

Directional, 3-way Cartridges

Powered by Sun **QuickPrint**, your on-demand, customized catalogue solution.

This information is subject to change without notice. Visit <u>www.sunhydraulics.com</u> for complete and up to date information.

© 2021 Sun Hydraulics



| DMBD | FLeX Series 3-way, solenoid-operated directional spool valve - 3000 psi (2101 bar) |
|-------|---|
| DMBF | FLeX Series 3-way, solenoid-operated directional spool2 valve |
| DWBF | FLeX Series 3-way, direct-acting, solenoid-operated directional blocking poppet |
| DWDF | 3-way, direct-acting, solenoid-operated directional poppet valve (7404 Series) |
| DBAFS | 3-way, soft shift, solenoid-operated directional spool valve - pilot capacity (7405 Series) |
| DWDM | 3-way, manually operated, directional poppet |
| DMDA | 3-way, solenoid-operated directional spool |
| DBAF | 3-way solenoid-operated directional spool valve - pilot capacity (740 |
| DMDM | 3-way, manually operated, directional spool |
| DMDAS | 3-way, soft shift, solenoid-operated directional spool |
| DBAH | 3-way, hydraulically operated, spool directional valve - pilot11 capacity |
| DBAP | 3-way, air-operated, spool directional valve - pilot |
| DPBP | 3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3 |
| DPCP | 3-way, pilot-operated, directional valve with drain to port 4 (1 to 2 open, 3 |
| DRBP | 3-way, direct-acting, directional valve with drain to port 4 (1 to 2 open, 3 |
| DVBP | 3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A |
| DVCP | 3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A |
| DRBPX | 3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 to 2 open, |
| DBAM | 3-way, manually operated, spool directional valve - pilot |
| DRBR | 3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 220 blocked) |
| DRBRX | 3-way, direct-acting, fixed setting, directional valve with drain to port 4 (3 to 4 open,21 port 2 blocked) |
| DRCR | 3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 222 blocked) |
| DDDG | 3-way, 2-position, pilot-to-shift, directional |



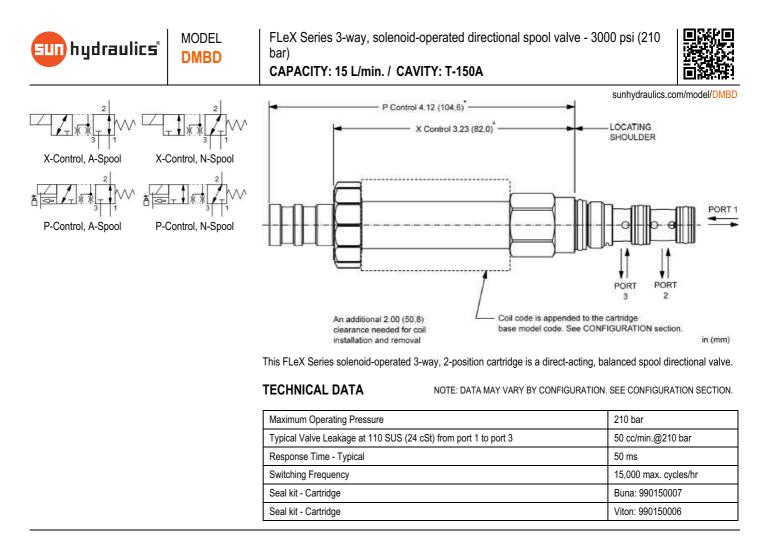
| DDFG | 3-way, 2-position, pilot-to-shift, directional |
|-------|---|
| DDHG | 3-way, 2-position, pilot-to-shift, directional |
| DRBN | 3-way, direct-acting, directional valve with drain to port 4 - normally |
| DPBC | 3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 327 open) |
| DPCC | 3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 328 open) |
| DRBC | 3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 329 open) |
| DRCC | 3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3 |
| DVBC | 3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T |
| DVCC | 3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T |
| DPBD | 3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 |
| DPCD | 3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 |
| DRBD | 3-way, direct-acting, directional valve with internal drain to port 3 (1 to 2 open, 3 |
| DVBD | 3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T |
| DVCD | 3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T |
| DPBO | 3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 |
| DPCO | 3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 |
| DRBO | 3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 |
| DRCO | 3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 |
| DVBO | 3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A |
| DVCO | 3-way, vent-to-operate, directional valve with drain to port 4 and integral T-8A |
| DRBOX | 3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 blocked, 2 |



Cavity Information

| Series | Ports | Cavities |
|---|---|--|
| Series Z Cartridges 3/8-24 UNF Cartridge Thread 5 mm Valve Hex Size 11 - 14 Nm Valve Installation Torque | 3-Port | T-382A |
| Series P Cartridges M16 Cartridge Thread 22,2 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque | 2-Port 2-Port (Deep) 3-Port | T-8A T-8DP T-9A |
| Series 1C Cartridges 7/8-14 UNF Cartridge Thread 25,4 mm Valve Hex Size 23-26 lbf ft Valve Installation Torque | 2-Port (Common) 3-Port (Common) 3-Port (Common) 4-Port (Common) | SC-10-02 SC-10-03 SC-22-03 SC-10-04 |
| Series OC Cartridges 3/4-16 UNF Cartridge Thread 22,2 mm Valve Hex Size 19-22 lbf ft Valve Installation Torque | 2-Port (Common) 3-Port (Common) | SC-08-02 SC-08-03 |
| Series 0 Cartridges M16 Cartridge Thread 19,1 mm Valve Hex Size 25,4 mm Valve Hex Size 27 - 33 Nm Valve Installation Torque | 2-Port 2-Port (Deep) 3-Port 3-Port 4-Port | T-162A T-162DP T-150A T-163A T-30A |
| Series 1 Cartridges M20 Cartridge Thread 22,2 mm Valve Hex Size 41 - 47 Nm Valve Installation Torque | 2-Port 2-Port 3-Port 4-Port 4-Port 6-Port | T-10A T-13A T-11A T-21A T-31A T-61A |
| Series 2 Cartridges 1"-14 UNS Cartridge Thread 28,6 mm Valve Hex Size 61 - 68 Nm Valve Installation Torque | 2-Port 2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) 6-Port 6-Port | T-3A T-5A T-2A T-22A T-32A T-52AD T-52A T-52A T-62A |
| Series 3 Cartridges M36 Cartridge Thread 31,8 mm Valve Hex Size 203 - 217 Nm Valve Installation Torque | 2-Port 3-Port 4-Port 4-Port 4-Port (Dual path) | T-16A T-17A T-23A T-33A T-53AD |
| Series 4 Cartridges M48 Cartridge Thread 41,3 mm Valve Hex Size 474 - 508 Nm Valve Installation Torque | 6-Port 6-Port 2-Port 2-Port (Undercut) 3-Port 3-Port (Undercut) 4-Port 4-Port (Undercut) 4-Port | T-53A T-63A T-18A T-18AU T-19A T-19AU T-24A T-24AU T-24AU T-34A |

| 6-Port | T-54A |
|--------|-------|
| | |
| 6-Port | T-64A |
| | |



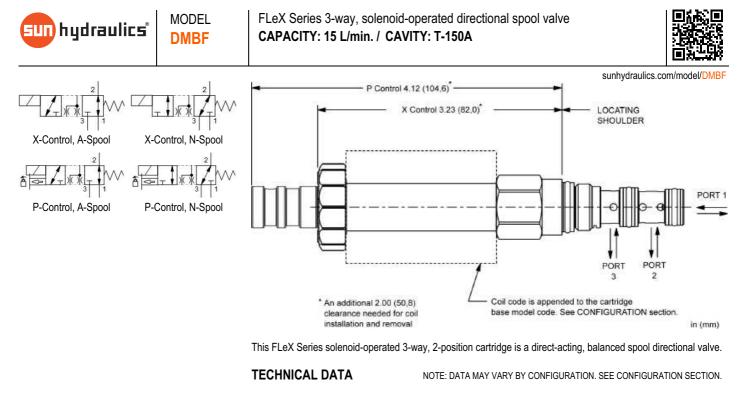
• Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

• An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DMBDXAN

| CONTROL | (X) SPOOL CONFIGURATION | (A) SEAL MATERIAL | (N) COIL * | |
|------------------------|---------------------------------------|-------------------|---|--|
| X No Manual Override | A Normally Open 1 to 2, Closed 2 to 3 | Buna-N | No coil | |
| P Manual Pull Override | N Normally Open 2 to 3, Closed 1 to 2 | 2 E EPDM | * Additional coil options are available | |
| | | V Viton | · | |



| Maximum Operating Pressure | 350 bar |
|---|-----------------------|
| Typical Valve Leakage at 110 SUS (24 cSt) Inlet on 1 | 164 cc/min.@350 bar |
| Typical Valve Leakage at 110 SUS (24 cSt) Inlet on 2 or 3 | 82 cc/min.@350 bar |
| Response Time - Typical | 50 ms |
| Switching Frequency | 15,000 max. cycles/hr |
| Seal kit - Cartridge | Buna: 990150007 |
| Seal kit - Cartridge | Viton: 990150006 |

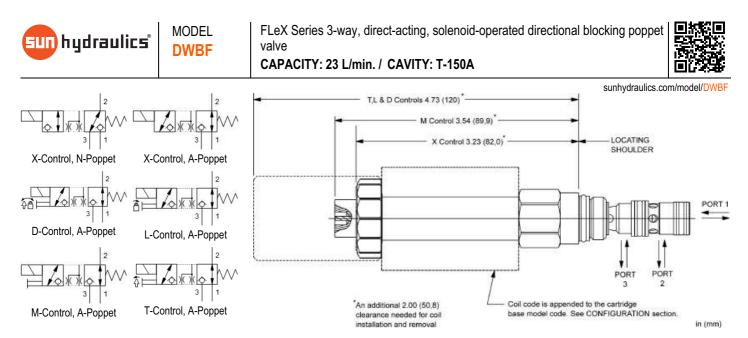
• Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

• An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DMBFXAN

| CONTROL | (X) SPOOL CONFIGURATION | (A) SEAL MATERIAL | (N) COIL * | |
|------------------------|---------------------------------------|-------------------|---|--|
| X No Manual Override | A Normally Open 1 to 2, Closed 1 to 3 | B Buna-N | No coil | |
| P Manual Pull Override | N Normally Open 2 to 3, Closed 1 to 2 | E EPDM | * Additional coil options are available | |
| | | V Viton | · · · · · · · · · · · · · · · · · · · | |



This FLeX Series solenoid-operated 3-way, 2-position cartridge is a direct-acting, poppet-style directional valve.

Due to the poppet style construction, this valve has extremely low leakage.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-----------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,07 cc/min.@350 bar |
| Response Time - Typical | 50 ms |
| Switching Frequency | 10,000 max. cycles/hr |
| U.S. Patent # | 10,302,201 |
| Seal kit - Cartridge | Buna: 990150007 |
| Seal kit - Cartridge | Viton: 990150006 |

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

- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.
- Sun Hydraulics bases solenoid valve performance data on testing at maximum ambient temperature (50° C) and 15% undervoltage at stabilized current (580 mA). This ensures that our data represents valve performance under worst-case conditions.

CONFIGURATION OPTIONS

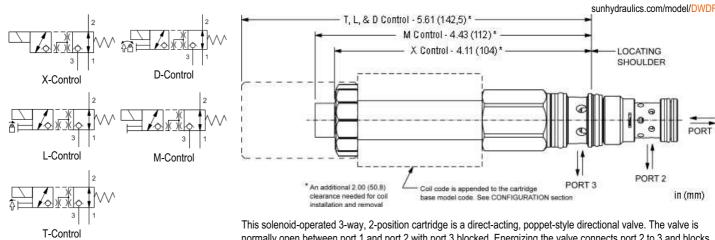
Model Code Example: DWBFXNN

| CONTROL (X |) POPPET CONFIGURATION (N | I) SEAL MATERIAL (N | COIL * |
|---------------------------------------|---------------------------------------|---------------------|---|
| X No Manual Override | N Normally Open 2 to 3, Closed 1 to 2 | N Buna-N | No coil |
| D Twist/Lock (Dual) Manual Override | A Normally Open 1 to 2, Closed 2 to 3 | E EPDM | * Additional coil options are available |
| L Twist/Lock (Detent) Manual Override | | V Viton | |

M Manual Override

T Twist (Momentary) Manual Override





This solenoid-operated 3-way, 2-position cartridge is a direct-acting, poppet-style directional valve. The valve is normally open between port 1 and port 2 with port 3 blocked. Energizing the valve connects port 2 to 3 and blocks port 1. All flow paths are bidirectional and blocked paths are blocked in both directions. Due to the poppet style construction, this valve has extremely low leakage.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

MODEL

DWDF

sun hydraulics

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

| Maximum Operating Pressure | 350 bar | |
|---|-----------------------|--|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar | |
| Manual Override Force Requirement | 33 N/100 bar @ Port 1 | |
| Manual Override Stroke | 2,5 mm | |
| Response Time - Typical | 50 ms | |
| Switching Frequency | 15,000 max. cycles/hr | |
| Seal kit - Cartridge | Buna: 990411007 | |
| Seal kit - Cartridge | Viton: 990411006 | |

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

• An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DWDFXAN

| CONTROL | (X) | POPPET CONFIGURATION (| (A) | SEAL MATERIAL | (N) | COIL * |
|---------------------------------------|-----|---------------------------------------|-----|---------------|-----|---|
| X No Manual Override | | A Normally Open 1 to 2, Closed 2 to 3 | | N Buna-N | | No coil |
| D Twist/Lock (Dual) Manual Override | | | | E EPDM | | * Additional coil options are available |
| L Twist/Lock (Detent) Manual Override | ; | | | V Viton | | |
| | | | | | | |

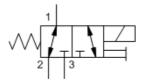
Manual Override

T Twist (Momentary) Manual Override

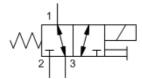
3-way, soft shift, solenoid-operated directional spool valve - pilot capacity (740 Series) SERIES P / CAPACITY: 1 L/min. / CAVITY: T-9A



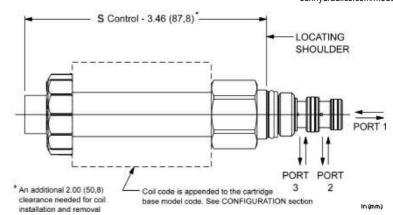
sunhydraulics.com/model/DBAFS



M-Control, H-Spool



M-Control, C-Spool



This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is normally open between port 1 and port 2 or port 1 and port 3 and all flow paths are bidirectional.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar | |
|---|-------------------------|--|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar | |
| Manual Override Force Requirement | 66 N/100 bar @ Port 1 | |
| Manual Override Stroke | 2,5 mm | |
| Seal kit - Cartridge | Buna: 990009007 | |
| Seal kit - Cartridge | Polyurethane: 990009002 | |
| Seal kit - Cartridge | Viton: 990009006 | |

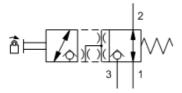
NOTES Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.

CONFIGURATION OPTIONS

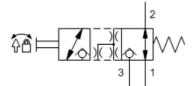
Model Code Example: DBAFSHN

| POPPET CONFIGURATION | (H) SEAL MATERIAL | (N) <u>C</u> OIL * |
|----------------------|-------------------|---|
| H Normally Open | N Buna-N | No coil |
| C Normally Closed | V Viton | * Additional coil options are available |

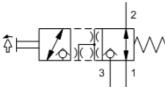




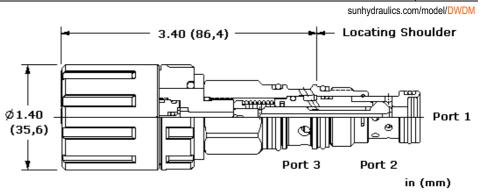
L-Control, A-Poppet



D-Control, A-Poppet



T-Control, A-Poppet



This manually operated, 2-position, 3-way directional cartridge is a direct-acting, poppet-style valve used to control the direction of flow in a hydraulic circuit. The valve is normally open between port 1 and port 2 with port 3 blocked. Operating the valve connects port 2 to 3 and blocks port 1. All flow paths are bidirectional and blocked paths are blocked in both directions. Due to the poppet style construction, this valve has extremely low leakage.

Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

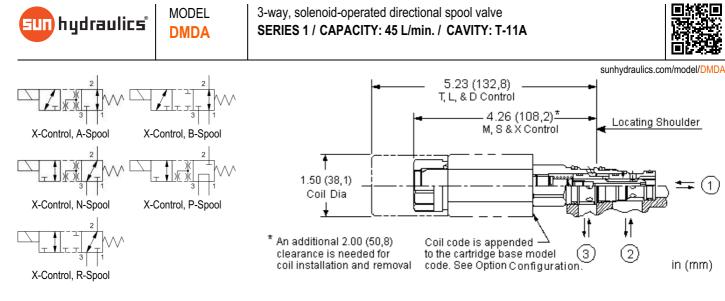
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

| Maximum Operating Pressure | 350 bar |
|---|---------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar |
| Operating Torque | 1,2 Nm |
| Seal kit - Cartridge | Buna: 990411007 |
| Seal kit - Cartridge | Viton: 990411006 |

CONFIGURATION OPTIONS

Model Code Example: DWDMLAN

| CONTROL (L) | POPPET CONFIGURATION (A) | SEAL MATERIAL (N) | |
|---------------------------------------|---------------------------------------|-------------------|--|
| L Twist/Lock (Detent) Manual Override | A Normally Open 1 to 2, Closed 2 to 3 | N Buna-N | |
| D Twist/Lock (Dual) Manual Override | | E EPDM | |
| T Twist (Momentary) Manual Override | | V Viton | |



This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-----------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 80 cc/min.@210 bar |
| Manual Override Force Requirement | 33 N/100 bar @ Port 1 |
| Manual Override Stroke 2,5 mm | |
| Response Time - Typical | 50 ms |
| Switching Frequency | 15,000 max. cycles/hr |
| Seal kit - Cartridge | Buna: 990411007 |
| Seal kit - Cartridge | EPDM: 990411014 |
| Seal kit - Cartridge | Viton: 990411006 |

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

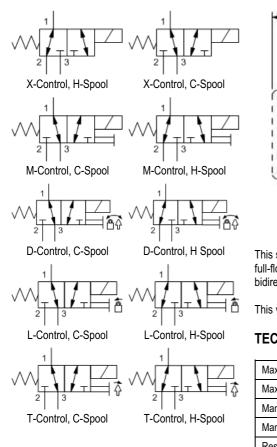
An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

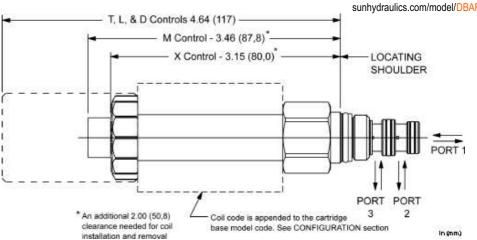
CONFIGURATION OPTIONS

Model Code Example: DMDAXAN

| CONTROL | (X) SPOOL CONFIGURATION (A) S | SEAL MATERIAL (N) | COIL * |
|---------------------------------------|---|-------------------|---|
| X No Manual Override | A Normally Open 1 to 2, Closed 2 to 3 | N Buna-N | No coil |
| M Manual Override | N Normally Open 2 to 3, Closed 1 to 2 | E EPDM | 212 DIN 43650-Form A, 12 VDC |
| D Twist/Lock (Dual) Manual Override | B Normally Open 1 to 2, Closed 2 to 3, | V Viton | 224 DIN 43650-Form A, 24 VDC |
| L Twist/Lock (Detent) Manual Override | e Closed Transition | | 912 Deutsch DT04-2P, 12 VDC |
| T Twist (Momentary) Manual Override | P Normally Open 1 to 3, Closed 1 to 2 | | 924 Deutsch DT04-2P, 24 VDC |
| | R Normally Open 2 to 3, Closed 1 to 2, Closed Transition | | * Additional coil options are available |







This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool pilot valve used to pilot other full-flow valves. The valve is normally open between port 1 and port 2 or port 1 and port 3 and all flow paths are bidirectional.

This valve is designed to be used with 740 and 747 Series coils.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar |
| Manual Override Force Requirement | 66 N/100 bar @ Port 1 |
| Manual Override Stroke | 2,5 mm |
| Response Time - Typical | 50 ms |
| Switching Frequency | 15,000 max. cycles/hr |
| Seal kit - Cartridge | Buna: 990009007 |
| Seal kit - Cartridge | EPDM: 990009014 |
| Seal kit - Cartridge | Polyurethane: 990009002 |
| Seal kit - Cartridge | Viton: 990009006 |

NOTES

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

• An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

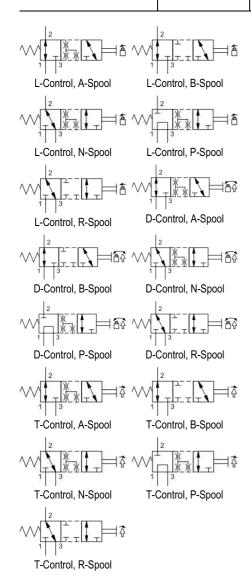
Model Code Example: DBAFXHN

| CONTROL (2 | X) SPOOL CONFIGURATION | (H) | SEAL MATERIAL | (N) | COIL * |
|---------------------------------------|------------------------|-----|---------------|-----|---|
| X No Manual Override | H Normally Open | | N Buna-N | | No coil |
| D Twist/Lock (Dual) Manual Override | C Normally Closed | | E EPDM | | * Additional coil options are available |
| L Twist/Lock (Detent) Manual Override | | | V Viton | | ····· |
| Manual Override (Standard) | | | | | |

T Twist (Momentary) Manual Override







CONFIGURATION OPTIONS

CONTROL

- L Twist/Lock (Detent) Manual Override
- D Twist/Lock (Dual) Manual Override
- T Twist (Momentary) Manual Override

sunhydraulics.com/model/DMDM 3.40 (86,4) \$\$1.40 \$\$

This manually operated, 2-position, 3-way directional cartridge is a direct-acting, balanced spool valve used to control the direction of flow in a hydraulic circuit. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

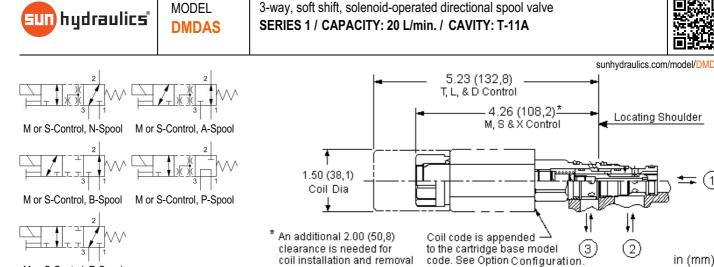
TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|--------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 80 cc/min.@210 bar |
| Operating Torque | 1,2 Nm |
| Seal kit - Cartridge | Buna: 990411007 |
| Seal kit - Cartridge | Viton: 990411006 |

Model Code Example: DMDMLAN

| (L) | SP | OOL CONFIGURATION (A | SE | AL MATERIAL | (| N) |
|-----|----|---|----|-------------|---|----|
| le | А | Normally Open 1 to 2, Closed 2 to 3 | Ν | Buna-N | | |
| e | В | Normally Open 1 to 2, Closed 2 to 3, Closed Transition | V | Viton | | |
| | Ν | Normally Open 2 to 3, Closed 1 to 2 | | | | |
| | Ρ | Normally Open 1 to 3, Closed 1 to 2 | | | | |
| | R | Normally Open 2 to 3, Closed 1 to 2, Closed Transition | | | | |



M or S-Control, R-Spool

This solenoid-operated 3-way, 2-position cartridge is a direct-acting, balanced spool directional valve.

TECHNICAL DATA

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

AS

∓ (1)

in (mm)

| Maximum Operating Pressure | 350 bar |
|---|-----------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 80 cc/min.@210 bar |
| Manual Override Force Requirement | 33 N/100 bar @ Port 1 |
| Manual Override Stroke | 2,5 mm |
| Seal kit - Cartridge | Buna: 990411007 |
| Seal kit - Cartridge | EPDM: 990411014 |
| Seal kit - Cartridge | Viton: 990411006 |

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

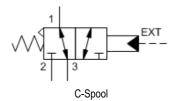
• An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

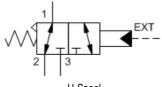
Model Code Example: DMDASNN

| SPOOL CONFIGURATION (N) | SEAL MATERIAL | (N) COIL * |
|---|---------------|---|
| N Normally Open 2 to 3, Closed 1 to 2 | N Buna-N | No coil |
| A Normally Open 1 to 2, Closed 2 to 3 | E EPDM | 212 DIN 43650-Form A, 12 VDC |
| B Normally Open 1 to 2, Closed 2 to 3, | V Viton | 224 DIN 43650-Form A, 24 VDC |
| Closed Transition | | 912 Deutsch DT04-2P, 12 VDC |
| P Normally Open 1 to 3, Closed 1 to 2 | | 924 Deutsch DT04-2P, 24 VDC |
| R Normally Open 2 to 3, Closed 1 to 2, Closed Transition | | * Additional coil options are available |

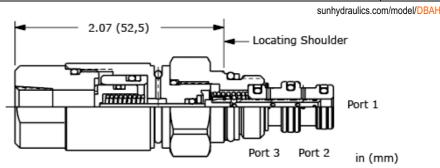




<mark>sun</mark> hydraulics"



H-Spool



These pilot-stage, directional, 2-position, 3-way valves are hydraulically operated, spring-return cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3. These cartridges are designed for pilot flow applications.

TECHNICAL DATA

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

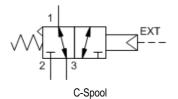
| Maximum Operating Pressure | 350 bar |
|---|------------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar |
| Minimum Pilot Pressure to Operate | See Technical Features |
| Pilot Control Port | See Control Options |
| Seal kit - Cartridge | Buna: 990509007 |
| Seal kit - Cartridge | Viton: 990509006 |

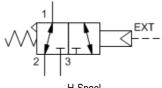
CONFIGURATION OPTIONS

Model Code Example: DBAHBCN

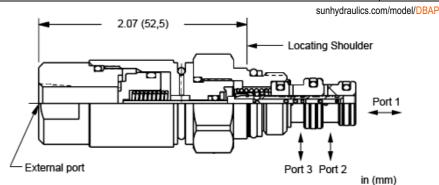
| CONTROL | (B) SPOOL CON | FIGURATION | (C) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|--------------------------|-------------------|--------------------------|-----|---------------|-----|---------------------------------|
| B External 4-SAE Port | C Normally | Open 1 to 3, Closed 1 to | 2 | N Buna-N | | Standard Material/Coating |
| A External 1/8 NPTF Port | H Normally | Open 1 to 2, Closed 1 to | 3 | V Viton | | /AP Stainless Steel, Passivated |
| D External 1/8 BSPP Port | | | | | | |







H-Spool



These pilot-stage, directional, 2-position, 3-way valves are pneumatically operated, spring-return cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar | | |
|---|-------------------------------|--|--|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar | | |
| Minimum Pilot Pressure to Operate | 1,5 [+ port 1 press./100] bar | | |
| Pilot Control Port | See Control Options | | |
| Seal kit - Cartridge | Buna: 990509007 | | |
| Seal kit - Cartridge | Viton: 990509006 | | |

CONFIGURATION OPTIONS

CONTROL

F External 1/8 NPTF Port

E External 4-SAE Port

P External 1/8 BSPP Port

(F) SPOOL CONFIGURATION (C) SEAL MATERIAL

Model Code Example: DBAPFCN

C Normally Open 1 to 3, Closed 1 to 2 H Normally Open 1 to 2, Closed 1 to 3

N Buna-N E EPDM V Viton

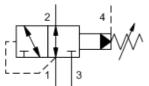
(N) MATERIAL/COATING

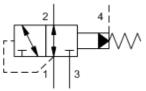
Standard Material/Coating /AP Stainless Steel, Passivated

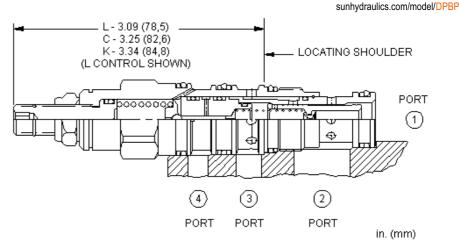
© 2021 Sun Hydraulics

MODEL **DPBP**









Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | EPDM: 990021014 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

CONFIGURATION OPTIONS

L Standard Screw Adjustment

C Tamper Resistant - Factory Set

CONTROL

K Handknob

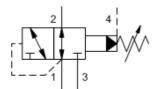
Model Code Example: DPBPLAN

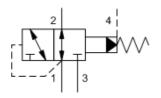
- (L) ADJUSTMENT RANGE (A) SEAL MATERIAL (N) MATERIAL/COATING А 100 - 3000 psi (7 - 210 bar), 1000 psi N Buna-N (70 bar) Standard Setting E EPDM B 50 - 1500 psi (3,5 - 105 bar), 1000 psi V Viton
 - (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28
 - bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14
 - bar) Standard Setting 25 - 1500 psi (1,7 - 105 bar), 1000 psi J
 - (70 bar) Standard Setting
 - W 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

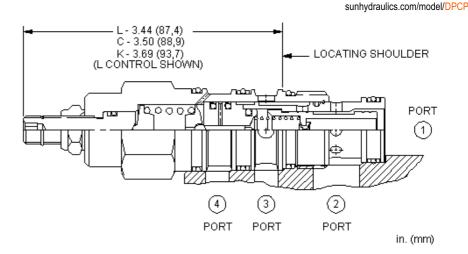
- Standard Material/Coating
 - /LH Mild Steel, Zinc-Nickel

MODEL DPCP









Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,16 - 0,25 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990022007 |
| Seal kit - Cartridge | Polyurethane: 990022002 |
| Seal kit - Cartridge | Viton: 990022006 |

CONFIGURATION OPTIONS

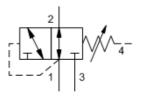
Model Code Example: DPCPLAN

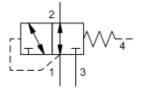
| CONTROL | (L) ADJUSTMENT RANGE (A) SEAL MATERI | IAL (N) |
|----------------------------------|--|---------|
| L Standard Screw Adjustment | A 100 - 3000 psi (7 - 210 bar), 1000 psi N Buna-N | |
| C Tamper Resistant - Factory Set | (70 bar) Standard Setting E EPDM | |
| K Handknob | B 50 - 1500 psi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

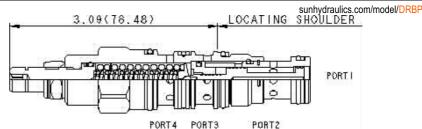
bar) Standard Setting

W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting









Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

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

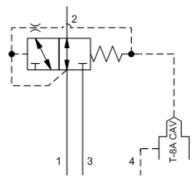
CONFIGURATION OPTIONS

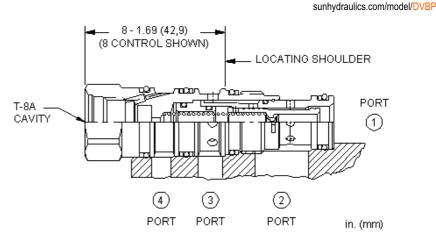
Model Code Example: DRBPLAN

| CONTROL | (L) | ADJUSTMENT RANGE | A) | SEAL MATERIAL | (N) |
|--|-----|---|--------|---------------------|-----|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount | | A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting E 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting W 750 - 4500 psi (50 - 315 bar), 1000 psi (70 bar) Standard Setting | ļ ļ | N Buna-N V Viton | |

MODEL DVBP







This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar | |
|---|-------------------------|--|
| Control Pilot Flow | 0,11 - 0,16 L/min. | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar | |
| Pilot Control Cavity | T-8A | |
| Seal kit - Cartridge | Buna: 990021007 | |
| Seal kit - Cartridge | Polyurethane: 990021002 | |
| Seal kit - Cartridge | Viton: 990021006 | |

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

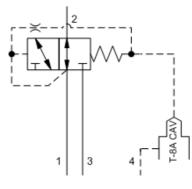
CONFIGURATION OPTIONS

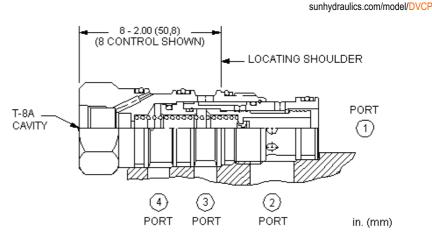
Model Code Example: DVBP8FN

| CONTROL | B) MINIMUM CONTROL PRESSURE | (F) SEAL MATERIAL | (N) |
|---------------|-----------------------------|-------------------|-----|
| 8 T-8A Cavity | F 100 psi (7 bar) | N Buna-N | |
| | | V Viton | |

MODEL







This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar | |
|---|-------------------------|--|
| Control Pilot Flow | 0,11 - 0,16 L/min. | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar | |
| Pilot Control Cavity | T-8A | |
| Seal kit - Cartridge | Buna: 990022007 | |
| Seal kit - Cartridge | Polyurethane: 990022002 | |
| Seal kit - Cartridge | Viton: 990022006 | |

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

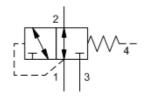
CONFIGURATION OPTIONS

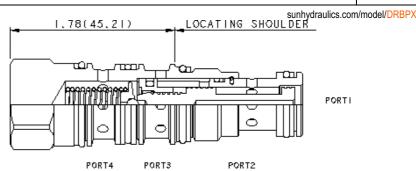
Model Code Example: DVCP8FN

| CONTROL | (8) | MINIMUM CONTROL PRESSURE | (F) | SEAL MATERIAL | (N) |
|---------------|-----|--------------------------|-----|---------------|-----|
| 8 T-8A Cavity | | F 100 psi (7 bar) | | N Buna-N | |
| | | | | V Viton | |

3-way, direct-acting, fixed setting, directional valve with drain to port 4 (1 to 2 open, 3 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. | |
|---|-------------------------|--|
| Maximum Operating Pressure | 350 bar | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. | |
| Seal kit - Cartridge | Buna: 990021007 | |
| Seal kit - Cartridge | Polyurethane: 990021002 | |
| Seal kit - Cartridge | Viton: 990021006 | |

CONFIGURATION OPTIONS

Model Code Example: DRBPXFN

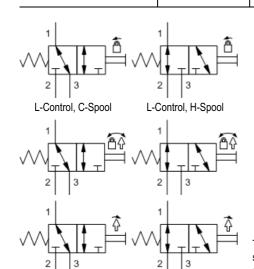
| SHIFTING PRESSURE (F) | | SEAL MATERIAL | (N) |
|--------------------------|--|---------------|-----|
| F 100 psi (7 bar) | | N Buna-N | |
| | | V Viton | |

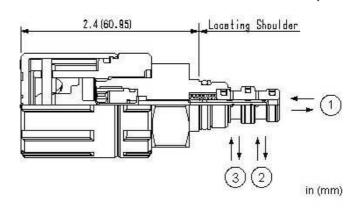
<mark>sun</mark> hydraulics

MODEL DBAM



sunhydraulics.com/model/DBAM





These pilot-stage, directional, 2-position, 3-way valves are manually operated cartridges and are available in two spool configurations; normally open 1 to 2 and normally open 1 to 3. These cartridges are designed for pilot flow applications. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|---------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 0,7 cc/min.@350 bar |
| Seal kit - Cartridge | Buna: 990109007 |
| Seal kit - Cartridge | EPDM: 990009014 |
| Seal kit - Cartridge | Viton: 990109006 |

CONFIGURATION OPTIONS

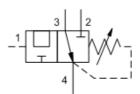
Model Code Example: DBAMLCN

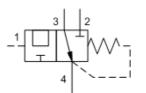
| (| CONTROL | (L) | SPOOL CONFIGURATION (| C) | SEAL MATERIAL | (N) |
|---|---------------------------------------|-----|---------------------------------------|----|---------------|-----|
| | L Twist/Lock (Detent) Manual Override | | C Normally Open 1 to 3, Closed 1 to 2 | | N Buna-N | |
| | D Twist/Lock (Dual) Manual Override | | H Normally Open 1 to 2, Closed 1 to 3 | | E EPDM | |
| | T Twist (Momentary) Manual Override | | | | V Viton | |

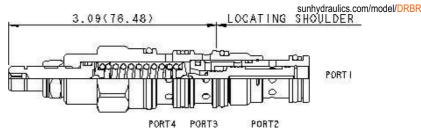
Twist (Momentary) Manual Override

3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A









Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|--|-------------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

CONFIGURATION OPTIONS

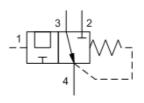
Model Code Example: DRBRLNN

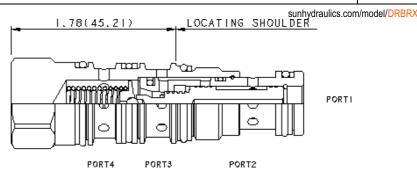
| ONTROL | (L) ADJUSTMENT RANGE (N | I) SEAL MATERIAL | (N) | MATERIAL/COATING |
|--|--|---------------------|-----|--|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob Q Handknob with Panel Mount | N 60 - 800 psi (4 - 55 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting | N Buna-N V Viton | | Standard Material/Coating /AP Stainless Steel, Passivated |

S 25 - 200 psi (1,7 - 14 bar), 200 psi (14 bar) Standard Setting

3-way, direct-acting, fixed setting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-21A







Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

CONFIGURATION OPTIONS

Model Code Example: DRBRXFN

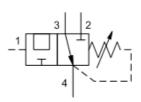
| SHIFTING PRESSURE | (F) SEAL MATERIAL | (N) |
|-------------------|-------------------|-----|
| F 100 psi (7 bar) | N Buna-N | |
| | V Viton | |

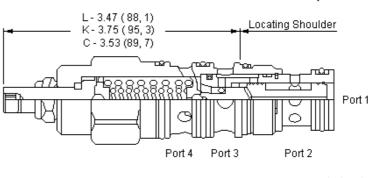


MODEL DRCR 3-way, direct-acting, directional valve with drain to port 4 (3 to 4 open, port 2 blocked) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A



sunhydraulics.com/model/DRCR





in (mm)

Direct-acting, 3-way directional cartridges (3 to 4 open, 2 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

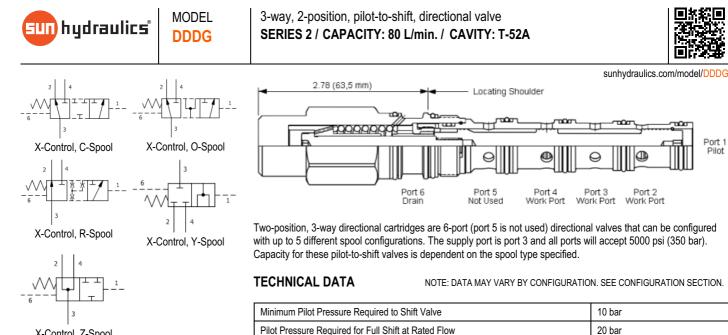
| Maximum Operating Pressure | 350 bar |
|--|-------------------------|
| Maximum Valve Leakage at 110 SUS (24 cSt) | 50 cc/min.@210 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990022007 |
| Seal kit - Cartridge | Polyurethane: 990022002 |
| Seal kit - Cartridge | Viton: 990022006 |

CONFIGURATION OPTIONS

Model Code Example: DRCRLNN

| CONTROL | (L) ADJUSTMENT RANGE | (N) SEAL MATERIAL | (N) MATERIAL/COATING |
|--|---|-------------------|--|
| L Standard Screw AdjustmentC Concealed Manual OverrideK Handknob | N 60 - 800 psi (4 - 55 bar), 200 ps bar) Standard Setting E 200 - 400 psi (14 - 28 bar), 200 bar) Standard Setting | V Viton | Standard Material/Coating /LH Mild Steel, Zinc-Nickel |

S 25 - 200 psi (1,7 - 14 bar), 200 psi (14 bar) Standard Setting



Maximum Operating Pressure

X-Control, Z-Spool

Maximum Valve Leakage at 110 SUS (24 cSt)

Pilot Volume Displacement Seal kit - Cartridge Seal kit - Cartridge

CONFIGURATION OPTIONS

Model Code Example: DDDGXCN

| CONTROL | (X) | SPOOL CONFIGURATION | (C) | SEAL MATERIAL (N | MATERIAL/COATING |
|------------------|-----|------------------------|-----|------------------|---------------------------------|
| X Not Adjustable | | C Closed Crossover | | N Buna-N | Standard Material/Coating |
| | | O Open Crossover | | V Viton | /AP Stainless Steel, Passivated |
| | | R Restricted Crossover | | | /LH Mild Steel, Zinc-Nickel |
| | | Y All Ports Blocked | | | |
| | | | | | |

Z All Ports Open

Port 1 Pilot

350 bar

0,82 cc

30 cc/min.@70 bar

Buna: 990052007

Viton: 990052006



Two-position, 3-way directional cartridges are 6-port (port 5 is not used) directional valves that can be configured with up to 5 different spool configurations. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

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

| Minimum Pilot Pressure Required to Shift Valve | 11 bar |
|--|-------------------|
| Pilot Pressure Required for Full Shift at Rated Flow | 20 bar |
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Volume Displacement | 2,1 cc |
| Seal kit - Cartridge | Buna: 990053007 |
| Seal kit - Cartridge | Viton: 990053006 |

CONFIGURATION OPTIONS

<mark>sun</mark> hydraulics"

X-Control, C-Spool

X-Control, R-Spool

X-Control, Z-Spool

Model Code Example: DDFGXCN

| CONTROL | (X) SPOOL CONFIGURATION | (C) SEAL MATERIAL | (N) MATERIAL/COATING |
|------------------|-------------------------|-------------------|---------------------------------|
| X Not Adjustable | C Closed Crossover | N Buna-N | Standard Material/Coating |
| | O Open Crossover | V Viton | /AP Stainless Steel, Passivated |
| | R Restricted Crossover | | /LH Mild Steel, Zinc-Nickel |
| | Y All Ports Blocked | | |

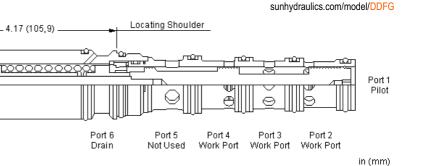
Z All Ports Open

MODEL

DDFG

4

X-Control, Y-Spool



X-Control, O-Spool 3







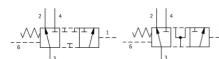


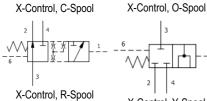
X-Control, Y-Spool

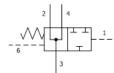
3-way, 2-position, pilot-to-shift, directional valve SERIES 4 / CAPACITY: 320 L/min. / CAVITY: T-54A



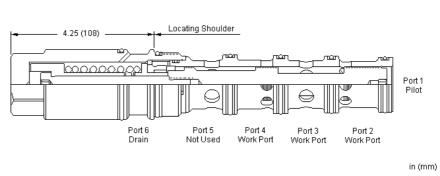
sunhydraulics.com/model/DDHG







X-Control, Z-Spool



Two-position, 3-way directional cartridges are 6-port (port 5 is not used) directional valves that can be configured with up to 5 different spool configurations. The supply port is port 3 and all ports will accept 5000 psi (350 bar). Capacity for these pilot-to-shift valves is dependent on the spool type specified.

TECHNICAL DATA

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

| Minimum Pilot Pressure Required to Shift Valve | 20 bar |
|--|-------------------------|
| Pilot Pressure Required for Full Shift at Rated Flow | 24 bar |
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 50 cc/min.@70 bar |
| Pilot Volume Displacement | 4,4 cc |
| Seal kit - Cartridge | Buna: 990054007 |
| Seal kit - Cartridge | Polyurethane: 990054002 |
| Seal kit - Cartridge | Viton: 990054006 |

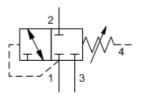
CONFIGURATION OPTIONS

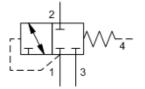
Model Code Example: DDHGXCN

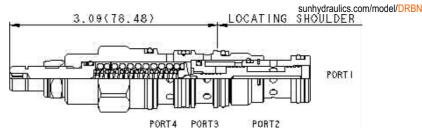
| CONTROL | (X) SPOOL CONFIGURATION | (C) SEAL MATERIAL | (N) |
|------------------|-------------------------|-------------------|-----|
| X Not Adjustable | C Closed Crossover | N Buna-N | |
| | O Open Crossover | V Viton | |
| | R Restricted Crossover | | |
| | Y All Ports Blocked | | |
| | | | |

Z All Ports Open









Normally closed, direct-acting, 3-way directional cartridges are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

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

CONFIGURATION OPTIONS

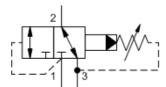
Model Code Example: DRBNLAN

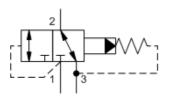
| CONTROL | (L) | ADJUSTMENT RANGE (A) | SEAL MATERIAL (N) | MATERIAL/COATING |
|--|-----|---|---------------------|--|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount | | A 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting W 750 - 4500 psi (50 - 315 bar), 1000 psi (70 bar) Standard Setting | N Buna-N V Viton | Standard Material/Coating /AP Stainless Steel, Passivated |

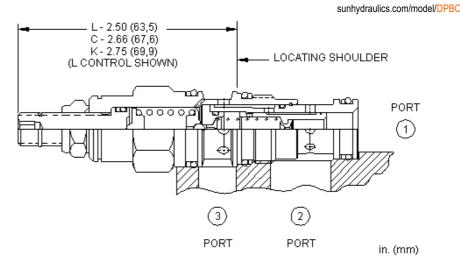
MODEL DPBC

3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A









Pilot-operated, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. | | | |
|--|-------------------------|--|--|--|
| Maximum Operating Pressure | 350 bar | | | |
| Control Pilot Flow | 0,11 - 0,16 L/min. | | | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar | | | |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 | | | |
| Locknut Hex Size | 15 mm | | | |
| Locknut Torque | 9 - 10 Nm | | | |
| Seal kit - Cartridge | Buna: 990011007 | | | |
| Seal kit - Cartridge | Polyurethane: 990011002 | | | |
| Seal kit - Cartridge | Viton: 990011006 | | | |

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

CONFIGURATION OPTIONS

Model Code Example: DPBCLAN

| L Standard Screw Adjustment A 100 - 3000 psi (7 - 210 bar), 1000 psi N Buna-N Standard Mate | ING |
|--|---------------|
| C Tamper Resistant - Factory Set (70 bar) Standard Setting V V Viton /AP Stainless Steet K Handknob B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting //LH Mild Steel, Zin D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting D 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting | l, Passivated |

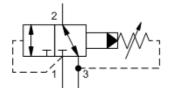
W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

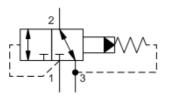
sun hydraulics' 🛛 🕻

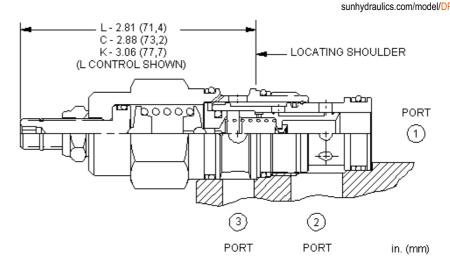
MODEL DPCC

3-way, pilot-operated, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A









Pilot-operated, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. | | | |
|--|-------------------------|--|--|--|
| Maximum Operating Pressure | 350 bar | | | |
| Control Pilot Flow | 0,16 - 0,25 L/min. | | | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar | | | |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 | | | |
| Locknut Hex Size | 15 mm | | | |
| Locknut Torque | 9 - 10 Nm | | | |
| Seal kit - Cartridge | Buna: 990202007 | | | |
| Seal kit - Cartridge | Polyurethane: 990002002 | | | |
| Seal kit - Cartridge | Viton: 990202006 | | | |

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

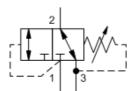
CONFIGURATION OPTIONS

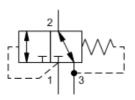
Model Code Example: DPCCLAN

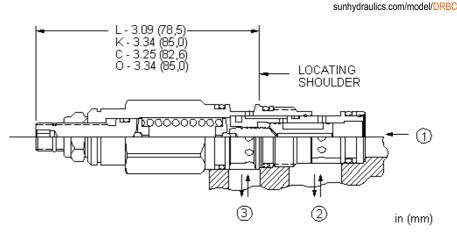
| CONTROL | (L) | ADJUSTMENT RANGE (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|---|-----|---|---------------------|-----|---|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob | | A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting H 35 - 3000 psi (2,4 - 210 bar), 1000 psi (70 bar) Standard Setting W 100 - 4500 psi (7 - 315 bar) 1000 psi | N Buna-N V Viton | | Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel |

W 100 - 4500 psi (7 - 315 bar), 1000 psi (70 bar) Standard Setting









Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. | | |
|--|-------------------------|--|--|
| Maximum Operating Pressure | 350 bar | | |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. | | |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 | | |
| Locknut Hex Size | 15 mm | | |
| Locknut Torque | 9 - 10 Nm | | |
| Seal kit - Cartridge | Buna: 990011007 | | |
| Seal kit - Cartridge | Polyurethane: 990011002 | | |
| Seal kit - Cartridge | Viton: 990011006 | | |

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

CONFIGURATION OPTIONS

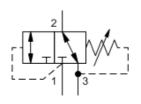
Model Code Example: DRBCLAN

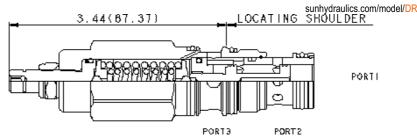
| CONTROL | (L) | ADJUSTMENT RANGE (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|----------------------------------|-----|--|---------------|-----|---------------------------------|
| L Standard Screw Adjustment | | A 500 - 3000 psi (35 - 210 bar), 1000 psi | N Buna-N | | Standard Material/Coating |
| C Tamper Resistant - Factory Set | | (70 bar) Standard Setting | V Viton | | /AP Stainless Steel, Passivated |
| K Handknob | | B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting | | | /LH Mild Steel, Zinc-Nickel |
| | | D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 | | | |

- bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14
- bar) Standard Setting S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting
- W 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

MODEL DRCC 3-way, direct-acting, directional valve with internal drain to port 3 (1 blocked, 2 to 3 open) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A







Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Polyurethane: 990002002 |

CONFIGURATION OPTIONS

Model Code Example: DRCCLAN

| CONTROL | (L) | ADJUSTMENT RANGE (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|-----------------------------|-----|---|---------------|-----|-----------------------------|
| L Standard Screw Adjustment | | A 750 - 3000 psi (50 - 210 bar), 1000 psi | N Buna-N | | Standard Material/Coating |
| | | (70 bar) Standard Setting | V Viton | | /LH Mild Steel, Zinc-Nickel |
| | | B 300 - 1500 psi (20 - 105 bar), 500 psi | | | |
| | | (35 bar) Standard Setting | | | |
| | | D 200 - 800 psi (14 - 55 bar), 400 psi (28 | | | |
| | | bar) Standard Setting | | | |
| | | E 100 - 400 psi (7 - 28 bar), 200 psi (14 | | | |
| | | bar) Standard Setting | | | |

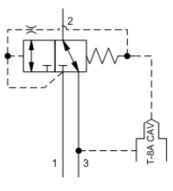
S 50 - 200 psi (3,5 - 14 bar), 100 psi (7 bar) Standard Setting

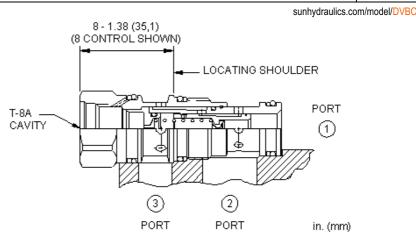
sun hydraulics" 🛛 🗖

MODEL DVBC

3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 blocked, 2 to 3 open) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A







This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990011007 |
| Seal kit - Cartridge | Polyurethane: 990011002 |
| Seal kit - Cartridge | Viton: 990011006 |

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

CONFIGURATION OPTIONS

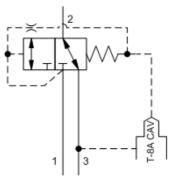
Model Code Example: DVBC8FN

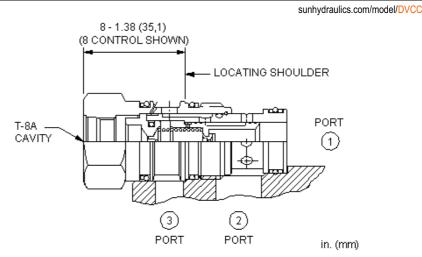
| CONTROL | (8) MINIMUM CONTROL PRESSURE (F) SEAL MATER | IAL (N) |
|---------------|---|---------|
| 8 T-8A Cavity | F 100 psi (7 bar) N Buna-N | |
| | V Viton | |

MODEL DVCC

3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 blocked, 2 to 3 open) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A







This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,16 - 0,25 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990202007 |
| Seal kit - Cartridge | Polyurethane: 990002002 |
| Seal kit - Cartridge | Viton: 990202006 |

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

CONFIGURATION OPTIONS

Model Code Example: DVCC8FN

| CONTROL (8 |) MINIMUM CONTROL PRESSURE | (F) SEAL MATERIAL | (N) |
|---------------|----------------------------|-------------------|-----|
| 8 T-8A Cavity | F 100 psi (7 bar) | N Buna-N | |
| | | V Viton | |

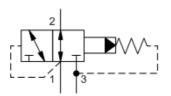
<mark>sun</mark> hydraulics°

MODEL **DPBD**

3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



2



L - 2.50 (63,5) C - 2.66 (67,6) K - 2.75 (69,9) (L CONTROL SHOWN) LOCATING SHOULDER PORT 000 (1)ф 3 (2)PORT PORT in. (mm)

Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|--------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990011007 |
| eal kit - Cartridge Polyurethane: 990011002 | |
| Seal kit - Cartridge | Viton: 990011006 |

CONFIGURATION OPTIONS

Model Code Example: DPBDLAN

| CONTROL | (L) | ADJUSTMENT RANGE | (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|---|-----|--|-----------------------------|---------------------|-----|--|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob | | A 100 - 3000 psi (7 - 210 bar), 1000 (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi bar) Standard Setting K 75 - 1500 psi (5 - 105 bar), 1000 psi (5 - 105 bar), 1000 psi (5 - 4500 psi (10,5 - 315 bar), 100 psi (70 bar) Standard Setting | psi (28 (14 si (70 | N Buna-N V Viton | | Standard Material/Coating /AP Stainless Steel, Passivated |



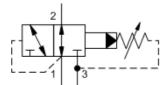
<mark>sun</mark> hydraulics

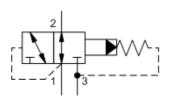
MODEL DPCD

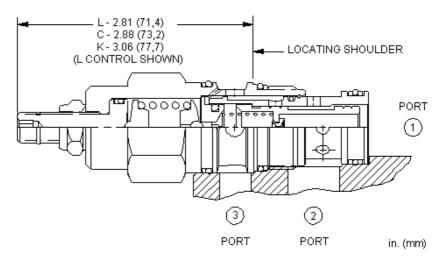
3-way, pilot-operated, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A



sunhydraulics.com/model/DPCD







Pilot-operated, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,16 - 0,25 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990202007 |
| Seal kit - Cartridge | Polyurethane: 990002002 |
| Seal kit - Cartridge | Viton: 990202006 |

CONFIGURATION OPTIONS

Model Code Example: DPCDLAN

| CONTROL | (L) | ADJUSTMENT RANGE (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|---|-----|---|---------------------|-----|--|
| L Standard Screw AdjustmentC Tamper Resistant - Factory SetK Handknob | | A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 | N Buna-N V Viton | | Standard Material/Coating /AP Stainless Steel, Passivated |

- bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

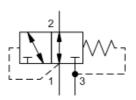
© 2021 Sun Hydraulics

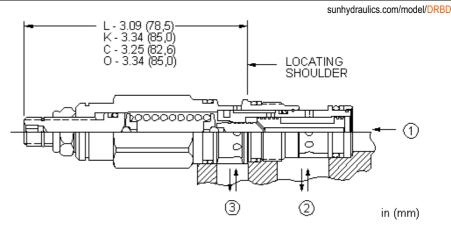
un hydraulics d^{Ma}D

MODEL DRBD

3-way, direct-acting, directional valve with internal drain to port 3 (1 to 2 open, 3 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A







Direct-acting, 3-way directional cartridges (1 to 2 open, 3 blocked) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 3 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990011007 |
| Seal kit - Cartridge | Polyurethane: 990011002 |
| Seal kit - Cartridge | Viton: 990011006 |

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

CONFIGURATION OPTIONS

Model Code Example: DRBDLAN

(A) SEAL MATERIAL (N) MATERIAL/COATING (L) ADJUSTMENT RANGE CONTROL 500 - 3000 psi (35 - 210 bar), 1000 psi N Buna-N Standard Screw Adjustn A indard Material/Coating C Tamper Resistant - Factory Set (70 bar) Standard Setting V Viton /AP Stainless Steel, Passivated 50 - 1500 psi (3,5 - 105 bar), 200 psi K Handknob В (14 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting

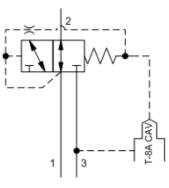
- S 25 200 psi (1,7 14 bar), 100 psi (7 bar) Standard Setting
- W 750 4500 psi (50 315 bar), 1000 psi (70 bar) Standard Setting

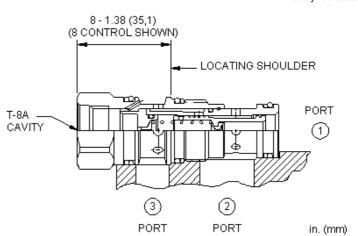
MODEL DVBD

3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 to 2 open, 3 blocked) SERIES 1 / CAPACITY: 28 L/min. / CAVITY: T-11A



sunhydraulics.com/model/DVBD





This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990011007 |
| Seal kit - Cartridge | Polyurethane: 990011002 |
| Seal kit - Cartridge | Viton: 990011006 |

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

CONFIGURATION OPTIONS

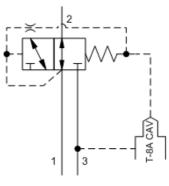
Model Code Example: DVBD8FN

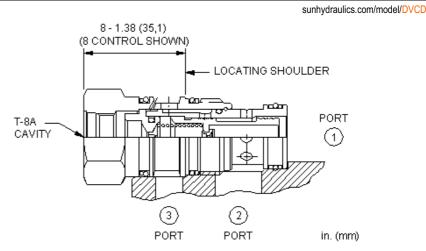
| CONTROL | (8) | MINIMUM CONTROL PRESSURE | (F) | SEAL MATERIAL | (N) |
|---------------|-----|--------------------------|-----|---------------|-----|
| 8 T-8A Cavity | | F 100 psi (7 bar) | | N Buna-N | |
| | | | | V Viton | |

MODEL

3-way, vent-to-operate, directional valve with internal drain to port 3 and integral T-8A control cavity (1 to 2 open, 3 blocked) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-2A







This valve is a, 3-way directional cartridge (1 to 2 open, 3 blocked) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,16 - 0,25 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990202007 |
| Seal kit - Cartridge | Polyurethane: 990002002 |
| Seal kit - Cartridge | Viton: 990202006 |

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

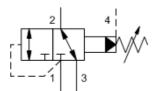
CONFIGURATION OPTIONS

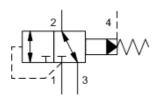
Model Code Example: DVCD8FN

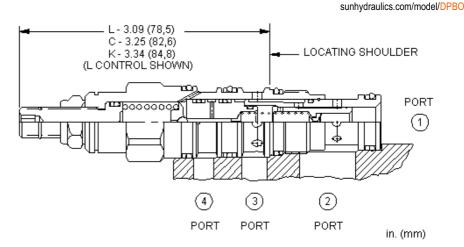
| CONTROL | (8) MINIMUM CONTROL PRESSURE | (F) SEAL MATERIAL | (N) |
|---------------|------------------------------|-------------------|-----|
| 8 T-8A Cavity | F 100 psi (7 bar) | N Buna-N | |
| | | V Viton | |

MODEL DPBO









Pilot-operated, 3-way directional cartridges (1 blocked, 2-to-3 open) are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

CONFIGURATION OPTIONS

L Standard Screw AdjustmentC Tamper Resistant - Factory Set

CONTROL

K Handknob

Model Code Example: DPBOLAN

| (L) | ADJUSTMENT RANGE | (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|-----|---|-----|---------------------|-----|---|
| t | A 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar), 1000 p (70 bar) Standard Setting | | N Buna-N V Viton | | Standard Material/Coating /AP Stainless Steel, Passivated /LH Mild Steel, Zinc-Nickel |

(70 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28

- bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14
- bar) Standard Setting J 25 - 1500 psi (1,7 - 105 bar), 1000 psi
- (70 bar) Standard Setting
- W 150 4500 psi (10,5 315 bar), 1000 psi (70 bar) Standard Setting

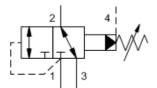
© 2021 Sun Hydraulics

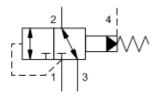
<mark>sun</mark> hydraulics

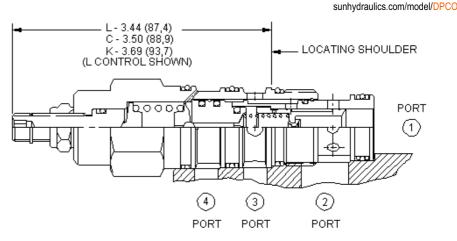
MODEL **DPCO**

3-way, pilot-operated, directional valve with drain to port 4 (1 blocked, 2 to 3 open) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A









in. (mm)

Pilot-operated, 3-way directional cartridges (1 blocked, 2-to-3 open) are switching devices typically used in moderate-flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

bar) Standard Setting

bar) Standard Setting W 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting

E 25 - 400 psi (1,7 - 28 bar), 200 psi (14

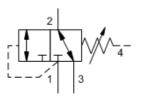
NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Control Pilot Flow | 0,16 - 0,25 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 15 cc/min.@70 bar |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990022007 |
| Seal kit - Cartridge | Polyurethane: 990022002 |
| Seal kit - Cartridge | Viton: 990022006 |

CONFIGURATION OPTIONS

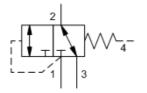
Model Code Example: DPCOLAN

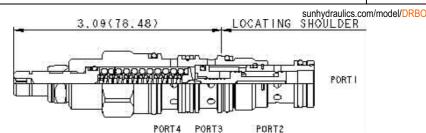
| CONTROL | (L) ADJUSTMENT RANGE | (A) SEAL MATERIAL | (N) MATERIAL/CO | DATING |
|----------------------------------|--|-------------------|-----------------|-------------------|
| L Standard Screw Adjustment | A 100 - 3000 psi (7 - 210 bar), | 1000 psi N Buna-N | Standard M | Material/Coating |
| C Tamper Resistant - Factory Set | (70 bar) Standard Setting | V Viton | AP Stainless S | Steel, Passivated |
| K Handknob | B 50 - 1500 psi (3,5 - 105 bar), (70 bar) Standard Setting | , 1000 psi | | |
| | D 25 - 800 psi (1,7 - 55 bar), 40 | 00 psi (28 | | |



MODEL

DRBO





Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

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

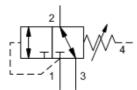
CONFIGURATION OPTIONS

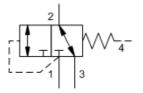
Model Code Example: DRBOLAN

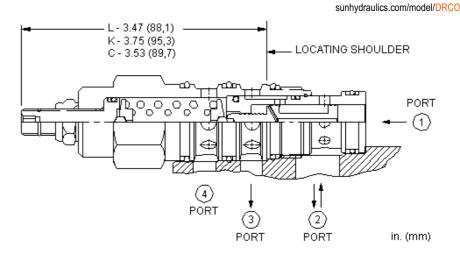
| CONTROL | (L) | ADJUSTMENT RANGE | (A) | SEAL MATERIAL | (N) | MATERIAL/COATING |
|--|-----|--|--|---------------------|-----|---------------------------|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob O Handknob with Panel Mount | | A 500 - 3000 psi (35 - 210 ba (70 bar) Standard Setting B 50 - 1500 psi (3,5 - 105 bar (14 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 5 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 5 bar) Standard Setting S 25 - 200 psi (1,7 - 14 bar), bar) Standard Setting W 750 - 4500 psi (50 - 315 ba (70 bar) Standard Setting |), 200 psi 200 psi (14 200 psi (14 100 psi (7 | N Buna-N V Viton | | Standard Material/Coating |

MODEL DRCO 3-way, direct-acting, directional valve with drain to port 4 (1 blocked, 2 to 3 open) SERIES 2 / CAPACITY: 60 L/min. / CAVITY: T-22A









Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|--|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Locknut Hex Size | 15 mm |
| Locknut Torque | 9 - 10 Nm |
| Seal kit - Cartridge | Buna: 990022007 |
| Seal kit - Cartridge | Polyurethane: 990022002 |
| Seal kit - Cartridge | Viton: 990022006 |

CONFIGURATION OPTIONS

Model Code Example: DRCOLAN

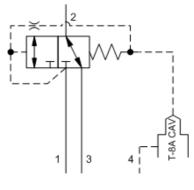
| CONTROL | (L) | ADJUSTMENT RANGE (A | SEAL MATERIAL | (N) |
|---|-----|---|---------------------|-----|
| L Standard Screw Adjustment C Tamper Resistant - Factory Set K Handknob | | A 750 - 3000 psi (50 - 210 bar), 1000 psi (70 bar) Standard Setting B 300 - 1500 psi (20 - 105 bar), 500 psi (35 bar) Standard Setting D 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting | N Buna-N V Viton | |

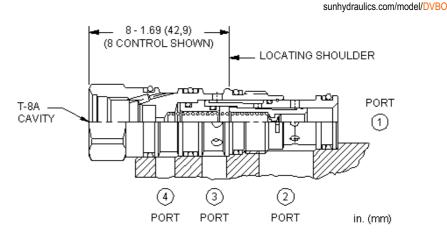
S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting

💵 hydraulics 🛛

MODEL DVBO







This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

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

CONFIGURATION OPTIONS

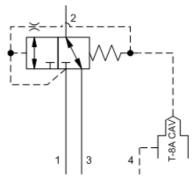
Model Code Example: DVBO8FN

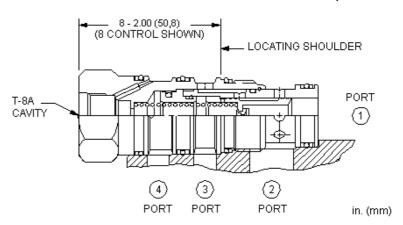
| CONTROL | (8) MINIMUM CONTROL PRESSURE (F) SEAL MATE | ERIAL (N) |
|---------------|--|-----------|
| 8 T-8A Cavity | F 100 psi (7 bar) N Buna-N | |
| | V Viton | |

MODEL DVCO









This valve is a, 3-way directional cartridge (1 blocked, 2 to 3 open) that incorporates an integral pilot control cavity. It may be used by itself or to actuate larger pilot-operated directional cartridges or logic elements. The valve shifts when there is flow through the pilot control cartridge installed in the T-8A cavity.

TECHNICAL DATA

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

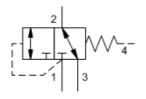
| Maximum Operating Pressure | 350 bar |
|---|-------------------------|
| Control Pilot Flow | 0,11 - 0,16 L/min. |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min.@70 bar |
| Pilot Control Cavity | T-8A |
| Seal kit - Cartridge | Buna: 990022007 |
| Seal kit - Cartridge | EPDM: 990022014 |
| Seal kit - Cartridge | Polyurethane: 990022002 |
| Seal kit - Cartridge | Viton: 990022006 |

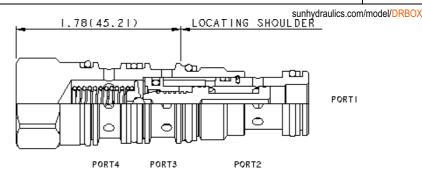
NOTES Compound cartridge (pilot and main stage) assembly information is provided for reference only. Cartridges must be ordered separately and assembled at point of use.

CONFIGURATION OPTIONS

Model Code Example: DVCO8FN

| CONTROL (8 | MINIMUM CONTROL PRESSURE | (F) | SEAL MATERIAL | (N) |
|---------------|--------------------------|-----|---------------|-----|
| 8 T-8A Cavity | F 100 psi (7 bar) | | N Buna-N | |
| | | | E EPDM | |
| | | | V Viton | |





Direct-acting, 3-way directional cartridges (1 blocked, 2 to 3 open) are switching devices typically used in moderate flow circuits. They can be used by themselves or to actuate larger pilot-operated directional cartridges or logic cartridges. The valve shifts when the pressure differential between port 1 and port 4 exceeds the setting.

TECHNICAL DATA

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

| Factory Pressure Settings Established at | 15 L/min. |
|---|-------------------------|
| Maximum Operating Pressure | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 30 cc/min. |
| Seal kit - Cartridge | Buna: 990021007 |
| Seal kit - Cartridge | Polyurethane: 990021002 |
| Seal kit - Cartridge | Viton: 990021006 |

CONFIGURATION OPTIONS

SHIFTING PRESSURE 100 psi (7 bar)

F

(F) SEAL MATERIAL

Ν Buna-N

V Viton

(N) MATERIAL/COATING

Model Code Example: DRBOXFN

| Stanuaru Materiai/Coating |
|---------------------------------|
| /AP Stainless Steel, Passivated |
| /LH Mild Steel, Zinc-Nickel |
| |

smart SOLUTIONS for DEMANDING applications



www.sunhydraulics.com

Sun Hydraulics Headquarters Sarasota, Florida USA (1) 941 362 1200 suninfo@sunhydraulics.com

Sun Hydraulics Korea Corp. Incheon Korea +82 3281 31350 sales@sunhydraulics.co.kr Sun Hydraulics Limited Coventry England +44 2476 217 400 sales@sunuk.com

Sun Hydraulics China Co. Ltd. Shanghai P.R. China +86 2151 162862 sunchinainfo@sunhydraulics.com Sun Hydraulik GmbH Erkelenz Germany +49 2431 80910 sales@sunhydraulik.de

Sun Hydraulics Corp. (India) Bangalore India +91 8028 456325 sunindiainfo@sunhydraulics.com Enovation Controls, LLC A Sun Hydraulics Company Tulsa, OK USA Ph: (1) 918-317-4100

High Country Tek, Inc A Sun Hydraulics Company Nevada City, California USA (1) 530 265 3236 info@HCTcontrols.com