SDC10-3	Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain	45 l/min [12 US gpm]	350 bar [5000 psi]	24
	CP241-21	CP12-3S	Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain	76 l/min [20 US gpm]	350 bar [5000 psi]	25
	1PS100	A880	Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain	150 l/min [40 US gpm]	350 bar [5000 psi]	26
3	1PS200	A16102	Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain	250 l/min [66 US gpm]	350 bar [5000 psi]	27
Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	1PSC30	A6610	Sequence Valve, Direct Acting, Poppet Type with Reverse Free Flow, Internal Pilot, External Drain	30 l/min [8 US gpm]	350 bar [5000 psi]	28

Sequence Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	1PSC100	A880	Sequence Valve, Pilot Operated, Poppet Type with Reverse Free Flow, Internal Pilot, External Drain	150 l/min [40 US gpm]	350 bar [5000 psi]	29
Kick-Down Sequence Valve	Model No.	Cavity	Description	Flow*	Pressure	Page

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

Sequence and Unloading Valves Quick Reference



Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	CP240-30	SDC10-3	Unloading Valve, Direct Acting, Poppet Type, Hydraulic Pilot, Internal Drain	4 l/min [1 US gpm]	240 bar [3500 psi]	31
Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
3!						

1UL60	A3146	Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, Internal Drain	60 l/min [16 US gpm]	350 bar [5000 psi]	32

Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
	AUV 06	NCS 06/4	Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, External Drain	50 l/min [13 US gpm]	250 bar [3600 psi]	33

Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
1 2	1PUL60	A12088	Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, External Drain	60 l/min [16 US gpm]	350 bar [5000 psi]	34
	1PUL200	A3145	Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, External Drain	200 l/min [52 US gpm]	350 bar [5000 psi]	35

Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
3 2	VDB 06-EN	NCS 06/3	Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Internal Drain	80 l/min [21 US gpm]	350 bar [5000 psi]	36
	VDB 12-EN	NCS 12/3	Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Internal Drain	160 l/min [42 US gpm]	350 bar [5000 psi]	37
Unloading Valves	Model No.	Cavity	Description	Flow*	Pressure	Page
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	VDB 06-CN	NCS 06/3	Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Atmospheric Vent	80 l/min [21 US gpm]	350 bar [5000 psi]	38
Accumulator Discharge Valve	Model No.	Cavity	Description	Flow*	Pressure	Page
	ADV1-16	SDC16-3S	Accumulator Discharge Valve, Normally Open, Poppet Type, Hydraulic Pilot, Internal Drain	30 l/min [8 US gpm]	210 bar [3000 psi]	39

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

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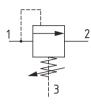
Sequence and Unloading Valves CP240-8

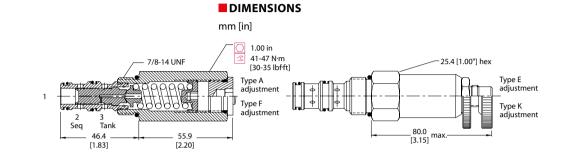
Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain 210 bar [3000 psi] • 55 l/min [14 US gpm]

DESCRIPTION AND OPERATION

This is a direct acting, spool type sequence valve that opens from port 1 to port 2 when the setting is reached, which can be used to sequence operations in a system limiting pressure loss. Connecting port 3 to tank allows this valve to be used as a relief with a consistent setting in applications with high backpressure variation. This valve is ideal for sequencing a secondary operation, while maintaining pressure in the first or as a compensator in a load sense system.

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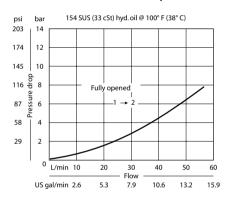
PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	55 l/min [14 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	SDC10-3

PERFORMANCE CURVES

Pressure Drop

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sear up	tion			Pressur	e Setting		
Code	Seal kit					e setting in psi	
B -Buna ·	- N 120027			(50 psi in Pressure		within specified	
V -Viton	120028			XXX-Star	ndard setti	ng (see Pressure Range	
Housing	I			for value Example			
Code	Ports & Material	Housing Model Code		Code	Bar	Psi	
0	No Housing	No Housing		100	69	[1000]	
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B		_			
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B	Pressure	-	_		
6S	AL, #6 SAE	CP10-3-6S	Coc		Bar	Psi	
8S	AL, #8 SAE	CP10-3-8S	A Standard		4-28 17	[50-400] [250]	
	um bodies are to be used nal housings available	for pressures less than 210 bar [B Standard		5-55 28	[75-800] [400]	
	ent Option		C		7-97	[100-1400]	
			Standard	Setting	69	[1000]	

Quick Reference

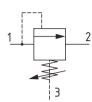
Index

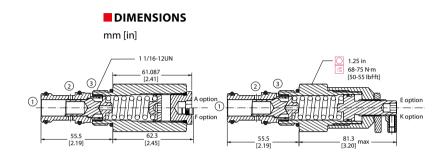
Sequence and Unloading Valves CP241-8

Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain 210 bar [3000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a direct acting, spool type sequence valve that opens from port 1 to port 2 when the setting is reached, which can be used to sequence operations in a system limiting pressure loss. Connecting port 3 to tank allows this valve to be used as a relief with a consistent setting in applications with high backpressure variation. This valve is ideal for sequencing a secondary operation, while maintaining pressure in the first or as a compensator in a load sense system.





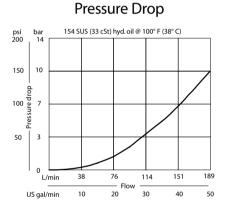
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PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	150 l/min [40 US gpm]
Max setting	41 bar [600 psi]
Weight	0.41 kg [0.90 lb]
Cavity	CP12-3S

Note: Maximum 105 bar [1500 psi] differential allowed between ports 2 and 3

PERFORMANCE CURVES



Seal Op	tion								
Code	Seal kit					Pressu	re Setting		
B -Buna	- N 120680								10 psi increments
V -Viton	120681					XXX-Sta	pecified Press ndard setting	i (see Pressure	Range for value)
Housin	n					Example	:		-
	-	llauda Madal Cada				(Code	Bar	Psi
Code	Ports & Material	Housing Model Code					050	35	[500]
U	No Housing	No Housing							
4B	AL, 1/2 BSP	CP12-3S-4B/2B							
6B	AL, 3/4 BSP	CP12-3S-6B/2B							
10S	AL, #10 SAE	CP12-3S-10S/4S				Pressure Range			
125	AL, #12 SAE	CP12-3S-12S/4S				Code	Bar	Psi	
* Alumir	num bodies are to be used	for pressures less than 210 bar [30	100 psi].			A	1-10	[13-150]	_
	onal housings available					Standard Setting	3.4	[50]	
	nent Option					В	3.4-28	[50-400]	
Adjustr					_	Standard Setting	7	[100]	
Adjustr A- Inter	nal								

Sequence and Unloading Valves 1DS100

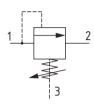
Sequence Valve, Direct Acting, Spool Type, Internal Pilot, External Drain

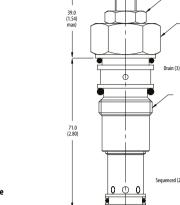
350 bar [5000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a direct acting, spool type sequence valve that opens from port 1 to port 2 when the setting is reached, which can be used to sequence operations in a system limiting pressure loss. Connecting port 3 to tank allows this valve to be used as a relief with a consistent setting in applications with high backpressure variation. This valve is ideal for sequencing a secondary operation, while maintaining pressure in the first or as a compensator in a load sense system.

SCHEMATIC





Installation torque 60 Nm [44 ft. lbs]

PERFORMANCE CURVES

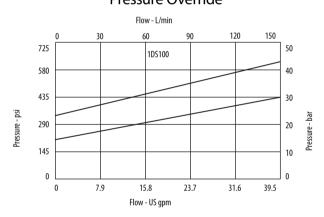
DIMENSIONS

mm [in]

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Max setting	40 bar [580 psi]
Leakage	25 ml/min nominal
Weight	0.28 kg [0.62 lb]
Cavity	A880

Pressure Override



MODEL CODE

									Pressure S	ietting	
1DS14	0 - No housing 5 - Cartridge and housing ment Option						Housing M	aterial	Code- Press bar (5 bar ir specified Pro XXX-Standa Pressure Rat Example:	ncrements essure Rar ard setting	within nge) (see
R - Kno							Omit - Alur 377 - Steel	ninum/No housing	Code	Bar	Psi
Housin	•								20	20	[290]
						Seal Opti					
Code	Ports	Housing Model	Code			Code	Seal Ki	t			
		Aluminum	Steel			S -Buna-N					
0mit	No Housing					SV-Viton	SK177V				
4W	1/2″ BSP. 1/4″ BSP Drain	B4821	B4527		Pressur	re Range					
6W	3/4" BSP. 1/4" BSP Drain	B5466	B4403			Code	Bar	Psi			
6T	3/8" SAE. 1/4" SAE Drain	B10793			-	2	2-25	[29-360]			
8T	1/2" SAE. 1/4" SAE Drain	B6584			Stand	ard Setting	20	[290]			
	3/4" SAE. 1/4" SAE Drain	B7883	B11379		<i>c</i> . 1	4 ard Setting	2-40 28	[30-580] [400]			



Hex socket adjust 4.0A/F

17.0 A/F

28.6 A/F

1-14 UNS

red (2)

Sequence and Unloading Valves PSV4-8

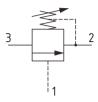
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain

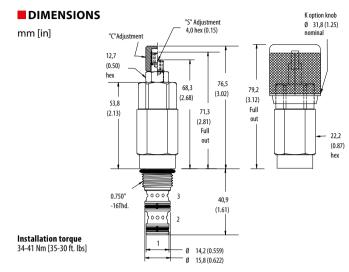
350 bar [5000 psi] • 15 l/min [4 US gpm]

DESCRIPTION AND OPERATION

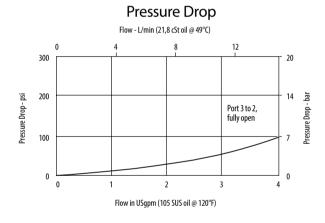
This is a hydraulically pilot operated spool valve, normally closed from port 3 to 2 with the spring chamber referenced to port 2. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 3 to 2. Port 2 should always be connected to tank. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

SCHEMATIC





PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	15 l/min [4 US gpm]
Leakage	82 ml/min [5 ln³/min] @ 210 bar [3000 psi]
Weight	0.21 kg [0.47 lb]
Cavity	SDC08-3

Seal 0	ption					Pressure	e Setting		
Code	Se	al Kit						setting in psi	
0mit-	Buna - N 02-	-160755	Adjustment Option						ressure Range) Range for value)
V -Vito	n 02-	-160756	C - Tamper Resistant			Example:		(····j·····,
			K - Knob S - External	Housing Material		0	ode	Bar	Psi
				Omit - No Housing S - Steel			10	69	[1000]
				A - Aluminium					
Housi	ng					Pressure Range			
Code	Ports	Housing I	Nodel Code			Code	Bar	Psi	_
		Aluminur				15	28-100	[40-1500]	
		Heavy Du	ty Heavy Duty			Standard Setting	52	[750]	_
0	No Housing					30	34-210	[500-3000]	
4T	#4 SAE	02-160741	l 02–160745			Standard Setting	103	[1500]	_
6T	#6 SAE	02-160742	02–160746			50	124-350	[1800-5000]	
2G	1/4″ BSP	02-160739	9 02–160743			Standard Setting	172	[2500]	_
			0 02-160744						



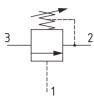
Sequence and Unloading Valves PSV2-8

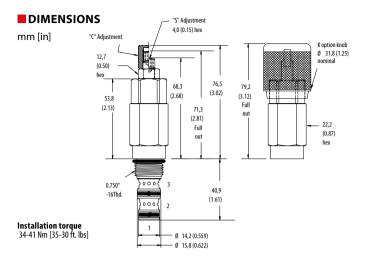
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain **210 bar [3000 psi] • 23 I/min [6 US gpm]**

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 3 to 2 with the spring chamber referenced to port 2. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 3 to 2. Port 2 should always be connected to tank. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

SCHEMATIC

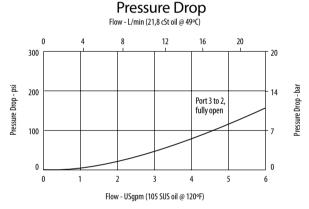




PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	23 l/min [6 US gpm]
Leakage	82 ml/min [5 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.21 kg [0.47 lb]
Cavity	SDC08-3

PERFORMANCE CURVES



Seal O	ption							
Code	Seal K	lit						
Omit-	Buna - N 02–16	0755				re Setting		
V-Vitor	n 02–16	0756			Code x1 (100 psi	00 - Pressure icraments w	e setting in psi ithin specified	Pressure Range)
Adjust	ment Option				XXX-Sta Example	ndard settin	g (see Pressure	Range for value)
	per Resistant					Code	Bar	Psi
K - Kno S - Exte						10	69	[1000]
Housir	ng Material							
	No Housing minium				Pressure Range			
Housir	a				Code	Bar	Psi	_
	Ports	Housing Model Code			13 Standard Setting	3.4-90 45	[50-1300] [650]	
		Aluminum Heavy Duty			30 Standard Setting	35-210 103	[500-3000] [1500]	_
0	No Housing				Stanuard Setting	105	[1300]	_
4T	#4 SAE	02-160741						
6T	#6 SAE	02-160742						
	1/4″ BSP	02-160739						
2G								



Sequence and Unloading Valves PSV4-10

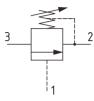
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain

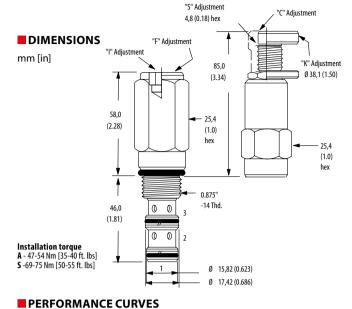
210 bar [3000 psi] • 15 l/min [4 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 3 to 2 with the spring chamber referenced to port 2. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 3 to 2. Port 2 should always be connected to tank. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

SCHEMATIC

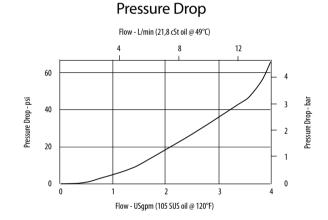




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PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	15 l/min [4 US gpm]
Leakage	82 ml/min [5 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.24 kg [0.53 lb]
Cavity	SDC10-3



Seal O	otion					Press	ure Settin	g
Code	Seal K						x100 - Press si icraments	
Omit-E	Buna - N 565804	F	Adjustment Option				tandard set	
V -Vitor	889599	1	C - Tamper Resistant F - Fixed			Examp	le:	
			I - Internal				Code	
			K - Knob S - External	Housing Material			10	
			- External	Omit - Aluminum/No Housing S - Steel	1	Pressure Range		
Housin	g					Code	Bar	
Code	Ports	Housing Model	Code		_	5	3.5-30	
		Aluminum	Aluminum	Steel	_	Standard Setting	15	
			Heavy Duty	Heavy Duty		9	7-62	
		Standard Duty	neavy Duty	neavy Duly				
0	No Housing	Standard Duty	neavy Duty	neavy Duty	-	Standard Setting	30	
-	No Housing	· ·	-		-	Standard Setting 14	30 14-95	
3B	3/8″ BSP	Standard Duty 02–173358	_	-	-	14 Standard Setting	14-95 48	
-	3/8″ BSP 1/4″ BSP	· ·	- 876705	- 02-175127	- - -	14 Standard Setting 28	14-95 48 20-190	
3B 2G 3G	3/8″ BSP 1/4″ BSP 3/8″ BSP	02–173358 –	- 876705 876714	-	- - -	14 Standard Setting 28 Standard Setting	14-95 48 20-190 97	
3B 2G 3G 6H	3/8" BSP 1/4" BSP 3/8" BSP #6 SAE	02–173358 – –	- 876705 876714 876704	- 02-175127 02-175128	- - - -	14 Standard Setting 28 Standard Setting 56	14-95 48 20-190 97 35-380	
3B 2G 3G	3/8″ BSP 1/4″ BSP 3/8″ BSP	02–173358 – – –	- 876705 876714	- 02-175127 02-175128 -	- - - - - - * Aluminum bodies a	14 Standard Setting 28 Standard Setting 56 Standard Setting	14-95 48 20-190 97 35-380 193	

	Pressu	re Settin	9		
	(100 ps	i icraments andard sett	ure setting in ps within specifiec ing (see Pressur	d Pressure Rai	
		Code	Bar	Psi	
		10	69	[1000]	
Pressure R	ange				
Code	-	Bar	Psi		
5		3.5-30	[50-450]		
Standard S	etting	15	[225]		
9		7-62	[100-900]		
Standard S	etting	30	[450]		
14		14-95	[200-1400]		
Standard S	etting	48	[700]		
28		20-190	[300-2800]		
Standard S	etting	97	[1400]		
56		35-380	[500-5600]		
Standard S	ettina	193	[2800]		

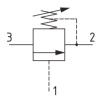
Sequence and Unloading Valves PSV2-10

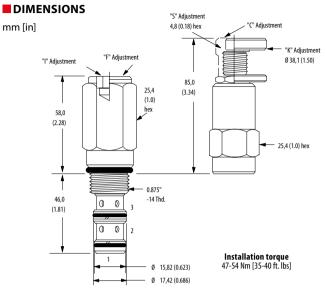
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain 210 bar [3000 psi] • 23 l/min [6 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 3 to 2 with the spring chamber referenced to port 2. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 3 to 2. Port 2 should always be connected to tank. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

SCHEMATIC

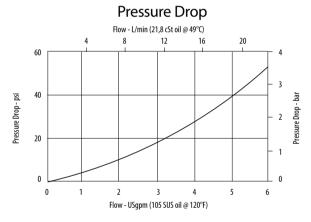




PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	23 l/min [6 US gpm]
Leakage	82 ml/min [5 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.24 kg [0.53 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



Seal O	ption			Pressu	re Setting		
Code	Seal Kit	_	Adjustment Option			ire setting in psi (50 psi increment	
Omit-E	Buna - N 565804	_	C - Tamper Resistant		n specified Pressure Range) Standard setting (see Pressure Range for value)		
V -Vitor	889599	_	F - Fixed	Examp		ig (see i ressure nange for value)	
			l - Internal K - Knob	Code	Bar	Psi	
Housir	Ig		S - External	10	69	[1000]	
Code	Ports	Housing Model Code	2	10.5	72.4	[1050]	
		Aluminum Standard Duty	Aluminum Heavy Duty	Pressure Range			
•	N. H			Code	Bar	Psi	
0	No Housing			2	3.5-14	[50-200]	
3B	3/8″ BSP	02–173358	-	Standard Setting	7	[100]	
6T	#6 SAE	566162	-	6	7-40	[100-600]	
2G	3/4″ BSP	-	876705	Standard Setting	21	[300]	
3G	3/8″ BSP	-	876714	12	14-80	[200-1200]	
6H	#6 SAE	-	876704	Standard Setting	41	[600]	
8H	#8 SAE	_	876711	24	25-165	[400-2400]	
оп	#0 JAE	-	6/0/11	Standard Setting	83	[1200]	



Sequence and Unloading Valves PSV10-10

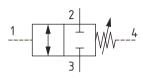
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, External Drain

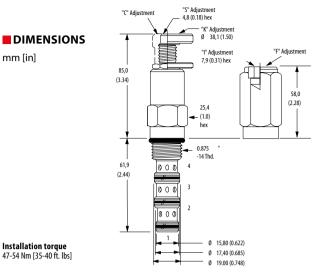
210 bar [3000 psi] • 23 l/min [6 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 2 to 3 with port 4 as a drain port connected to tank. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 2 to 3. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

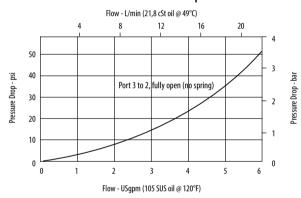
SCHEMATIC





PERFORMANCE CURVES

Pressure Drop



Rated prossure

PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	23 I/min [6 US gpm]
Leakage	164 ml/min [10 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.27 kg [0.60 lb]
Cavity	SDC10-4

Seal O	ption						
Code	Seal K	t		Pressur	Setting		
Omit-	Buna - N 889625						50 psi increments
V -Vitor	n 566080			within sp XXX-Star Example	ndard setting	sure Range) g (see Pressure Ra	ange for value)
_	ment Option			Code	Bar	Psi	
C - Tam F - Fixe	iper Resistant d			10	69	[1000]	
I - Inte	rnal			10.5	72.4	[1050]	
K - Kno S - Exte					,2.1	[1050]	
Housir	Ig						
Housir Code		Housing Model	Code	 Pressure Range			
		-		 Pressure Range Code	Bar	Psi	
		Housing Model Aluminum Standard Duty	Code Aluminum Heavy Duty		Bar 3.5-14	Psi [50-200]	
Code	Ports	Aluminum	Aluminum	 Code	3.5-14 7	[50-200] [100]	
Code 0	Ports No Housing	Aluminum Standard Duty	Aluminum Heavy Duty	 Code 2 Standard Setting 4	3.5-14 7 5-28	[50-200] [100] [75-400]	
Code 0 3B	Ports No Housing 3/8″ BSP	Aluminum Standard Duty 02–179705	Aluminum Heavy Duty –	 Code 2 Standard Setting 4 Standard Setting	3.5-14 7 5-28 14	[50-200] [100] [75-400] [200]	
Code 0 3B 6T	Ports No Housing 3/8" BSP #6 SAE	Aluminum Standard Duty	Aluminum Heavy Duty –	 Code 2 Standard Setting 4 Standard Setting 6	3.5-14 7 5-28 14 7-40	[50-200] [100] [75-400] [200] [100-600]	
Code 0 3B	Ports No Housing 3/8″ BSP	Aluminum Standard Duty 02–179705	Aluminum Heavy Duty –	 Code 2 Standard Setting 4 Standard Setting 6 Standard Setting	3.5-14 7 5-28 14 7-40 21	[50-200] [100] [75-400] [200] [100-600] [300]	
Code 0 3B 6T	Ports No Housing 3/8" BSP #6 SAE	Aluminum Standard Duty 02–179705 566161	Aluminum Heavy Duty –	Code 2 Standard Setting 4 Standard Setting 6 Standard Setting 12	3.5-14 7 5-28 14 7-40 21 14-80	[50-200] [100] [75-400] [200] [100-600] [300] [200-1200]	
Code 0 3B 6T 2G	Ports No Housing 3/8" BSP #6 SAE 1/4" BSP	Aluminum Standard Duty 02–179705 566161 –	Aluminum Heavy Duty - - 876709	Code 2 Standard Setting 4 Standard Setting 6 Standard Setting	3.5-14 7 5-28 14 7-40 21	[50-200] [100] [75-400] [200] [100-600] [300]	· · ·

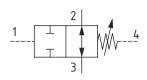


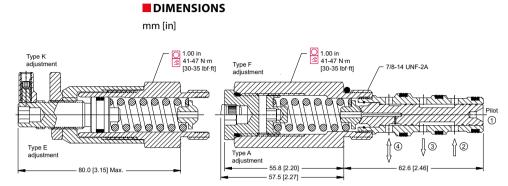
Sequence and Unloading Valves CP240-5

Sequence Valve, Normally Open, Spool Type, Hydraulic Pilot, External Drain 210 bar [3000 psi] • 25 l/min [7 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally open from port 2 to 3 with port 4 as a drain port connected to tank. When the pilot pressure on port 1 reaches the setting, the valve will begin to close port 2 to 3. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

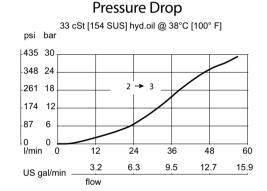




PERFORMANCE DATA

PERFORMANCE CURVES

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	25 l/min [7 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	SDC10-4



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MODEL CODE

Seal Op	tion				Pressu	ire Setting		
Code	Seal kit					10 - Pressure		
B -Buna	- N 120023							Pressure Range) Range for value)
V -Viton	120024				Examp			,
Housing]					Code	Bar	Psi
Code	Ports & Material	Housing Model Code				075	52	[750]
0	No Housing	No Housing						
L3B	AL, 3/8 BSP	SDC10-4-L-3B			Pressure Range			
L4B	AL, 1/2 BSP	SDC10-4-L-4B			Code	Bar	Psi	
6S	AL, #6 SAE	SDC10-4-6S			Α	3.4-27.6	[50-400]	-
85	AL, #8 SAE	SDC10-4-8S			Standard Setting	17	[250]	_
* Alumin	um hodies are to he used	for pressures less than 210 bar [30	00 nsil		В	4.8-55.2	[70-800]	
	nal housings available	tor pressures ress than 210 bar [50	00 p3ij.		Standard Setting	28	[400]	_
	nent Option				C	6.9-96.5	[100-1400]	
najasai	nal				Standard Setting	69	[1000]	

BC332375508106en-000202

Quick Reference

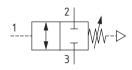
Index

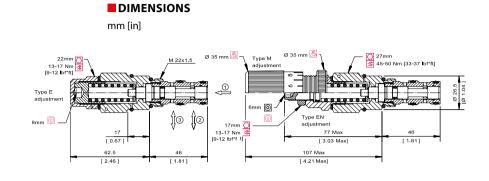
Sequence and Unloading Valves VDP 06/NC

Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Atmospheric Vent **315 bar [4600 psi] • 25 l/min [7 US qpm]**

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 2 to 3 with an atmospheric vent. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 2 to 3. This is deal for sensing pressure in a remote area of a circuit to sequence another operation.



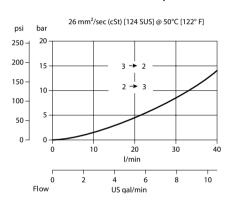


Danfoss

PERFORMANCE DATA

Rated pressure	315 bar [4600 psi]
Rated flow @ 7 bar [100 psi]	25 l/min [7 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	NCS 06/3

PERFORMANCE CURVES Pressure Drop



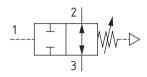
			Pressure Setting	Example:		
Adjustment Option	1		Code-Pressure setting in bar	Code	Bar	
E - Internal EN - External			(5 bar increments within specif Pressure Range)	ed 60	60	
M - Calibrated Knob			XXX-Standard setting (see Pressure Range for value)			
Pressure Range			Seal Option			
Code	Bar	Psi	Code Seal kit			
1	15-40	[220-580]	V-Viton 23000059			
Standard Setting	No	ot set	Omit-Buna - N 230000430			
2	30-120	[435-1740]				
Standard Setting	No	ot set	Housing			
3	105-190	[1520-2750]	Code Ports & Material Housing Model C	ode		
Standard Setting	No	ot set	00 No Housing No Housing			
Standard Setting			SE3/8 AL, 3/8 BSP NCS06/3-SE-3/8			
			SE1/2 AL, 1/2 BSP NCS06/3-SE-1/2			
			SE6S AL, #6 SAE NCS06/3-SE-6S			
			SE8S AL, #8 SAE NCS06/3-SE-8S			

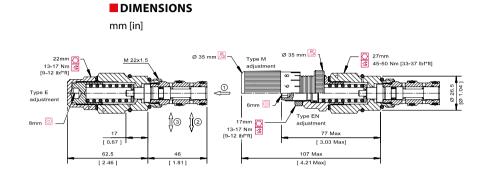
Sequence and Unloading Valves VDP 06/NA

Sequence Valve, Normally Open, Spool Type, Hydraulic Pilot, Atmospheric Vent 315 bar [4600 psi] • 25 l/min [7 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally open from port 2 to 3 with an atmospheric vent. When the pilot pressure on port 1 reaches the setting, the valve will begin to close port 2 to 3. This is ideal for sensing pressure in a remote area of a circuit to stall another operation.



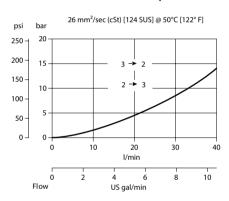


Danfoss

PERFORMANCE DATA

Rated pressure	315 bar [4600 psi]
Rated flow @ 7 bar [100 psi]	25 l/min [7 US gpm]
Weight	0.26 kg [0.57 lb]
Cavity	NCS 06/3

PERFORMANCE CURVES Pressure Drop



			Pressure Setting	Example:		
Adjustment Optio	n		Code-Pressure setting in ba		Bar	
E - Internal EN - External			(5 bar increments within sp Pressure Range)	ecified	60	
M - Calibrated Knob			XXX-Standard setting (see Pressure Range for valu	e)		
			Seal Option			
			Code Seal kit			-
Pressure Range			V-Viton 230000590			
Code	Bar	Psi	Omit-Buna - N 230000430			
1	15-40	[217-580]	Housing			
Standard Setting	No	ot set	Code Ports & Material Housing Mod	el Code		-
2	30-120	[435-1740]	00 No Housing No Housing			
Standard Setting	No	ot set	SE3/8 AL, 3/8 BSP NSC06/3-SE-3/	3		
3	105-190	[1523-2756]	SE1/2 AL, 1/2 BSP NSC06/3-SE-1/.	2		
Standard Setting	No	ot set	SE6S AL, #6 SAE NSC06/3-SE-65			
			SE8S AL, #8 SAE NSC06/3-SE-85			

Sequence and Unloading Valves CP240-2

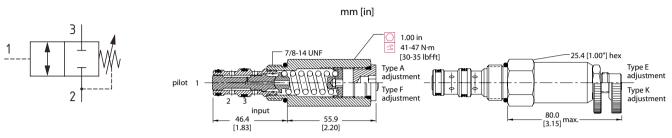
Sequence Valve, Normally Closed, Spool Type, Hydraulic Pilot, Internal Drain 210 bar [3000 psi] • 35 I/min [9 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve, normally closed from port 3 to 2 with the spring chamber referenced to port 2. When the pilot pressure on port 1 reaches the setting, the valve will begin to open port 3 to 2. Port 2 should always be connected to tank. This is ideal for sensing pressure in a remote area of a circuit to sequence another operation.

DIMENSIONS

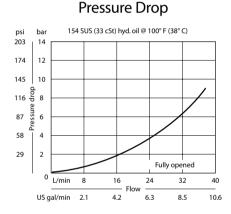
SCHEMATIC



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow @ 7 bar [100 psi]	35 l/min [9 US gpm]
Weight	0.24 kg [0.52 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



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Seal Op					Pressur	e Setting		Example:		
Code	Seal kit						setting in psi	Code	Bar	P
B -Buna					(10 psi ir	ncrements w	ithin specified			
V -Viton	120010				Pressure		(D	100	69	[10
Housin	9				XXX-Sta Range fo		g (see Pressure			
Code	Ports & Material	Housing Model Code								
0	No Housing	No Housing			Pressure Range					
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B			Code	Bar	Psi	_		_
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B			A	4-28	[50-400]			
6S	AL, #6 SAE	CP10-3-6S			Standard Setting	17	[250]	_		
85	AL, #8 SAE	CP10-3-85			В	5-55	[75-800]			
	,				Standard Setting	28	[400]	_		
		for pressures less than 210 bar [30	00 psi].		C	7-97	[100-1400]			
	onal housings available				Standard Setting	69	[1000]	_		
	nent Option				D	34-166	[500-2400]			
A- Interi E - Exter					Standard Setting	103	[1500]			

Sequence and Unloading Valves PSV5-10

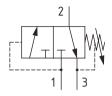
Sequence Valve, Normally Closed, Spool Type, Internal Pilot, Internal Drain

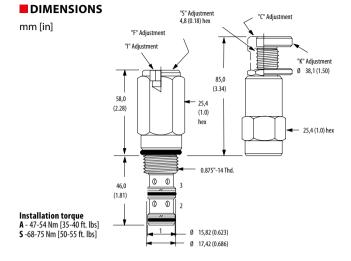
210 bar [3000 psi] • 8 l/min [2 US gpm]

DESCRIPTION AND OPERATION

This is a three ported sequence valve, where pressure sensed at port 1 will shift valve and open port 1 to port 2. Port 3 should always be referenced to tank. This is ideal for use as a brake release valve in a transmission circuit.

SCHEMATIC



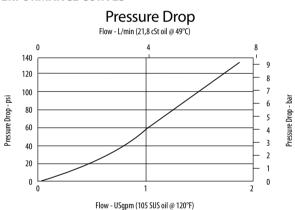


Danfoss

PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	8 l/min [2 US gpm]
Leakage	82 ml/min [5 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.24 kg [0.53 lb]
Cavity	SDC10-3



Seal Op	otion						re Setting
Code	Sea	Kit					x100 - Pressu ents within sp
Omit-B	una - N 5658	04	Adjustmer	t Option		XXX-St	andard settin
V -Viton	889	599	C - Tamper I K - Knob	Resistant		Examp	
			I - Internal	Housing	Material	Code	Bar
			F - Fixed S - External		uminum/No Housing	10	69
				S - Steel	j	10.5	72.4
Housin							
Code	Ports	Ho	ising Model Cod	e			
			minum ndard Duty	Aluminum Heavy Duty	Steel Heavy Duty	Pressure Range	
0	No Housing					Code	Bar
3B	3/8″ BSP	02-	173358	-	-	5	3.5-30
2G	1/4″ BSP	-		876705	02-175127	Standard Setting	16
3G	3/8″ BSP	-		876714	02-175128	9	7-62
6H	#6 SAE	-		876704	-	Standard Setting	31
8H	#8 SAE	_		876711	_	 14	14-95
6T	#6 SAE	566	162	_	02-175124	 Standard Setting 28	48 20-190
	#8 SAE				02-175125	 20 Standard Setting	20-190 97

Examples		(see Pressure Ra	nge for vali
Code	Bar	Psi	
10	69	[1000]	
10.5	72.4	[1050]	

Code	Bar	Psi
5	3.5-30	[50-450]
Standard Setting	16	[225]
9	7-62	[100-900]
Standard Setting	31	[450]
14	14-95	[200-1400]
Standard Setting	48	[700]
28	20-190	[300-2800]
Standard Setting	97	[1400]

Sequence and Unloading Valves PSV1-10

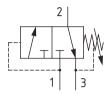
Sequence Valve, Normally Closed, Spool Type, Internal Pilot, Internal Drain

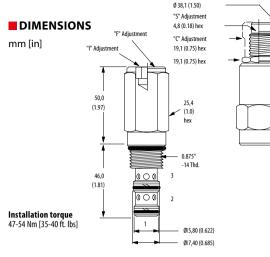
210 bar [3000 psi] • 23 l/min [6 US gpm]

DESCRIPTION AND OPERATION

This is a three ported sequence valve, where pressure sensed at port 1 will shift valve and open port 1 to port 2. Port 3 should always be referenced to tank. This is ideal for use as a brake release valvein a transmission circuit.

SCHEMATIC





PERFORMANCE CURVES

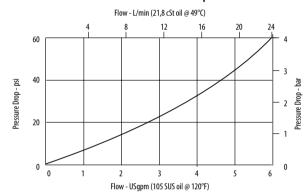
Pressure Drop

"K" Adjustment

Danfoss

80.0

(3.15)



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	23 l/min [6 US gpm]
Leakage	82 ml/min [5 ln ³ /min] @ 210 bar [3000 psi]
Weight	0.24 kg [0.53 lb]
Cavity	SDC10-3

MODEL CODE

Seal O	otion							
Code	Seal K	it						
Omit-E	3una - N 565804	1						
V -Vitor	889599)						
Adjust	ment Option				Process	e Setting		
F - Fixe I - Inter K - Kno S - Exte	rnal b				(50 psi ir	ncrements w ndard settin	re setting in psi ithin specified Pi g (see Pressure R	ressure Range) Range for value).
Housir	a				Code	Bar	Psi	
		Housing Model Co	da		10	69	[1000]	
	Ports							
Code	Ports				10.5	72.4	[1050]	
	Ports	Aluminum Standard Duty	Aluminum Heavy Duty		10.5 Pressure Range	72.4	[1050]	
	Ports No Housing	Aluminum	Aluminum			72.4 Bar	[1050] Psi	
0		Aluminum	Aluminum		Pressure Range			_
0 3B	No Housing	Aluminum Standard Duty	Aluminum Heavy Duty		Pressure Range Code	Bar	Psi	-
0 3B 6T	No Housing 3/8″ BSP	Aluminum Standard Duty 02–173358	Aluminum Heavy Duty –		Pressure Range Code 2 Standard Setting 6	Bar 3.5-14 7 7-40	Psi [50-200] [100] [200-1200]	-
0 3B 6T 2G	No Housing 3/8″ BSP #6 SAE	Aluminum Standard Duty 02–173358 566162	Aluminum Heavy Duty –		Pressure Range Code 2 Standard Setting 6 Standard Setting	Bar 3.5-14 7 7-40 21	Psi [50-200] [100] [200-1200] [300]	-
0 3B 6T 2G 3G	No Housing 3/8″ BSP #6 SAE 1/4″ BSP	Aluminum Standard Duty 02–173358 566162 –	Aluminum Heavy Duty – – 876705		Pressure Range Code 2 Standard Setting 6 Standard Setting 12	Bar 3.5-14 7 7-40 21 14-80	Psi [50-200] [100] [200-1200] [300] [200-1200]	-
0 3B 6T 2G 3G 6H 8H	No Housing 3/8" BSP #6 SAE 1/4" BSP 3/8" BSP	Aluminum Standard Duty 02–173358 566162 – –	Aluminum Heavy Duty 876705 876714		Pressure Range Code 2 Standard Setting 6 Standard Setting	Bar 3.5-14 7 7-40 21	Psi [50-200] [100] [200-1200] [300]	-

BC332375508106en-000202

Sequence and Unloading Valves VDP 06/4201

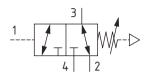
Sequence Valve, 3-Way, Spool Type, Hydraulic Pilot, Atmospheric Vent

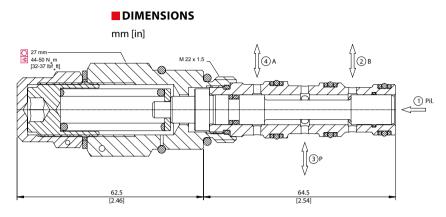
315 bar [4600 psi] • 23 l/min [6 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated spool valve where port 4 is closed and port 2 is open to port 3 in the neutral position. Pilot pressure is applied to port 1 and the spring chamber is referenced to atmosphere. When the pressure on port 1 reaches the setting, port 2 will begin to close and port 4 is opened to port 3. This valve can be used normally closed, normally open or as a diverter valve.

SCHEMATIC





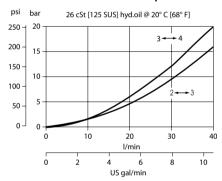
PERFORMANCE DATA

Rated pressure	315 bar [4600 psi]
Rated flow @ 7 bar [100 psi]	23 l/min [6 US gpm]
Weight	0.28 kg [0.62 lb]
Cavity	NCS06/4

PERFORMANCE CURVES

Pressure Drop

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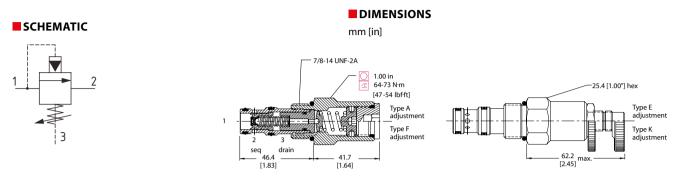
							Pressure S	rung	
Adjustment Opti E - Internal EN - External M - Calibrated Kno					Seal Option		Code-Pressu 5 bar increm Pressure Ran XXX-Standar (see Pressure Example:	ents within ge) d setting	specified
					Code	Seal kit	Code	Bar	Psi
Pressure Range					Omit -Buna - N	230000080	20	20	[290]
	Bar				V-Viton	230000350			
Code	Ddr	Psi			• • • • • •				
Code 1	15-40	[220-580]		Housing					
Code 1 Standard Setting	15-40			Housing			g Model Code		
1	15-40	[220-580]]		g Model Code ing		
1 Standard Setting	15-40 No 30-120	[220-580] ot set		Code	Ports & Materi	al Housing	ing		
1 Standard Setting 2	15-40 No 30-120	[220-580] ot set [430-1740]		Code 00	Ports & Materi No Housing	al Housing No Housi	ing -L-3/8		
1 Standard Setting 2 Standard Setting	15-40 Na 30-120 Na 105-190	[220-580] ot set [430-1740] ot set		Code 00 L3/8	Ports & Materi No Housing AL, 3/8 BSP	al Housing No Housi NCSO6/4	-L-3/8 -L-3/8		

Sequence and Unloading Valves CP240-21

Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain 350 bar [5000 psi] • 45 l/min [12 US gpm]

DESCRIPTION AND OPERATION

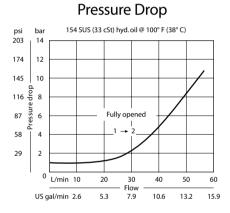
This is a pilot operated, spool type sequence valve that opens from port 1 to port 2 when the setting is reached. This is ideal for sequencing a secondary operation while maintaining pressure in the primary operation, limiting pressure loss with constant or varying flows.



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	45 l/min [12 US gpm]
Weight	0.23 kg [0.51 lb]
Cavity	SDC10-3

PERFORMANCE CURVES



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MODEL CODE

Seal Op	tion		Pressure Setting	
Code	Seal kit		Code x10 - Pressure set	
B -Buna	- N 120009			hin specified Pressure Range) (see Pressure Range for value)
V -Viton	120010		Example:	5
Housin			Code	Bar Psi
Code	Ports & Material	Housing Model Code		103 [1500]
0	No Housing	No Housing		
SE3B	AL, 3/8 BSP	SDC10-3-SE-3B	Pressure Range	
SE4B	AL, 1/2 BSP	SDC10-3-SE-4B	Code Bar	Psi
6S	AL, #6 SAE	CP10-3-6S	A 14-55 Standard Setting 28	[200-800] [400]
85 * Alumir	AL, #8 SAE	CP10-3-8S	B 21-103 Standard Setting 69	[30-1500] [1000]
* Additio	onal housings available	nor pressures less man 210 bar (.	C 28-207 Standard Setting 103	[400-3000] [1500]
Adiustn	nent Option		Stalluaru Settiliy 105	[1500]

BC332375508106en-000202

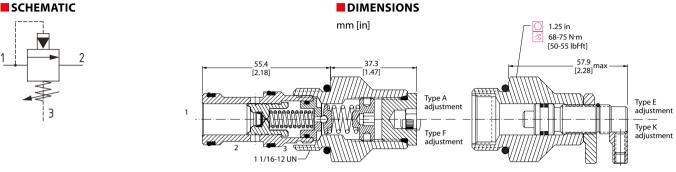
Sequence and Unloading Valves CP241-21

Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain 350 bar [5000 psi] • 76 l/min [20 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, spool type sequence valve that opens from port 1 to port 2 when the setting is reached. This is ideal for sequencing a secondary operation while maintaining pressure in the primary operation, limiting pressure loss with constant or varying flows.

SCHEMATIC



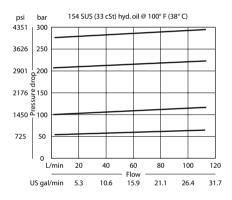
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	76 l/min [20 US gpm]
Weight	0.28 kg [0.62 lb]
Cavity	CP12-3S

PERFORMANCE CURVES

Pressure Override

Danfoss



sear of	tion					Pressu	re Setting		
Code	Seal kit							e setting in psi	
B -Buna	- N 120335								d Pressure Ran re Range for va
V -Viton	120336					Exampl		.,	·····
Housin	a						Code	Bar	Psi
Code	Ports & Material	Housing Model Code					150	103	[1500]
00	No Housing	No Housing	-						
4B	AL, 1/2 BSP	CP12-3S-4B/2B	-						
6B	AL, 3/4 BSP	CP12-3S-6B/2B	-			Pressure Range			
10S	AL, #10 SAE	CP12-3S-10S/4S	-			Code	Bar	Psi	_
125	AL, #12 SAE	CP12-3S-12S/4S	_			A Standard Setting	14-55 28	[200-800] [400]	
	num bodies are to be used	for pressures less than 210 bar	[3000 psi].			B Standard Setting	21-103 69	[30-1500] [1000]	
	onal housings available								
* Additi						,	28-207	[400-3000]	1

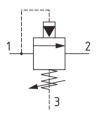
Sequence and Unloading Valves 1PS100

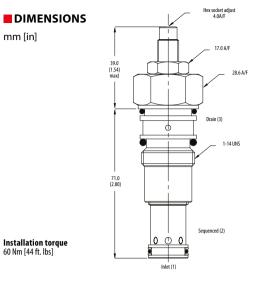
Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain 350 bar [5000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

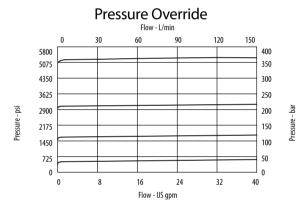
This is a pilot operated, spool type sequence valve that opens from port 1 to port 2 when the setting is reached. This is ideal for sequencing a secondary operation while maintaining pressure in the primary operation, limiting pressure loss with constant or varying flows.

SCHEMATIC





PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Leakage	35 ml/min @ 280 bar [4060 psi]
Weight	0.17 kg [0.37 lb]
Cavity	A880

Basic (Code									Pressure S	etting		
1PS14 Adjust	1PS100 - No housing 1PS145 - Catridge and Housing Adjustment Option P - External							Housing	Material	Code- Pressure setting in ba (5 bar increments within spe Pressure Range) XXX-Standard setting (see Pressure Range for value)			
R - Kno	- Knob								uminum/No housing	Example:			
G - Tarr	nper Resistant							377 - Stee	2	Code	Bar	Psi	
Housin	Housing					Seal Opt	ion		60	60	[870]		
Code	Ports	Housing Model Code					Code	Seal Kit					
		Aluminu	m Steel	Aluminum 1PS155	Steel 1PS155		S -Buna-N	SK177	1				
Omit	No Houring			113133	15133		SV-Viton	SK17	7V				
	No Housing					Pressure	Range						
4W	1/2" BSP. 1/4" BSP Drain Port	B4821	B4527				de	Bar	Psi				
6W	3/4" BSP. 1/4" BSP Drain Port	B5466	B4403	BXP23867- 6WS	BXP23867- 6WS377			2-70	[29-1015]				
				0005	0003377	Standard	d Setting	35	[510]				
6T	3/8" SAE. 1/4" SAE Drain Port	B10793				-	0	10-210	[150-3000]				
8T	1/2" SAE. 1/4" SAE Drain Port	B6584				Standard		100	[1450]				
12T	3/4" SAE. 1/4" SAE Drain Port	B7883	B11379			-	5	50-350	[725-5000]				
* * 1	num bodies are to be used for press		210	00:1		Standard	ing made at	280	[4060]				

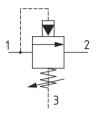


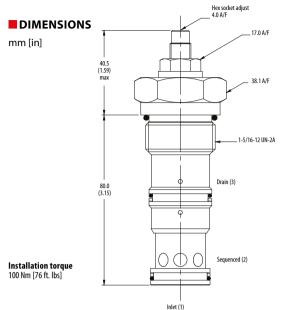
Sequence and Unloading Valves 1PS200

Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain 350 bar [5000 psi] • 250 l/min [66 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, spool type sequence valve that opens from port 1 to port 2 when the setting is reached. This is ideal for sequencing a secondary operation while maintaining pressure in the primary operation, limiting pressure loss with constant or varying flows.





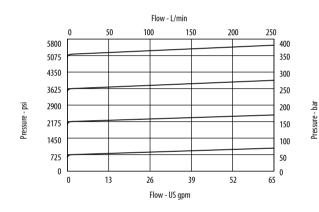
Danfoss

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	250 l/min [60 US gpm]
Leakage	35 ml/min @ 280 bar [4060 psi]
Weight	0.72 kg [1.60 lb]
Cavity	A16102

PERFORMANCE CURVES

Pressure Override



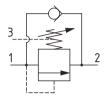
Basic	lode				Pressure	setting	
1P5200 - No housing 1P5250 - Cartridge and Housing Adjustment Option P - External		Housing Material Omit - Aluminum/No housin	Code - Pressure setting in bar (5 bar increments within specified Pressure Range) XXX-Standard setting (see Pressur Range for value) Example:				
P - Ext R - Kno				377 - Steel	Code	Bar	Psi
G - Tan	iper Resistant				60	60	[870]
Housir				Seal Option	-		
	'9						
	Dt.	0	C 1	Code Seal Kit			
	Ports	Housing Model	Code	Code Seal Kit S-Buna-N SK173			
	Ports	Housing Model Aluminum	Code Steel				
	Ports No Housing			S-Buna-N SK173 SV-Viton SK173V			
Code				S-Buna-N SK173 SV-Viton SK173V Pressure Range			
Code Omit	No Housing	Aluminum	Steel	S-Buna-N SK173 SV-Viton SK173V			

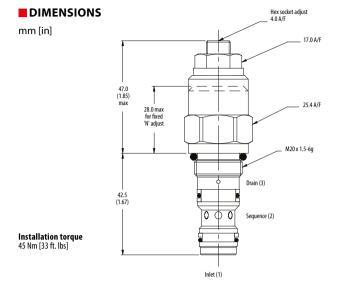
Sequence and Unloading Valves 1PSC30

Sequence Valve, Direct Acting, Poppet Type with Reverse Free Flow, Internal Pilot, External Drain **350 bar [5000 psi] • 30 l/min [8 US gpm]**

DESCRIPTION AND OPERATION

This is a direct acting, poppet type sequence valve with a reverse flow check. It opens from port 1 to port 2 when the set pressure is reached and free flows from port 2 to 1. It can be used to sequence operations in a system or in a service line after a directional valve, where free flow is necessary in the reverse direction.

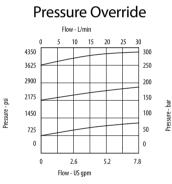




PERFORMANCE DATA

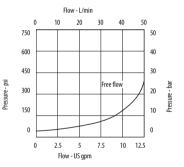
Rated pressure	350 bar [5000 psi]
Rated flow	30 l/min [8 US gpm]
Leakage	0.3 ml/min nominal [5 drops/min]
Weight	0.15 kg [0.33 lb]
Cavity	A6610

PERFORMANCE CURVES



Pressure Drop

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Basic	Code						Pressure Setting			
1PSC3 Adjust	0 - No housing 5- Cartridge and Housing ment Option		Housing M Omit - Alur 377 - Steel	<mark>aterial</mark> minum/No housing	Range for value)					
F - Exte N - Nor	rnal 1-adjustable option, contact technical sur	oport.		Seal Opt	tion		Example:			
Housi		Code	Seal Kit	t	Code	Bar	Psi			
Code Ports		Housing Model	Codo	S-Buna-I	N SK395	_	60	60	[870]	
coue		Aluminum	Steel	SV-Viton	SK395V	_				
0mit	No Housing			Pressure Range						
3W	3/8″ BSP Valve & Cyl Port. 1/4″ BSP Pilot Port	B6743	B12823	<u>Code</u> 10	Bar 10-100	Psi [145-1450]				
6T	3/8" SAE Valve & Cyl Port. 1/4" SAE Pilot Port	B10536		Standard Setting 20	70 60-210	[1015] [870-3000]				
8T	1/2″ SAE Valve & Cyl Port. 1/4″ SAE Pilot Port	B7884	B11811	Standard Setting 35	100 70-350	[1450] [1015-5000]				

Sequence and Unloading Valves 1PSC100

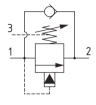
Sequence Valve, Pilot Operated, Poppet Type with Reverse Free Flow, Internal Pilot, External Drain

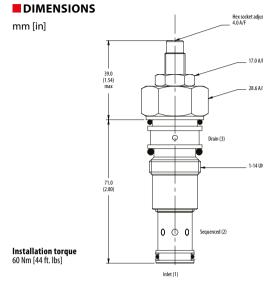
350 bar [5000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, poppet type sequence valve with a reverse flow check. It opens from port 1 to port 2 when the set pressure is reached and free flows from port 2 to 1. It can be used to sequence operations in a system or in a service line after a directional valve, where free flow is necessary in the reverse direction.

SCHEMATIC



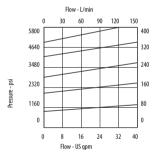


PERFORMANCE DATA

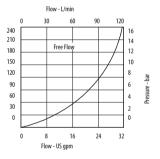
Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Leakage	35 ml/min @ 280 bar [4060 psi]
Weight	0.17 kg [0.37 lb]
Cavity	A880

PERFORMANCE CURVES





Pressure Drop



iSI

Pressure

Desta	·								Pressure Setting		
Basic Code 1PSC100 - No housing 1PSC145 - Cartridge and Housing Adjustment Option P - External R - Knob			Seal Opti	377 - Steel	nterial ninum/No housing	Code- Pressure set (5 bar increments v g specified Pressure I XXX-Standard setti Pressure Range for Example:		s within e Range) tting (see			
	b Iper Resistant					Code	Seal Kit		Code	Bar	Psi
-	iper nesistant					S -Buna-N	SK177		60	60	[870]
Housing				SV-Viton	SK177V						
Code	Ports	Housing Model C	ode			Pressure Range		-			
		Aluminum	Steel			Code	Bar	Psi			
Omit	No Housing				-	7	2-70	[29-1015]			
-					-	Standard Setting 20	35 10-210	[510] [150-3000]			
3W	3/8" BSP 1/4" BSP Drain Ports				-	Standard Setting	10-210	[1450]			
4W	1/2" BSP 1/4" BSP Drain Ports	B4821	B4527			35	50-350	[725-5000]			
6W	3/4" BSP 1/4" BSP Drain Ports	B5466	B4403			Standard Setting	280	[4060]			
6T	3/8" SAE 1/4" SAE Drain Ports	B10793			-	Setting made at 14 l/	min				
8T	1/2" SAE 1/4" SAE Drain Ports	B6584			- 			210 [2000			
	3/4" SAE 1/4" SAE Drain Ports		B11379		- " Aluminui	m bodies are to be used	ior pressures li	522 (11911 S IN D9L [3000	psij.		



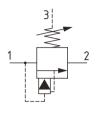
Sequence and Unloading Valves 1UPS100

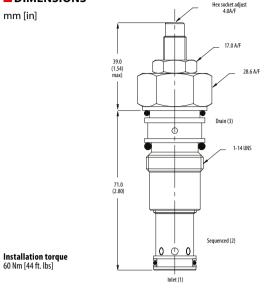
Kick-Down Sequence Valve, Pilot Operated, Spool Type, Internal Pilot, External Drain 350 bar [5000 psi] • 150 l/min [40 US gpm]

DESCRIPTION AND OPERATION

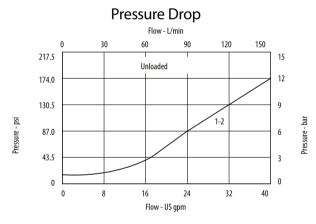
This is a pilot operated, spool type sequence valve that opens from port 1 to port 2 when the setting is reached. It then automatically vents the main spool, causing the inlet pressure in port 1 to fall to the pressure in port 2. Sometimes known as a 'kick-down' valve, it can be used to sequence operations in a system limiting pressure loss, where the pressure in the second operation is much lower than the first.

SCHEMATIC





PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	150 l/min [40 US gpm]
Leakage	100 ml/min nominal
Weight	0.17 kg [0.37 lb]
Cavity	A880

MODEL CODE

	Code		_						Pressure	Setting	
1UPS1 1UPS1							Housing N Omit - Alu 377 - Steel	minum/No housing	Pressure R XXX-Stand	ements v ange) lard setti	vithin specified
	mper Resistant								Code	Bar	Psi
Housir	ng					Seal Opti	ion		60	60	[870]
Code	Ports	Housing Model	Code	-		Code	Seal K	it			
		Aluminum	Steel			S -Buna-N	SK177				
0mit	No housing					SV-Viton	SK177\	1			
4W	1/2" BSP 1/4" BSP Drain Ports	B4821	B4527		Pressure	Range					
	3/4" BSP 1/4" BSP Drain Ports	B5466	B4403			de	Bar	Psi			
6W		B10793			-	2 0 d Setting	10-210 100	[100] [145-3000]			
6W 6T	3/8" SAE 1/4" SAE Drain Ports							[210]			
	3/8" SAE 1/4" SAE Drain Ports 1/2" SAE 1/4" SAE Drain Ports	B6584			1	15	30-350	[210]			

DIMENSIONS



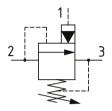
Sequence and Unloading Valves CP240-30

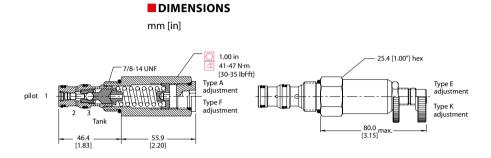
Unloading Valve, Direct Acting, Poppet Type, Hydraulic Pilot, Internal Drain 240 bar [3500 psi] • 4 l/min [1 US gpm]

DESCRIPTION AND OPERATION

This is a low flow pilot valve for use in unloading circuits. The valve remains closed between port 2 and 3 until the setting is achieved on port 2, and the valve opens as a relief valve. Normally used in conjunction with a check valve, pressure sensed on port 1 downstream of the check valve keeps the valve open until the pressure drops to a pre-determined percentage of the setting (75%, 80%, or 85%). When the pressure falls, the valve will close allowing pressure to rise again. This valve can be used with a logic element in an accumulator system to dump the pump flow at minimum pressure or in a two-pump unloading circuit.

SCHEMATIC





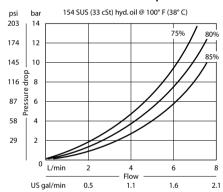
PERFORMANCE DATA

Rated pressure	240 bar [3500 psi]
Rated flow @ 7 bar [100 psi]	4 l/min [1 US gpm]
Weight	0.24 kg [0.53 lb]
Cavity	SDC10-3

PERFORMANCE CURVES

Pressure Drop

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Code Seal kit B-Buna-N 120027 V-Viton 120028 Housing	Pressure Setting Code x10 - Pressure setting in psi (50 psi increments within specified Pressure Range XXX-Standard setting (see Pressure Range for valu Example:
V-Viton 120028	(50 psi increments within specified Pressure Range XXX-Standard setting (see Pressure Range for valu
	XXX-Standard setting (see Pressure Range for valu
Housing	
	Code Bar Psi
Code Ports & Material Housing Model Code	150 103 [1500]
O No Housing No Housing	
SE3B AL, 3/8 BSP SDC10-3-SE-3B	Pressure Ratio
SE4B AL, 1/2 BSP SDC10-3-SE-4B	75 - 75% 80 - 80%
65 AL, #6 SAE CP10-2-65	85 - 85%
85 AL, #8 SAE CP10-2-85	
* Aluminum bodies are to be used for pressures less than 210 bar [3000 psi].	Pressure Range
* Additional housings available	Code Bar Psi
Adjustment Option A - Internal	A 28-103 [400-1500] Standard Setting 69 [1000]

Sequence and Unloading Valves 1UL60

Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, Internal Drain

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

DESCRIPTION AND OPERATION

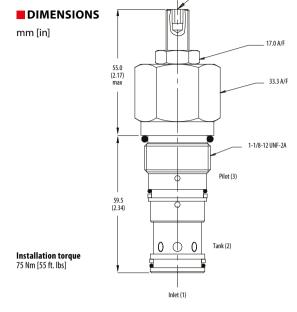
This is a pilot operated, spool type unloading valve. Normally used in conjunction with a check valve, the valve remains closed from port 1 to 2 until the set pressure is reached. Pressure sensed downstream of the check valve at port 3 will pilot the valve open, allowing the pressure at port 1 unload to tank (port 2) at minimum pressure. When the pressure in port 3 falls to 85% of the setting, the valve will close and the pressure in port 1 will rise. This valve can be used to dump the pump flow at minimum pressure in an accumulator system or in a two-pump unloading circuit.

SCHEMATIC

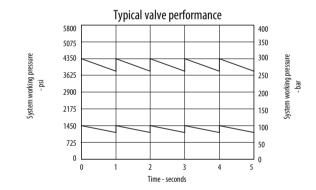


PERFORMANCE DATA

Rated pressure



PERFORMANCE CURVES



60 l/min [16 US gpm]
35ml/min nominal
85-90%
0.46 kg [1.01 lb]
A3146

350 bar [5000 psi]

MODEL CODE

Basic	Code						Pressure S	etting	
1UL6) - No Housing 5 - Cartridge and H	lousing			Housing Omit - Al 377 - Stee	uminum/No Housing	Code-Press (5 bar incres Pressure Ra XXX-Standa (see Pressur Example:	ments wit nge) ard setting	hin specified
Adjus	tment Option			Seal Op	otion		Code	Bar	Psi
P - Ex				Code	Seal K	it	60	60	[870]
G - 1a	nper Resistant			S-Buna	-N SK451	<u> </u>			
				SV-Vitor		,			
Housi	ng								
Code	Ports	Housing Model	Code	Pressure Range					
		Aluminium	Steel	Code	Bar	Psi			
0mit	No Housing			10	40-100	[580-1450]			
4W	1/2″ BSP		BXP24103-4W-S-377	Standard Setting		[1090]			
8T	1/2″ SAE	BXP24103-8T-S		20 Standard Setting	70-210 100	[1015-3000] [1450]			
	1/2 JAL	D/1 2 /105 01 5		35	150-350	[2200-5000]			



Hex socket adjust 4.0 A/F

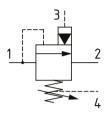
Sequence and Unloading Valves AUV 06

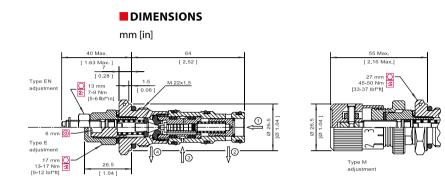
Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, External Drain 250 bar [3600 psi] • 50 l/min [13 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, spool type unloading valve. Normally used in conjunction with a check valve, the valve remains closed from port 1 to 2 until the set pressure is reached. Pressure sensed downstream of the check valve at port 3 will pilot the valve open, allowing the pressure at port 1 unload to tank (port 2) at minimum pressure. When the pressure in port 3 falls to 85% of the setting, the valve will close and the pressure in port 1 will rise. This valve can be used to dump the pump flow at minimum pressure in an accumulator system or in a two-pump unloading circuit.

SCHEMATIC



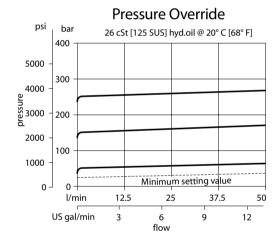


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PERFORMANCE DATA

Rated pressure	250 bar [3600 psi]
Rated flow @ 7 bar [100 psi]	50 l/min [13 US gpm]
Weight	0.22 kg [0.49 lb]
Cavity	NCS06/4

PERFORMANCE CURVES



Adjustment Option								Pressure S	setting	
E - Internal EN - External						Seal Option		Code-Press (5 bar incre Pressure Ra	ments wit	g in bar hin specified
M - Calibrated Knob						Code	Seal kit	XXX-Standa	ard setting	
						Omit-Buna-N	230000080	(see Pressu Example:	re Range f	or value)
Pressure Range						V -Viton	230000350	Code	Bar	Psi
Code	Bar	Psi						60	60	[870]
1	10-70	[145-1015]								[0/0]
Standard Setting	Ne	ot set			Housing					
2	30-140	[435-2030]			Code	Ports & Materi	al Housing	y Model Cod	e	
Standard Setting	Ne	ot set			00	No Housing	No Housi	ng		
3	70-210	[1015-3000]			L3/8	AL, 3/8 BSP	NCS06/4	-L-3/8		
Standard Setting	Ne	ot set			L1/2	AL, 1/2 BSP	NCS06/4	-L-1/2		
Pressure Ratio					L6S	AL, #6 SAE	NCS06/4	-L-6S		
A - 85%					L8S	AL, #8 SAE	NCS06/4	-L-8S		

Sequence and Unloading Valves 1PUL60

Unloading Valve, Pilot Operated, Spool Type, Hydraulic Pilot, External Drain

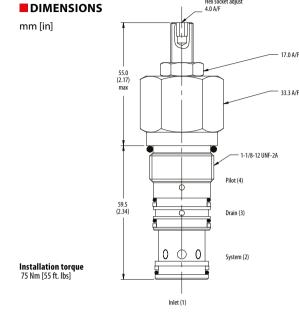
350 bar [5000 psi] • 60 l/min [16 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, spool type unloading valve. Normally used in conjunction with a check valve, the valve remains closed from port 1 to 2 until the set pressure is reached. Pressure sensed downstream of the check valve at port 3 will pilot the valve open, allowing the pressure at port 1 unload to open to port 2. When the pressure in port 3 falls to 85% of the setting the valve will close and the pressure in port 1 will rise. It has a drain port 4 which allows the use of flow at port 2 in a secondary function. This valve can be used to dump the pump flow at minimum pressure in an accumulator system or in a two-pump unloading circuit.

SCHEMATIC



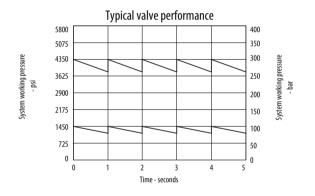


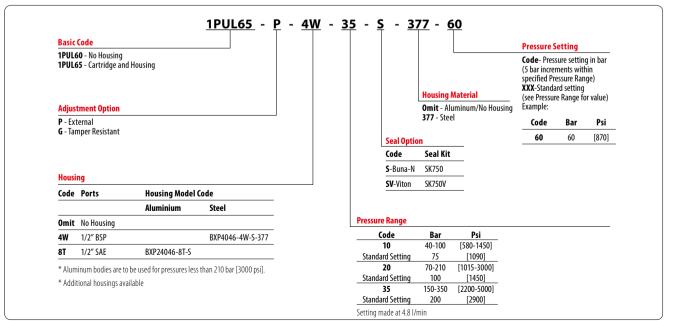
Hex socket adjust 4.0 A/F

PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	60 l/min [16 US gpm]
Leakage	35 ml/min nominal
Pressure Ratio	85-90%
Weight	0.46 kg [1.01 lb]
Cavity	A12088







Sequence and Unloading Valves 1PUL200

Sequence Valve, Pilot Operated, Poppet Type with Reverse Free Flow, Internal Pilot, External Drain

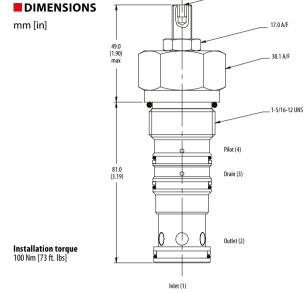
350 bar [5000 psi] • 200 l/min [52 US gpm]

DESCRIPTION AND OPERATION

This is a pilot operated, spool type unloading valve. Normally used in conjunction with a check valve, the valve remains closed from port 1 to 2 until the set pressure is reached. Pressure sensed downstream of the check valve at port 3 will pilot the valve open, allowing the pressure at port 1 unload to open to port 2. When the pressure in port 3 falls to 85% of the setting the valve will close and the pressure in port 1 will rise. It has a drain port 4 which allows the use of flow at port 2 in a secondary function. This valve can be used to dump the pump flow at minimum pressure in an accumulator system or in a two-pump unloading circuit.







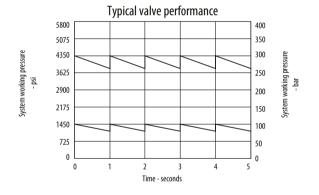
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Hex socket adjust 4.0 A/F

PERFORMANCE CURVES

PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	200 l/min [52 US gpm]
Leakage	35 ml/min nominal
Pressure Ratio	85-90%
Weight	0.74 kg [1.63 lb]
Cavity	A3145



MODEL CODE

Basic Code				Code- Pressu		
1PUL200 - No housing 1PUL250 - Cartridge and Housing		Or	<mark>ousing Material</mark> mit - Aluminum/No Housin	(5 bar increme Pressure Rang XXX-Standard (see Pressure	ents wit e) setting	hin specifie
Adjustment Option		37	77 - Steel	Code	Bar	Psi
P - External				60	60	[870]
G - Tamper Resistant		Seal Option			_	
Housing		Code	Seal Kit - 1PUL200 Se	al Kit - 1PUL25	0	
Code Ports Housin	g Model Code	S-Buna-N	SK670	SK452	_	
Alumin	-	SV-Viton	SK670V	SK452V	_	
Omit No Housing		Pressure Range				
8W 1" BSP 1/4" BSP Drain Port BXP234	56-8W-S BXP23466-8W-S-377		Bar Psi			
16T 1" SAE 1/4" SAE Drain Port BXP234	56-16T-S BXP23466-16-S-377		80-210 [435-3000] 100 [1450]			

BC332375508106en-000202

Sequence and Unloading Valves VDB 06-EN

Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Internal Drain

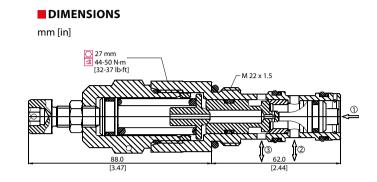
350 bar [5000 psi] • 80 l/min [21 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated, poppet type unloading valve where port 3 is closed until pressure rises above the relief setting, allowing flow from port 3 to port 2. Pilot pressure on port 1 will reduce the relief valve setting and eventually open the valve fully. This is ideal for use in two- pump unloading circuits where a gradual reduction in low pressure flow is preferred.

SCHEMATIC





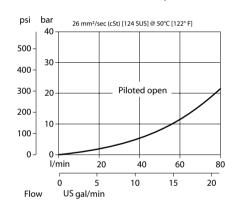
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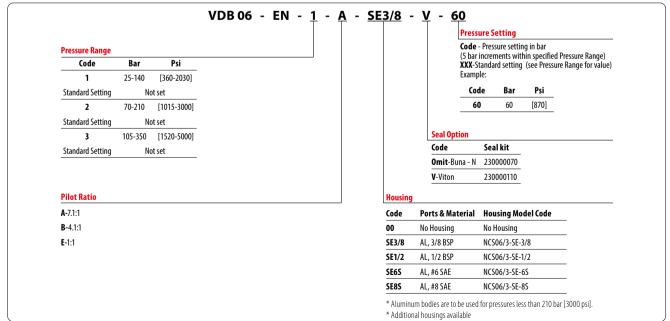
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow @ 7 bar [100 psi]	80 l/min [21 US gpm]
Weight	0.21 kg [0.46 lb]
Cavity	NCS06/3

PERFORMANCE CURVES

Pressure Drop





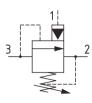
Sequence and Unloading Valves VDB 12-EN

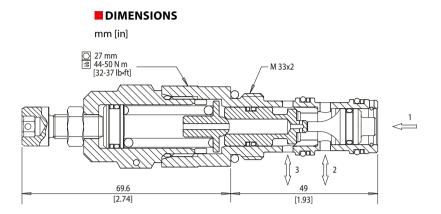
Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Internal Drain

350 bar [5000 psi] • 160 l/min [42 US gpm]

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated, poppet type unloading valve where port 3 is closed until pressure rises above the relief setting, allowing flow from port 3 to port 2. Pilot pressure on port 1 will reduce the relief valve setting and eventually open the valve fully. This is ideal for use in two- pump unloading circuits where a gradual reduction in low pressure flow is preferred.





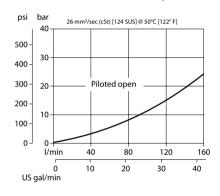
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]				
Rated flow @ 7 bar [100 psi]	160 l/min [42 US gpm]				
Weight	0.70 kg [1.54 lb]				
Cavity	NCS12/3				

PERFORMANCE CURVES



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MODEL CODE

									Pressure S		
Pressure Range									Code-Press (5 bar increr		
Pilot Ratio A			Pilot Ratio A					Pressure Rar XXX-Standa	ige)		
Code	Bar	Psi	Code	Bar	Psi				(see Pressur		
1	25-170	[360-2460]	1	25-120	[360-1740]				Example:		
Standard Setting	Ν	lot set	Standard Setting	No	ot set				Code	Bar	Psi
2	70-250	[1015-3600]	2	60-200	[870-2900]				60	60	[870]
Standard Setting	Ν	lot set	Standard Setting	No	ot set		Seal Option				
3	105-350	[1520-5000]	3	90-280	[1305-4060]		Code	Seal kit			
Standard Setting	N	lot set	Standard Setting	No	ot set		Omit-Buna - N	23000013	0		
							V -Viton	23000036	0		
						Housing					
Pilot Ratio						Code	Ports & Material	Housing	Model Code	2	
A- 6.9:1						00	No Housing	No Housin	ng		
B- 4.7:1						SE1/2	AL, 1/2 BSP	NCS12/3-9	SE-1/2		
						SE3/4	AL,3/4 BSP	NCS12/3-9	SE-3/4		
						SE8S	AL, #8 SAE	NCS12/3-9	SE-8S		
						SE12S	AL, #12 SAE	NCS12/3-9	SE-12S		

BC332375508106en-000202

Sequence and Unloading Valves VDB 06-CN

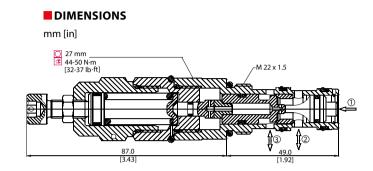
Unloading Valve, Differential Area, Poppet Type, Hydraulic Pilot, Atmospheric Vent

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

DESCRIPTION AND OPERATION

This is a hydraulically pilot operated, poppet type unloading valve with an atmospheric vent. Port 3 is closed until pressure rises above the relief setting, allowing flow from port 3 to port 2. Pilot pressure on port 1 will reduce the relief valve setting and eventually open the valve fully. This is ideal for use in two-pump unloading circuits where a gradual reduction in low pressure flow is preferred.





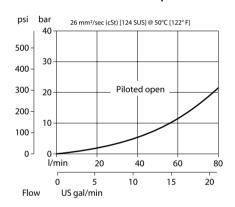
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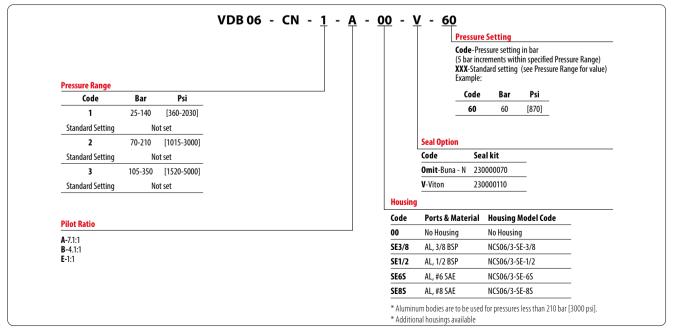
PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]				
Rated flow @ 7 bar [100 psi]	80 l/min [21 US gpm]				
Weight	0.29 kg [0.64 lb]				
Cavity	NCS06/3				

PERFORMANCE CURVES

Pressure Drop





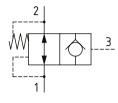
Sequence and Unloading Valves ADV1-16

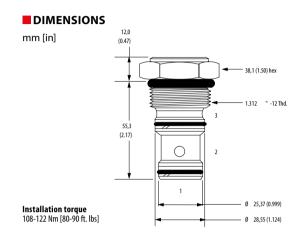
Accumulator Discharge Valve, Normally Open, Poppet Type, Hydraulic Pilot, Internal Drain

210 bar [3000 psi] • 30 l/min [8 US gpm]

DESCRIPTION AND OPERATION

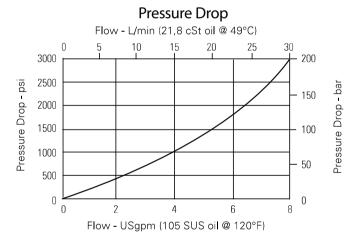
This valve is a normally open, restricted, pilot to close poppet valve. In the normal position, flow can pass from port 1 to 2 or port 2 to 1. When pressure is applied to port 3 the valve will close, preventing oil from passing from port 1 to 2. Pressure in port 2 will open the valve, allowing flow to pass from port 2 to 1. The ideal application for this valve is as an accumulator discharge valve. When the power is removed and the pilot pressure reduces to zero, the accumulator pressure can be discharged through this valve in a controlled manner.





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PERFORMANCE CURVES



PERFORMANCE DATA

Rated pressure	210 bar [3000 psi]
Rated flow	30 l/min [8 US gpm]
Minimum pilot pressure	4 bar [60 psi]
Weight	0.28 kg [0.62 lb]
Cavity	SDC16-3S

Seal Option				Pilot Ratio				
Code	Seal kit	,	100 -100:1					
Omit -Buna - N	565812							
V -Viton	889611		н	lousin	g			
			C	ode	Ports	Aluminum standard duty	Aluminum heavy duty	
			0)	No Housing			
			6	бB	3/4" BSP	02-175471		
			1	2T	#12 SAE	566414		
			4	G	1/2" BSP		02-160676	
			6	iG	3/4″ BSP		876726	
			-1	OH	#10 SAE		876725	
				2H	#12 SAE		876727	

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