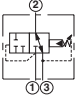
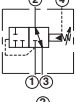
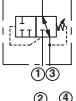
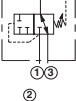
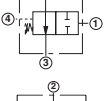
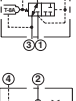
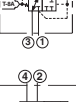
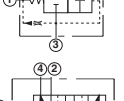
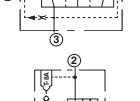
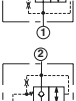
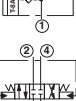
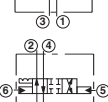
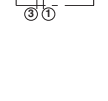
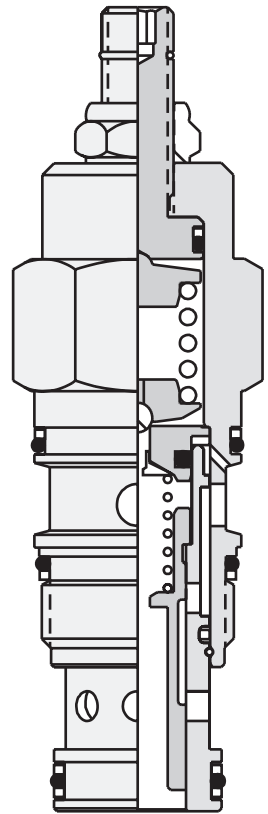
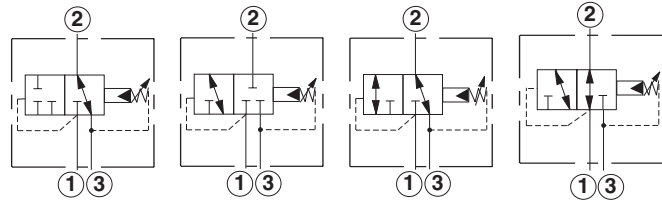
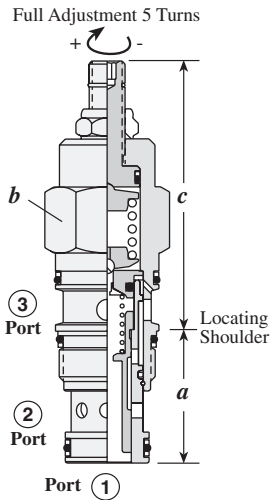


Directional Cartridge Valves

<i>Cartridge Type</i>	<i>Page</i>
	2-way and 3-way, with Internal Drain to Port 3 118
	2-way and 3-way, with Drain to Port 4 119
	2-way and 3-way Direct Acting, Internal Drain to Port 3 120
	2-way and 3-way, Direct Acting, Drain to Port 4 121
	2-way, Direct Acting, Sealed Pilot, Pilot-to-shift 122
	2-way and 3-way, Vent-to-Operate, with Integral T-8A Control Cavity 123
	2-way and 3-way, Vent-to-operate, with Integral T-8A Control Cavity 124
	3-way, 2-position Vent-to-shift, Diverter, Normally Closed 125
	3-way, 2-position Vent-to-shift, Diverter, Normally Open 126
	2-way Poppet, with Integral T-8A Control Cavity, Control Port 1 to Port 2 127
	2-way Poppet, with Integral T-8A Control Cavity, Control Port 2 to Port 1 128
	3-position, 4-way, Pilot-to-shift 129
	2-position, 4-way, Pilot-to-shift, Detented 130



2-WAY AND 3-WAY, WITH INTERNAL DRAIN TO PORT 3



DPBA, DPCA

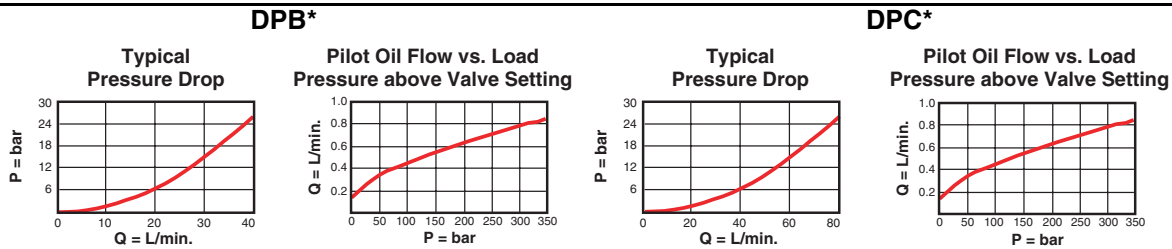
DPBB, DPCB

DPBC, DPCC

DPBD, DPCD

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	c			
28 L/min.	DPBA – LAN	T - 11A	35,1	22,2	L	C	K	45 - 50
60 L/min.	DPCA – LAN	T - 2A	35,1	28,6	71,4	73,2	77,7	60 - 70

Performance Curves



- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 15 cc/min. at 70 bar.
- Control pilot flow = DPBA, DPBB, DPBC, DPBD: 0,11 - 0,16 L/min.; DPCA, DPCB, DPCC, DPCD: 0,16 - 0,25 L/min.
- Maximum pressure at port 3 should be limited to 210 bar. This is due to fatigue strength limits not hydraulic operating limits.
- Pressure at port 3 is directly additive to the setting of the valve. Because of this, port 3 may not be useable as a work port in your circuit. If this is a consideration, the 4 port version of this valve may be a solution.
- Direct acting and pilot operated versions of these valves are interchangeable. They fit the same cavities and have the same flow paths.
- These valves are not bistable; it is capable of modulating between the two positions shown.

OPTION ORDERING INFORMATION

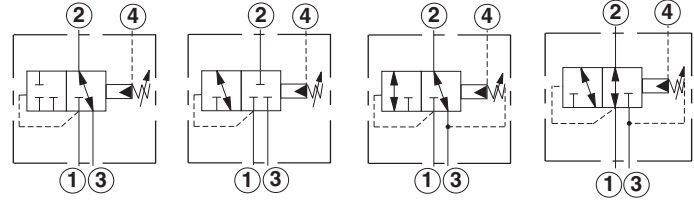
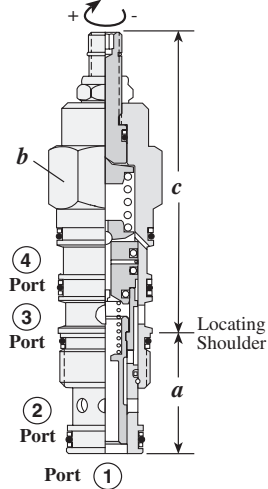
Nominal Capacity	Version	Control**	Adjustment Range	Seal Material
B 28 L/min.	A 2-Way, Pilot Operated, with Internal Drain to Port 3, Normally Open	L Standard Screw Adjustment	A 7 - 210 bar Standard set at 70 bar	N Buna-N
C 60 L/min.	B 2-Way, Pilot Operated, with Internal Drain to Port 3, Normally Closed	C* Tamper Resistant Factory Set	B 3,5 - 105 bar Standard set at 70 bar	V Viton
	C 3-Way, 2-Position, Pilot Operated, with Internal Drain to Port 3, Port 1 Blocked, 2 to 3 Open	K Handknob with Lock Knob	D 1,7 - 55 bar Standard set at 28 bar	
	D 3-Way, 2-Position, Pilot Operated, with Internal Drain to Port 3, Port 3 Blocked, 1 to 2 Open	* Special setting required. Specify at time of order.	E 1,7 - 28 bar Standard set at 14 bar	
		** See page 178 for information on Control Options	W 10,5 - 315 bar Standard set at 70 bar	
			C 10,5 - 420 bar Standard set at 70 bar	

Consult the Sun website for our most recent and complete information on the full Corrosion Resistant line of products.

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2-WAY AND 3-WAY, WITH DRAIN TO PORT 4

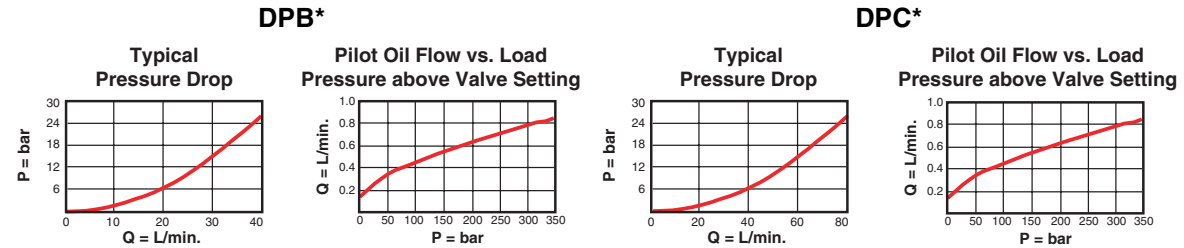
Full Adjustment 5 Turns



DPBM, DPCM DPBN, DPCN DPBO, DPCO DPBP, DPCP

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	c			
					L	C	K	
28 L/min.	DPBM – LAN	T - 21A	35,1	22,2	78,5	82,6	84,8	45 - 50
60 L/min.	DPCM – LAN	T - 22A	35,1	28,6	87,4	88,9	93,7	60 - 70

Performance Curves



- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 15 cc/min. at 70 bar.
- Control pilot flow = DPBM, DPBN, DPBO, DPBP: 0,11 - 0,16 L/min.; DPCM, DPCN, DPCO, DPCP: 0,16 - 0,25 L/min.
- Maximum pressure at port 3 should be limited to 210 bar. This is due to fatigue strength limits not hydraulic operating limits.
- Pressure at port 4 is directly additive to the setting of the valve.
- Port 3 can be used as a work port.
- Port 4 can be blocked to prevent the cartridge from shifting.
- Direct acting and pilot operated versions of these valves are interchangeable. They fit the same cavities and have the same flow paths.
- These valves are not bistable; it is capable of modulating between the two positions shown.

OPTION ORDERING INFORMATION

DP ** - ***

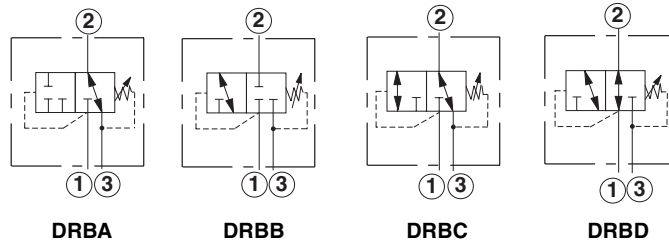
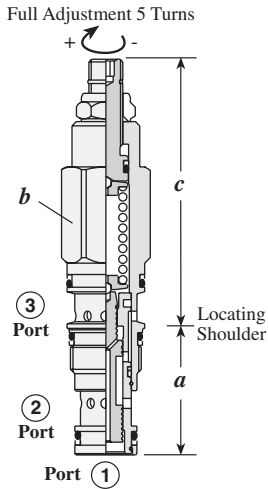
Nominal Capacity	Version	Control**	Adjustment Range	Seal Material
B 28 L/min.	M 2-Way, Pilot Operated, with Drain to Port 4, Normally Open	L Standard Screw Adjustment	A 7 - 210 bar Standard set at 70 bar	N Buna-N
C 60 L/min.	N 2-Way, Pilot Operated, with Drain to Port 4, Normally Closed	C* Tamper Resistant Factory Set	B 3,5 - 105 bar Standard set at 70 bar	V Viton
	O 3-Way, 2-Position, Pilot Operated, with Drain to Port 4, 2 to 3 Open, Port 1 Blocked	K Handknob with Lock Knob	D 1,7 - 55 bar Standard set at 28 bar	
	P 3-Way, 2-Position, Pilot Operated, with Drain to Port 4, 1 to 2 Open, Port 3 Blocked	E 1,7 - 28 bar Standard set at 14 bar	W 10,5 - 315 bar Standard set at 70 bar	

** See page 178 for information on Control Options

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2-WAY AND 3-WAY DIRECT ACTING, INTERNAL DRAIN TO PORT 3



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	c			
					L	C	K	
28 L/min.	DRBA – LAN	T - 11A	35,0	22,2	78,5	82,6	85,0	45 - 50
28 L/min.	DRBB – LAN	T - 11A	35,0	22,2	78,5	82,6	85,0	45 - 50
28 L/min.	DRBC – LAN	T - 11A	35,0	22,2	78,5	82,6	85,0	45 - 50
28 L/min.	DRBD – LAN	T - 11A	35,0	22,2	78,5	82,6	85,0	45 - 50

Performance Curves

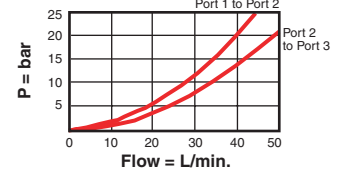
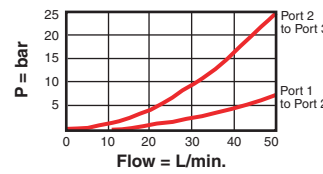
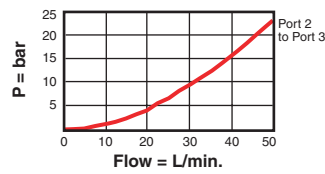
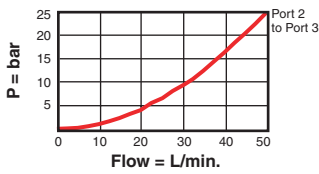
DRBA

DRBB

DRBC

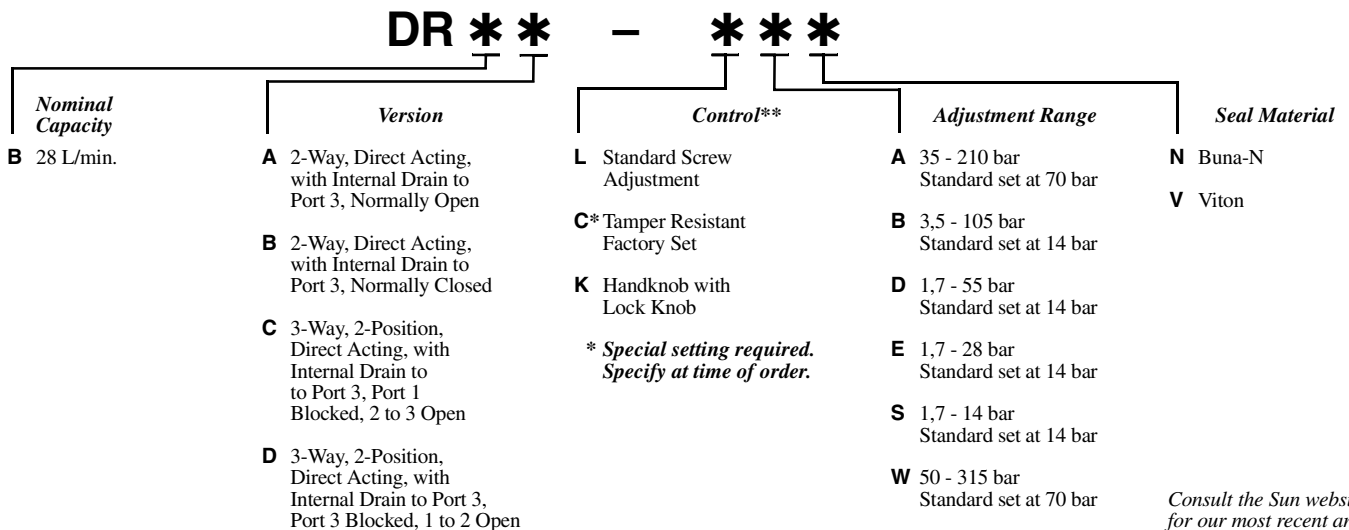
DRBD

Typical Pressure Drop



- Maximum operating pressure = 350 bar.
- Maximum combined valve leakage (ports 2 and 3) = 30 cc/min. at 70 bar.
- Pressure at port 3 is directly additive to the setting of the valve. Because of this, port 3 may not be useable as a work port in your circuit. If this is a consideration, the 4 port version of this valve may be a solution.
- Pilot pressure at port 3 is limited to 210 bar.
- Direct acting and pilot operated versions of these valves are interchangeable. They fit the same cavities and have the same flow paths.
- Because of their direct acting design, these cartridges feature low internal leakage and low pilot flow consumption.
- These valves are not bistable; it is capable of modulating between the two positions shown.

OPTION ORDERING INFORMATION



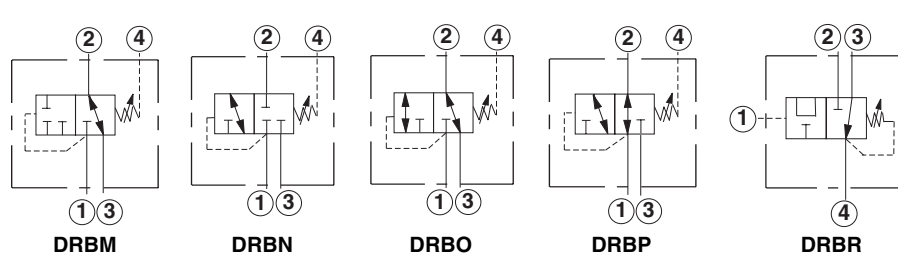
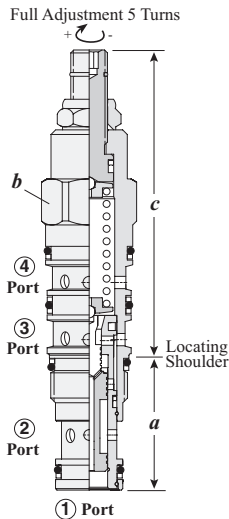
** See page 178 for information on Control Options

* Special setting required. Specify at time of order.

Consult the Sun website for our most recent and complete information on the full Corrosion Resistant line of products.

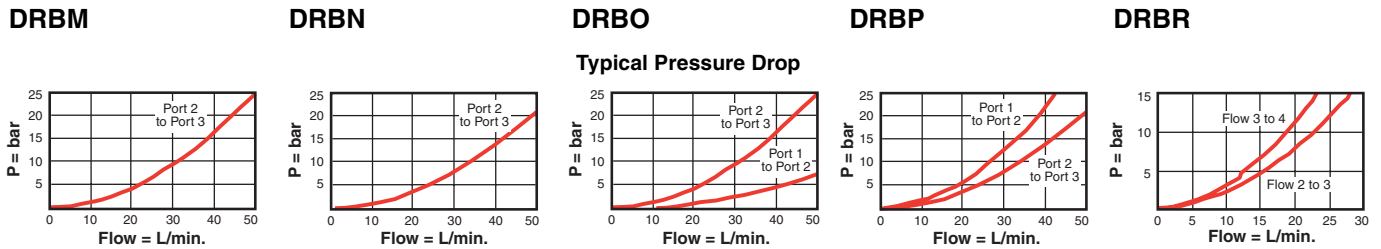
Visit www.sunhydraulics.com for current list pricing and complete technical information on all Sun products.

2-WAY AND 3-WAY DIRECT ACTING, DRAIN TO PORT 4



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions					Installation Torque (Nm)
			a	b	L	C	K	
28 L/min.	DRBM – LAN	T - 21A	35,1	22,2	78,7	80,3	84,8	45 - 50
28 L/min.	DRBN – LAN	T - 21A	35,1	22,2	78,7	80,3	84,8	45 - 50
28 L/min.	DRBO – LAN	T - 21A	35,1	22,2	78,7	80,3	84,8	45 - 50
28 L/min.	DRBP – LAN	T - 21A	35,1	22,2	78,7	80,3	84,8	45 - 50
28 L/min.	DRBR – LAN	T - 21A	35,1	22,2	78,7	80,3	84,8	45 - 50

Performance Curves



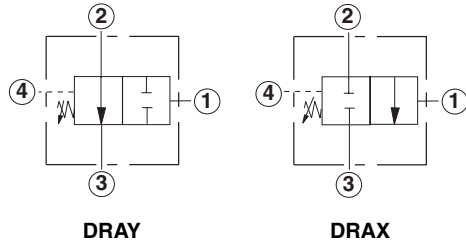
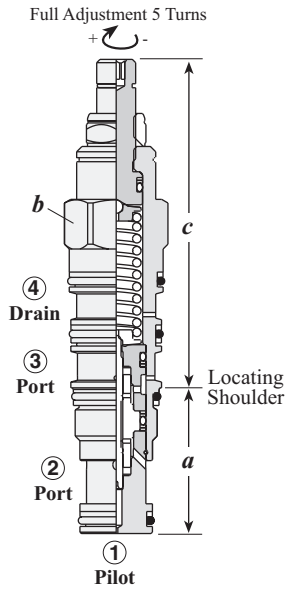
- Maximum operating pressure = 350 bar.
- Maximum combined valve leakage (ports 2, 3, and 4) = 30 cc/min. at 70 bar.
- Maximum pressure at port 3 should be limited to 210 bar. This is due to fatigue strength limits not hydraulic operating limits.
- Port 3 can be used as a work port.
- Pressure at port 4 is directly additive to the setting of the valve.
- Because of their direct acting design, these cartridges feature low internal leakage and low pilot flow consumption.
- Direct acting and pilot operated versions of these valves are interchangeable. They fit the same cavities and have the same flow paths.
- This valve is not bistable; it is capable of modulating between the two positions shown.
- DRBR: 55 bar is the highest setting possible for this valve. The flow path between ports 2 and 3 is bidirectional.

OPTION ORDERING INFORMATION

Nominal Capacity	Version	Control**	Adjustment Range	Seal Material
B 28 L/min.	M 2-Way, Direct Acting, with Drain to Port 4, Normally Open	L Standard Screw Adjustment	A 35 - 210 bar Standard set at 70 bar	N Buna-N
DRCO only:	N 2-Way, Direct Acting, with Drain to Port 4, Normally Closed	C* Tamper Resistant Factory Set	B 3,5 - 105 bar Standard set at 14 bar	V Viton
C 60 L/min.	O 3-Way, 2-Position, Direct Acting, with Drain to Port 4, Port 2 to 3 Open, Port 1 Blocked	K Handknob with Lock Knob	D 1,7 - 55 bar Standard set at 14 bar	
	P 3-Way, 2-Position, with Drain to Port 4, Port 1 to 2 Open, Port 3 Blocked	<i>* Special setting required. Specify at time of order.</i>	E 1,7 - 28 bar Standard set at 14 bar	
	R 3-Way, 2-Position, Direct Acting, with Drain to Port 4, Port 3 to Port 4 Open, Port 2 Blocked	<i>** See page 178 for information on Control Options</i>	S 1,7 - 14 bar Standard set at 14 bar	
		<i>Customer specified special setting stamped on hex.</i>	W 50 - 315 bar Standard set at 70 bar	
			DRBR only:	
			N 4 - 55 bar Standard set at 14 bar	
			E 1,7 - 28 bar Standard set at 14 bar	
			S 1,7 - 14 bar Standard set at 14 bar	

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2-WAY, DIRECT ACTING, SEALED PILOT, PILOT-TO-SHIFT

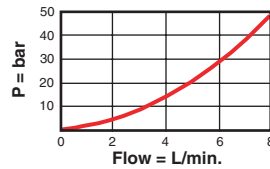


Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
2 L/min.	DRAY – LAN	T - 21A	35,1	22,2	78,5	45 - 50
2 L/min.	DRAX – LAN	T - 21A	35,1	22,2	78,5	45 - 50

Performance Curves

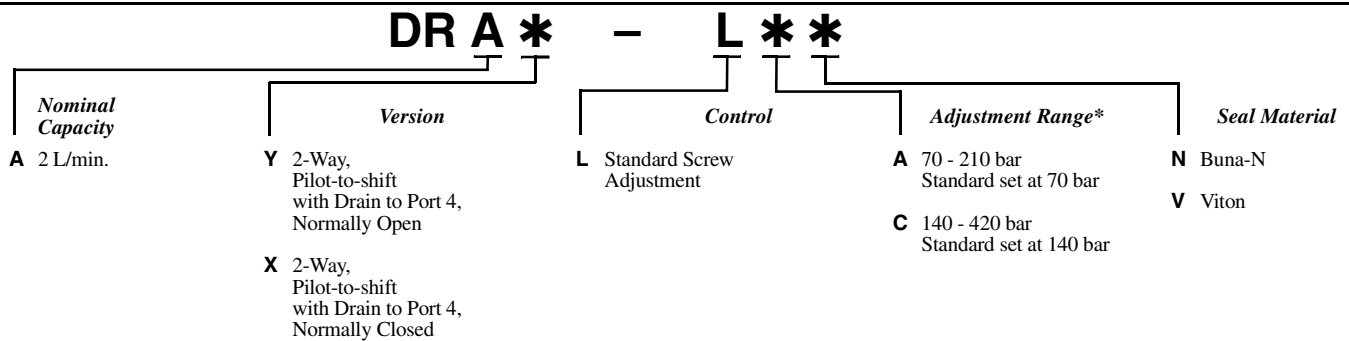
DRAY, DRAX

Typical Pressure Drop vs. Flow Port 2 to Port 3



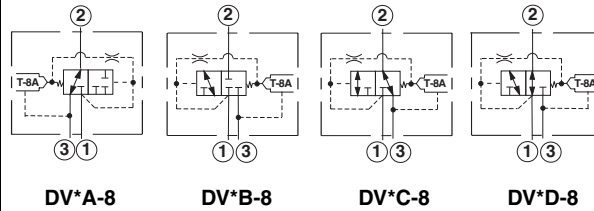
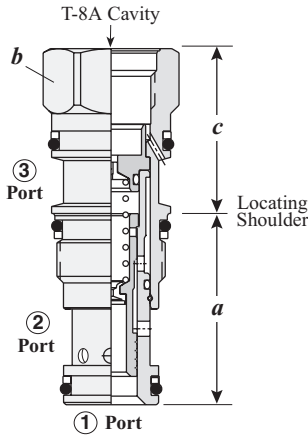
- Maximum operating pressure = 350 bar.
- Reseat = > 85% of set pressure.
- The pilot area (port 1) and the spring chamber drain (port 4) are positively sealed.
- The valve is designed not to modulate and is the equivalent of a hydraulic pressure switch.
- There is spool leakage at 0,6 cc/min. at 70 bar between work ports 2 and 3.

OPTION ORDERING INFORMATION



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2-WAY AND 3-WAY, VENT-TO-OPERATE WITH INTEGRAL T-8A CONTROL CAVITY



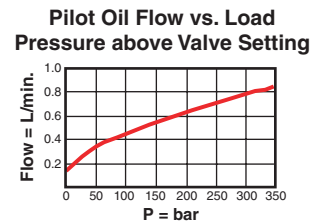
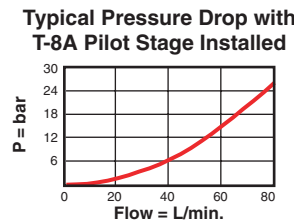
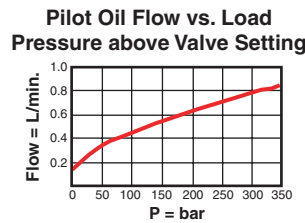
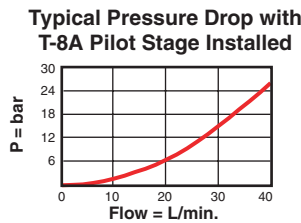
The -8 control option allows the pilot control valve to be incorporated directly into the end of the cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 141.

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
28 L/min.	DVB* - 8FN	T-11A	35,1	22,2	35,1	45 - 50
60 L/min.	DVC* - 8FN	T-2A	35,1	28,6	35,1	60 - 70

Performance Curves

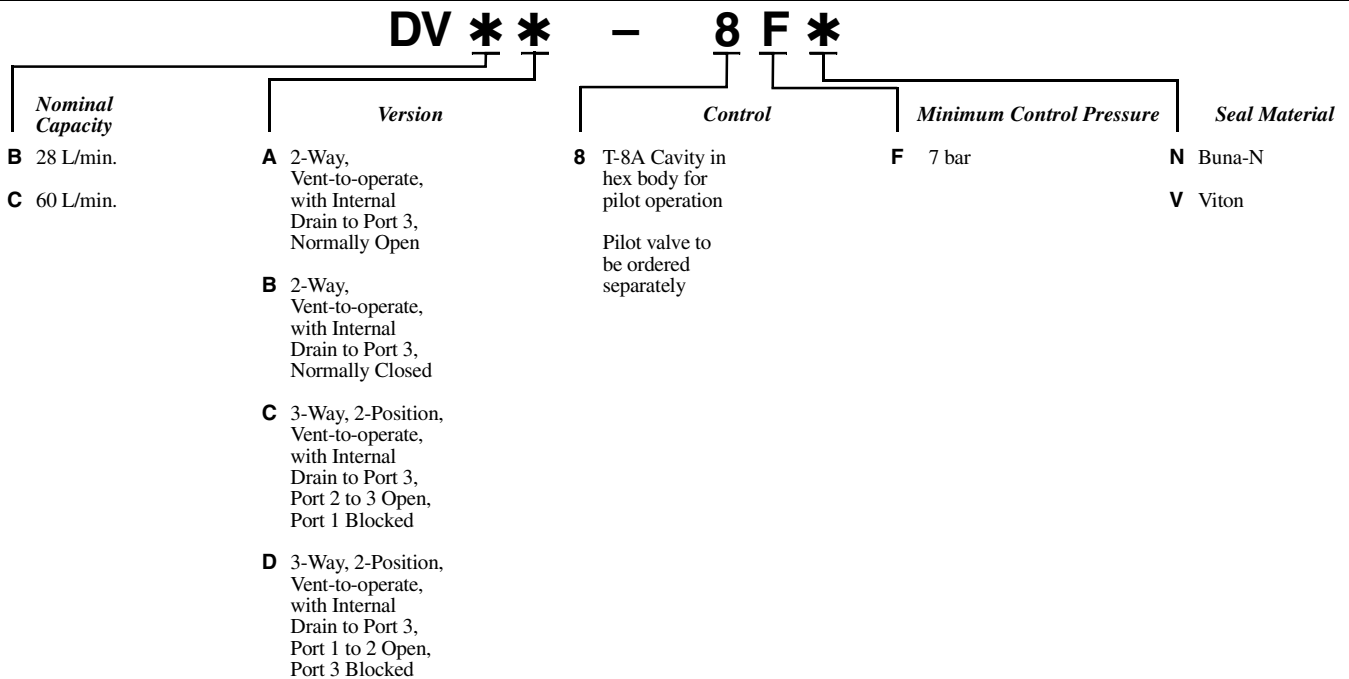
DVB*-8

DVC*-8



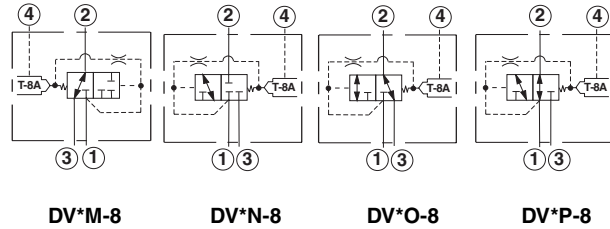
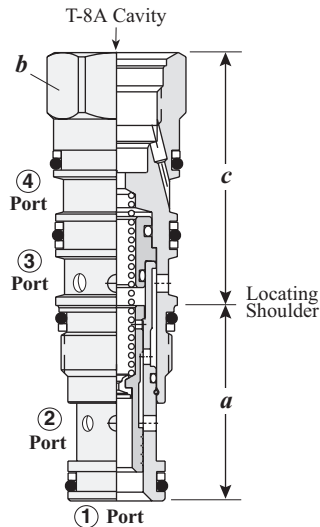
- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 30 cc/min. at 70 bar.
- Control pilot flow = DVBA-8, DVBB-8, DVBC-8, DVBD-8: 0,11 - 0,16 L/min.; DVCA-8, DVCB-8, DVCC-8, DVCD-8: 0,16 - 0,25 L/min.
- There must be a pressure source at port 1, relative to port 3, to shift the valve.
- Pressure at port 3 may oppose the opening of the valve. Because of this, port 3 may not be useable as a work port in your circuit. If this is a consideration, the 4 port version of this valve may be a solution.
- Pressure at port 3 is limited to 210 bar.
- These valves are not bistable; they are capable of modulating between the two positions shown.
- The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.

OPTION ORDERING INFORMATION



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2-WAY AND 3-WAY, VENT-TO-OPERATE, WITH INTEGRAL T-8A CONTROL CAVITY



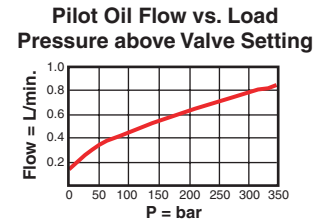
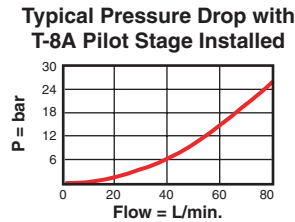
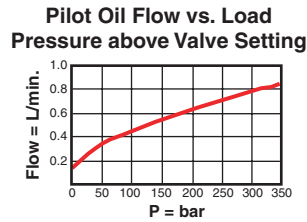
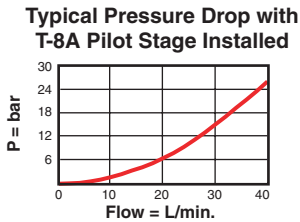
The -8 control option allows the pilot control valve to be incorporated directly into the end of the cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 141.

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
28 L/min.	DVB* - 8FN	T-21A	35,1	22,2	42,9	45 - 50
60 L/min.	DVC* - 8FN	T-22A	35,1	28,6	50,8	60 - 70

Performance Curves

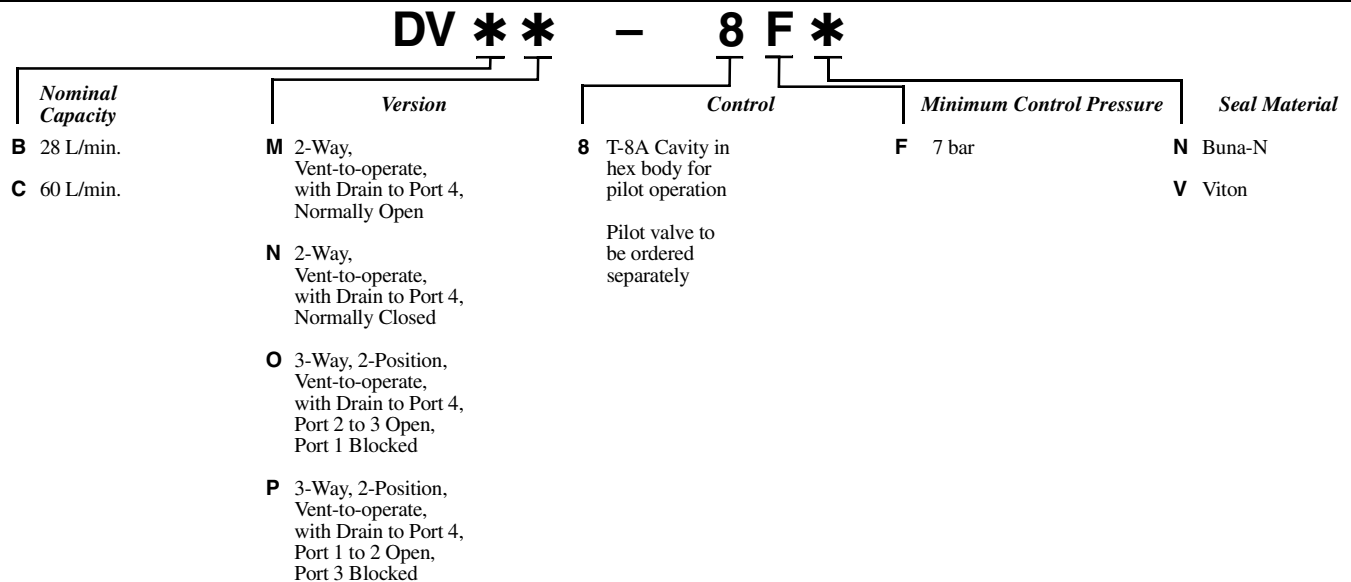
DVB*-8

DVC*-8



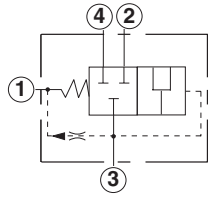
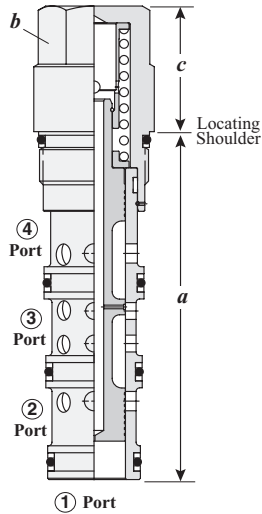
- Maximum operating pressure = 350 bar.
- Maximum leakage at 24 cSt = 30,0 cc/min. at 70 bar.
- Control pilot flow at opening = DVB*-8, DVC*-8: 0,11 - 0,16 L/min.
- Port 3 can be used as a work port.
- The flow path between port 2 and port 3 is bidirectional.
- Pressure at port 3 is limited to 210 bar.
- These valves are not bistable; it is capable of modulating between the two positions shown.
- There must be a pressure source at port 1, relative to port 4, to shift the valve.
- The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.

OPTION ORDERING INFORMATION



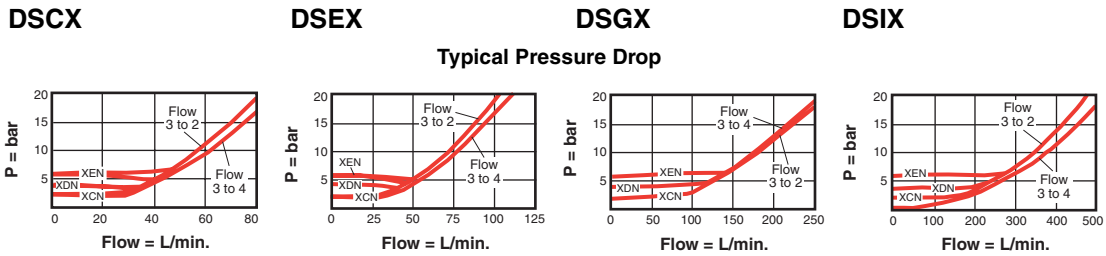
Visit www.sunhydraulics.com for current list pricing and complete technical information on all Sun products.

3-WAY, 2-POSITION VENT-TO-SHIFT, DIVERTER, NORMALLY CLOSED



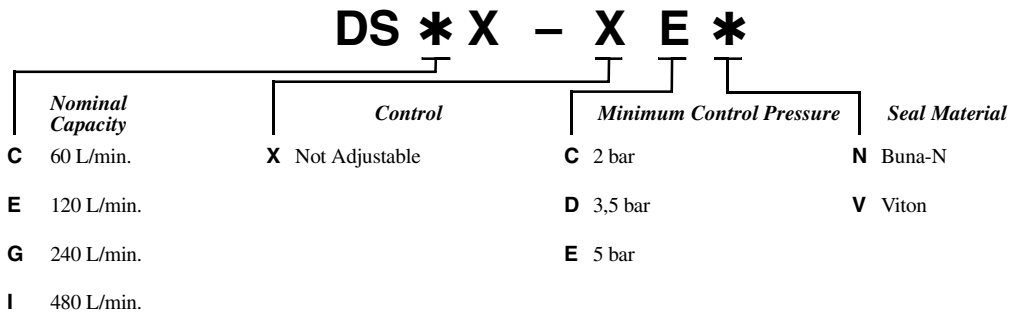
Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
60 L/min.	DSCX – XEN	T - 31A	84,8	22,2	30,2	45 - 50
120 L/min.	DSEX – XEN	T - 32A	92,2	28,6	33,3	60 - 70
240 L/min.	DSGX – XEN	T - 33A	114,6	31,8	41,4	200 - 215
480 L/min.	DSIX – XEN	T - 34A	139,7	41,3	53,8	465 - 500

Performance Curves



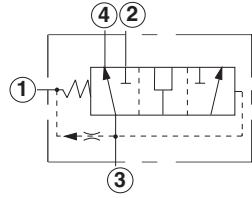
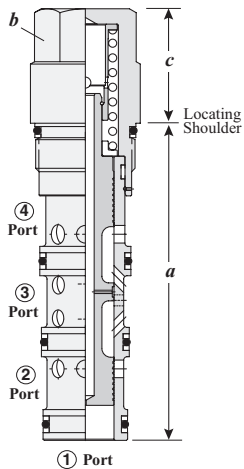
- Maximum operating pressure = 350 bar.
- Pressure compensated vent flow = DSCX, DSEX: 0,38 L/min.; DSGX, DSIX: 0,60 L/min.
- There must be a pressure source at port 3, relative to port 1, to shift the valve.
- The pressure at port 3 must be greater than port 1 and is dependant on the minimum control pressure selected.
- One application of this valve is to bypass divider/combiner valves in a limited-slip tractive circuit. Closed, the oil must go through the divider/combiner valves. Open, there is a large path around the divider/combiner valves for efficient high speed operation.
- One pilot valve may be used; to vent multiple diverter valves if blocking checks are used at port 1 of each diverter. If blocking checks are not used, there will be interaction between high and low pressure legs of the circuits.
- Hardened spool and sleeve provide consistent and low spool leakage rates and excellent wear characteristics.
- The valve is not bistable; it is capable of modulation between the two positions shown.

OPTION ORDERING INFORMATION



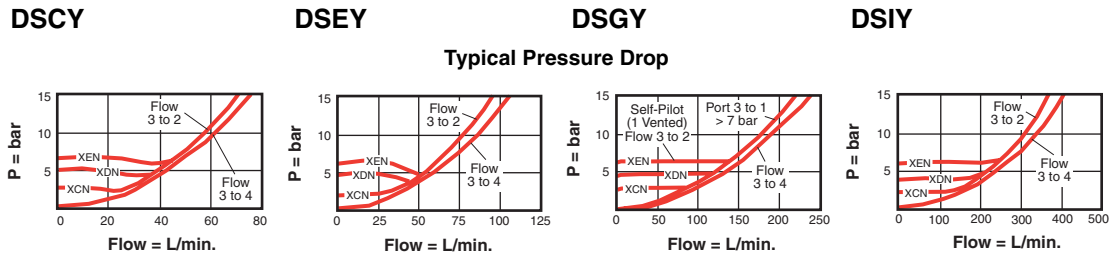
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3-WAY, 2-POSITION, VENT-TO-SHIFT, DIVERTER, NORMALLY OPEN



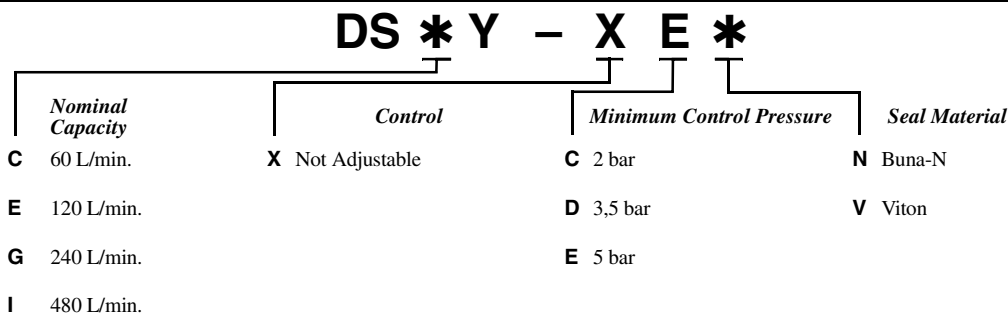
Nominal Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
60 L/min.	DSCY – XEN	T - 31A	84,8	22,2	30,2	45 - 50
120 L/min.	DSEY – XEN	T - 32A	92,2	28,6	33,3	60 - 70
240 L/min.	DSGY – XEN	T - 33A	114,6	31,8	41,4	200 - 215
480 L/min.	DSIY – XEN	T - 34A	139,7	41,3	53,8	465 - 500

Performance Curves



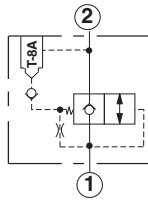
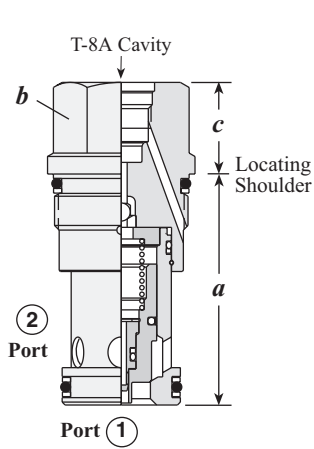
- Maximum operating pressure = 350 bar.
- Pressure compensated vent flow = DSCY, DSEY: 0,38 L/min.; DSGY, DSIY: 0,60 L/min.
- The pressure at port 3 must be greater than port 1 and is dependant on the minimum control pressure selected.
- There must be a pressure source at port 3, relative to port 1, to shift the valve.
- One application of this valve is to be used in pairs to select between 2 motors or pumps.
- Hardened spool and sleeve provide consistent and low spool leakage rates and excellent wear characteristics.
- The valve is not bistable; it is capable of modulation between the two positions shown.

OPTION ORDERING INFORMATION



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2-WAY POPPET, WITH INTEGRAL T-8A CONTROL CAVITY, CONTROL PORT 1 TO PORT 2



The -8 control option allows the pilot control valve to be incorporated directly into the end of the cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 141.

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
60 L/min.	DFCA – 8DN	T - 13A	35,1	22,2	19,1	45 - 50
120 L/min.	DFDA – 8DN	T - 5A	41,1	28,6	17,5	60 - 70
240 L/min.	DFEA – 8DN	T - 16A	62,0	31,8	24,6	200 - 215
480 L/min.	DFFA – 8DN	T - 18A	79,5	41,3	30,2	465 - 500

Performance Curves

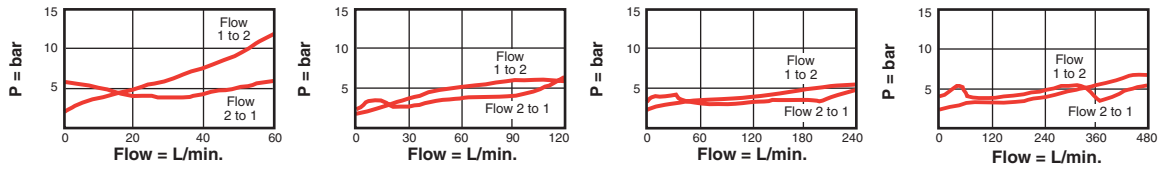
DFCA-8

DFDA-8

DFEA-8

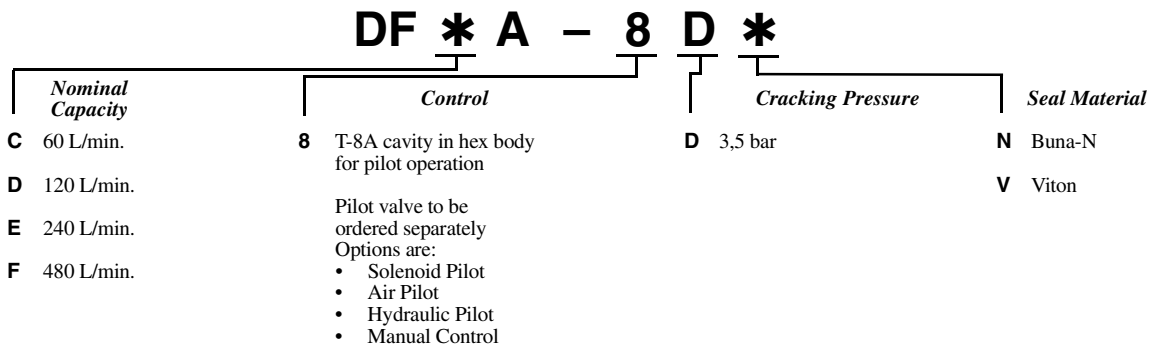
DFFA-8

Pressure Differential vs. Flow



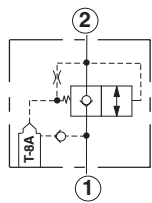
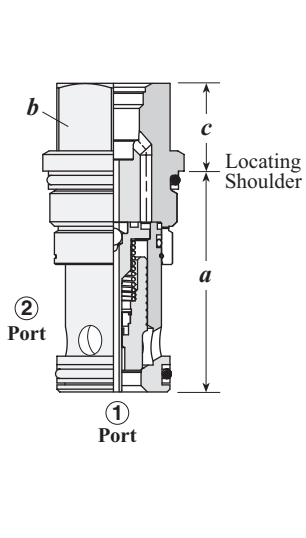
- Maximum operating pressure = 350 bar.
- Maximum main stage valve leakage at 24 cSt = 0,6 cc/min. at 350 bar (for complete assembly, port valve leakage must be considered).
- The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.

OPTION ORDERING INFORMATION



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2-WAY POPPET, WITH INTEGRAL T-8A CONTROL CAVITY, CONTROL PORT 2 TO PORT 1



The -8 control option allows the pilot control valve to be incorporated directly into the end of the cartridge via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 141.

Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			<i>a</i>	<i>b</i>	<i>c</i>	
60 L/min.	DFCB – 8DN	T - 13A	35,1	22,2	19,1	45 - 50
120 L/min.	DFDB – 8DN	T - 5A	41,1	28,6	17,5	60 - 70
240 L/min.	DFEB – 8DN	T - 16A	62,0	31,8	24,6	200 - 215

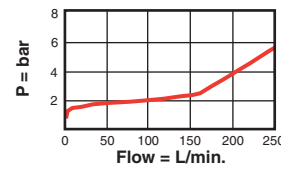
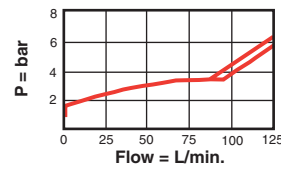
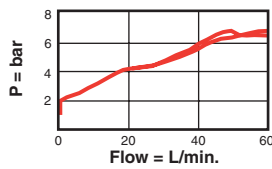
Performance Curves

DFCB-8

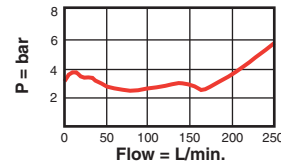
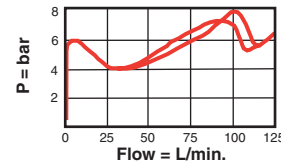
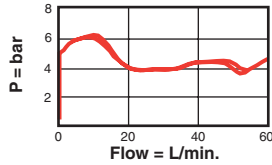
DFDB-8

DFEB-8

Pressure vs. Flow with T-8A Pilot Stage Installed, Port 1 to 2

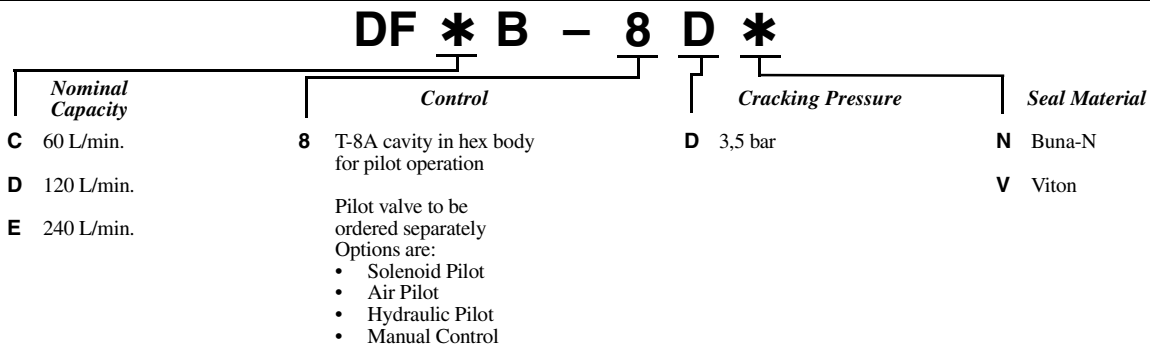


Pressure vs. Flow with T-8A Pilot Stage Installed, Port 2 to 1



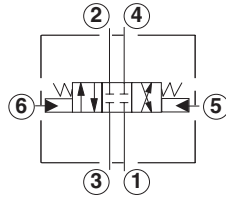
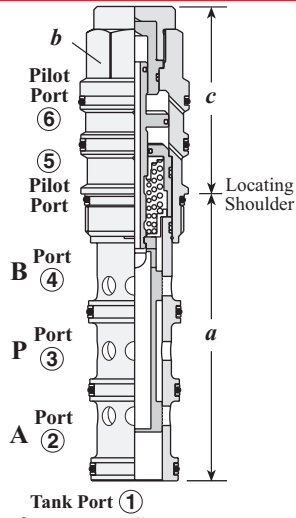
- Maximum operating pressure = 350 bar.
- Maximum main stage valve leakage at 24 cSt = 0,6 cc/min. at 350 bar (for complete assembly, port valve leakage must be considered).
- The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.

OPTION ORDERING INFORMATION



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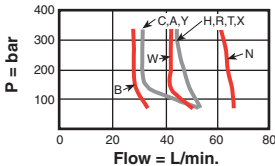
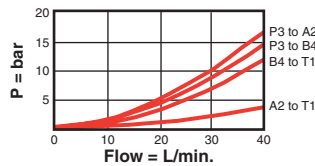
3-POSITION, 4-WAY, PILOT-TO-SHIFT



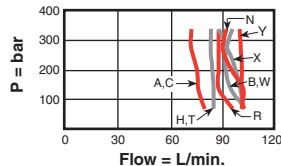
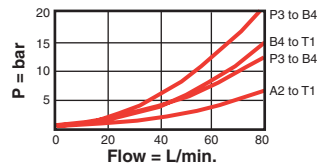
Nominal Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
40 L/min.	DCCC - XCN	T - 61A	85,1	22,2	50,0	45 - 50
80 L/min.	DCDC - XCN	T - 62A	92,2	28,6	58,7	60 - 70
160 L/min.	DCEC - XCN	T - 63A	114,6	31,8	72,1	200 - 215
320 L/min.	DCFC - XCN	T - 64A	140,0	41,3	91,2	465 - 500

Performance Curves

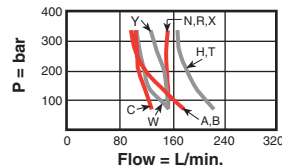
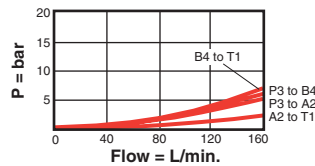
DCCC



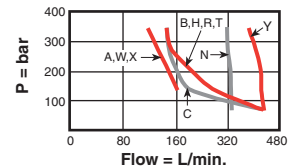
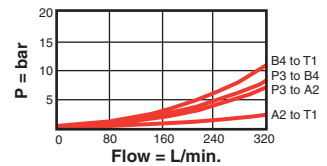
DCDC



DCEC



DCFC



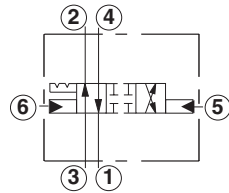
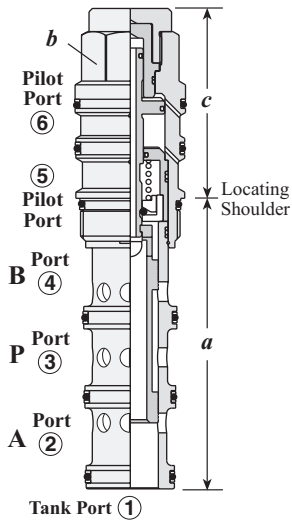
- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 30 cc/min. at 70 bar.
- Minimum pilot pressure required to shift valve = DCCC: 12 bar, DCDC: 10,5 bar, DCEC, DCFC: 9 bar.
- Pilot volume displacement = DCCC: 0,33 cc.; DCDC: 0,98 cc.; DCEC: 2,8 cc.; DCFC: 6,9 cc.
- All ports will accept 350 bar, including the x and y pilot ports (port 5 and port 6).
- The pilot ports, 5 and 6 are positively sealed from the work ports.
- The reason for the different capacities, or performance limits, for the different spool configurations are flow forces. Flow forces are proportional to flow and pressure drop. Typically, they resist the opening of a passage. Spool configurations that open passages as they spring centre are the most susceptible. If the flow forces due to the flow and pressure conditions exceed the centring spring force the valve may not shift completely. Higher flows may be used at lower pressures.

OPTION ORDERING INFORMATION

Nominal Capacity	Control	Spool Configuration		Seal Material
		DC * C - X * *	Spool Configuration	
C 40 L/min.	X Standard Pilot	A A to T Centre	R Regen Centre	N Buna-N
D 80 L/min.		B B to T Centre	T Tandem Centre	V Viton
E 160 L/min.		C Blocked Centre	W A and B Bleed to T Centre	
F 320 L/min.		H Open Centre	X P to B and A to T Centre	
		N P to A and B to T Centre	Y A and B to T Centre	

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2-POSITION, 4-WAY, PILOT-TO-SHIFT, DETENTED



Nominal Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions			Installation Torque (Nm)
			a	b	c	
40 L/min.	DCCD – XCN	T - 61A	85,1	22,2	50,0	45 - 50
80 L/min.	DCDD – XCN	T - 62A	92,2	28,6	58,7	60 - 70
160 L/min.	DCED – XCN	T - 63A	114,6	31,8	72,1	200 - 215
320 L/min.	DCFD – XCN	T - 64A	140,0	41,3	91,2	465 - 500

Performance Curves

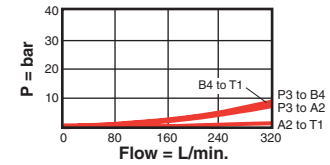
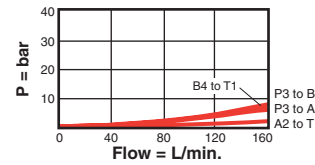
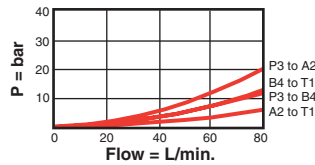
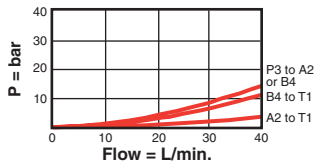
DCCD

DCDD

DCED

DCFD

Typical Pressure Drop



See www.sunhydraulics.com for additional performance curves.

- Maximum operating pressure = 350 bar.
- Maximum valve leakage at 24 cSt = 30 cc/min. at 70 bar.
- Minimum pilot pressure required to shift valve = DCCD: 12 bar, DCDD: 10,5 bar, DCED, DCFD: 9 bar.
- Pilot volume displacement = DCCD: 0,82 cc.; DCDD: 2,0 cc.; DCED: 5,6 cc.; DCFD: 14,0 cc.
- All ports will accept 350 bar, including the x and y pilot ports (port 5 and port 6).
- The pilot ports, 5 and 6, are positively sealed from the work ports.

OPTION ORDERING INFORMATION

DC * D - X * *

Nominal Capacity	Control	Spool Configuration	Seal Material
C 40 L/min.	X Standard Pilot	C Blocked Crossover	N Buna-N
D 80 L/min.		H Open Crossover	V Viton
E 160 L/min.		X P to B and A to T Crossover	
F 320 L/min.		Available for DCCD only: T Tandem Crossover	

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