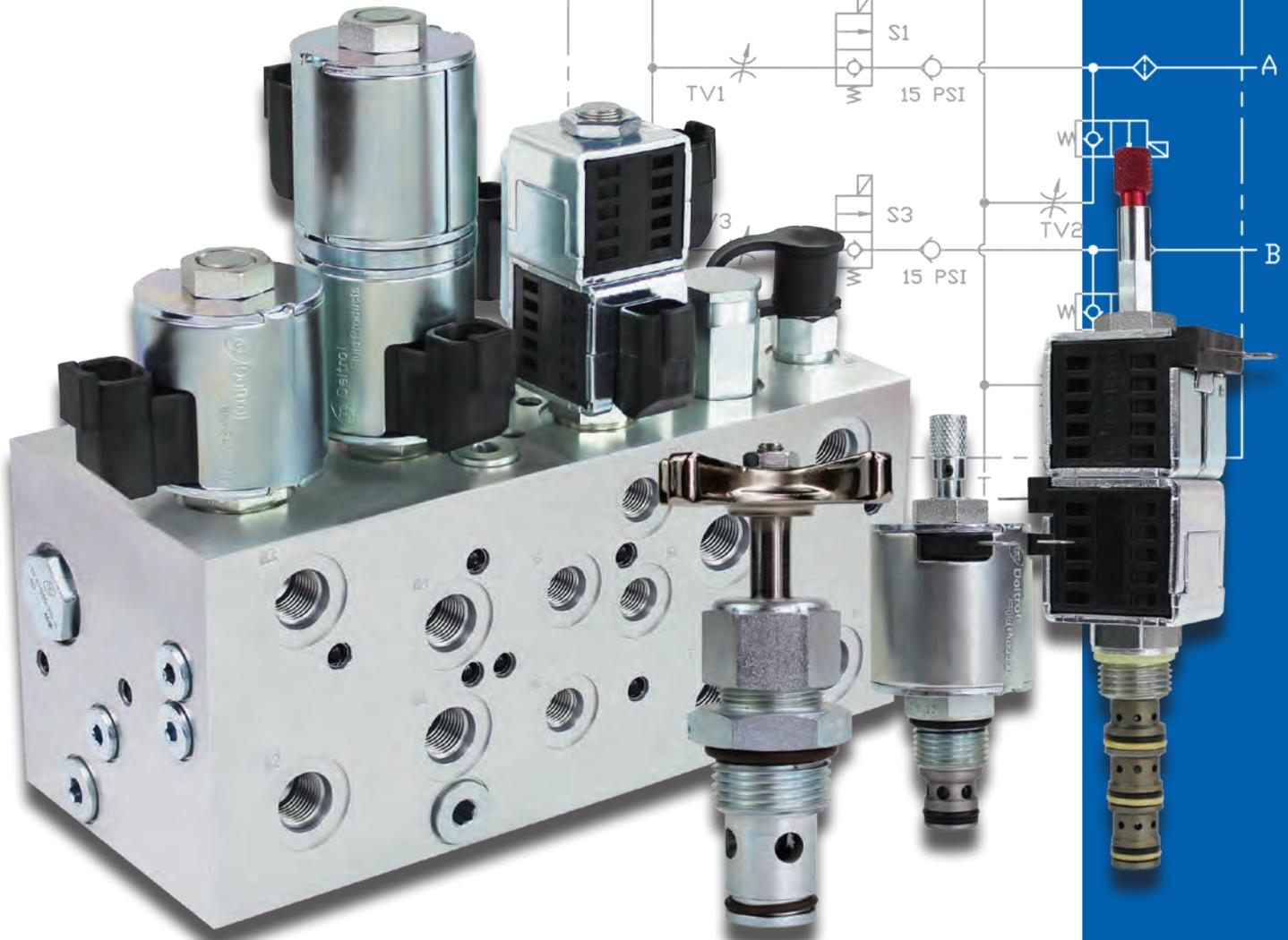




Deltrol

FLUID PRODUCTS

Cartridge Valves and Integrated Circuit Manifolds



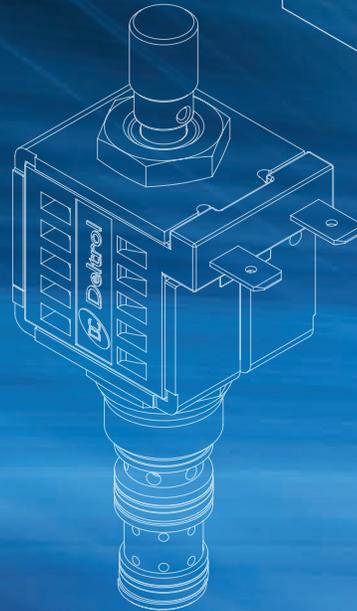
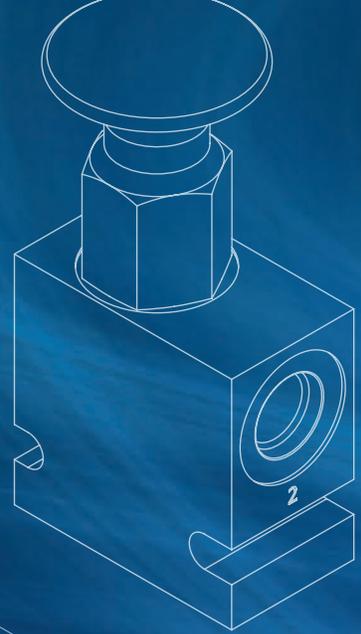
Building Fluid Power Solutions Around The World

Deltrol Is Committed To The Fluid Power Industry

- Focusing on 08 and 10 size Cartridge, Zero Profile & In-Line Valves
- Pressures up to 5000 psi and flows up to 20 gpm
- Solenoid coils produced at quality Deltrol facilities
- Valve & System design teams with the capabilities to design solutions outside the above parameters
- Expedited Prototyping for Custom Designs

Building Fluid Power Solutions Around The World

- Providing solutions for 60 years
- ISO 9001: 2015 certified quality system
- Industry best lead times
- 100% final inspection on every valve
- Pneumatic or hydraulic applications
- Library with thousands of proven designs



World Class Performance

For 60 years Deltrol Fluid Products has striven for World Class Performance standards in product design, quality, competitive prices and quick response. Whether manufacturing an extensive range of fluid power components or assisting in the design/building of a complete fluid power system, Deltrol's commitment remains constant, Complete Customer Satisfaction.

Our Mission

- Maintain our position of leadership, quality and integrity with our customers, employees and suppliers.
- Continually strive to be a world-class manufacturer of cartridge valves, custom manifold systems and in-line valves.

Quality Commitment

- Our ISO 9001-2015 certified quality system continues to guide product quality, consistency and dependability.
- Stringent design verification and vendor qualification.
- Test 100% of the products we produce utilizing our automated testing system.

What's New In This Catalog Edition

- Over 30 new industry products
- New detailed graphics, shaded for easier product component identification

- Improved details, dimensions & specifications
- Easier to use How To Order section

Navigating This Catalog

Valve Description

DSV-080-2NCP
Normally-Closed, Two-Way, Two-Position, Pilot-Operated Solenoid Valve

SERIES 8

DESCRIPTION
A cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION
When de-energized, the DSV-080-2NCP acts as a check valve, allowing flow from ② to ①, while blocking flow from ② to ③. When energized, the poppet lifts to open the ② to ③ flow path.

Operation of Manual Override Option M: To override, push button in, twist counterclockwise and release. In this position, the valve will remain open. To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position. **Option MP, MF, MM:** To override, pull spring-loaded knob/adaptor on top of valve. Release to return to normal operation.

FEATURES AND BENEFITS

- 4000 PSI (276 Bar) rating.
- Continuous-duty solenoid.
- Hardened poppet and plunger for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Low leak option available.
- Manual override option.
- Industry common cavity.

TECHNICAL SPECS

SPECIFICATIONS
Solenoid Valve

Operating Pressure: 4000 PSI (276 Bar)
Flow: See PRESSURE DROP VS. FLOW graph
Internal Leakage: 5 drops/min. max. at 4000 PSI (276 Bar)
Low leakage available

Temperature: -30° F to +250° F (-35°C to +120° C)
Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.
Coil Duty Rating: Continuous from 85% to 110% of rated voltage.
Current Draw: 12 VDC is 1.3 amps.
Minimum Pull-In Voltage: 85% of rated voltage at 4000 PSI (276 Bar) supplied at 100% of nominal flow rating.
Response Time: 80% of final change of state with 100% voltage.
Pull-In: 12 VDC 16 m. sec. **Drop-Out:** 12 VDC 18 m. sec.
Recommended Filtration: Critical Application-ISO 17/15/13 Non-Critical Application-ISO 20/18/14
Fluids: Mineral-based fluids. For other fluid compatibility consult factory.
Cavity/Valve Tool: 080-2, see page 11.08.2
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 PSI (207 Bar).

Dimensions Installed in Stand Alone Block

Dimensions of Valve with Coil

Configurable Model Code

Function

Product Tabs

Dimensions Installed in Stand Alone Block

Dimensions of Valve with Coil

HOW TO ORDER

DSV - 080 - 2 NC P - * - * - * - * - * - *

Solenoid Valve Cavity Flow Path Normally Closed Poppet Seals Manual Override Low Leakage Voltage Termination Porting

Seals	Seal Kit	Voltage ¹	Termination ²	Porting ³	In-Line Body with Cartridge		
N	Suna N	DK9-080-S-NA	omit	Cartridge only w/val	omit		
V	Viton	DK9-080-S-VA	D1	DC 12 Volt	2N	1/4 PTF	B-080-2-2N
omit	omit	D2	DC 24 Volt	3N	3/8 PTF	B-080-2-3N	
M	Manually Override	D9	DC 20 Volt	DE	D6	Dual Lead	B-080-2-4T
MP	Knurled Knob Pull	D10	DC 10 Volt	SE	SS	Single Lead	B-080-2-4T
MF	Female Pull 1/4-28 UNF	A5	AC 120 Volt	SE	SS	Single Lead	B-080-2-4T
MM	Male Pull 3/16-16 UNC	A6	AC 240 Volt	SE	SS	Single Lead	B-080-2-4T
L	Low Leakage	omit	omit	omit	omit	omit	omit
omit	Standard leakage	omit	omit	omit	omit	omit	omit

1 Other options available - consult factory.
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a complete assembly consult the factory.
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

1.01.1

Section.Position In Section.Product Page Number

Products Will Typically Have 2 Pages

1.01.2

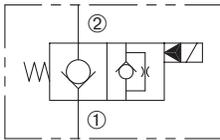
Please contact our Bellwood, IL facility if you have any questions or visit our web site at www.deltrolfluid.com.

Use this table of contents to navigate to our specification pages for the valve under consideration based on valve type, valve function, and flow or pressure maximums. The corresponding model listed for each item in the table of contents represents the basic part number to purchase. The corresponding series listed for each model categorizes the product by the family that it is in. All valves in a particular family will share at least one attribute. For example, Series 8 valves will fit in the size 8 common cavity size, and the zero profile valve family represents valves that have minimal exposure above the mounting surface.

1.00.0 SOLENOID

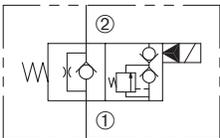
Two-Way, Two-Position

Solenoid, Two-Way, Two-Position, Normally-Closed, Poppet



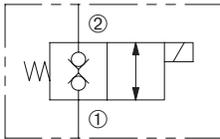
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	3000	207	DSV-080-2NCP	Series 8	1.01.1
16.0	60.6	3000	207	DSV2-100-2NCP	Series 10	1.03.1

Solenoid, Two-Way, Two-Position, Normally-Open, Poppet



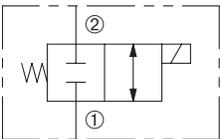
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gpm	lpm	psi	bar			
5.0	18.9	3000	207	DSV2-080-2NOP	Series 8	1.08.1
16.0	60.6	3000	207	DSV2-100-2NOP	Series 10	1.09.1

Solenoid, Two-Way, Two-Position, Normally-Closed, Bi-Directional, Poppet



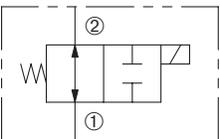
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	3000	207	DSV-080-2NCSP	Series 8	1.11.1

Solenoid, Two-Way, Two-Position, Normally-Closed, Spool



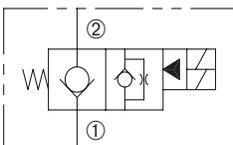
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-2NCS	Series 8	1.14.1
6.0	22.7	3000	207	DSV2-100-2NCS	Series 10	1.15.1

Solenoid, Two-Way, Two-Position, Normally-Open, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-2NOS	Series 8	1.16.1
6.0	22.7	3000	207	DSV2-100-2NOS	Series 10	1.17.1

Solenoid, Two-Way, Two-Position, Normally-Closed, Dual-Coil, Poppet

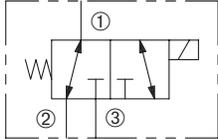


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
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1.20.0 SOLENOID

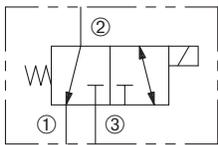
Three-Way, Two-Position

Solenoid, Three-Way, Two-Position, Spool



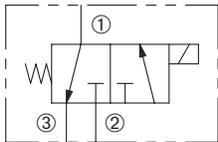
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
4.0	15.1	3000	207	DSV2-080-3	Series 8	1.20.1
6.0	22.7	3000	207	DSV2-100-3	Series 10	1.21.1

Solenoid, Three-Way, Two-Position, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	3000	207	DSV2-080-3B	Series 8	1.23.1
6.0	22.7	3000	207	DSV2-100-3B	Series 10	1.24.1

Solenoid, Three-Way, Two-Position, Spool

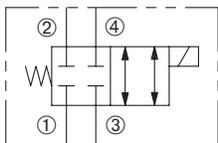


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DSV2-100-3D	Series 10	1.26.1

1.30.0 SOLENOID

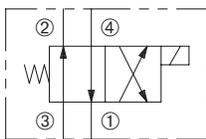
Four-Way, Two-Position

Solenoid, Four-Way, Two-Position, Normally-Closed, Spool



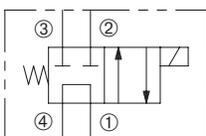
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-4NC	Series 8	1.30.1
6.0	22.7	3000	207	DSV2-100-4NC	Series 10	1.31.1

Solenoid, Four-Way, Two-Position, Cross Over, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-4CO	Series 8	1.32.1
6.0	22.7	3000	207	DSV2-100-4CO	Series 10	1.33.1

Solenoid, Four-Way, Two-Position, Tandem, Spool

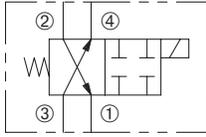


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-4TC	Series 8	1.34.1

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(continued)

Solenoid, Four-Way, Two-Position, Normally-Open, Spool

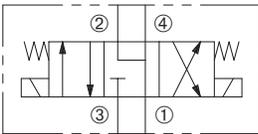


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV2-080-4NO	Series 8	1.36.1

1.40.0 SOLENOID

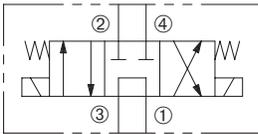
Four-Way, Three-Position

Solenoid, Four-Way, Three-Position, Motor Center, Spool



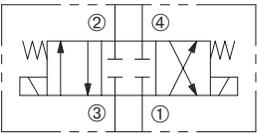
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV-080-34M	Series 8	1.40.1
6.0	22.7	3000	207	DSV-100-34M	Series 10	1.41.1

Solenoid, Four-Way, Three-Position, Tandem Center, Spool



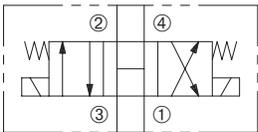
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV-080-34T	Series 8	1.42.1
4.0	15.1	3000	207	DSV-100-34T	Series 10	1.43.1

Solenoid, Four-Way, Three-Position, Closed Center, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	DSV-080-34C	Series 8	1.44.1
6.0	22.7	3000	207	DSV-100-34C	Series 10	1.45.1

Solenoid, Four-Way, Three-Position, Open Center, Spool

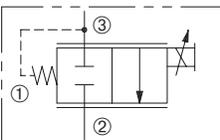


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
1.5	5.7	3000	207	DSV-080-34O	Series 8	1.46.1
3.0	11.4	3000	207	DSV-100-34O	Series 10	1.47.1

1.80.0 SOLENOID

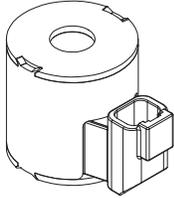
Electro-Proportional

Proportional Flow Control, Normally-Closed



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
14.0	53.0	3000	207	DPV-100-2NC	Series 10	1.80.1

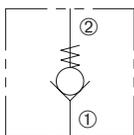
1.90.0 COIL



Solenoid Coils	Series	Page
Solenoid Coil Features / Specifications		1.90.1
K-Coil, Series 8 (External Frame) / Data	Series 8	1.91.1
DE - Dual Lead - <i>IP65 rated</i>	Series 8	1.91.1
SE - Single Lead - <i>IP65 rated</i>	Series 8	1.91.1
BE - Dual Spade	Series 8	1.91.2
AE - Single Spade	Series 8	1.91.2
EE - Single Stud	Series 8	1.91.2
UE - Deutsch - <i>IP69K rated</i>	Series 8	1.91.3
PE - Metri-Pack - <i>IP69K rated</i>	Series 8	1.91.3
JE - Amp Junior Timer - <i>IP69K rated</i>	Series 8	1.91.3
S-Coil, Series 8 (Internal Frame) / Data	Series 8	1.92.1
DS - Dual Lead	Series 8	1.92.1
SS - Single Lead	Series 8	1.92.1
BS - Dual Spade	Series 8	1.92.2
AS - Single Spade	Series 8	1.92.2
ES - Single Stud	Series 8	1.92.2
US - Deutsch - <i>IP67 rated</i>	Series 8	1.92.3
HS - DIN 43650	Series 8	1.92.3
C - Conduit	Series 8	1.92.3
K-Coil, Series 10 (External Frame) / Data	Series 10	1.93.1
DE - Dual Lead - <i>IP67 rated</i>	Series 10	1.93.1
SE - Single Lead - <i>IP67 rated</i>	Series 10	1.93.1
BE - Dual Spade	Series 10	1.93.2
AE - Single Spade	Series 10	1.93.2
EE - Single Stud	Series 10	1.93.2
UE - Deutsch - <i>IP69 rated</i>	Series 10	1.93.3
PE - Metri-Pack - <i>IP69 rated</i>	Series 10	1.93.3
JE - Amp Junior Timer - <i>IP69 rated</i>	Series 10	1.93.3
KE - Kostal - <i>IP67 rated</i>	Series 10	1.93.4
HE - DIN 43650	Series 10	1.93.4
S-Coil, Series 10 (Internal Frame) / Data	Series 10	1.94.1
D - Dual Lead	Series 10	1.94.1
S - Single Lead	Series 10	1.94.1
B - Dual Spade	Series 10	1.94.2
E - Single Spade	Series 10	1.94.2
H - DIN 43650	Series 10	1.94.2
C - Conduit	Series 10	1.94.3

2.00.0 CHECK

Check, Direct-Acting



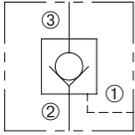
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
1.0	3.8	3500	241	ZCO-42	Zero Profile	2.01.1
5.0	18.9	3500	241	ZCP6	Zero Profile	2.03.1
4.0	15.1	3000	207	ZC-62	Zero Profile	2.07.1
2.0	7.6	1500	103	ZCO-62	Zero Profile	2.08.1
5.0	18.9	3000	207	DCV-080-B	Series 8	2.09.1
20.0	75.7	3000	207	DCV-100-B	Series 10	2.10.1
5.0	18.9	3000	207	DCV-080-PB	Series 8	2.11.1
20.0	75.7	3000	207	DCV-100-PB	Series 10	2.12.1
10.0	37.9	3000	207	DCV-100-P	Series 10	2.14.1

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(continued)

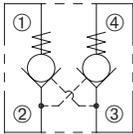
3.00.0 MOTION CONTROL

Check, Pilot-To-Open



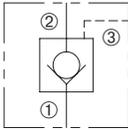
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	4000	276	ZPC2-63	Zero Profile	3.02.1
5.0	18.9	3000	207	DPC-080-P	Series 8	3.03.1
6.0	22.7	3000	207	DPC-100-P	Series 10	3.04.1

Check, Dual Pilot-To-Open



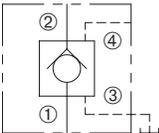
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
2.0	7.6	4000	276	DDPC-080-P	Series 8	3.07.1
6.0	22.7	4000	276	DDPC-100-P	Series 10	3.07.3

Check, Pilot-To-Close



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
3.0	11.4	3000	207	ZPTC-63	Zero Profile	3.08.1
12.0	45.4	3000	207	DPTC-100-P	Series 10	3.09.1

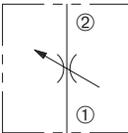
Check, Pilot-To-Open, Vented



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	DPCV-100-P	Series 10	3.11.1

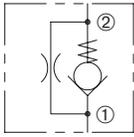
4.00.0 FLOW CONTROL

Needle Valve, Restrictive, Adjustable



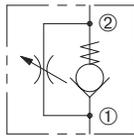
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
11.0	41.6	3000	207	DNV-080	Series 8	4.01.1
12.0	45.4	3000	207	DNV-100	Series 10	4.02.1
13.5	51.1	3000	207	NC-04-S	Series NC	4.04.1
22.5	85.2	3000	207	NC-06-S	Series NC	4.04.1
3.2	12.1	3000	207	NC-10-S	Series NC	4.04.1
7.0	26.5	3000	207	NC-20-S	Series NC	4.04.1
13.5	51.1	3000	207	NC-25-S	Series NC	4.04.1
22.5	85.2	3000	207	NC-30-S	Series NC	4.04.1
34.0	128.7	3000	207	NC-35-S	Series NC	4.04.1
13.5	51.1	5000	345	S-210-S	Series S	4.05.1
25.0	94.6	5000	345	S-310-S	Series S	4.05.1
40.0	151.4	5000	345	S-410-S	Series S	4.05.1
13.5	51.1	5000	345	SM-210-S	Series S	4.05.1
25.0	94.6	5000	345	SM-310-S	Series S	4.05.1
40.0	151.4	5000	345	SM-410-S	Series S	4.05.1

Flow Control, Free Reverse Flow, Fixed



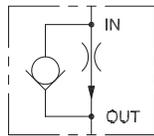
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
4.0	15.2	3000	207	ZFC-62	Zero Profile	4.10.1

Flow Control, Free Reverse Flow, Adjustable



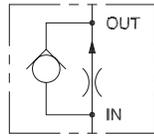
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	DFC-080	Series 8	4.11.1
20.0	75.7	3000	207	DFC-100	Series 10	4.12.1

Flow Regulator, Free Reverse Flow, Pressure-Compensated, Fixed



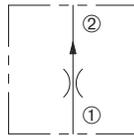
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	PCM88	In-Line	4.13.1

Flow Regulator, Free Reverse Flow, Pressure-Compensated, Fixed



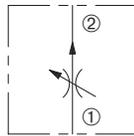
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
24.0	90.8	3000	207	LLPC	In-Line	4.14.1

Flow Regulator, Restrictive, Pressure-Compensated, Fixed



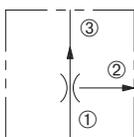
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
2.0	7.6	3000	207	DFR-080-2	Series 8	4.23.1

Flow Regulator, Restrictive, Pressure-Compensated, Adjustable



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
2.0	7.6	3000	207	DFRA-080-2	Series 8	4.24.1
10.0	37.9	3000	207	DFRA-100-2	Series 10	4.26.1

Flow Regulator, Bypass-Type, Pressure-Compensated, Fixed

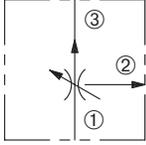


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	DFR-100-3	Series 10	4.30.1
25.0	94.6	3000	207	DFR-120-3	Series 12	4.32.1

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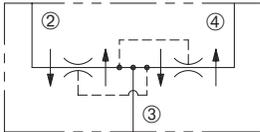
(continued)

Flow Regulator, Bypass-Type, Pressure-Compensated, Adjustable



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	DFRA-100-3	Series 10	4.31.1

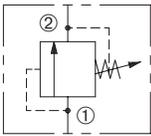
Flow Divider/Combiner, Pressure-Compensated



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
16.0	60.6	3000	207	DFD-100	Series 10	4.40.1

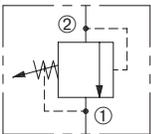
5.00.0 RELIEF

Relief, Direct-Acting, Adjustable, Poppet



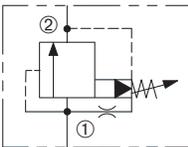
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
2.0	11.4	3200	221	ZRV-63	Zero Profile	5.01.1
10.0	37.9	3000	207	DRV2-080	Series 8	5.02.1
10.0	37.9	3000	207	DRV-080	Series 8	5.02.1
10.0	37.9	3000	207	DRV-100	Series 10	5.04.1

Relief, Direct-Acting, Differential-Area, Adjustable, Poppet



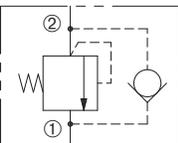
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	3000	207	DDRV-080	Series 8	5.06.1
20.0	75.7	3600	248	DDRV-100	Series 10	5.08.1

Relief, Pilot-Operated, Adjustable



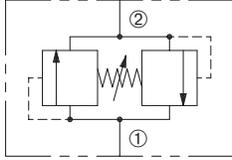
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
20.0	75.7	5000	345	DPOR-080	Series 8	5.09.1
30.0	113.6	5000	345	DPOR2-100	Series 10	5.10.1

Relief, Anti-Cavitation Check



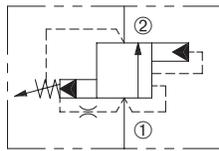
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
16.0	60.6	5500	380	RV-050	Series 050	5.12.1
20.0	75.7	5500	380	RV-060	Series 060	5.12.3
24.0	90.8	5500	380	RV-080	Series 080	5.12.5

Relief, Bi-Directional, Adjustable, Poppet



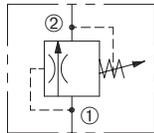
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
15.0	56.8	3600	248	DBRV-100	Series 10	5.13.1
20.0	75.7	5000	345	DBRVS-100	Series 10	5.14.1

Kick-Down Relief, Pilot-Operated, Adjustable



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	37.9	5000	345	DRVK-080	Series 8	5.20.1

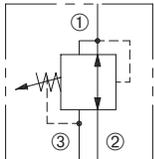
Thermal Relief, Adjustable



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
–	–	6000	414	ZTRV-62	Zero Profile	5.30.1

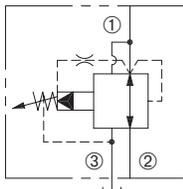
6.00.0 PRESSURE CONTROL

Pressure-Reducing/Relieving, Direct-Acting, Adjustable, Spool



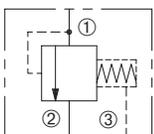
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
4.0	15.1	3000	207	DPR-100	Series 10	6.02.1

Pressure-Reducing/Relieving, Pilot-Operated, Adjustable, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	5000	345	DPRR-080	Series 8	6.03.1

Differential Pressure Sensing, Fixed, Spool



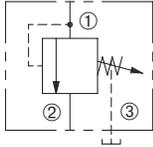
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
20.0	75.7	3000	207	DDPS-100-3NCS	Series 10	6.11.1
50.0	189.3	3000	207	DDPS-160	Series 16	6.13.1

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(continued)

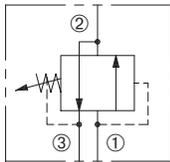
7.00.0 SEQUENCE

Sequence, Direct-Acting, Externally-Drained, Adjustable, Spool



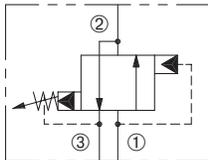
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DPS-100	Series 10	7.02.1

Sequence, Direct-Acting, Adjustable, Spool



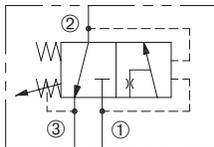
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DPS2-080	Series 8	7.03.1
5.0	18.9	3000	207	DPS2-100	Series 10	7.04.1

Sequence, Pilot-Operated, Adjustable, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	5000	345	DPS3-080	Series 8	7.04.3

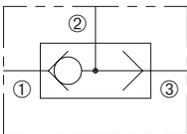
Kick-Down, Sequence, Pilot-Operated, Adjustable, Spool



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	5000	345	DPSK-080	Series 8	7.04.7
5.0	18.9	3000	207	DPSK-100	Series 10	7.05.1
5.0	18.9	3000	207	DPSK2-100	Series 10	7.06.1

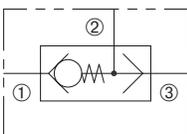
8.00.0 SHUTTLE

Shuttle, Ball-Type



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
4.0	15.1	3000	207	ZSHB-63	Zero Profile	8.02.1
6.0	22.7	3000	207	DSH-100	Series 10	8.05.1

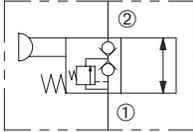
Shuttle, Spring Bias, Zero Leak



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
4.0	15.1	3000	207	ZSH2-63	Zero Profile	8.03.1

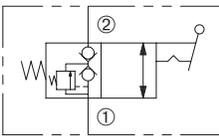
9.00.0 DIRECTIONAL VALVES

Directional, Two-Way, Two-Position, Normally-Closed, Manually-Operated



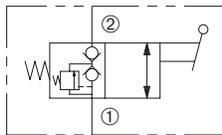
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DMP-080-2NCP	Series 8	9.01.1

Directional, Two-Way, Two-Position, Normally-Closed, Toggle-Operated, Detent



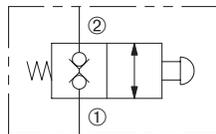
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DTV-080	Series 8	9.03.1

Directional, Two-Way, Two-Position, Normally-Closed, Toggle-Operated



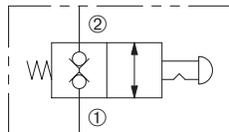
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
6.0	22.7	3000	207	DTV2-080	Series 8	9.04.1

Directional, Two-Way, Two-Position, Normally-Closed, Mechanically-Operated, Zero Leak



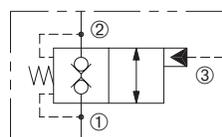
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	3000	207	DMR2-080	Series 8	9.05.1

Directional, Two-Way, Two-Position, Normally-Closed, Manually-Operated



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
5.0	18.9	3000	207	DMO-080-2NCSP	Series 8	9.07.1

Directional, Pilot-To-Open, Poppet

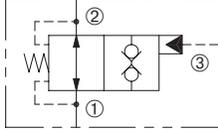


Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
8.0	30.4	3000	207	DPOD-100S-2NCP	Series 10	9.10.1

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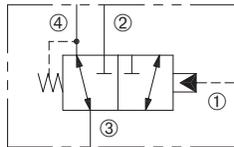
(continued)

Directional, Pilot-To-Close, Poppet



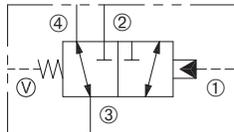
Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	38.9	3000	207	DPOD-100S-2NOP	Series 10	9.12.1

Directional, Three-Way, Two-Position, Pilot-Operated



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	38.9	3000	207	DPOD-100-3	Series 10	9.20.1

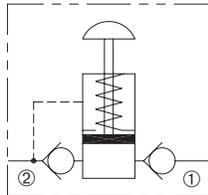
Directional, Three-Way, Two-Position, Pilot-Operated, Externally Vented



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
10.0	38.9	3000	207	DPOD2-100-3	Series 10	9.22.1

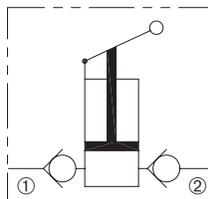
10.00.0 HAND PUMPS

Hand Pump, Nominal Flow 0.083 cu. in.



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
–	–	3000	207	DHP3-100	Series 10	10.01.1

Hand Pump, Nominal Flow 0.500 cu. in.



Flow		Pressure		Model	Series	Page
gpm	lpm	psi	bar			
–	–	3000	207	DHP-100	Series 10	10.02.1

11.00.0 TECHNICAL DATA

Recommended Filtration	11.01.1
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Cartridge Valve Cavities	Series	Page
Zero Profile Cavities		
Cavity Machining Details and Tooling, ZP42 Cavity	Zero Profile	11.04.2
Cavity Machining Details and Tooling, ZP43 Cavity	Zero Profile	11.04.3
Cavity Machining Details and Tooling, ZP62 Cavity	Zero Profile	11.06.2
Cavity Machining Details and Tooling, ZP63 Cavity	Zero Profile	11.06.3
Series 8 Cavities		
Cavity Machining Details and Tooling, 080-2 Cavity	Series 8	11.08.2
Pilot Piston Kits, Cavity Machining Details and Tooling, 080-2P Cavity	Series 8	11.08.2P
Cavity Machining Details and Tooling, 080-3 Cavity	Series 8	11.08.3
Cavity Machining Details and Tooling, 080-4 Cavity	Series 8	11.08.4
Series 10 Cavities		
Cavity Machining Details and Tooling, 100-2 Cavity	Series 10	11.10.2
Pilot Piston Kits, Cavity Machining Details and Tooling, 100-2P Cavity	Series 10	11.10.2P
Cavity Machining Details and Tooling, 100-3 Cavity	Series 10	11.10.3
Cavity Machining Details and Tooling, 100-3S Cavity	Series 10	11.10.3S
Cavity Machining Details and Tooling, 100-4 Cavity	Series 10	11.10.4
Cavity Machining Details and Tooling, 100-4L Cavity	Series 10	11.10.4L
Special Cavities		
Cavity Machining Details and Tooling, 120-3 Cavity	Series 12	11.12.3
Cavity Machining Details and Tooling, 160-3S Cavity	Series 16	11.16.3S
Cavity Machining Details and Tooling, NC10, NC20, NC25, NC30, NC35	Series NC	11.21.1
Cavity Machining Details and Tooling, NC4T Cavity	Series NC	11.21.2
Cavity Machining Details and Tooling, NC6T Cavity	Series NC	11.21.3
Cavity Machining Details and Tooling, S210, S310, S410 Cavities	Series S	11.22.1
Cavity Machining Details and Tooling, R05-2 Cavity	Series 050	11.25.2
Cavity Machining Details and Tooling, R06-2 Cavity	Series 060	11.26.2
Cavity Machining Details and Tooling, R08-2 Cavity	Series 080	11.28.2

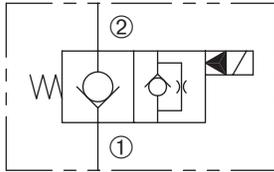
Model Number Index	11.90.1
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Warranty And Customer Commitment	11.99.1
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DSV-080-2NCP

Normally-Closed, Two-Way, Two-Position,
Pilot-Operated Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

When de-energized, the DSV-080-2NCP acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①. When energized, the poppet lifts to open the ② to ① flow path.

Operation of Manual Override Option M: To override, push button in, twist counterclockwise and release. In this position, the valve will remain open. To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position. **Option MP, MF, MM:** To override, pull spring-loaded knob/adaptor on top of valve. Release to return to normal operation.

FEATURES and BENEFITS

- 4000 psi (276 bar) rating.
- Continuous-duty solenoid.
- Hardened poppet and plunger for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Low leak option available.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 4000 psi (276 bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)
Low leakage available-

Less than 2 drops/min max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 4000 psi (276 bar)
Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 16 m. sec. **Drop-Out:** 12 VDC 18 m. sec.

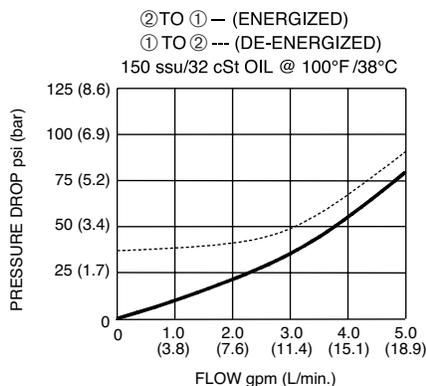
Recommended Filtration: Critical Application-ISO 17/15/13
Non-Critical Application-ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

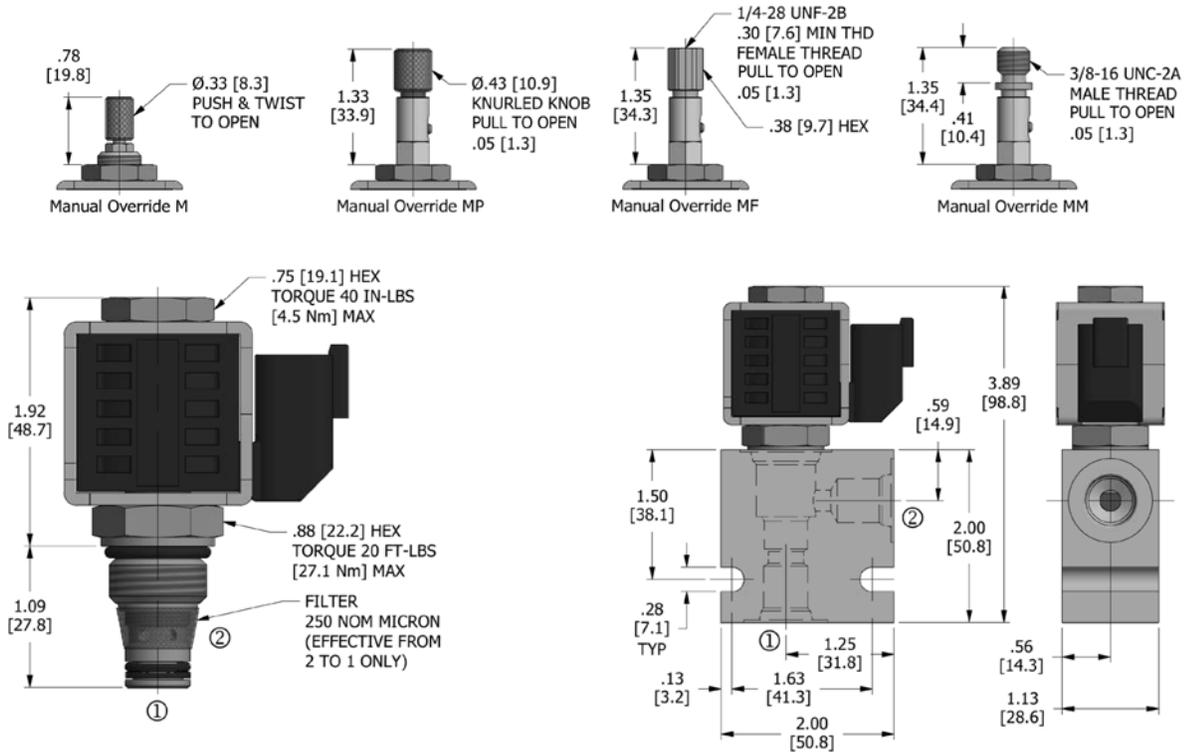
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
ally rated at 3000 psi (207 bar).

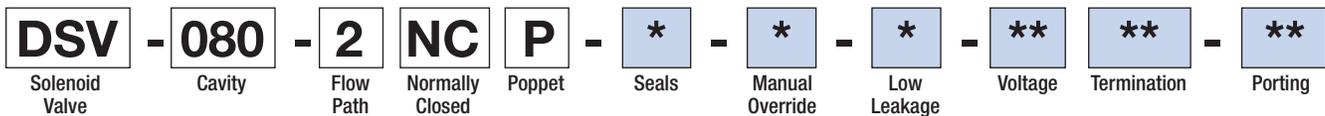
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Manual Override	
omit	No manual override
M	Manual override
MP	Knurled Knob Pull
MF	Female Pull 1/4-28 UNF
MM	Male Pull 3/8-16 UNC

Low Leakage	
omit	Standard leakage
L	Low leakage

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <small>IP69K</small>	US	Deutsch
PE <small>IP69K</small>		Metri-Pack
JE <small>IP69K</small>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit <small>Duty Rating: Intermittent</small>
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

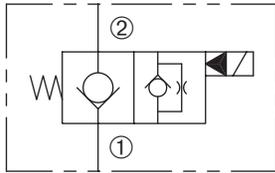
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-2NCP

Normally-Closed, Two-Way, Two-Position,
Pilot-Operated Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

When de-energized, the DSV2-100-2NCP acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①. When energized, the poppet lifts to open the ② to ① flow path.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain open in a detented condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened poppet and plunger for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 16 gpm (60.6 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 100 m. sec. **Drop-Out:** 12 VDC 180 m. sec.

Recommended Filtration: Critical Application-ISO 17/15/13

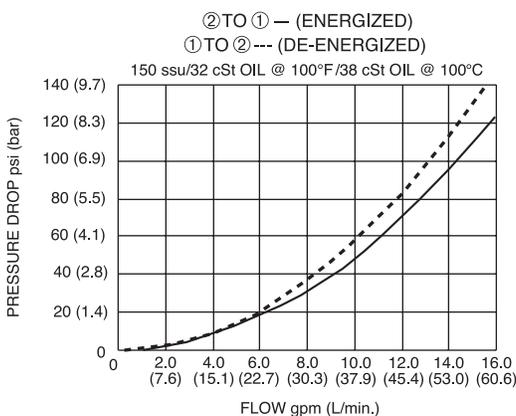
Non-Critical Application-ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

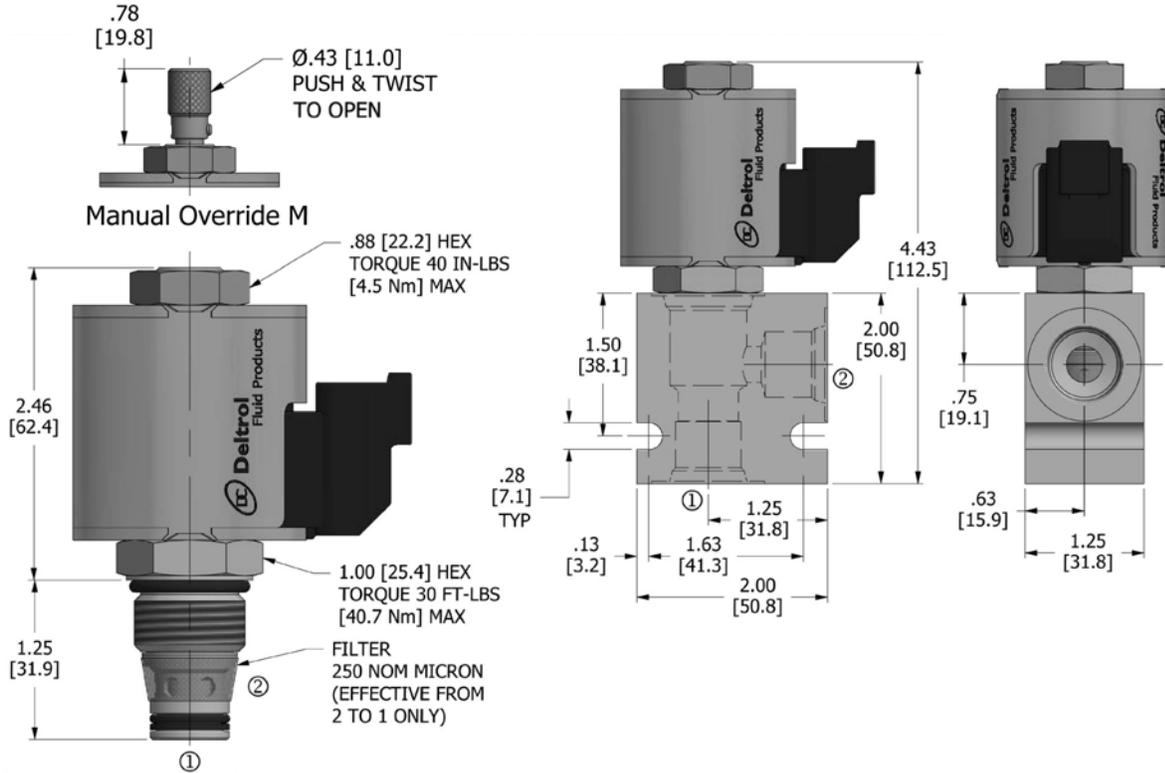
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

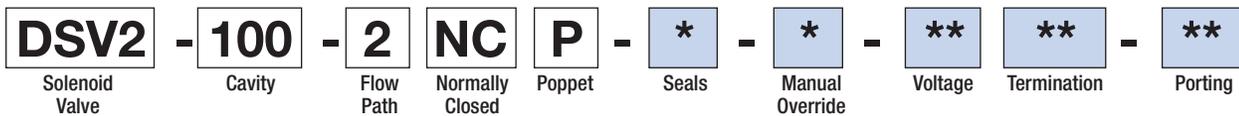
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

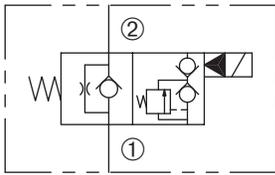
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV3-080-2NOP

Normally-Open, Two-Way, Two-Position,
Poppet-Type Solenoid Valve

SERIES 8



DESCRIPTION

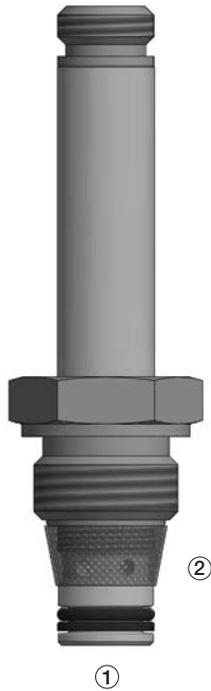
A cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

When de-energized, the DSV3-080-2NOP poppet is open to allow flow from ② to ①.

When energized, the poppet closes to block flow from ② to ①. In this condition, the cartridge allows reverse flow from ① to ② after overcoming the solenoid force of 75 psi (5 bar).

Operation of Manual Override Option: To override, push knob in, twist clockwise and release. In this position, the valve will remain closed. To return to normal operation, push knob in, twist counterclockwise and release. Override will be detented in this position.



FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened poppet and plunger for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3500 psi (241 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 25 m. sec. **Drop-Out:** 12 VDC 30 m. sec.

Recommended Filtration: Critical Application-ISO 17/15/13

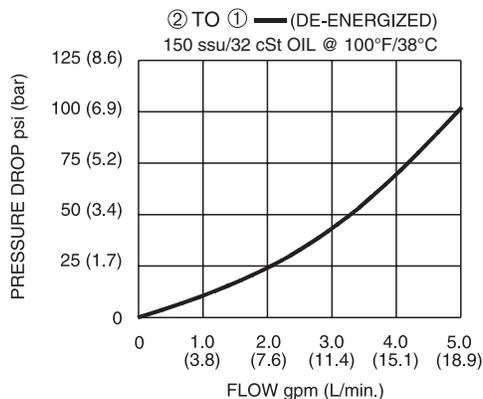
Non-Critical Application-ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

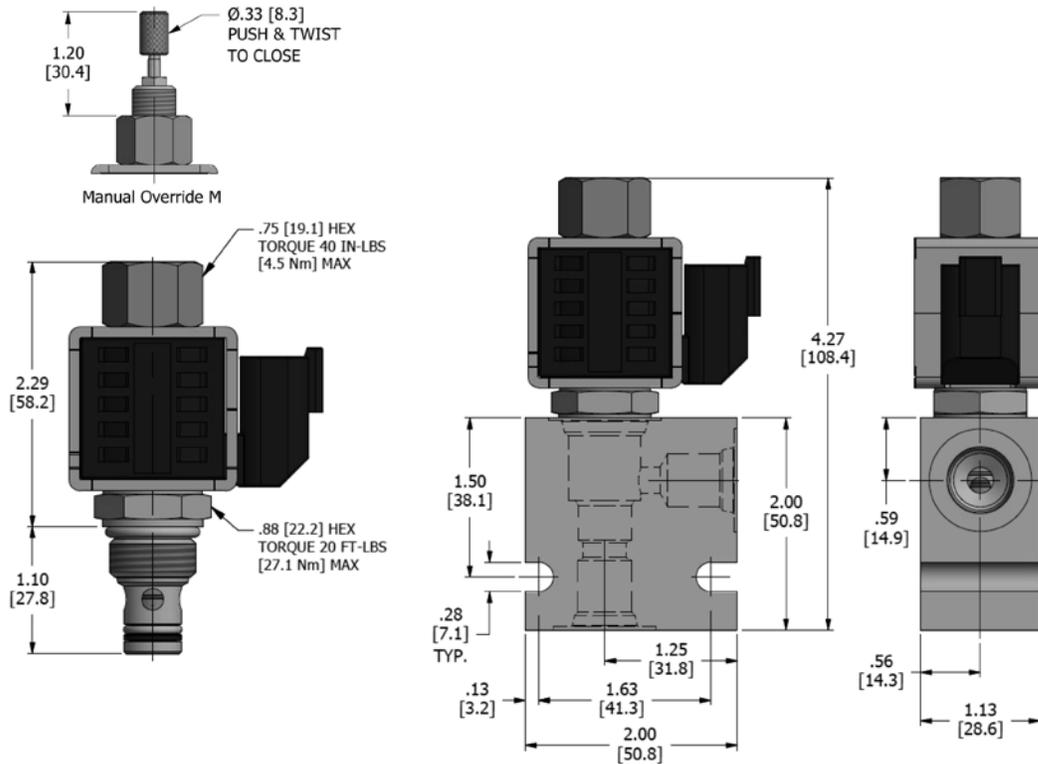
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3500 psi (241 bar).

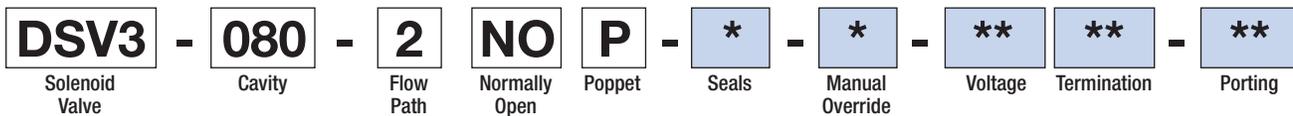
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Filter	
omit	No Filter
F	Filter

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE IP69K	US	Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10239-11	10239-11	coil retainer nut

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-2-2N
3N	3/8 PTF		B-080-2-3N
4T	SAE 4		B-080-2-4T
6T	SAE 6		B-080-2-6T

† Other options available – consult factory

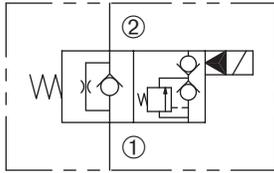
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-2NOP

Normally-Open, Two-Way, Two-Position,
Poppet-Type Solenoid Valve

SERIES 10



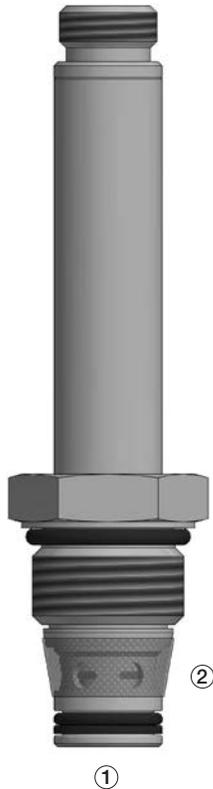
DESCRIPTION

A cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

When de-energized, the DSV2-100-2NOP poppet is open to allow flow from ② to ①.

When energized, the poppet closes to block flow from ② to ①. In this condition, the cartridge allows reverse flow from ① to ② after overcoming the solenoid force - 50 psi (3 bar).



FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened poppet and plunger for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 16 gpm (60.6 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 25 m. sec. **Drop-Out:** 12 VDC 30 m. sec.

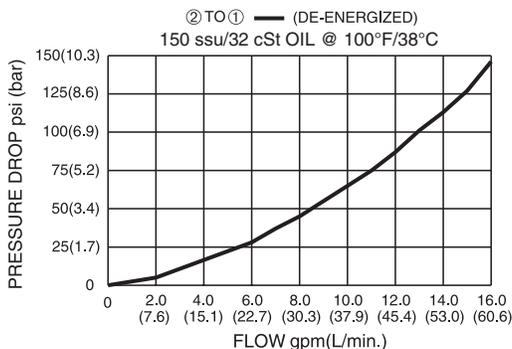
Recommended Filtration: Critical Application-ISO 17/15/13
Non-Critical Application-ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

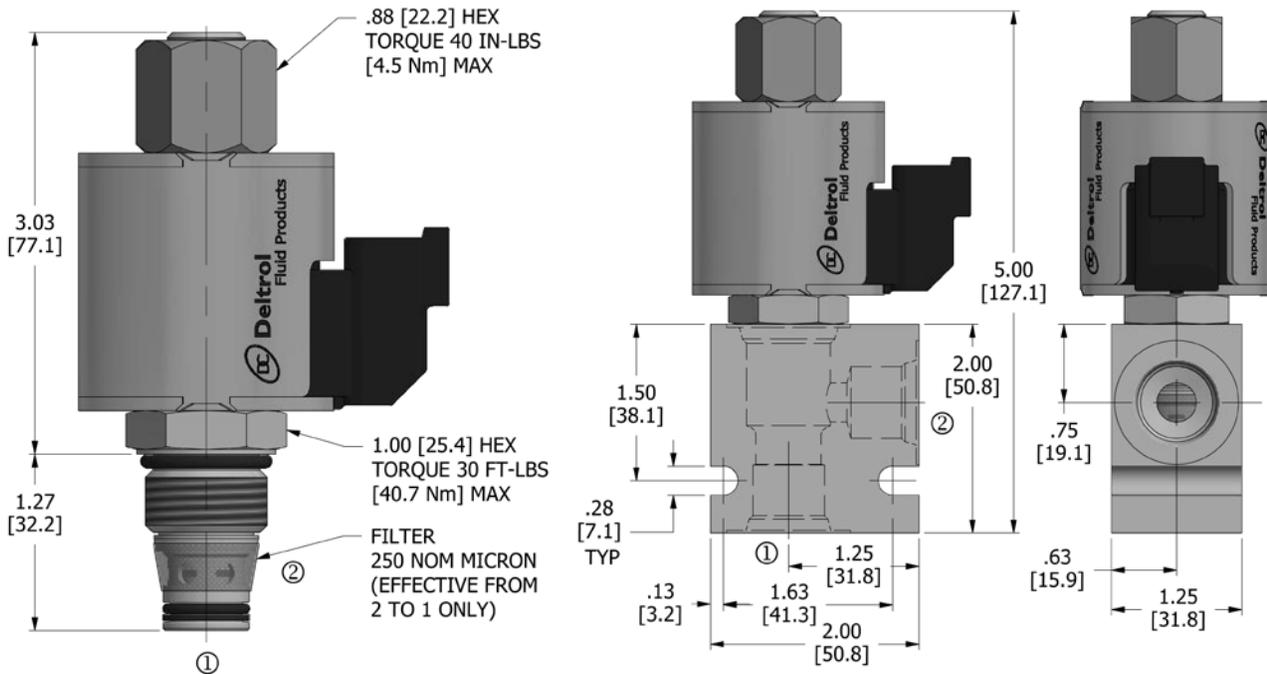
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

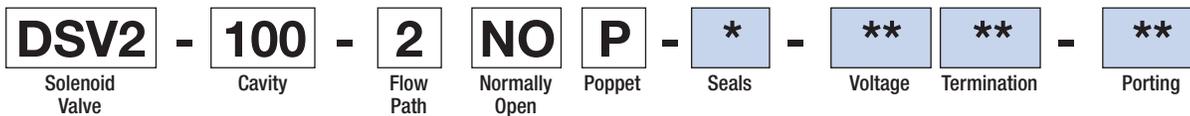
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE IP69K		Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-2-2N
3N	3/8 PTF		B-100-2-3N
6T	SAE 6		B-100-2-6T
8T	SAE 8		B-100-2-8T

10149-10 | 10149-10 | coil retainer nut

† Other options available – consult factory

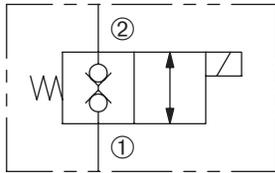
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV-080-2NCSP

Normally-Closed, Two-Way, Two-Position,
Bi-Directional Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed with positive shut off, blocking in both directions, to be used in load holding applications.

OPERATION

When de-energized, the DSV-080-2NCSP blocks flow in both directions.

When energized, the poppet shifts to allow flow in either direction.

Operation of Manual Override Option: To override, push button in to activate. To return to normal valve function, release button.



FEATURES and BENEFITS

- Continuous-duty solenoid.
- Uses Size 10 coils.
- Hardened poppet and seat for long life and low leakage.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Low leak valve available.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Low leakage available -

Less than 2 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 41 m. sec. **Drop-Out:** 12 VDC 30 m. sec.

Recommended Filtration: Critical Application – ISO 17/15/13

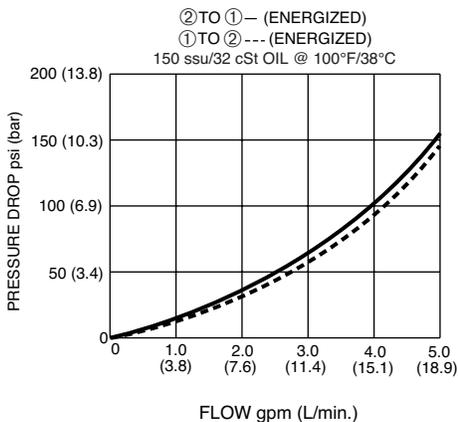
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

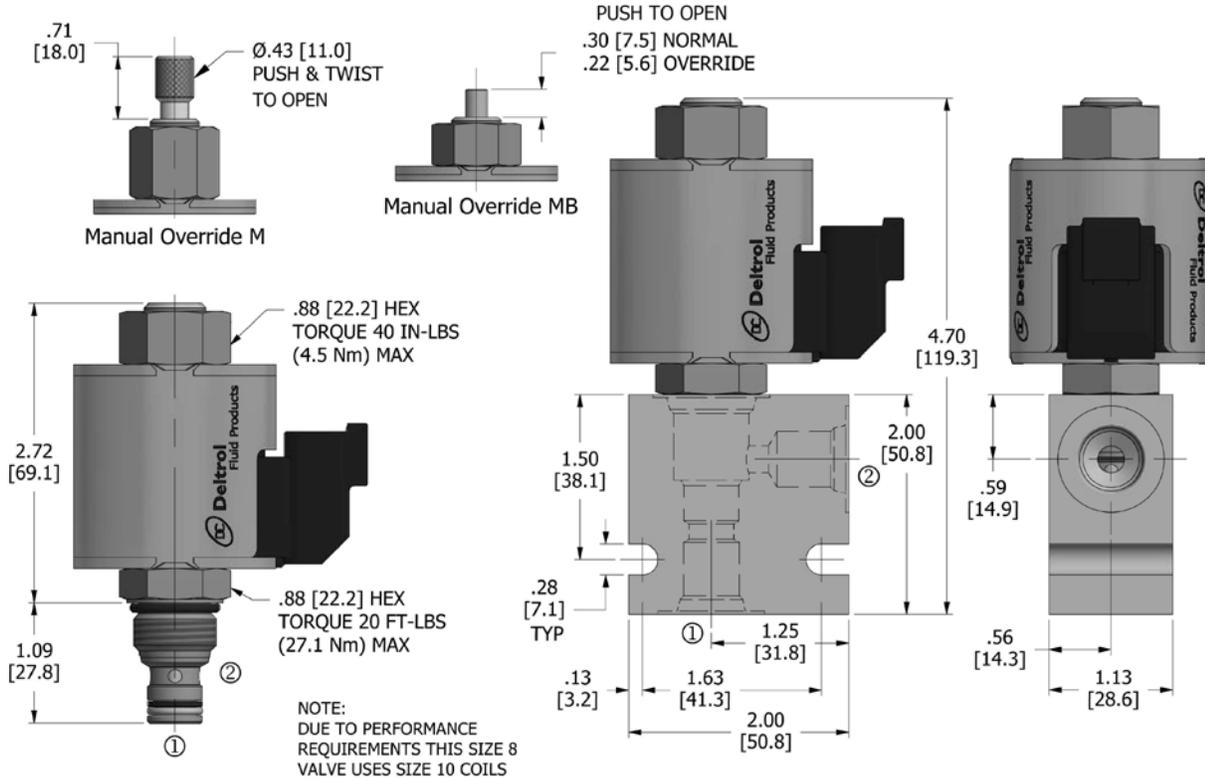
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

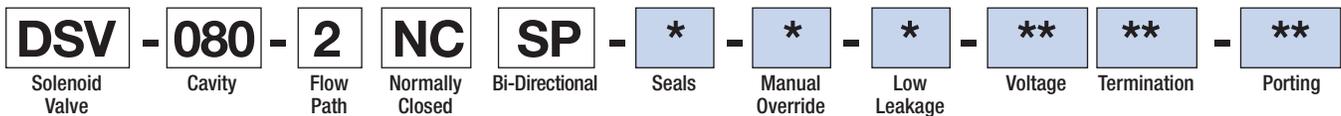
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Manual Override	
omit	No manual override
M	Manual override
MB	Push

Low Leakage	
omit	Standard leakage
L	Low leakage

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/c Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-2-2N
3N	3/8 PTF		B-080-2-3N
4T	SAE 4		B-080-2-4T
6T	SAE 6		B-080-2-6T

10146-04 10146-04 coil retainer nut
 Valve uses Series 10 Coils

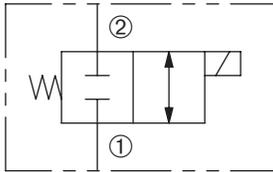
† Other options available – consult factory
 Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.
 All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-080-2NCS

Normally-Closed, Two-Way, Two-Position,
Spool-Type Solenoid Valve



SERIES 8



DESCRIPTION

A cartridge valve designed to operate as a bi-directional blocking valve.

OPERATION

When de-energized, the DSV2-080-2NCS blocks flow in both directions.

When energized, the cartridge's spool shifts to allow flow in either direction.

Operation of Manual Override Option M: To override, push button in, twist counterclockwise and release. In this position, the valve will remain open. To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position. **Option MP, MF, MM:** To override, pull spring-loaded knob/adaptor on top of valve. Release to return to normal operation.



FEATURES and BENEFITS

- Both ports may be fully pressurized.
- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 85 m. sec. **Drop-Out:** 12 VDC 95 m. sec.

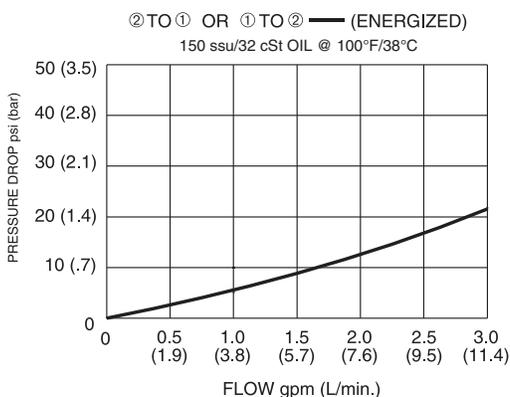
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

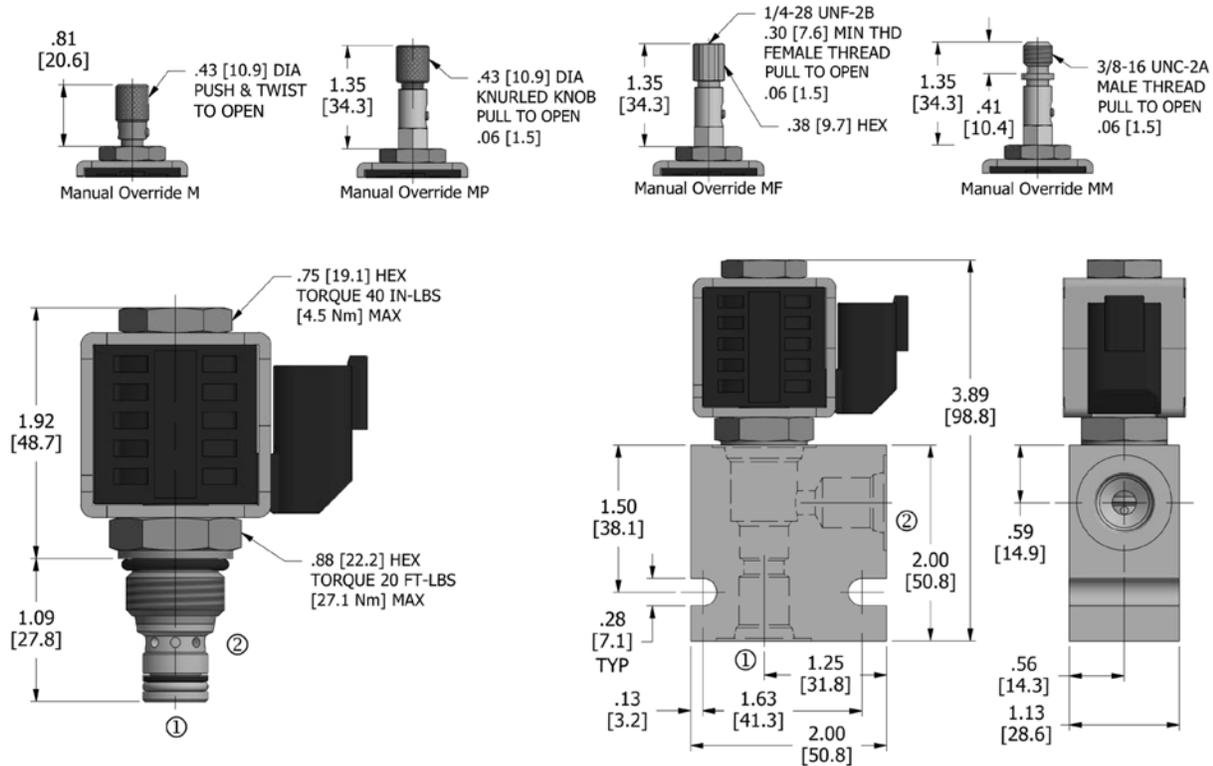
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Manual Override	
omit	No manual override
M	Manual override
MP	Knurled Knob Pull
MF	Female Pull 1/4-28 UNF
MM	Male Pull 3/8-16 UNC

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE IP69K	US	Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

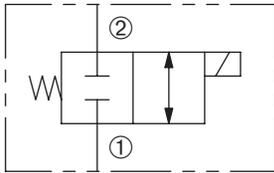
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-2NCS

Normally-Closed, Two-Way, Two-Position,
Spool-Type Solenoid Valve



SERIES 10



DESCRIPTION

A cartridge valve designed to operate as a bi-directional blocking valve.

OPERATION

When de-energized, the DSV2-100-2NCS blocks flow in both directions.

When energized, the cartridge's spool shifts to allow flow in either direction.

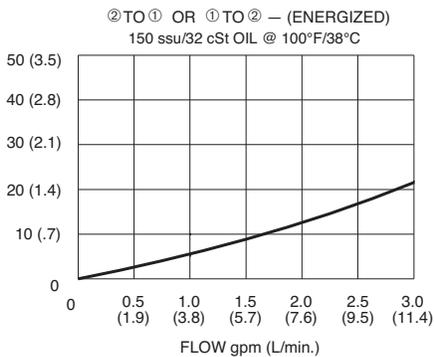
Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain open in a detented condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

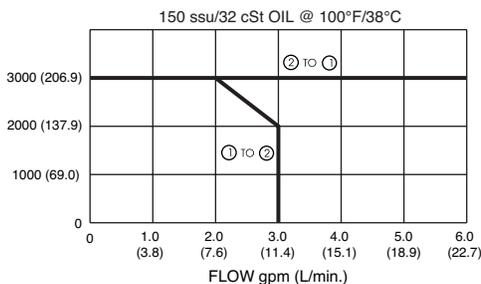
FEATURES and BENEFITS

- Both ports may be fully pressurized.
- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

PRESSURE DROP VS. FLOW



PERFORMANCE CHARACTERISTIC



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PERFORMANCE CHARACTERISTIC graph.
Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

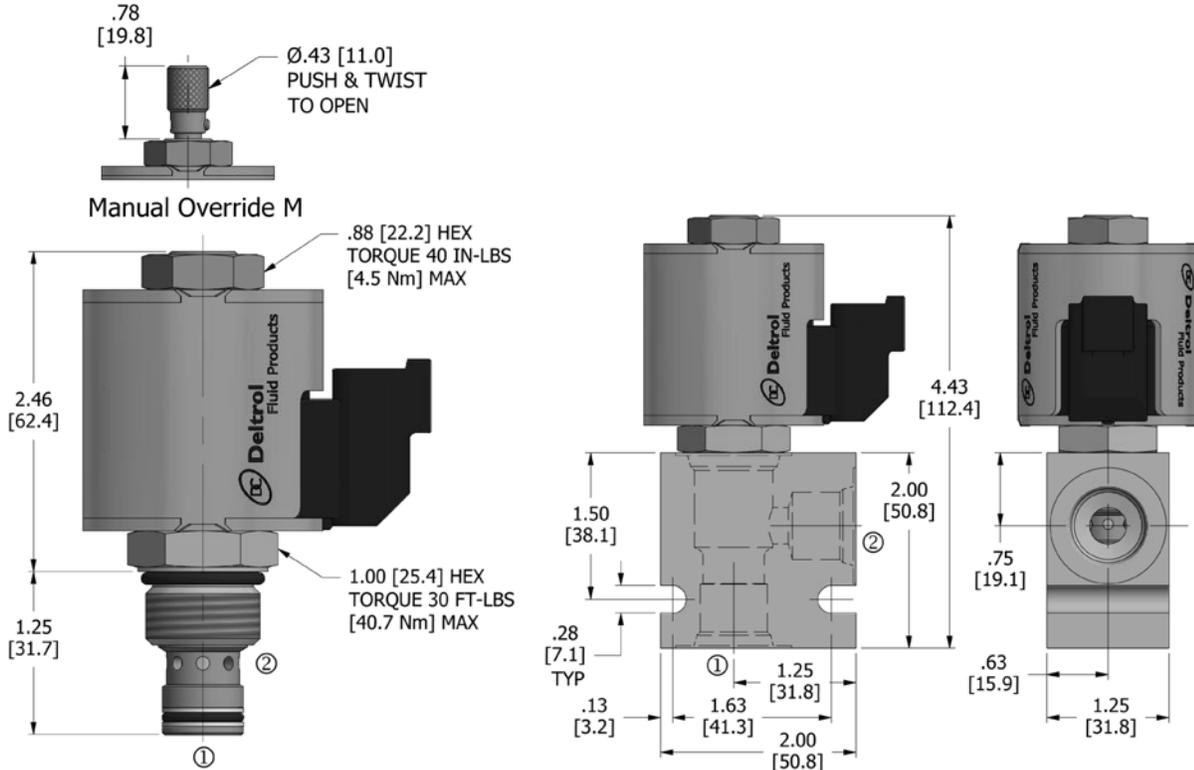
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-B
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE IP69K		Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-2-2N
3N	3/8 PTF		B-100-2-3N
6T	SAE 6		B-100-2-6T
8T	SAE 8		B-100-2-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

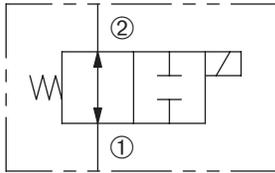
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-080-2NOS

Normally-Open, Two-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed to operate as a bi-directional blocking valve.

OPERATION

When de-energized, the DSV2-080-2NOS allows flow in both directions.

When energized, the cartridge's spool shifts to block flow in either direction.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain closed in a detented condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.



FEATURES and BENEFITS

- Both ports may be fully pressurized.
- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 85 m. sec. **Drop-Out:** 12 VDC 95m. sec.

Recommended Filtration: ISO 17/15/13

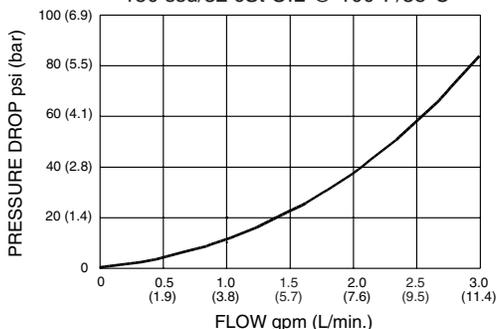
Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

Cavity/Cavity Tool: 080-2, see page 11.08.2

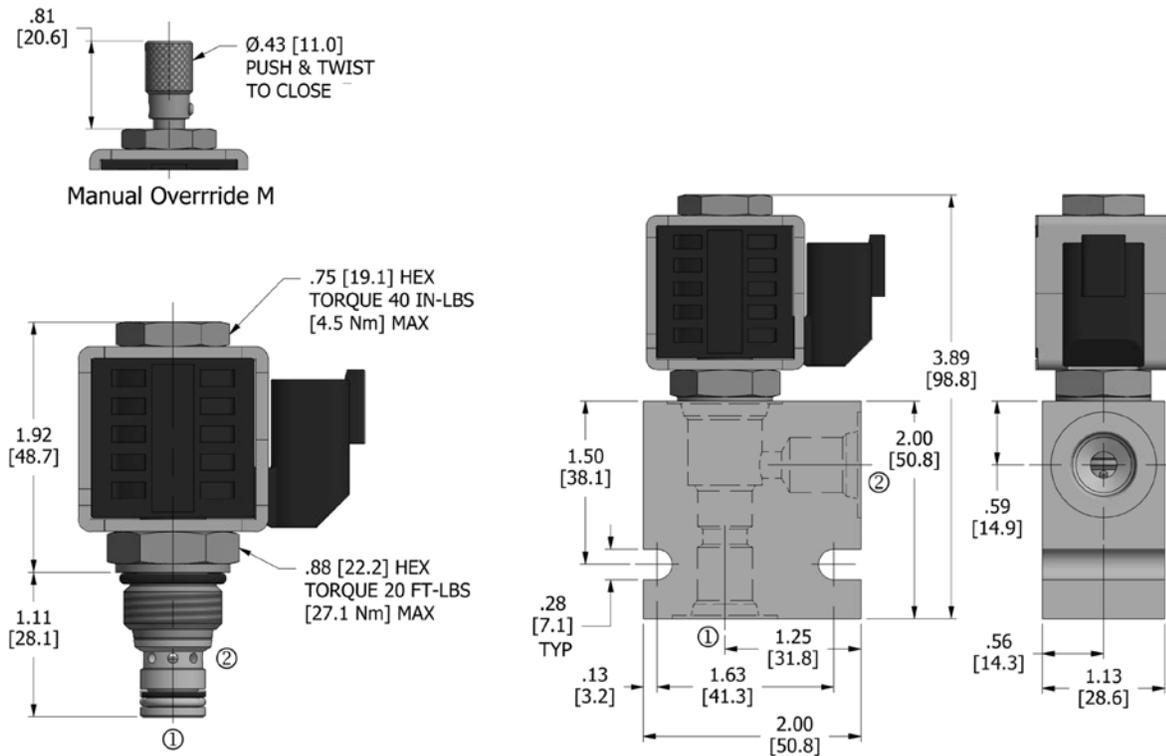
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

② TO ① OR ① TO ② — (DE-ENERGIZED)
150 ssu/32 cSt OIL @ 100°F/38°C



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE IP69K	US	Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

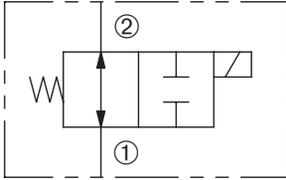
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-2NOS

Normally-Open, Two-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to operate as a bi-directional blocking valve.

OPERATION

When de-energized, the DSV2-100-2NOS allows flow in both directions.

When energized, the cartridge's spool shifts to block flow in either direction.

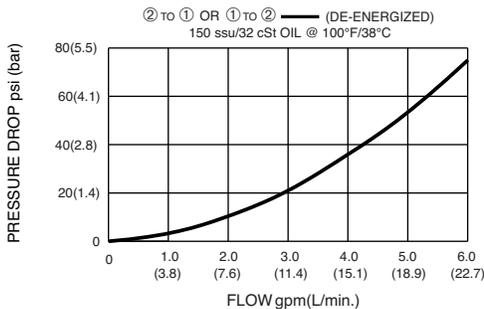
Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain closed in a detented condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

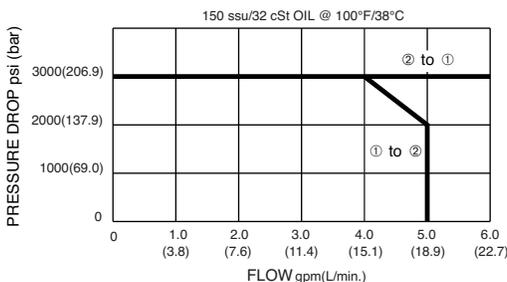
FEATURES and BENEFITS

- Both ports may be fully pressurized.
- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

PRESSURE DROP VS. FLOW



PERFORMANCE CHARACTERISTIC



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PERFORMANCE CHARACTERISTIC graph.
Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

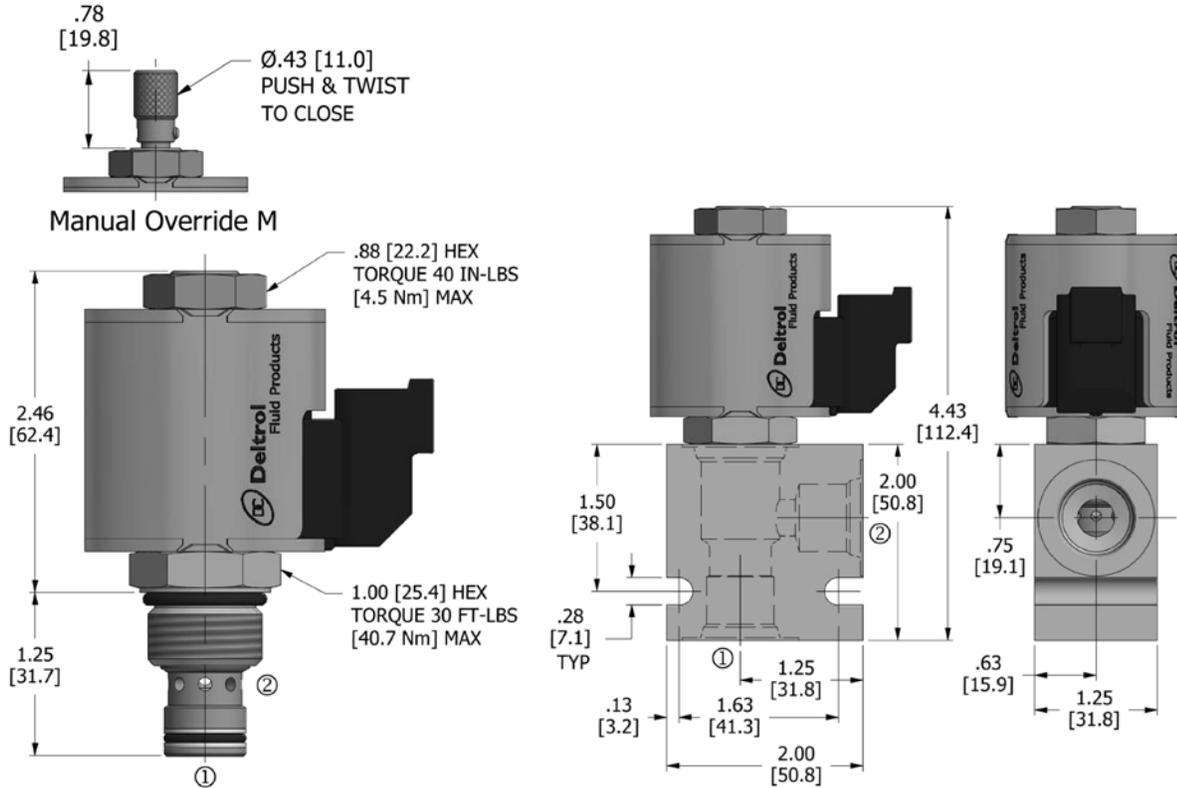
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-B
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE IP69K		Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-2-2N
3N	3/8 PTF		B-100-2-3N
6T	SAE 6		B-100-2-6T
8T	SAE 8		B-100-2-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

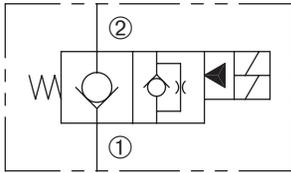
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DDSV-080-2NCP

Normally-Closed, Two-Way, Two-Position,
Dual-Coil, Pilot-Operated Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed with positive shut off, low leakage, to be used in load holding applications where system requires redundant methods of operation.

OPERATION

When de-energized, the DDSV-080-2NCP acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①.

When either the top primary or bottom redundant coil is energized, the poppet lifts to open the ② to ① flow path.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Efficient wet-armature construction.
- Hardened poppet and seat for long life.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Filter screen standard.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

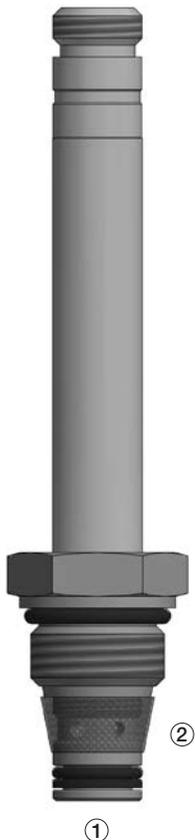
Pull-In: 12 VDC 16 m. sec. **Drop-Out:** 12 VDC 18 m. sec.

Recommended Filtration: Critical Application – ISO 17/15/13
Non-Critical Application – ISO 20/18/14

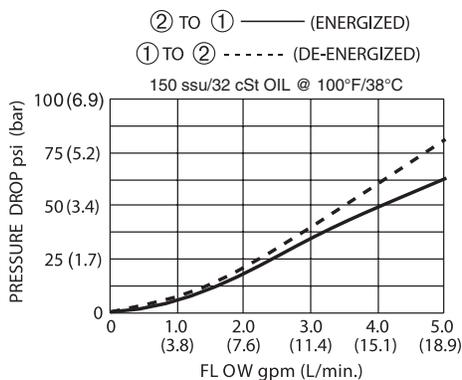
Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 080-2, see page 11.08.2

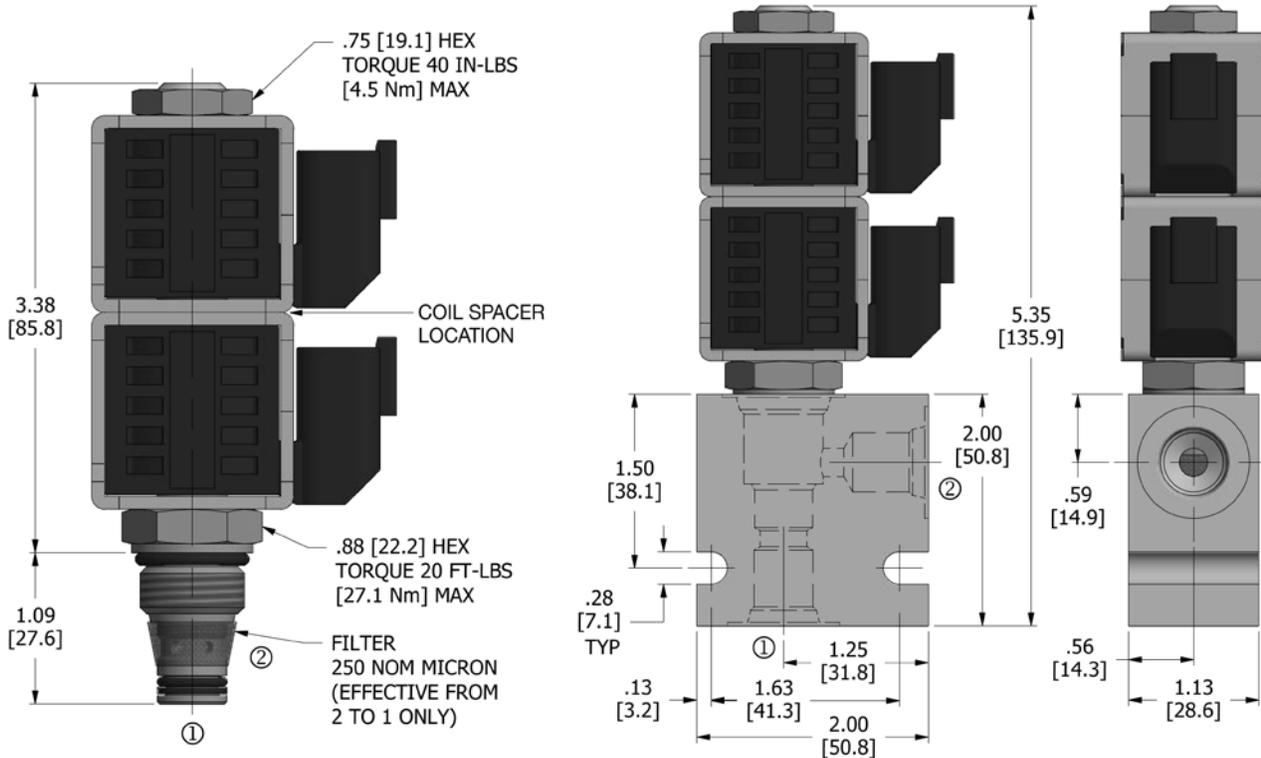
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).



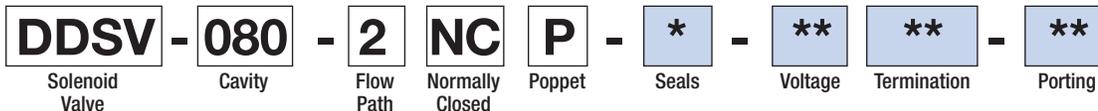
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	XS	Coil Spacer only
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <small>IP69K</small>	US	Deutsch
PE <small>IP69K</small>		Metri-Pack
JE <small>IP69K</small>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit <small>Duty Rating: Intermittent</small>
10234-41	10234-41	coil retainer nut
n/a	10172-60	coil spacer

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
6T	SAE 6	B-080-2-6T
8T	SAE 8	B-080-2-8T

† Other options available – consult factory

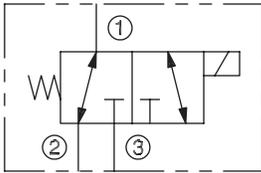
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-080-3

Three-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed as a three-way, spool-type, directional control valve.

OPERATION

When de-energized, the DSV2-080-3 allows flow between ② and ①, while blocking flow at ③.

When energized, the cartridge's spool shifts to allow flow between ① and ③ while blocking flow at ②.

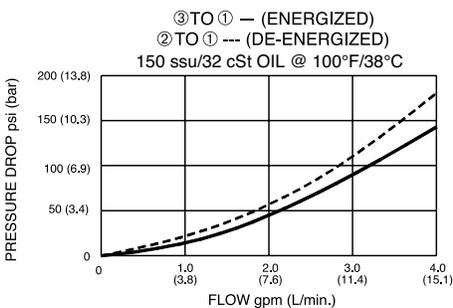
Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

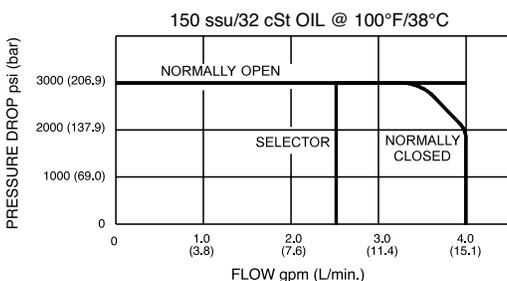
FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

PRESSURE DROP VS. FLOW



PERFORMANCE CHARACTERISTIC



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 4 gpm (15.1 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 40 m. sec. **Drop-Out:** 12 VDC 8 m. sec.

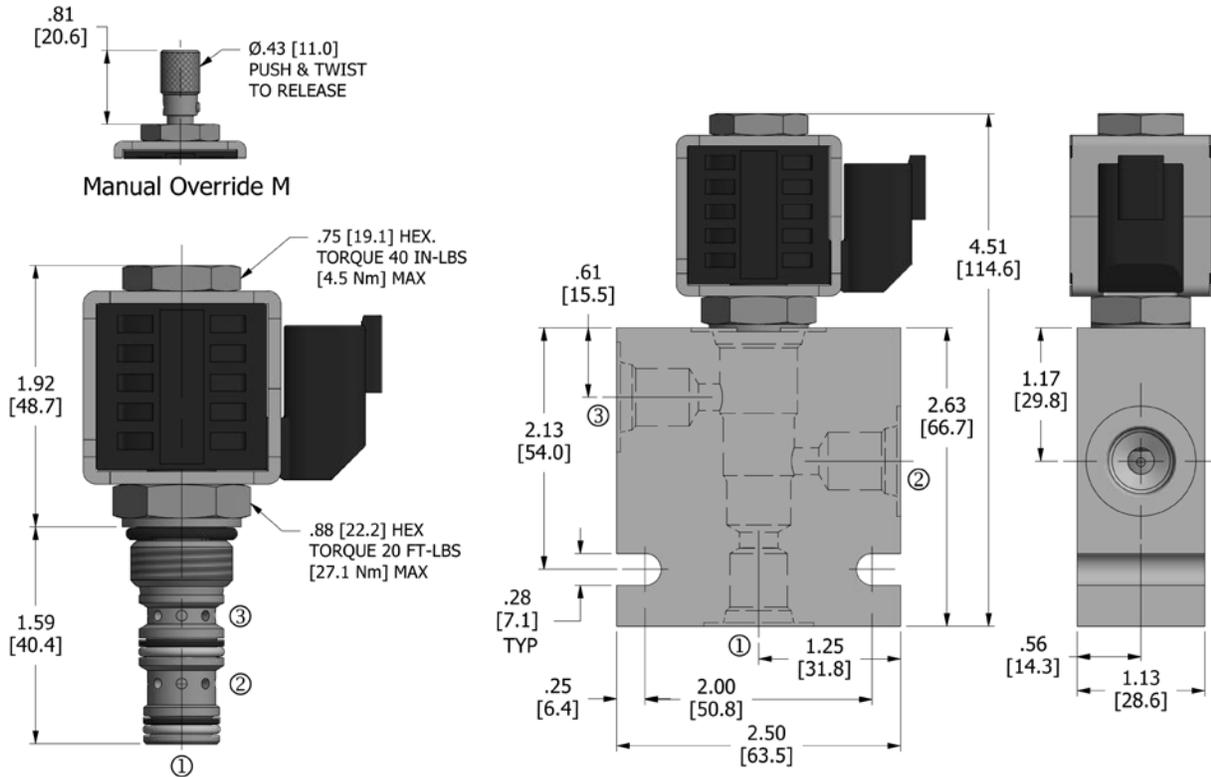
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

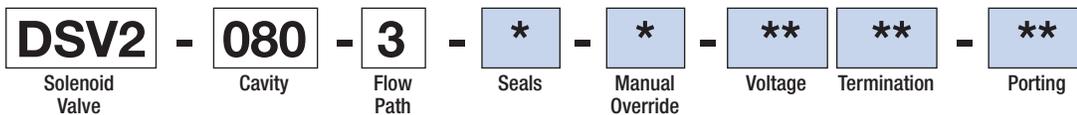
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <i>IP69K</i>	US	Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

† Other options available – consult factory

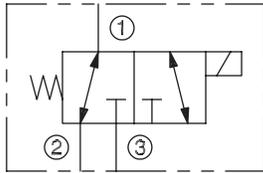
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-3

Three-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a three-way, spool-type, directional control valve.

OPERATION

When de-energized, the DSV2-100-3 allows flow between ② and ①, while blocking flow at ③.

When energized, the cartridge's spool shifts to allow flow between ① and ③ while blocking flow at ②.

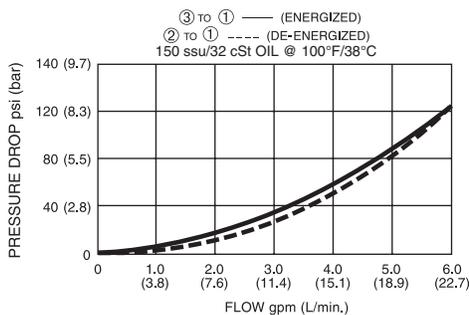
Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

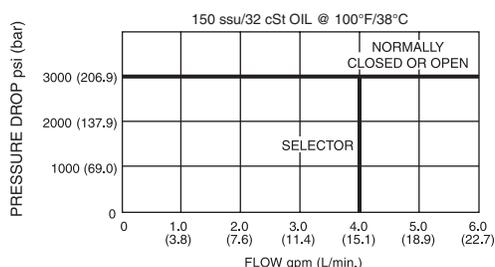
FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

PRESSURE DROP VS. FLOW



PERFORMANCE CHARACTERISTIC



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage
supplied at 80% of nominal flow rating.

Pull-In: 12 VDC 95 m. sec. **Drop-Out:** 12 VDC 80 m. sec.

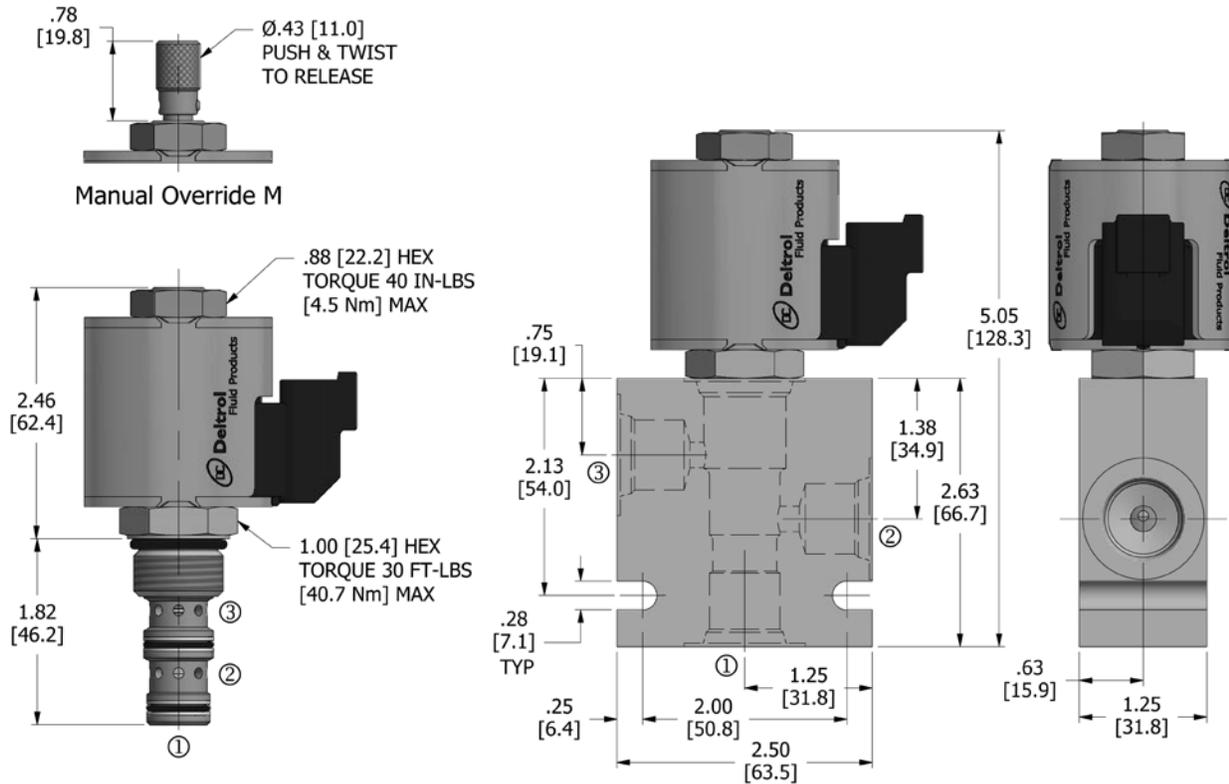
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

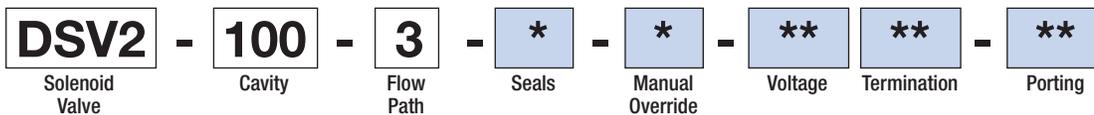
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage [†]	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination [†]		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <small>IP69K</small>		Deutsch
PE <small>IP69K</small>		Metri-Pack
JE <small>IP69K</small>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting [†]		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

10243-72 | 10243-72 | coil retainer nut

[†] Other options available – consult factory

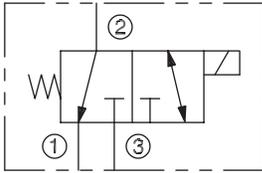
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-080-3B

Three-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed as a three-way, spool-type, directional control valve.

OPERATION

When de-energized, the DSV-080-3B allows flow from ② to ①, while blocking flow at ③.

When energized, the cartridge's spool shifts to allow flow between ② and ③ while blocking flow at ①.

Operation of Manual Override Option: To override, push button in to activate. To return to normal valve function, release button.



FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage
supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 45 m. sec. **Drop-Out:** 12 VDC 57 m. sec.

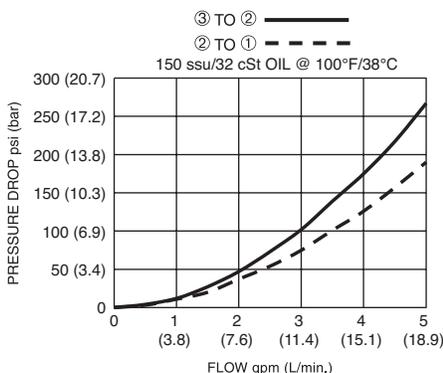
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

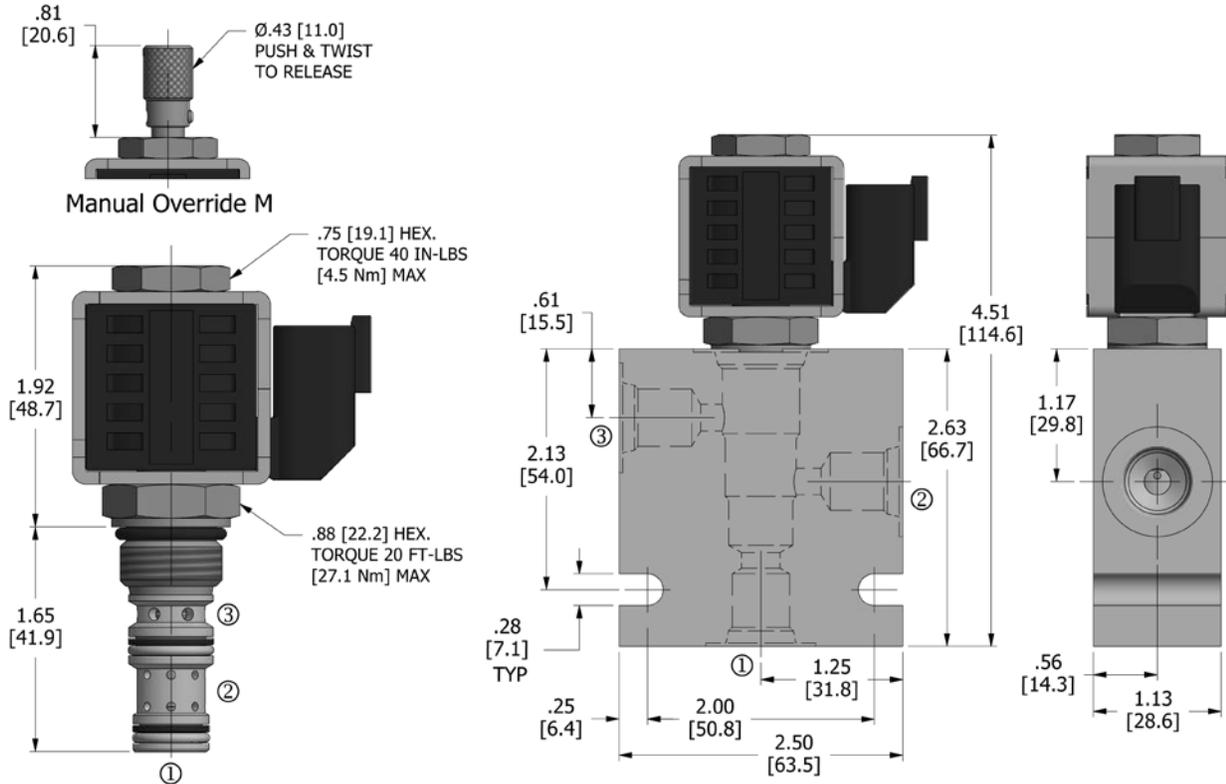
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

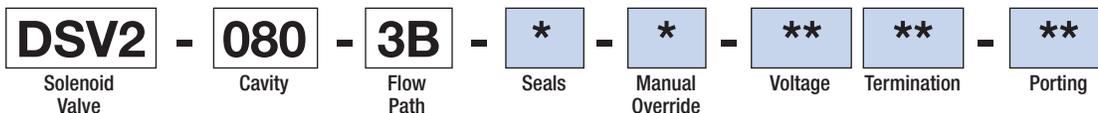
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <small>IP69K</small>	US	Deutsch
PE <small>IP69K</small>		Metri-Pack
JE <small>IP69K</small>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit <small>Duty Rating: Intermittent</small>
10234-41	10234-41	coil retainer nut

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

† Other options available – consult factory

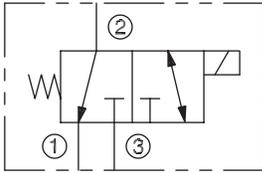
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-3B

Three-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a three-way, spool-type, directional control valve.

OPERATION

When de-energized, the DSV2-100-3B allows flow from ② to ①, while blocking flow at ③.

When energized, the cartridge's spool shifts to allow flow between ② and ③ while blocking flow at ①.

Operation of Manual Override Option: To override, push button in to activate. To return to normal valve function, release button. To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 95 m. sec. **Drop-Out:** 12 VDC 85 m. sec.

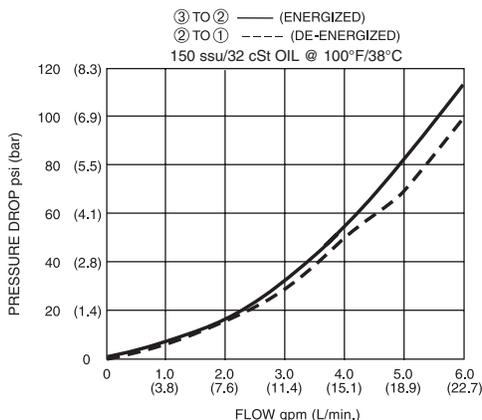
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

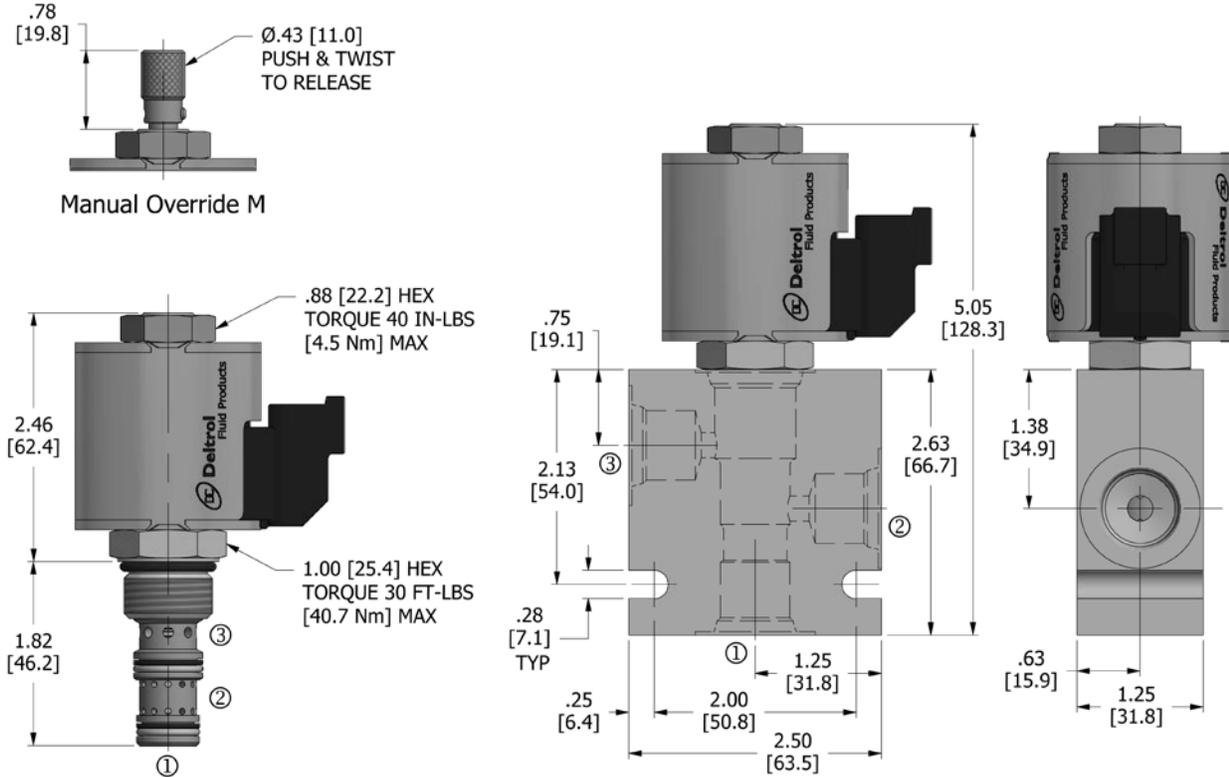
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

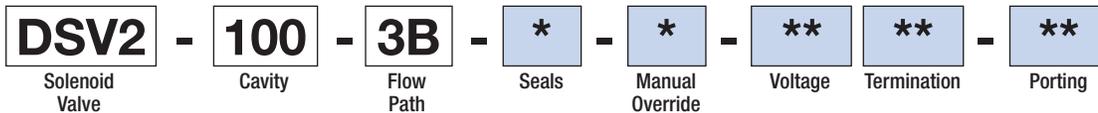
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage [†]	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination [†]		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting [†]			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-3-2N
3N	3/8 PTF		B-100-3-3N
6T	SAE 6		B-100-3-6T
8T	SAE 8		B-100-3-8T

10243-72 | 10243-72 | coil retainer nut

[†] Other options available – consult factory

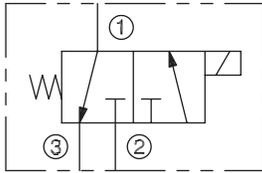
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-3D

Three-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a three-way, spool-type, directional control valve.

OPERATION

When de-energized, the DSV2-100-3D allows flow from ① to ③, while blocking flow at ②.

When energized, the cartridge's spool shifts to allow flow from ② and ① while blocking flow at ③.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 100 m. sec. **Drop-Out:** 12 VDC 85 m. sec.

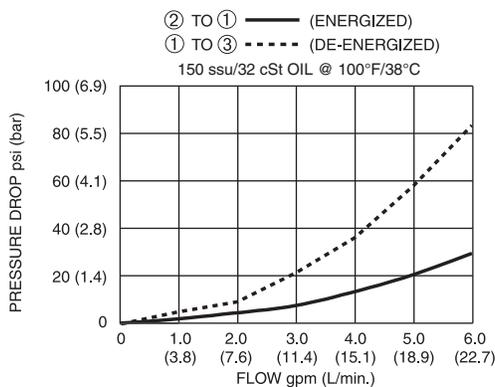
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

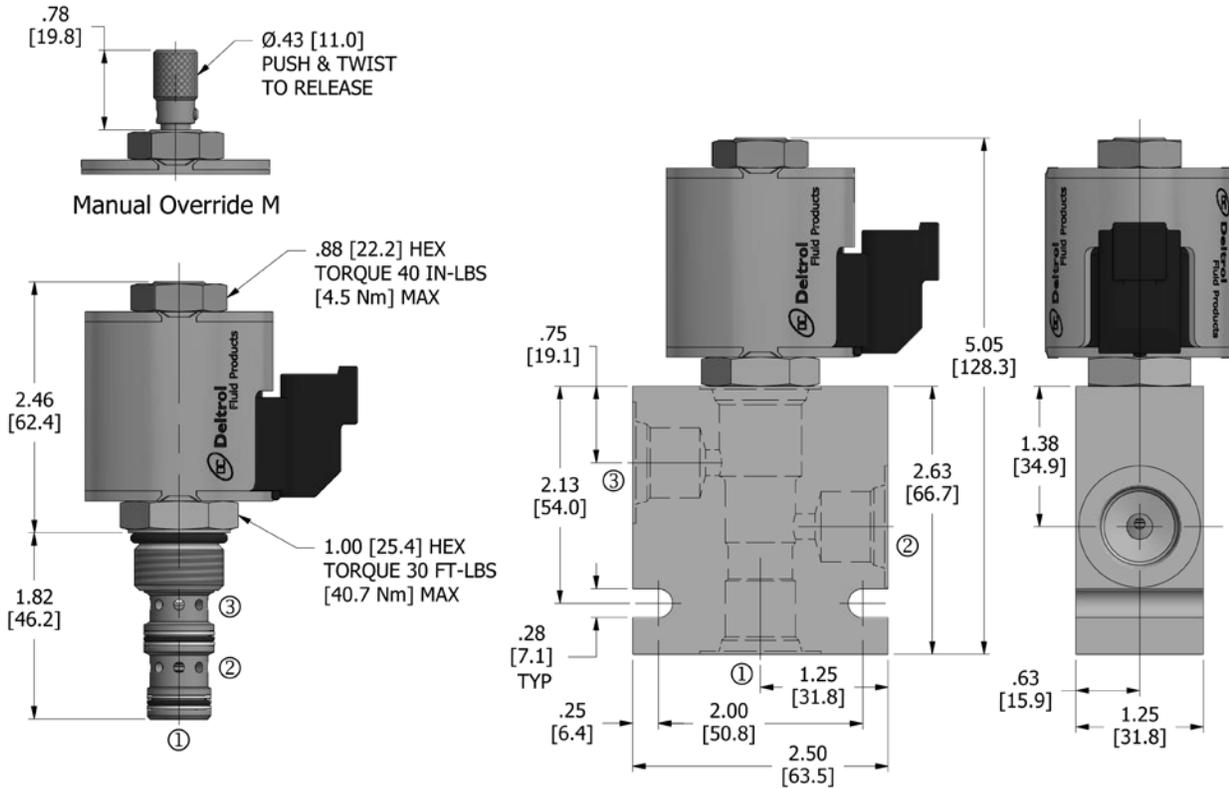
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

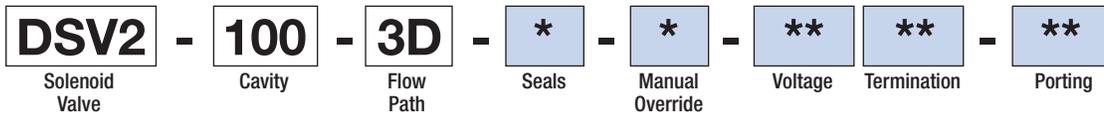
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-3-2N
3N	3/8 PTF		B-100-3-3N
6T	SAE 6		B-100-3-6T
8T	SAE 8		B-100-3-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

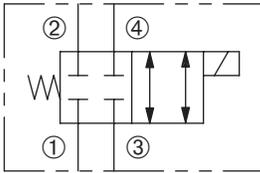
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

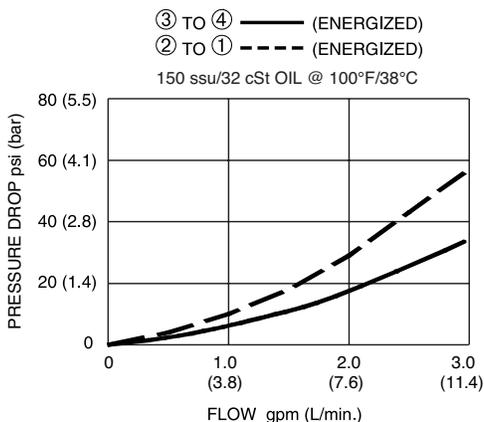
DSV2-080-4NC

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve with all ports normally-closed. This valve is commonly used in a circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When de-energized, the DSV2-080-4NC flow paths are blocked. When energized, the cartridge's spool shifts and allows flow from ③ to ④ and from ② to ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.

at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 35 m. sec. **Drop-Out:** 12 VDC 20 m. sec.

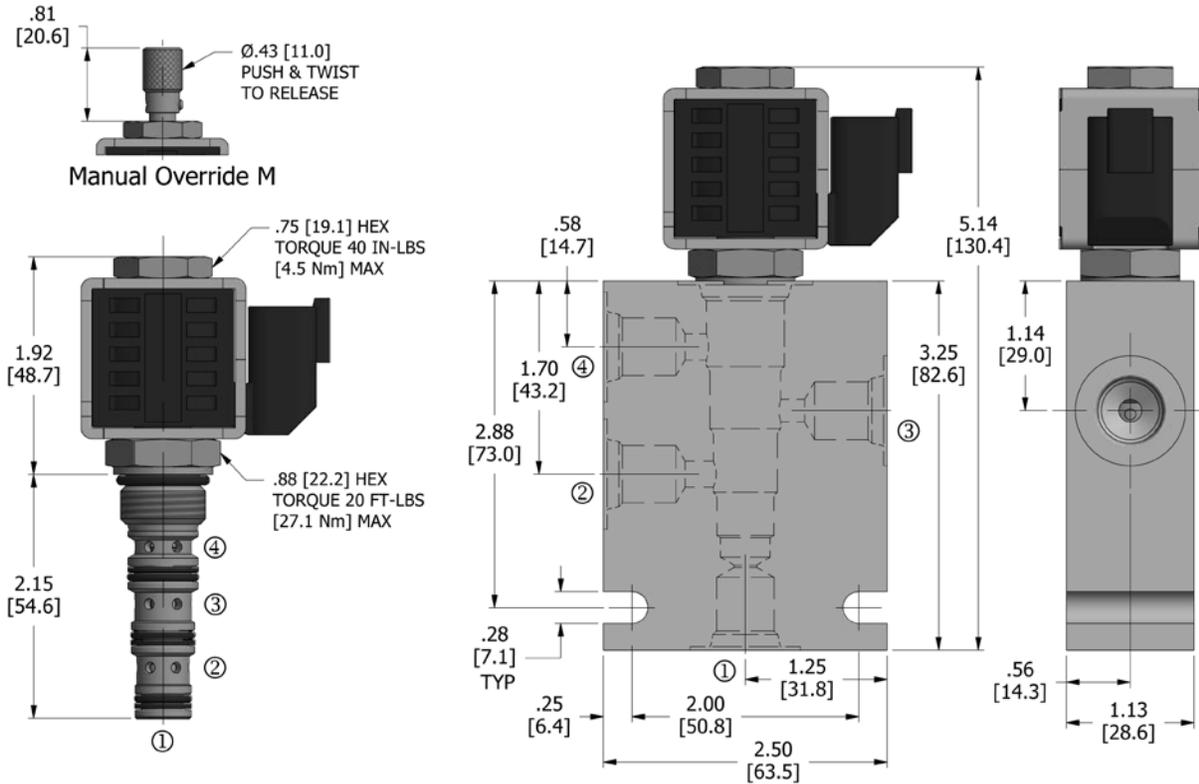
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

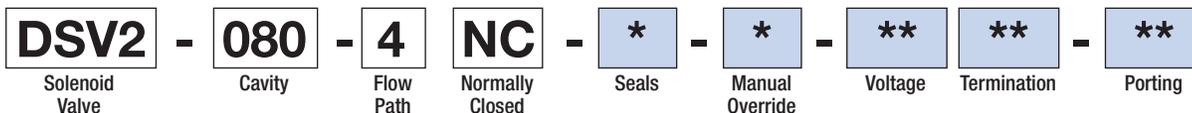
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-4-N-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <i>IP69K</i>	US	Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-4-2N
3N	3/8 PTF	B-080-4-3N
4T	SAE 4	B-080-4-4T
6T	SAE 6	B-080-4-6T

† Other options available – consult factory

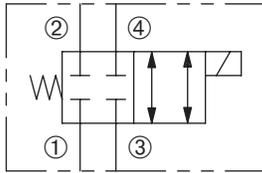
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV2-100-4NC

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve with all ports normally-closed. This valve is commonly used in a circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When de-energized, the DSV2-100-4NC flow paths are blocked. When energized, the cartridge's spool shifts and allows flow from ③ to ④ and from ② to ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm) max. at

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 100 m. sec. **Drop-Out:** 12 VDC 85 m. sec.

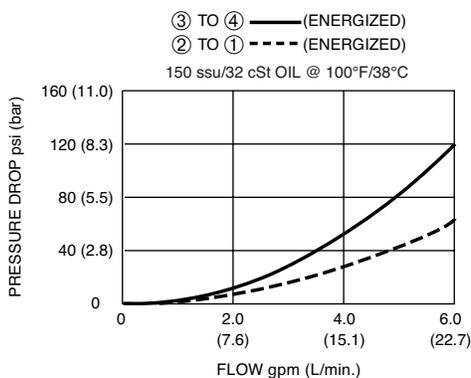
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

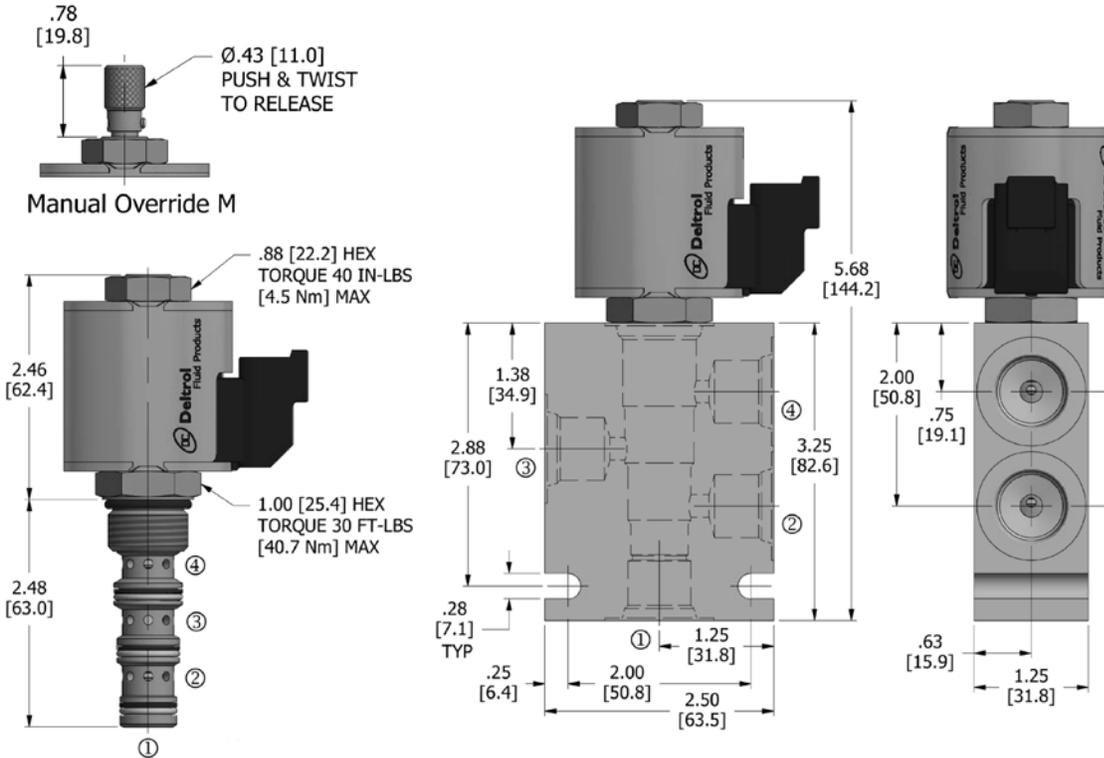
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

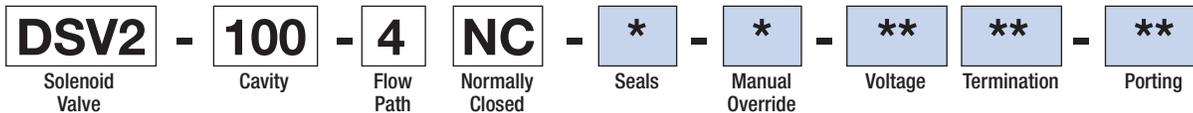
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-4-2N
3N	3/8 PTF		B-100-4-3N
6T	SAE 6		B-100-4-6T
8T	SAE 8		B-100-4-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

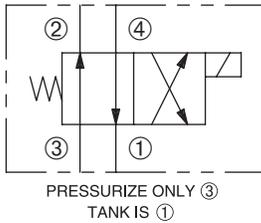
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

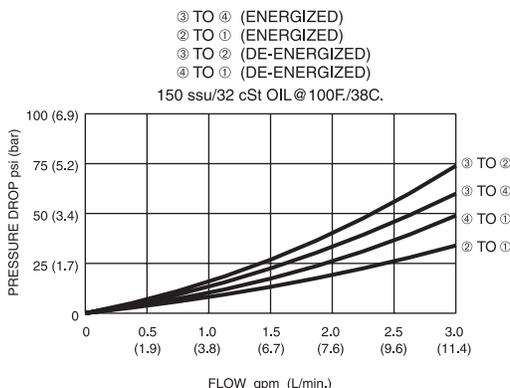
DSV2-080-4CO

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve with all ports normally-open. This valve is commonly used in a circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When de-energized, the DSV2-080-4CO allows flow from ③ to ② and from ④ to ①.

When energized, the cartridge's spool shifts and allows flow from ③ to ④ and from ② to ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 12 m. sec. **Drop-Out:** 12 VDC 7 m. sec.

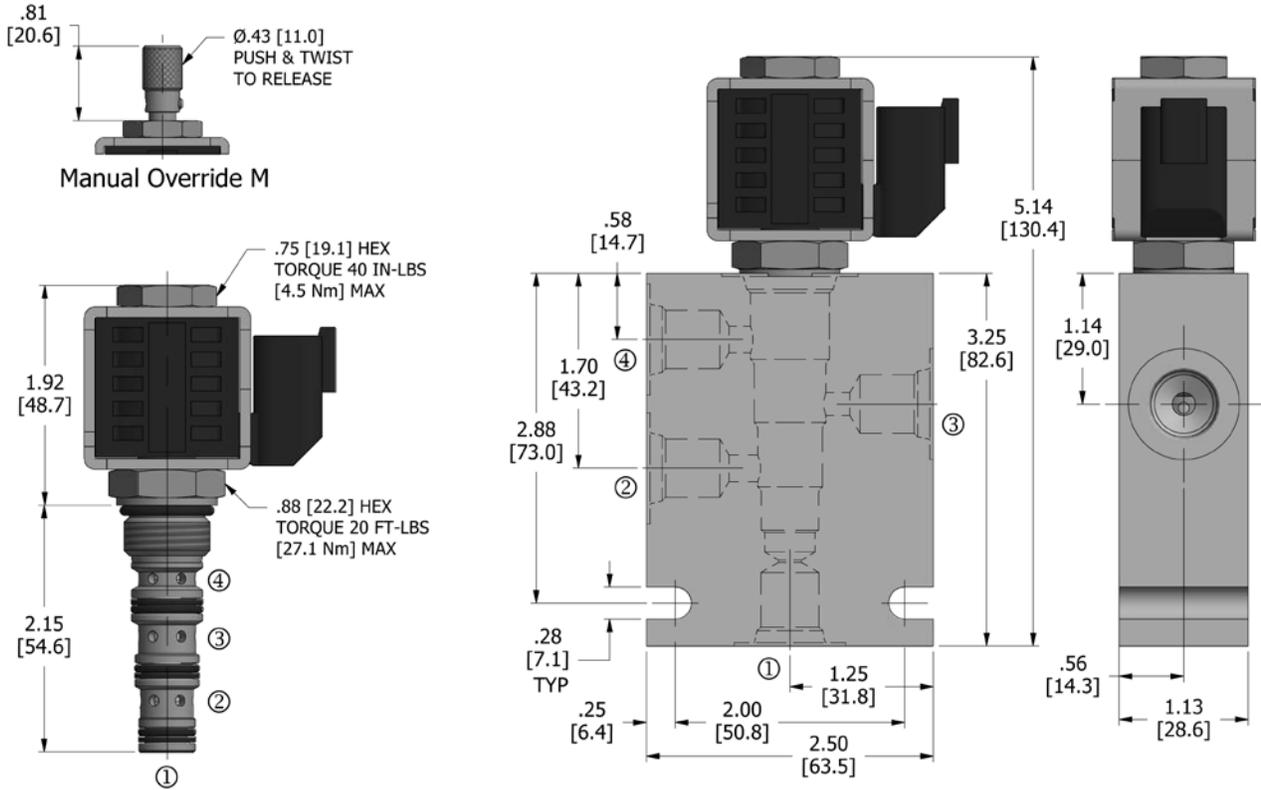
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

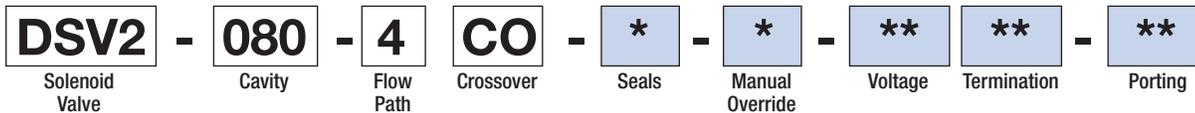
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-4-N-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <small>IP69K</small>	US	Deutsch
PE <small>IP69K</small>		Metri-Pack
JE <small>IP69K</small>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit <small>Duty Rating: Intermittent</small>
10234-41	10234-41	coil retainer nut

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-080-4-2N
3N	3/8 PTF	B-080-4-3N
4T	SAE 4	B-080-4-4T
6T	SAE 6	B-080-4-6T

† Other options available – consult factory

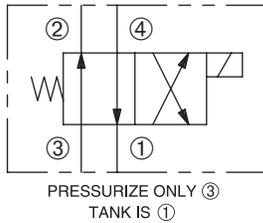
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

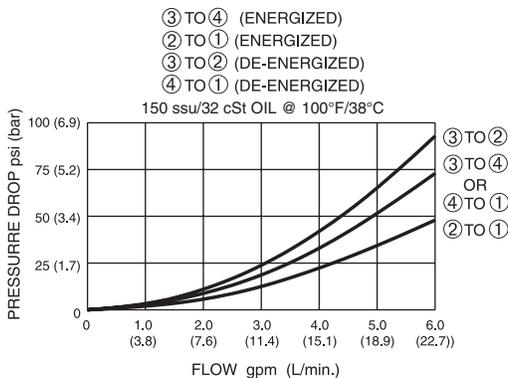
DSV2-100-4CO

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 10



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve with all ports normally-open. This valve is commonly used in a circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When de-energized, the DSV2-100-4CO allows flow from ③ to ② and from ④ to ①.

When energized, the cartridge's spool shifts and allows flow from ③ to ④ and from ② to ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 30 m. sec. **Drop-Out:** 12 VDC 120 m. sec.

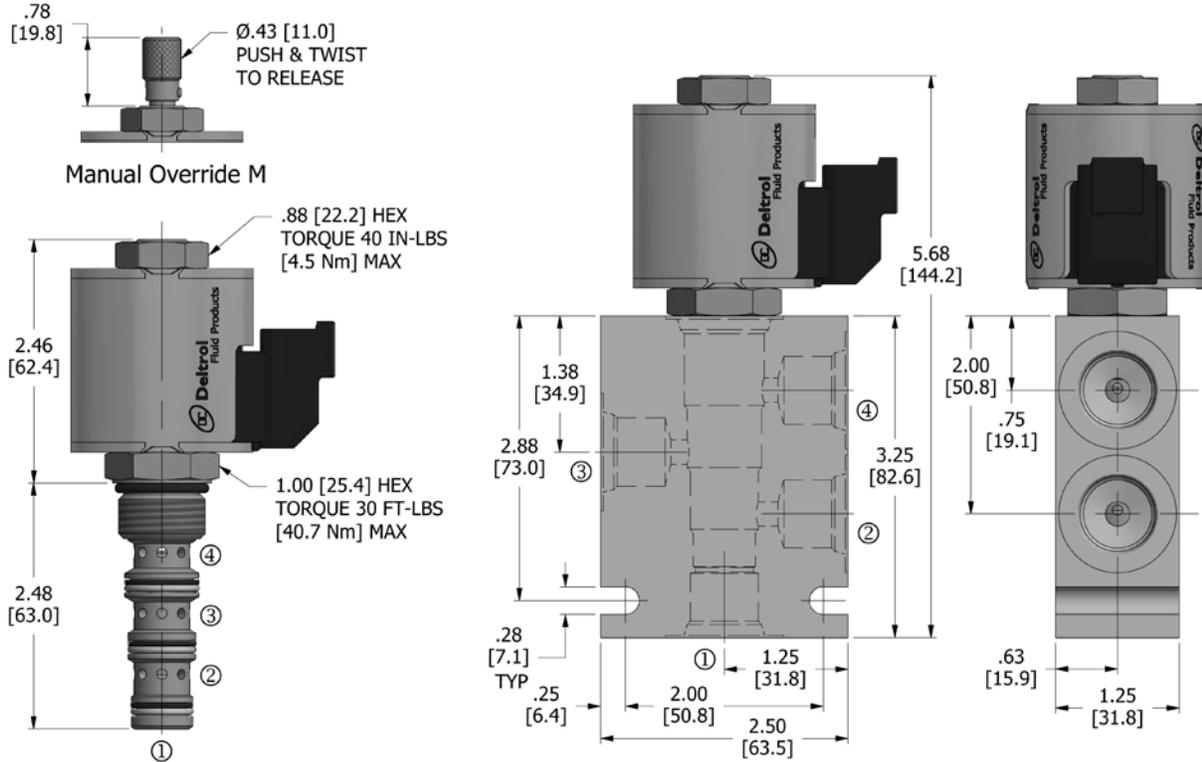
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

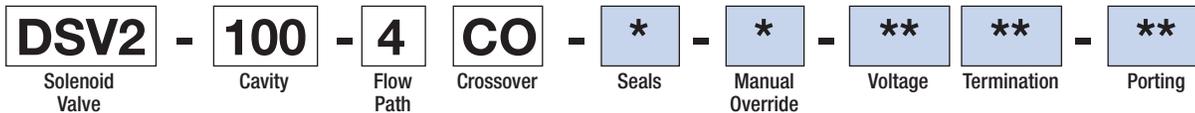
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE ^{IP69K}		Deutsch
PE ^{IP69K}		Metri-Pack
JE ^{IP69K}		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-4-2N
3N	3/8 PTF		B-100-4-3N
6T	SAE 6		B-100-4-6T
8T	SAE 8		B-100-4-8T

10243-72 10243-72 coil retainer nut

† Other options available – consult factory

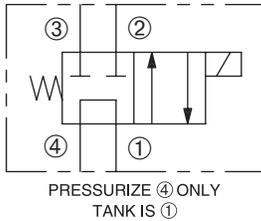
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

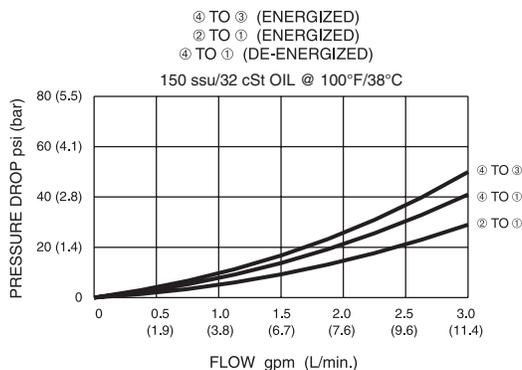
DSV2-080-4TC

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve, with two ports normally-closed and two ports normally-open. This valve is commonly used in a series circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When de-energized, the DSV2-080-4TC allows flow from ④ to ① and is blocked at ② and ③.

When energized, the cartridge's spool shifts and allows flow from ④ to ③ and from ② to ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 45 m. sec. **Drop-Out:** 12 VDC 11 m. sec.

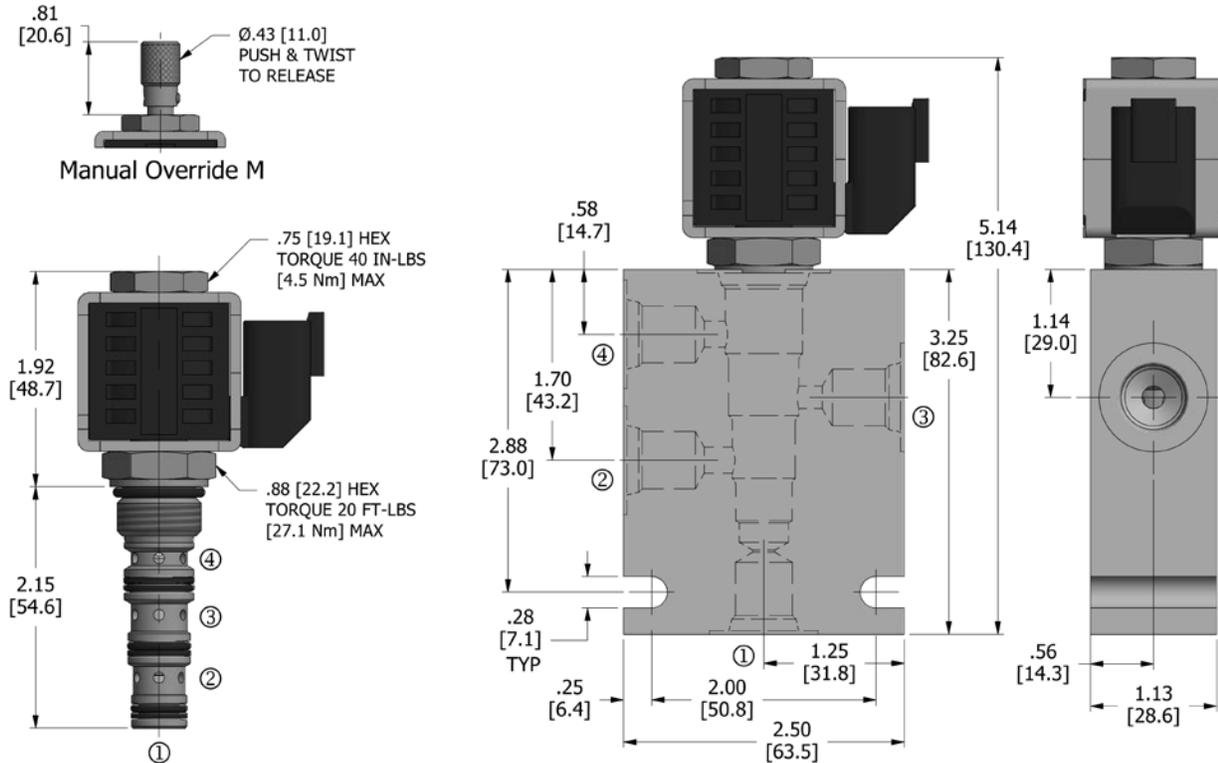
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

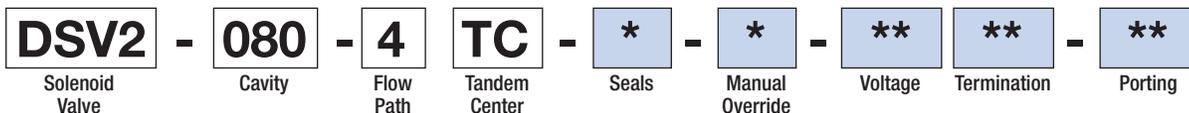
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-4-N-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE IP69K	US	Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-4-2N
3N	3/8 PTF		B-080-4-3N
4T	SAE 4		B-080-4-4T
6T	SAE 6		B-080-4-6T

† Other options available – consult factory

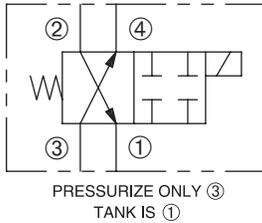
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

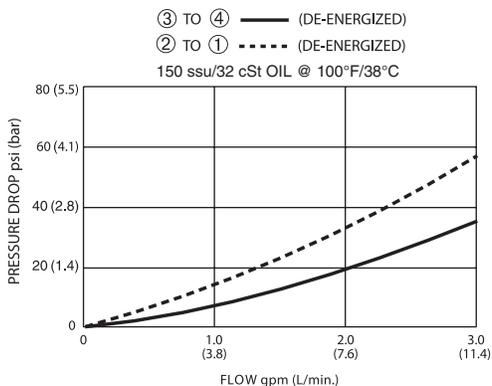
DSV2-080-4NO

Four-Way, Two-Position,
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a four-way, spool-type, directional control valve with all ports normally-open. This valve is commonly used in a circuit to allow flow to and from a double-acting cylinder or motor.

OPERATION

When energized, the spool shifts and all flow paths are blocked. When de-energized, the cartridge's spool allows flow from ③ to ④ and from ② and ①.

Operation of Manual Override Option: To override, push button in, twist counterclockwise and release. In this position, valve will remain detented in the shifted condition.

To return to normal operation, push button in, twist clockwise and release. Override will be detented in this position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Manual override option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 5 in³/min (82 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Response Time: 80% of final change of state with 100% voltage supplied at 100% of nominal flow rating.

Pull-In: 12 VDC 35 m. sec. **Drop-Out:** 12 VDC 20 m. sec.

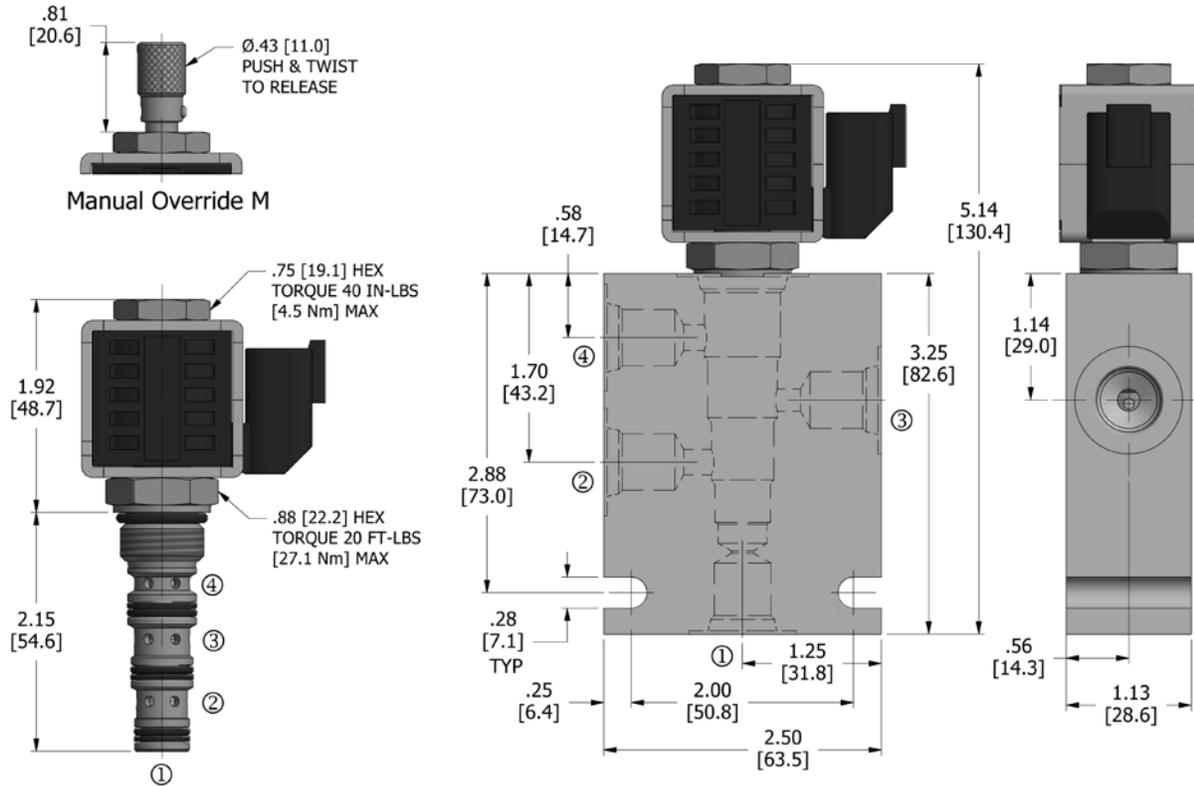
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

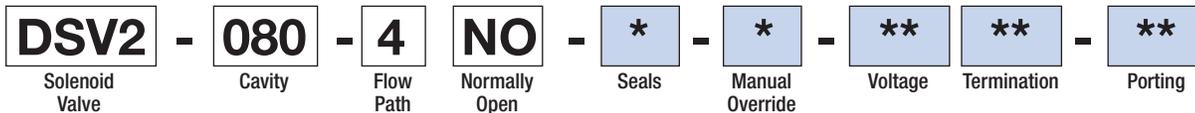
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-4-N-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	omit	Cartridge only w/nut
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <i>IP69K</i>	US	Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-4-2N
3N	3/8 PTF		B-080-4-3N
4T	SAE 4		B-080-4-4T
6T	SAE 6		B-080-4-6T

† Other options available – consult factory

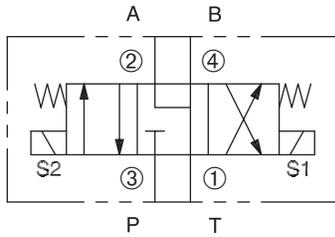
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV-080-34M

Four-Way, Three-Position, Motor Center
Spool-Type Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow between the ①, ②, and ④ ports with the ③ port blocked. When the upper solenoid (S1) is energized, the valve allows flow between ② and ① ports and the ③ and ④ ports. When the lower solenoid (S2) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil “S1” function, or push the knurled knob to activate the coil “S2” function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

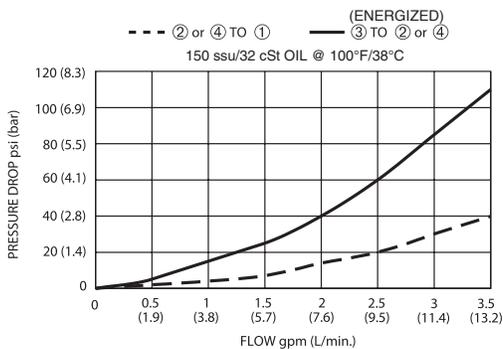
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

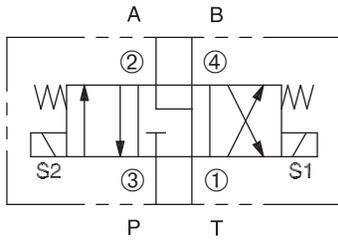
PRESSURE DROP VS. FLOW



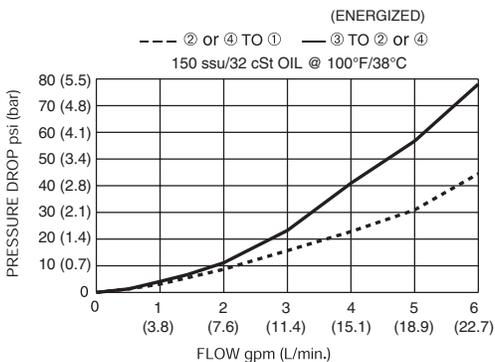
DSV-100-34M

Four-Way, Three-Position, Motor Center
Spool-Type Solenoid Valve

SERIES 10



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow between the ①, ②, and ④ ports with the ③ port blocked. When the upper solenoid (S1) is energized, the valve allows flow between ② and ① ports and the ③ and ④ ports. When the lower solenoid (S2) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil “S1” function, or push the knurled knob to activate the coil “S2” function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

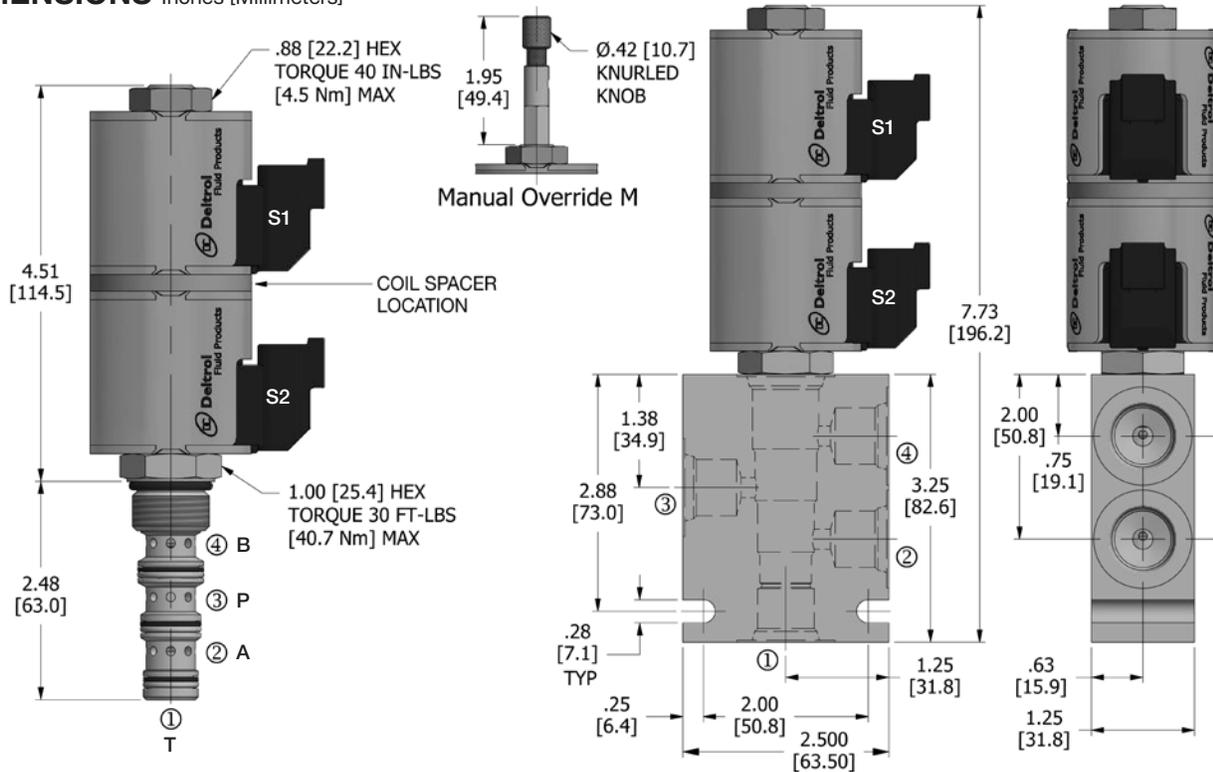
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

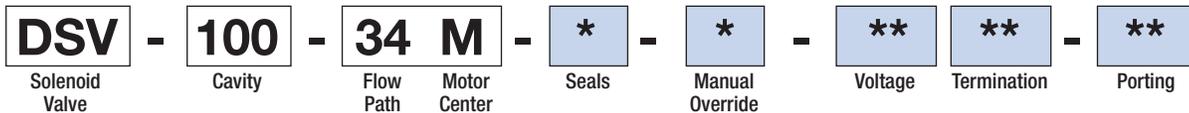
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
XK	XS	Coil Spacer only
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit
10243-72	10243-72	coil retainer nut
10308-50	10170-15	coil spacer

Porting†			In-Line Body w/c Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-100-4-2N
3N	3/8 PTF		B-100-4-3N
6T	SAE 6		B-100-4-6T
8T	SAE 8		B-100-4-8T

† Other options available – consult factory

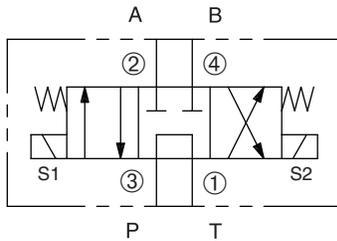
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

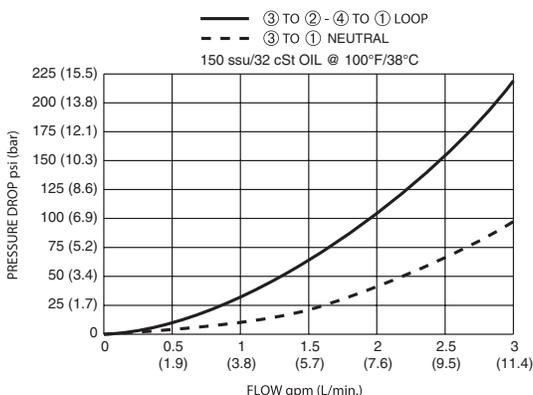
DSV-080-34T

Four-Way, Three-Position, Tandem Center
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow between the ③ and ① ports with ports ② and ④ blocked. When the lower solenoid (S2) is energized, the valve allows flow between the ① and ② ports and the ③ and ④ ports. When the upper (S1) solenoid is energized, the valve allows flow between the ① and ④ ports and the ② and ③ ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil "S1" function, or push the knurled knob to activate the coil "S2" function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

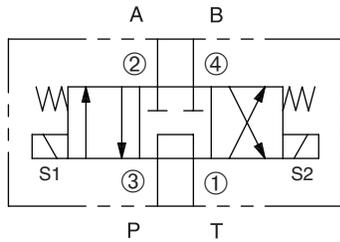
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

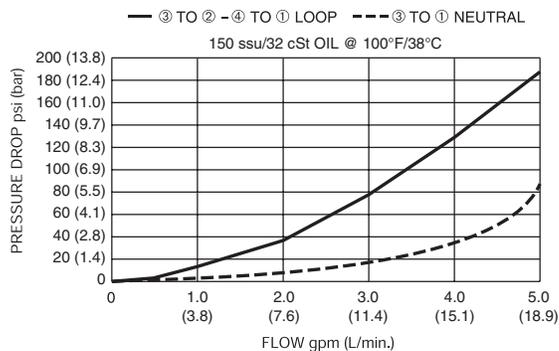
DSV-100-34T

Four-Way, Three-Position, Tandem Center
Spool-Type Solenoid Valve

SERIES 10



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow between the ③ and ① ports with the ② and ④ ports blocked. When the lower solenoid (S2) is energized, the valve allows flow between ② and ① ports and the ③ and ④ ports. When the upper solenoid (S1) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil “S1” function, or push the knurled knob to activate the coil “S2” function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 4 gpm (15.1 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

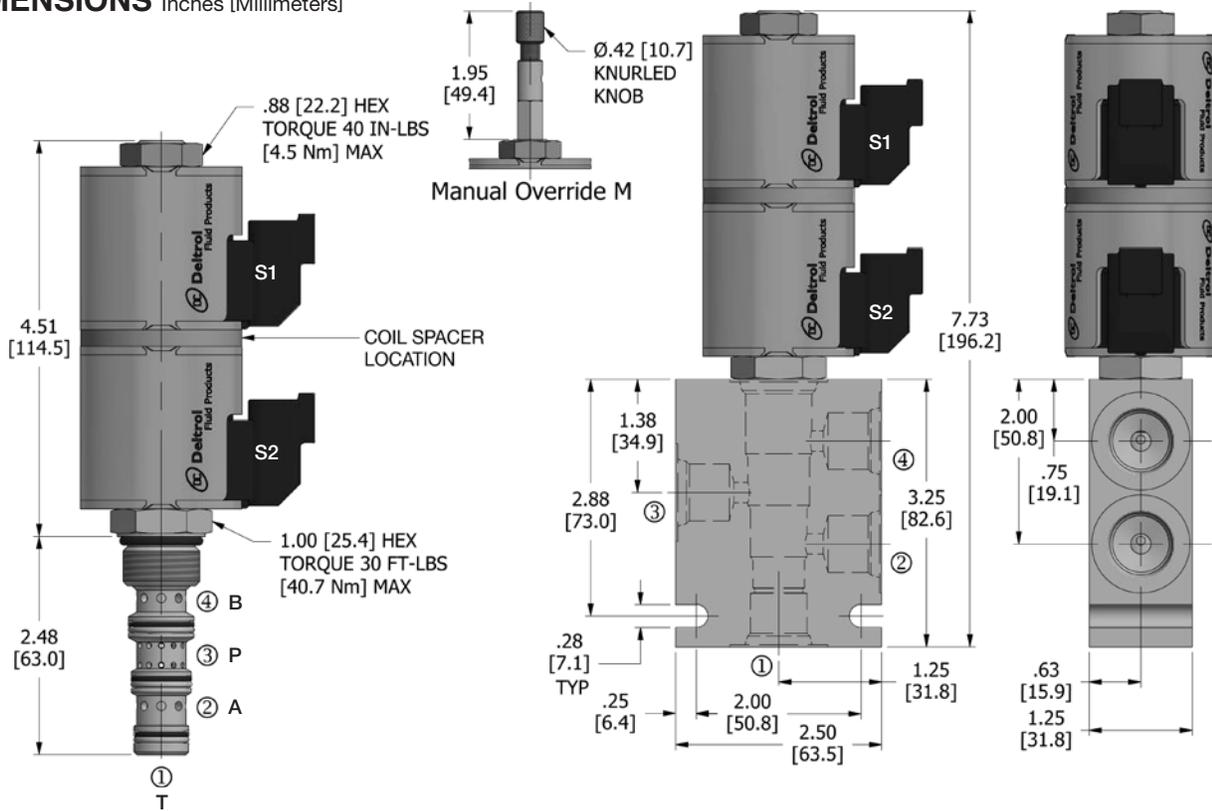
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

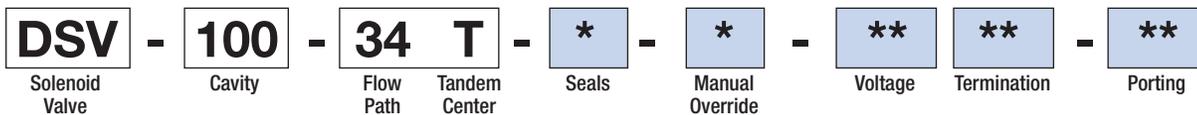
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
XK	XS	Coil Spacer only
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE IP69K		Deutsch
PE IP69K		Metri-Pack
JE IP69K		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit
10243-72	10243-72	coil retainer nut
10308-50	10170-15	coil spacer

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-100-4-2N
3N	3/8 PTF	B-100-4-3N
6T	SAE 6	B-100-4-6T
8T	SAE 8	B-100-4-8T

† Other options available – consult factory

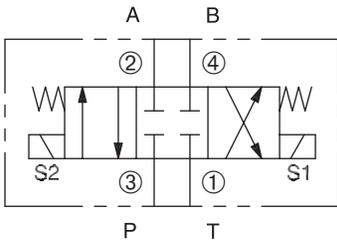
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

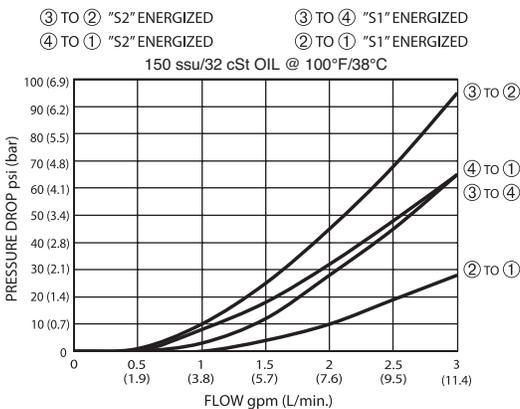
DSV-080-34C

Four-Way, Three-Position, Closed Center
Spool-Type Solenoid Valve

SERIES 8



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve prevents flow at all ports. When the upper solenoid (S1) is energized, the valve allows flow between the ② and ① ports and the ③ and ④ ports. When the lower solenoid (S2) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil "S1" function, or push the knurled knob to activate the coil "S2" function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

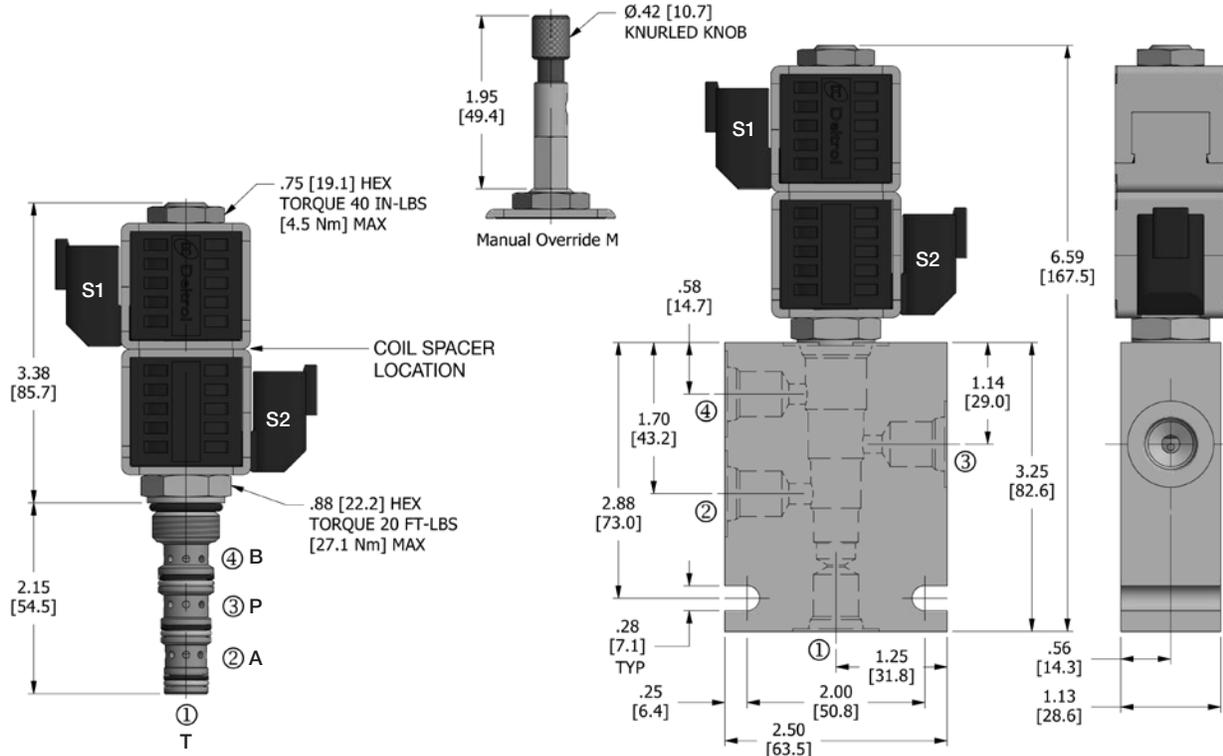
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

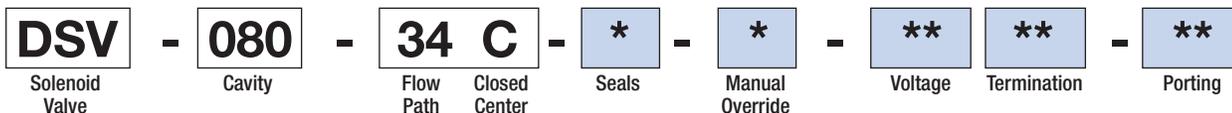
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-34-U-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	XS	Coil Spacer only
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE <i>IP69K</i>	US	Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut
n/a	10172-60	coil spacer

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-4-2N
3N	3/8 PTF		B-080-4-3N
4T	SAE 4		B-080-4-4T
6T	SAE 6		B-080-4-6T

† Other options available – consult factory

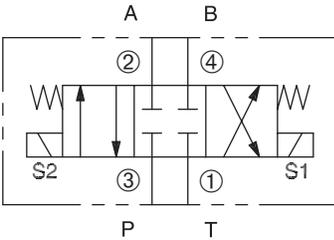
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

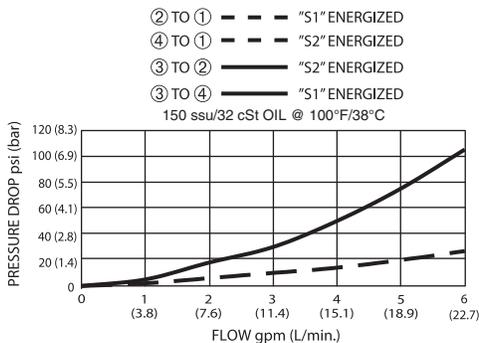
DSV-100-34C

Four-Way, Three-Position, Closed Center
Spool-Type Solenoid Valve

SERIES 10



PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve prevents flow at all ports. When the upper solenoid (S1) is energized, the valve allows flow between ② and ① ports and the ③ and ④ ports. When the lower solenoid (S2) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil "S1" function, or push the knurled knob to activate the coil "S2" function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

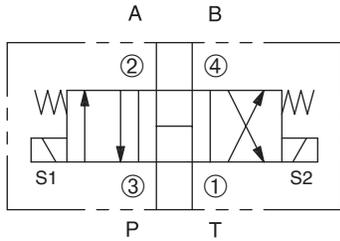
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

DSV-080-340

Four-Way, Three-Position, Open Center
Spool-Type Solenoid Valve

SERIES 8



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow at all ports. When the upper solenoid (S1) is energized, the valve allows flow between the ③ and ② ports and the ④ and ① ports. When the lower solenoid (S2) is energized, the valve allows flow between the ③ and ④ ports and the ② and ① ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil "S1" function, or push the knurled knob to activate the coil "S2" function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 1.5 gpm (5.7 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 8: K-Coil see page 1.91.1; S-Coil see page 1.92.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.3 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

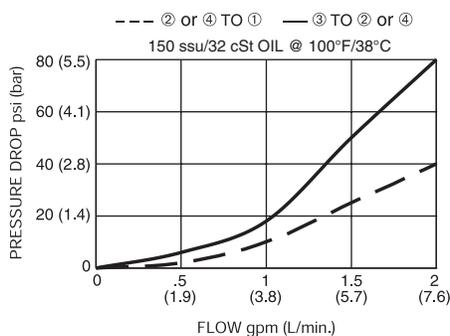
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

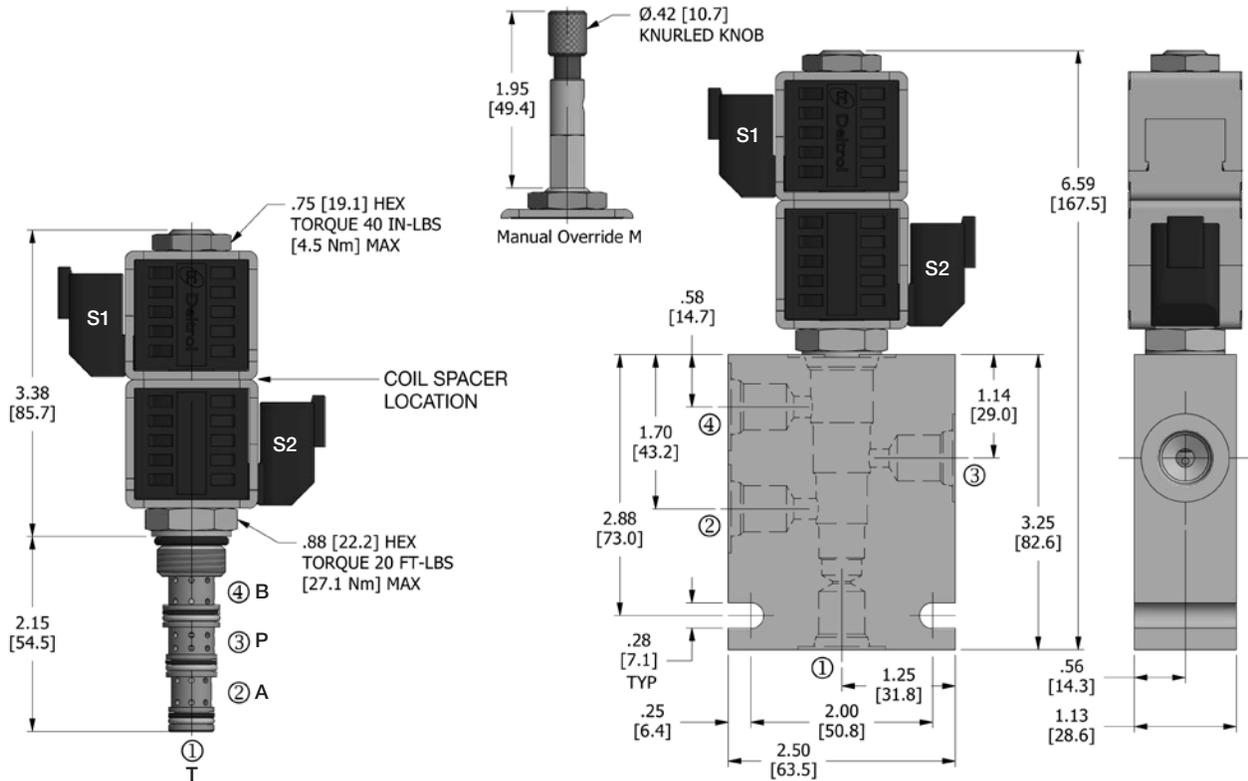
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

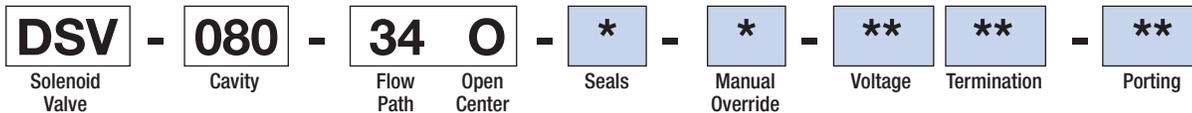
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-34-U-A
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
omit	XS	Coil Spacer only
DE	DS	Dual Lead
SE	SS	Single Lead
BE	BS	Dual Spade
AE	AS	Single Spade
EE	ES	Single Stud
UE ^{IP69K}	US	Deutsch
PE ^{IP69K}		Metri-Pack
JE ^{IP69K}		Amp Junior Timer
	HS	DIN 43650
	C	Conduit
10234-41	10234-41	coil retainer nut
n/a	10172-60	coil spacer

Porting†			In-Line Body w/o Cartridge
omit	Cartridge only		
2N	1/4 PTF		B-080-4-2N
3N	3/8 PTF		B-080-4-3N
4T	SAE 4		B-080-4-4T
6T	SAE 6		B-080-4-6T

† Other options available – consult factory

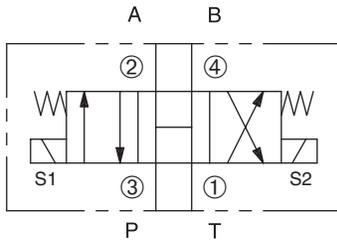
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSV-100-340

Four-Way, Three-Position, Open Center
Spool-Type Solenoid Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a three position, four-way solenoid valve.

OPERATION

When de-energized, the valve allows flow at all ports. When the upper solenoid (S1) is energized, the valve allows flow between the ② and ① ports and the ③ and ④ ports. When the lower solenoid (S2) is energized, the valve allows flow between the ④ and ① ports and the ③ and ② ports.

Operation of Manual Override Option: To override, pull the knurled knob to activate the coil “S1” function, or push the knurled knob to activate the coil “S2” function. Release the knurled knob to return the center position.

FEATURES and BENEFITS

- Continuous-duty solenoid.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: (Per land) 10 in³/min (164 cc/min) max.
at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil: Series 10: K-Coil see page 1.93.1; S-Coil see page 1.94.1.

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

Current Draw: 12 VDC is 1.8 amps.

Minimum Pull-In Voltage: 85% of rated voltage at 3000 psi (207 bar)

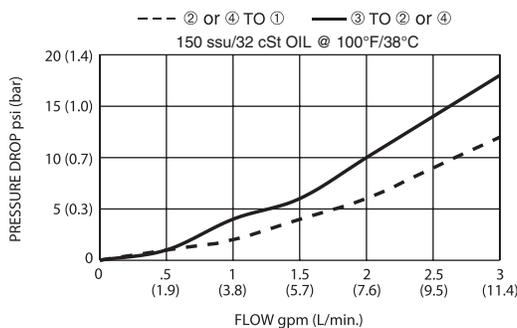
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

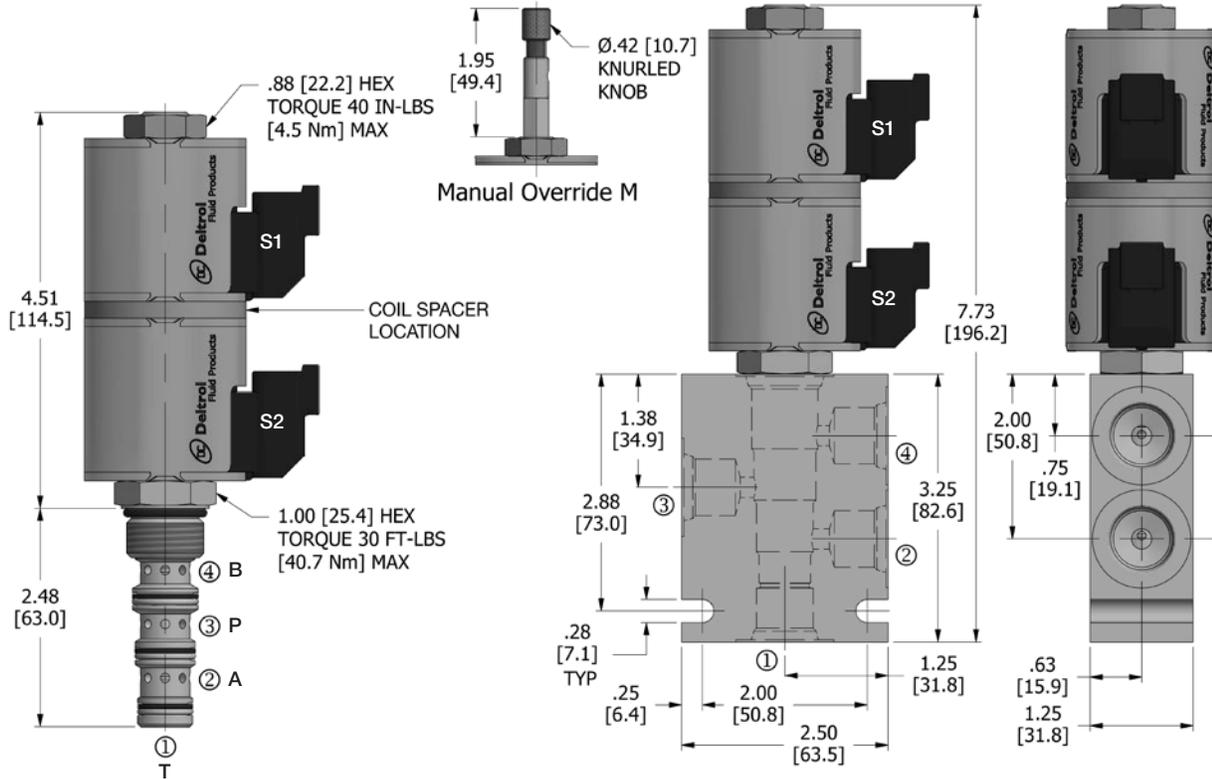
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar)

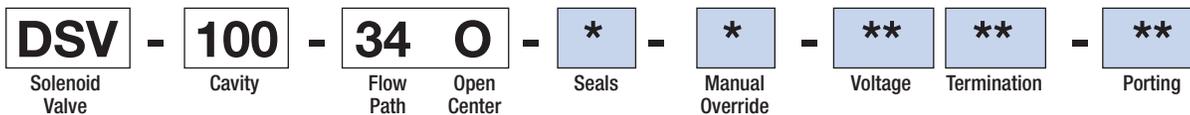
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Manual Override	
omit	No manual override
M	Manual override

Voltage†	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt
D9	DC 20 Volt
D10	DC 10 Volt
A5	AC 120 Volt
A6	AC 240 Volt

Termination†		
K-Coil External Frame	S-Coil Internal Frame	For internal diode – consult factory
XK	XS	Coil Spacer only
DE	D	Dual Lead
SE	S	Single Lead
BE	B	Dual Spade
AE		Single Spade
EE	E	Single Stud
UE <i>IP69K</i>		Deutsch
PE <i>IP69K</i>		Metri-Pack
JE <i>IP69K</i>		Amp Junior Timer
KE		Kostal
HE	H	DIN 43650
	C	Conduit
10243-72	10243-72	coil retainer nut
10308-50	10170-15	coil spacer

Porting†		
omit	Cartridge only	In-Line Body w/o Cartridge
2N	1/4 PTF	B-100-4-2N
3N	3/8 PTF	B-100-4-3N
6T	SAE 6	B-100-4-6T
8T	SAE 8	B-100-4-8T

† Other options available – consult factory

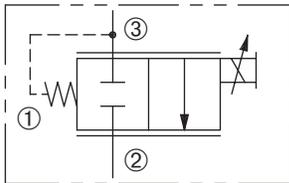
Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPV-100-2NC

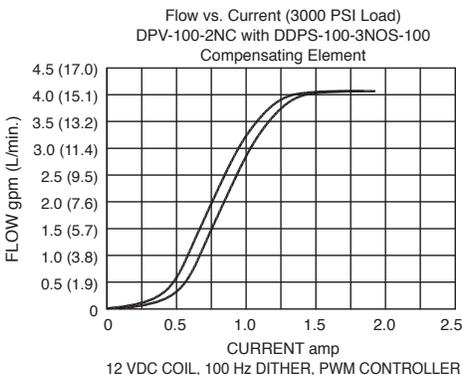
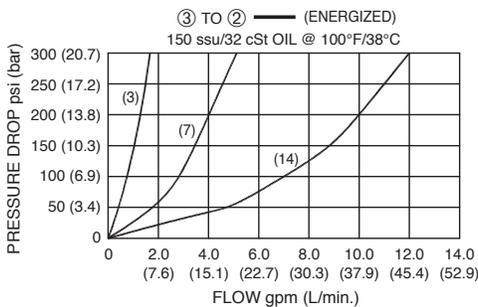
Normally-Closed,
Proportional, Flow Control Valve

SERIES 10



① Plug

PRESSURE DROP VS. FLOW



DESCRIPTION

A cartridge valve designed as a normally closed, spool-type, proportional valve for use with a compensating element to provide an electrically variable pressure-compensated flow control.

OPERATION

As electrical current is applied to the coil, the spool will gradually shift from closed to open as current increases to 2 amps maximum. Flow will pass from port ③ to port ② up to 300 psi differential.

Port ① is plugged.

The valve can also function as a differential control for load sense applications.

The valve functions with industry-common controllers which provide PWM current input to 2 amps @ 12 VDC.

OPERATION OF MANUAL OVERRIDE:

To override, push button in to activate.

To return to normal function, release button.

FEATURES and BENEFITS

- Valve controllers along with portable controller programming devices to vary PWM Duty Cycle, Ramp Time, Current Limit, Dither Frequency and Amplitude, can be provided by consulting the factory.
- Hardened precision spool and sleeve for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations.
- Industry common cavity.

SPECIFICATIONS

Coil Specifications:

12 Volt System

Resistance 4.0 ohms @ 20°C

Threshold Current 300 ± 70mA

Max. Control Current 1500 ± 200mA

24 Volt System

Resistance 16.0 ohms @ 20°C

Threshold Current 150 ± 35mA

Max. Control Current 750 ± 100mA

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 14 gpm (53.0 lpm)

Internal Leakage: (per land) 10 in³/min (164 cc/min) max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Coil Duty Rating: Continuous from 85% to 110% of rated voltage.

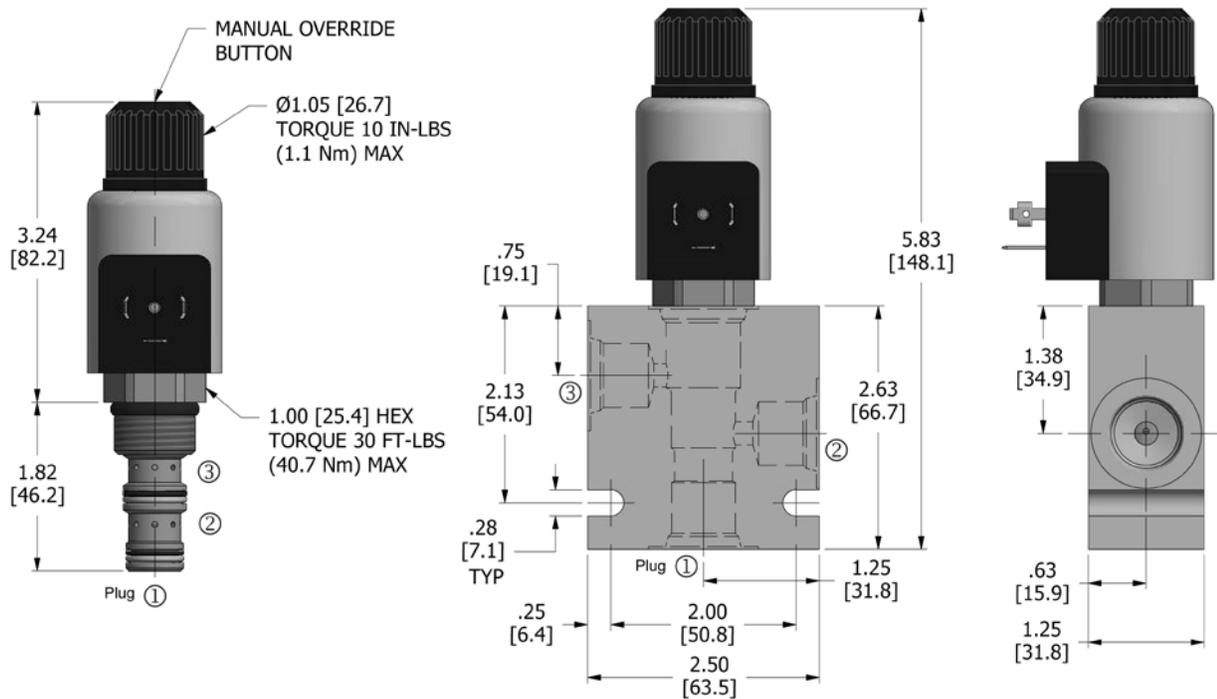
Recommended Filtration: ISO 16/12

Fluids: Mineral-based fluids.

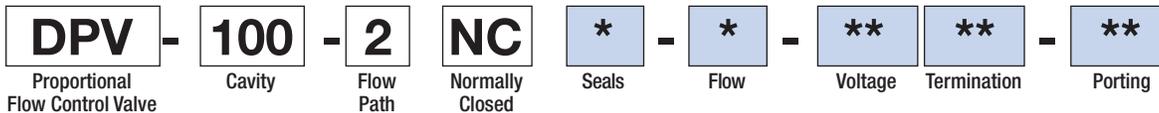
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar)

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	

Flow	
3	3 gpm (11.4 lpm)
7	7 gpm (26.5 lpm)
14	14 gpm (53.0 lpm)

Voltage	
omit	Cartridge only w/nut
D1	DC 12 Volt
D2	DC 24 Volt

Termination	
omit	Cartridge only w/nut
H	DIN 43650
10224-77	coil retainer nut

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

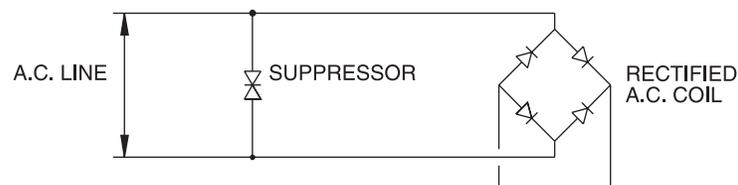
[†] Other options available – consult factory

Valve, Coil, and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

Solenoid Coil Features/Specifications

- **STANDARD VOLTAGE:** 10, 12, 20 AND 24 VOLTS D.C.
120 AND 240 VOLTS A.C.
- **WATTAGE:** SERIES 8: ALL COILS ARE NOMINALLY 16 WATTS AT 68°F./20°C.
SERIES 10: 10 VOLT COILS ARE NOMINALLY 19 WATTS AT 68°F./23°C.
12, 20, 24, 120 AND 240 VOLT COILS ARE NOMINALLY 22 WATTS AT 68°F./20°C.
- **DUTY RATING:** SEE COIL PAGES.
- **AMBIENT OPERATING TEMPERATURE:** 212°F/100°C
- **MAGNET WIRE:** ALL 100 SERIES ARE THERMAL CLASS 200°C., NEMA PUB, NO. MW1000
- **ENCAPSULATING MATERIAL:** THERMOPLASTIC POLYESTER (PET) (RYNITE FR530).
- **LEAD WIRES:** 18/20 GAUGE. MEETS SAE J1128 XLPE, TYPE SXL.
- **A.C. VOLTAGE COILS:** INTERNALLY FULL WAVE RECTIFIED TO SUPPLY THE COIL WINDING WITH D.C. CURRENT. THEREFORE THE COIL WINDING HAS NO “INRUSH” CURRENT MAKING IT SUITABLE FOR 50 OR 60 HERTZ (Hz) CYCLE APPLICATIONS. THE RECTIFIERS USED IN A.C. COILS MAY REQUIRE PROTECTION FROM TRANSIENT OVER VOLTAGES EXCEEDING 1000 VOLTS. PROTECT RECTIFIED A.C. COILS BY INSTALLING A COMMERCIALY AVAILABLE NONPOLARIZED SELENIUM DIODE SUPPRESSOR OR METAL-OXIDE VARISTOR ACROSS THE A.C. COIL AS SHOWN.



SERIES 8

16 WATT

VOLTS	OHMS	INITIAL CURRENT DRAW (AMPS)
10 DC	6.2	1.60
12 DC	9.0	1.33
20 DC	25.0	.80
24 DC	35.8	.67

SPECIFICATIONS

Wattage: Nominally 16 watt at 68°F./20°C.

Duty Rating: Continuous up to 115% voltage.

Ambient Operating Temperature: 212°F/100°C.

Encapsulating Material: Thermoplastic Polyester (PET) (Rynite FR530).

Termination Options: See below and on the following pages.

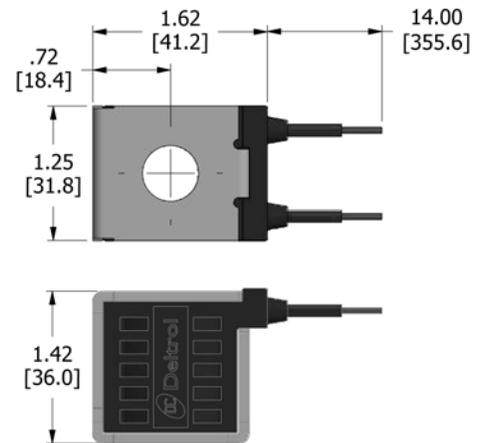
Environmental: IP69K for Deutsch, Metri-Pack and Amp Junior timer-style coils.

DUAL LEAD - IP65 rated

CODE - **DE

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10257-40	D10DE	GREEN
12 DC	10244-28	D1DE	RED
20 DC	10258-75	D20DE	LT BLUE
24 DC	10257-41	D2DE	BLUE

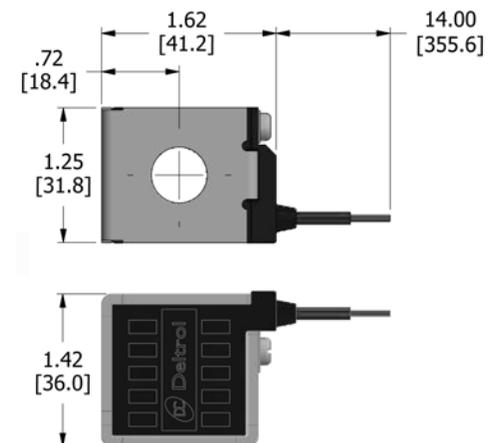
FOR INTERNAL DIODE – CONSULT FACTORY



SINGLE LEAD - IP65 rated

CODE - **SE

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10257-44	D10SE	GREEN
12 DC	10244-29	D1SE	RED
20 DC	10258-76	D20SE	LT BLUE
24 DC	10257-45	D2SE	BLUE



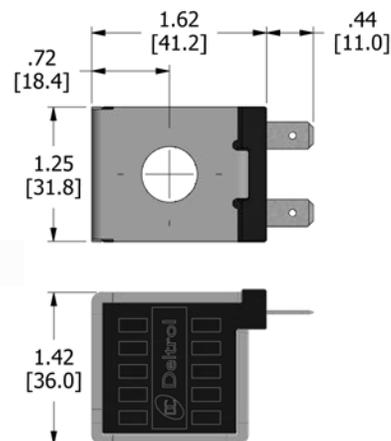
SERIES 8

DUAL SPADE

CODE - **BE

VOLTS	PART NO.	CODE
10 DC	10257-46	D10BE
12 DC	10244-27	D1BE
20 DC	10257-47	D20BE
24 DC	10257-48	D2BE

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)



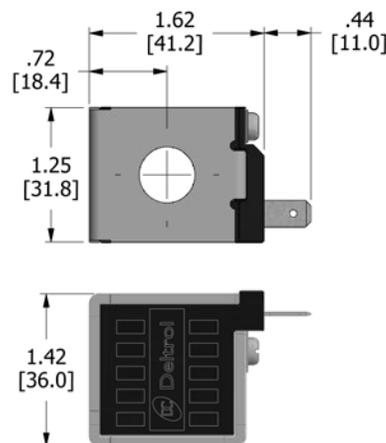
FOR INTERNAL DIODE – CONSULT FACTORY

SINGLE SPADE

CODE - **AE

VOLTS	PART NO.	CODE
10 DC	10257-51	D10AE
12 DC	10252-18	D1AE
20 DC	10258-77	D20AE
24 DC	10257-52	D2AE

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)

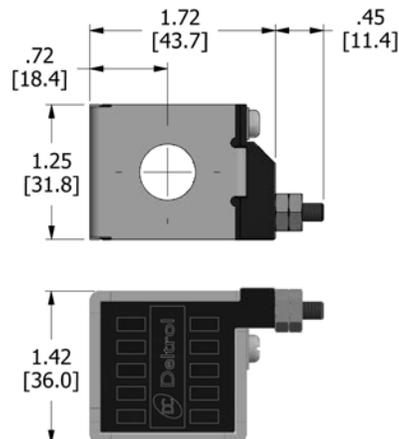


SINGLE STUD

CODE - **EE

VOLTS	PART NO.	CODE
10 DC	10257-53	D10EE
12 DC	10252-19	D1EE
20 DC	10258-78	D20EE
24 DC	10257-54	D2EE

TERMINATION:
8-32 MALE STUD
WITH BRASS NUTS



COIL

CHECK

MOTION CONTROL

FLOW CONTROL

RELIEF

PRESSURE CONTROL

SEQUENCE

SHUTTLE

DIRECTIONAL VALVES

HAND PUMPS

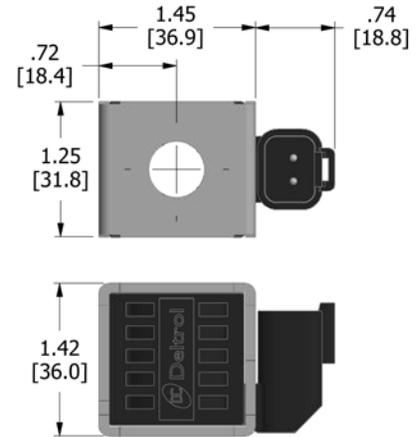
TECHNICAL DATA

DEUTSCH - IP69K rated

CODE - **UE

VOLTS	PART NO.	CODE
10 DC	10257-55	D10UE
12 DC	10244-24	D1UE
20 DC	10257-56	D20UE
24 DC	10257-57	D2UE

TERMINATION:
INTEGRAL DEUTSCH CONNECTOR
DT04-2P
MATING CONNECTOR
DT06-2S

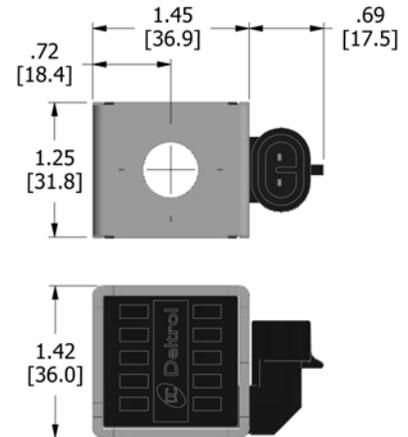


FOR INTERNAL DIODE – CONSULT FACTORY

METRI-PACK - IP69K rated

CODE - **PE

VOLTS	PART NO.	CODE
10 DC	10257-58	D10PE
12 DC	10244-25	D1PE
20 DC	10257-59	D20PE
24 DC	10257-60	D2PE

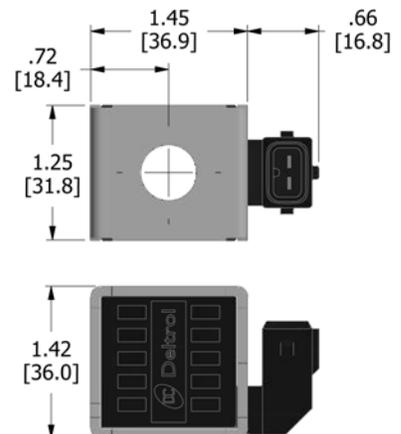


FOR INTERNAL DIODE – CONSULT FACTORY

AMP JUNIOR TIMER - IP69K rated

CODE - **JE

VOLTS	PART NO.	CODE
10 DC	10257-61	D10JE
12 DC	10244-26	D1JE
20 DC	10257-62	D20JE
24 DC	10257-63	D2JE



FOR INTERNAL DIODE – CONSULT FACTORY

SERIES 8

SPECIFICATIONS

Wattage: Nominally 16 watt at 68°F./20°C.

Duty Rating: Continuous up to 115% voltage.
Except **Conduit** which has an intermittent Duty Rating.

Ambient Operating Temperature: 212°F/100°C

Encapsulating Material: Thermoplastic Polyester (PET) (Rynite FR530).

A.C. Coils: Internally rectified with a full wave bridge (no inrush current).

Termination Options: See below and on the next page.

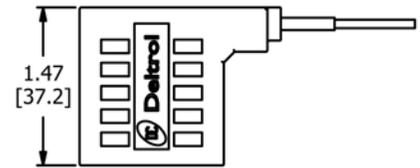
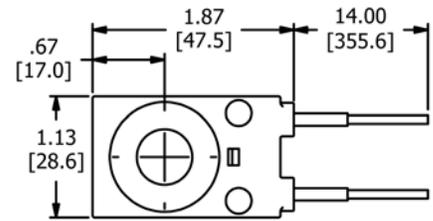
VOLTS	16 WATT	
	OHMS	INITIAL CURRENT DRAW (AMPS)
10 DC	6.2	1.60
12 DC	9.0	1.33
20 DC	25.0	.80
24 DC	35.8	.67
120 AC	Δ827	.15
240 AC	Δ3306	.07

ΔRESISTANCE CANNOT BE MEASURED ON AC COIL ASSEMBLIES

DUAL LEAD

CODE - **DS

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10205-94	D10DS	GREEN
12 DC	10226-52	D1DS	RED
24 DC	10231-42	D2DS	BLUE
120 AC	10184-49	A5DS	BLACK
240 AC	10184-53	A6DS	YELLOW

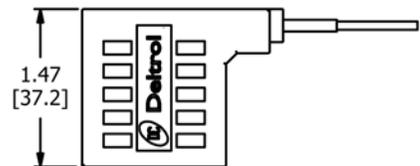
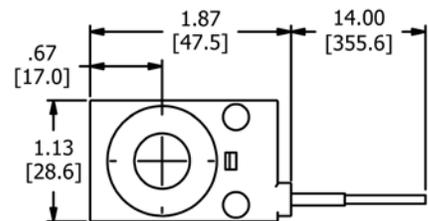


FOR INTERNAL DIODE – CONSULT FACTORY

SINGLE LEAD

CODE - **SS

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10194-19	D10SS	GREEN
12 DC	10226-14	D1SS	RED
24 DC	10226-11	D2SS	BLUE

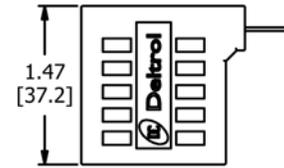
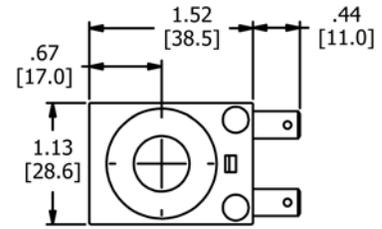


DUAL SPADE

CODE - **BS

VOLTS	PART NO.	CODE
10 DC	10221-46	D10BS
12 DC	10225-96	D1BS
20 DC	10222-51	D20BS
24 DC	10216-11	D2BS
120 AC	10222-49	A5BS
240 AC	10222-50	A6BS

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)



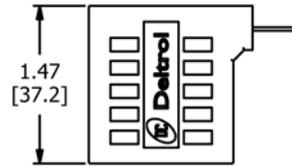
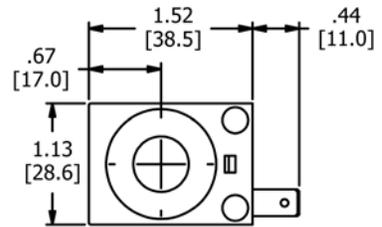
FOR INTERNAL DIODE – CONSULT FACTORY

SINGLE SPADE

CODE - **AS

VOLTS	PART NO.	CODE
10 DC	10222-46	D10AS
12 DC	10221-30	D1AS
24 DC	10221-47	D2AS

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)

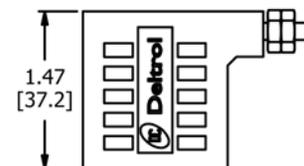
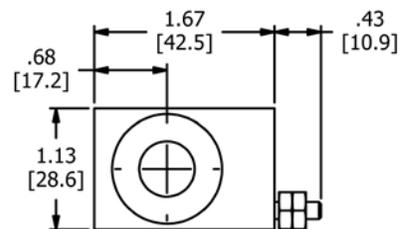


SINGLE STUD

CODE - **ES

VOLTS	PART NO.	CODE
10 DC	10196-60	D10ES
12 DC	10196-61	D1ES
24 DC	10196-62	D2ES

TERMINATION:
8-32 MALE STUD
WITH BRASS NUTS



S-Coil, Series 8

Internal Frame (continued)

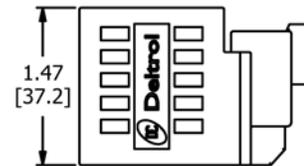
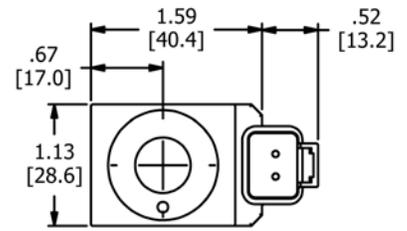
SERIES 8

DEUTSCH - IP67 rated

CODE - **US

VOLTS	PART NO.	CODE
10 DC	10210-13	D10US
12 DC	10222-99	D1US
20 DC	10228-95	D20US
24 DC	10228-52	D2US

TERMINATION:
 INTEGRAL DEUTSCH CONNECTOR
 DT04-2P
 MATING CONNECTOR
 DT06-2S



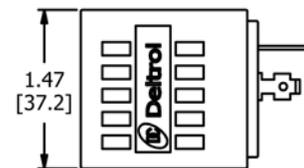
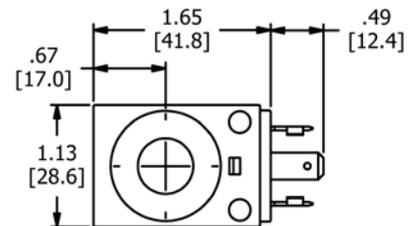
FOR INTERNAL DIODE – CONSULT FACTORY

DIN 43650 (HIRSCHMANN®)

CODE - **HS

VOLTS	PART NO.	CODE
12 DC	10246-17	D1HS
24 DC	10246-18	D2HS
120 AC	10246-43	A5HS
240 AC	10246-20	A6HS

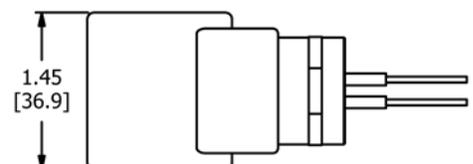
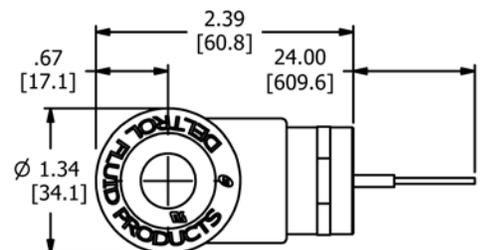
TERMINATION:
 Hirschmann GSR 200 – DIN 43650
 Form A/ISO 4400, EN175301-803:2000
 2 pole + ground – Mating Connector 43650



CONDUIT (FEMALE 1/2-14 NPT)

CODE - **C

VOLTS	PART NO.	CODE	LEAD COLOR
120 AC	10148-70	A5C	BLACK
240 AC	10176-89	A6C	YELLOW



Duty Rating: Intermittent

LEAD WIRES: 18/20 GAUGE MEETS SAE J1128 XLPE, TYPE SXL.

SERIES 10

SPECIFICATIONS

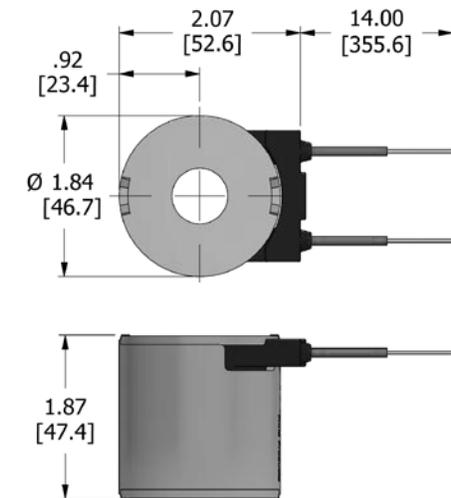
- Wattage:** Nominally 22 watt at 68°F./20°C.
- Duty Rating:** Continuous up to 115% voltage.
- Ambient Operating Temperature:** 212°F/100°C
- Encapsulating Material:** Thermoplastic Polyester (PET) (Rynite FR530).
- Metal Shell:** Zinc Nickel Plating.
- Termination Options:** See below and on the following pages.
- Environmental:** IP69K for Deutsch, Metri-Pack and Amp Junior timer-style coils.

VOLTS	22 WATT	
	OHMS	INITIAL CURRENT DRAW (AMPS)
10 DC	4.6	2.20
12 DC	6.6	1.83
20 DC	18.5	1.10
24 DC	26.2	.92

DUAL LEAD - IP67 rated

CODE - **DE

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10306-20	D10DE	GREEN
12 DC	10306-21	D1DE	RED
20 DC	10306-22	D20DE	LT. BLUE
24 DC	10306-23	D2DE	BLUE

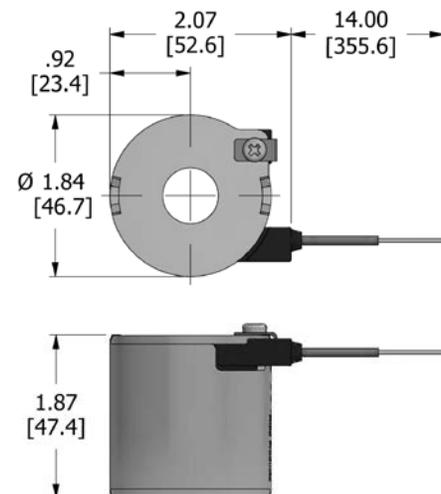


FOR INTERNAL DIODE – CONSULT FACTORY

SINGLE LEAD - IP67 rated

CODE - **SE

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10306-41	D10SE	GREEN
12 DC	10306-42	D1SE	RED
20 DC	10306-43	D20SE	LT. BLUE
24 DC	10306-44	D2SE	BLUE



K-Coil, Series 10

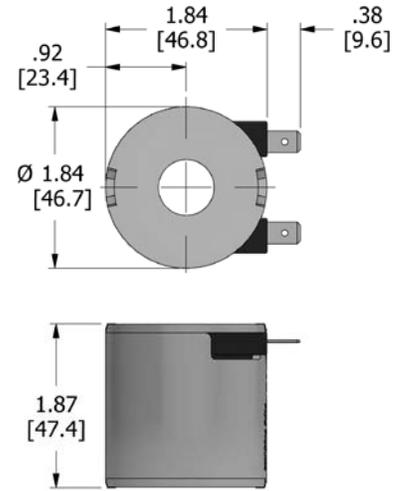
External Frame (continued)

SERIES 10

DUAL SPADE CODE - **BE

VOLTS	PART NO.	CODE
10 DC	10306-48	D10BE
12 DC	10306-49	D1BE
20 DC	10306-50	D20BE
24 DC	10306-51	D2BE

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)

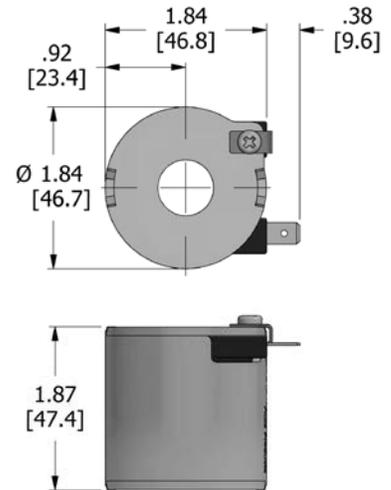


FOR INTERNAL DIODE – CONSULT FACTORY

SINGLE SPADE CODE - **AE

VOLTS	PART NO.	CODE
10 DC	10306-69	D10AE
12 DC	10306-70	D1AE
20 DC	10306-71	D20AE
24 DC	10306-72	D2AE

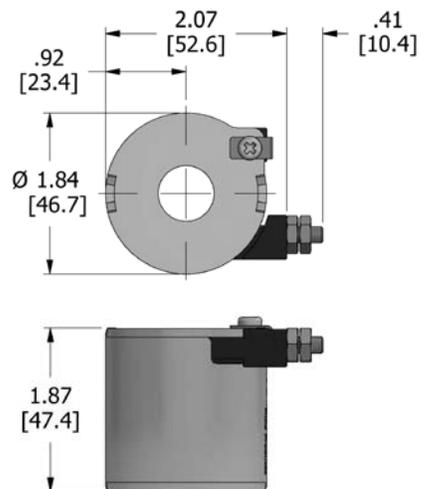
TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)



SINGLE STUD CODE - **EE

VOLTS	PART NO.	CODE
10 DC	10306-76	D10EE
12 DC	10306-77	D1EE
20 DC	10306-78	D20EE
24 DC	10306-79	D2EE

TERMINATION:
8-32 MALE STUD
WITH BRASS NUTS

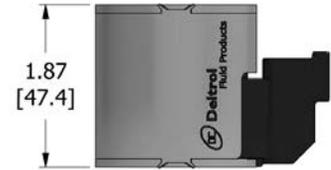
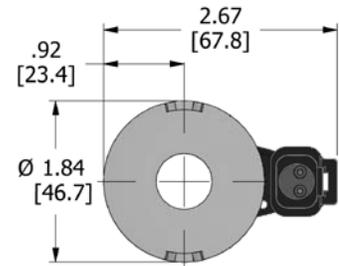


DEUTSCH - IP69K rated

CODE - **UE

VOLTS	PART NO.	CODE
10 DC	10306-83	D10UE
12 DC	10306-84	D1UE
20 DC	10306-85	D20UE
24 DC	10306-86	D2UE

TERMINATION:
INTEGRAL DEUTSCH CONNECTOR
DT04-2P
MATING CONNECTOR
DT06-2S

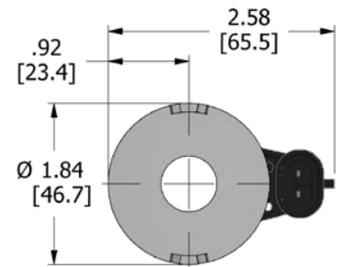


FOR INTERNAL DIODE – CONSULT FACTORY

METRI-PACK - IP69K rated

CODE - **PE

VOLTS	PART NO.	CODE
10 DC	10307-04	D10PE
12 DC	10307-05	D1PE
20 DC	10307-06	D20PE
24 DC	10307-07	D2PE

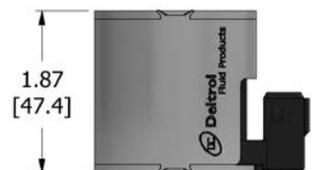
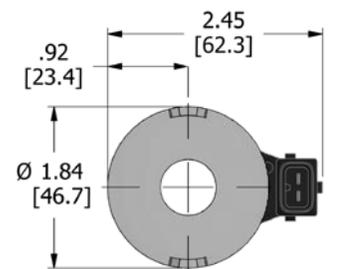


FOR INTERNAL DIODE – CONSULT FACTORY

AMP JUNIOR TIMER - IP69K rated

CODE - **JE

VOLTS	PART NO.	CODE
10 DC	10307-25	D10JE
12 DC	10307-26	D1JE
20 DC	10307-27	D20JE
24 DC	10307-28	D2JE



FOR INTERNAL DIODE – CONSULT FACTORY

K-Coil, Series 10

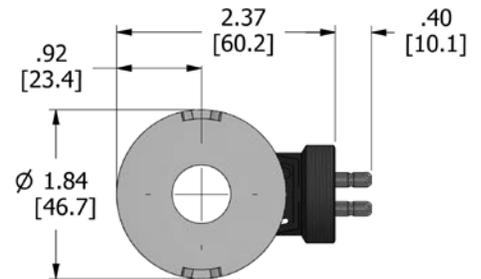
External Frame (continued)

SERIES 10

KOSTAL - IP67 rated

CODE - **KE

VOLTS	PART NO.	CODE
10 DC	10309-09	D10KE
12 DC	10310-10	D1KE
20 DC	10310-12	D20KE
24 DC	10310-13	D2KE



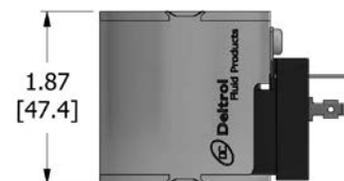
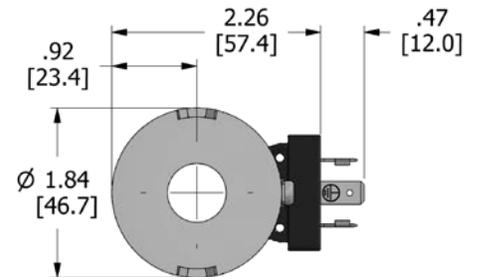
FOR INTERNAL DIODE – CONSULT FACTORY

DIN 43650 (Hirschmann®) - IP67 rated

CODE - **HE

VOLTS	PART NO.	CODE
12 DC	10307-47	D1HE
24 DC	10307-49	D2HE
120 AC	10307-62	A5HE
240 AC	10307-63	A6HE

TERMINATION:
 Hirschmann GSR 200 – DIN 43650
 Form A/ISO 4400, EN175301-803:2000
 2 pole + ground – Mating Connector 43650



FOR INTERNAL DIODE – CONSULT FACTORY

COIL

CHECK

MOTION CONTROL

FLOW CONTROL

RELIEF

PRESSURE CONTROL

SEQUENCE

SHUTTLE

DIRECTIONAL VALVES

HAND PUMPS

TECHNICAL DATA

SERIES 10

SPECIFICATIONS

Wattage: 10 volts: nominally 19 watts at 68°F./20°C.
12, 20, 24, 120 and 240 volts: nominally 22 watts at 68°F./20°C.

Duty Rating: Continuous up to 100% voltage.

Ambient Operating Temperature: 212°F/100°C.

Encapsulating Material: Thermoplastic Polyester (PET)
(Rynite FR530)

A.C. Coils: Internally rectified with a full wave bridge
(no inrush current).

Termination Options: See below and on the next page.

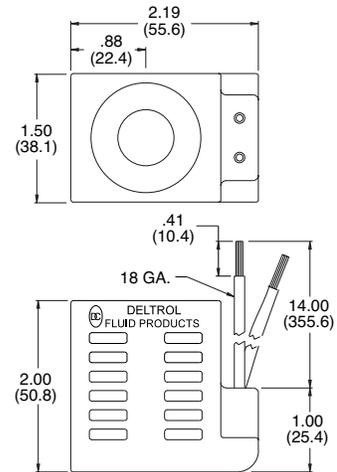
VOLTS	19 WATT		22 WATT	
	OHMS	INITIAL CURRENT DRAW (AMPS)	OHMS	INITIAL CURRENT DRAW (AMPS)
10 DC	5.3	1.9		
12 DC			6.5	1.83
20 DC			18.2	1.10
24 DC			26.1	.92
120 AC			Δ496	.18
240 AC			Δ1830	.18

ΔRESISTANCE CANNOT BE MEASURED ON AC COIL ASSEMBLIES

DUAL LEAD

CODE - **D

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10163-99	D10D	GREEN
12 DC	10162-76	D1D	RED
20 DC	10223-97	DC135	RED
24 DC	10162-77	D2D	BLUE
120 AC	10162-82	A5D	BLACK
240 AC	10162-83	A6D	YELLOW

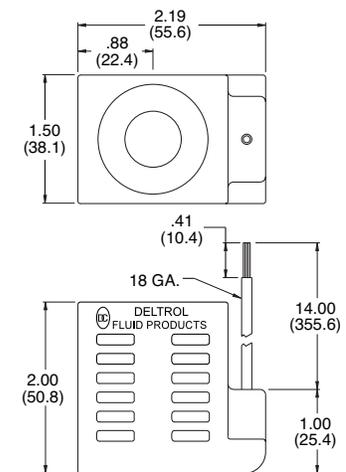


LEAD WIRES: 18/20 GAUGE MEETS SAE J1128 XLPE, TYPE SXL.

SINGLE LEAD

CODE - **S

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10164-12	D10S	GREEN
12 DC	10164-10	D1S	RED
24 DC	10164-11	D2S	BLUE



LEAD WIRES: 18/20 GAUGE MEETS SAE J1128 XLPE, TYPE SXL.

S-Coil, Series 10

Internal Frame (continued)

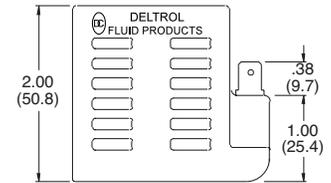
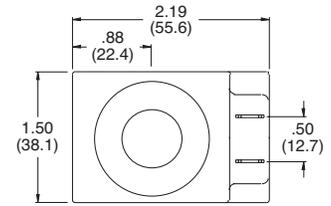
SERIES 10

DUAL SPADE

CODE - **B

VOLTS	PART NO.	CODE
10 DC	10164-08	D10B
12 DC	10162-91	D1B
20 DC	10234-53	D20B
24 DC	10162-92	D2B
120 AC	10162-90	A5B
240 AC	10164-09	A6B

TERMINATION:
1/4" MALE QUICK-CONNECT
PER SAE J858A (TYPE 1B)

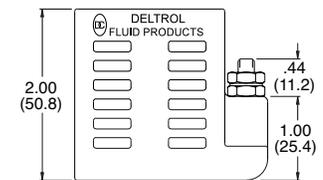
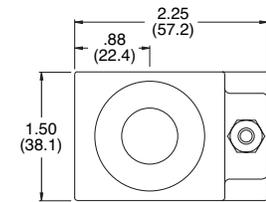


SINGLE STUD

CODE - **E

VOLTS	PART NO.	CODE
10 DC	10164-15	D10E
12 DC	10164-13	D1E
24 DC	10164-14	D2E

TERMINATION:
10-32 MALE STUD WITH
2 BRASS NUTS AND 1 STEEL
EXTERNAL TOOTH LOCKWASHER

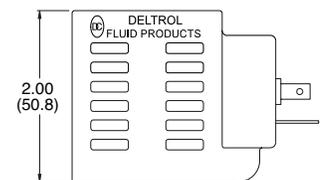
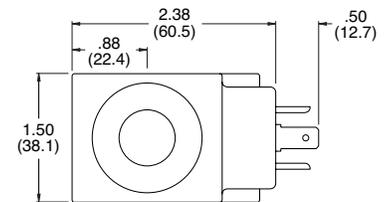


DIN 43650 (Hirschmann®)

CODE - **H

VOLTS	PART NO.	CODE
10 DC	10164-02	D10H
12 DC	10162-78	D1H
24 DC	10162-79	D2H
120 AC	10162-84	A5H
240 AC	10162-85	A6H

TERMINATION:
Hirschmann GSR 200 – DIN 43650
Form A/ISO 4400, EN175301-803:2000
2 pole + ground – Mating Connector 43650

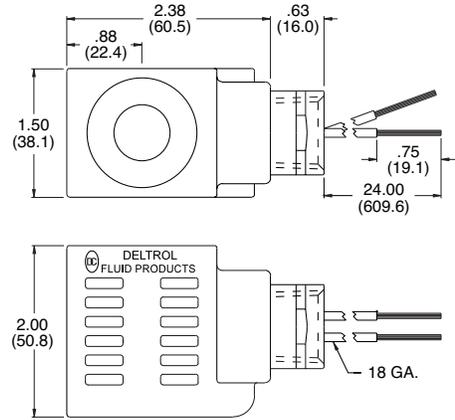


CONDUIT (FEMALE 1/2-14 NPT)

CODE - **C

VOLTS	PART NO.	CODE	LEAD COLOR
10 DC	10164-05	D10C	GREEN
12 DC	10162-80	D1C	RED
24 DC	10162-81	D2C	BLUE
120 AC	10162-86	A5C	BLACK
240 AC	10162-87	A6C	YELLOW

LEAD WIRES: 18/20 GAUGE MEETS SAE J1128 XLPE, TYPE SXL.



COIL

CHECK

MOTION CONTROL

FLOW CONTROL

RELIEF

PRESSURE CONTROL

SEQUENCE

SHUTTLE

DIRECTIONAL VALVES

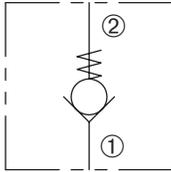
HAND PUMPS

TECHNICAL DATA

ZCO-42

Direct-Acting, Ball-Type
Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Chrome alloy ball for long life.
- Low leak.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3500 psi (241 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 1 gpm (3.8 lpm)

Internal Leakage: 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 5 psi (0.3 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

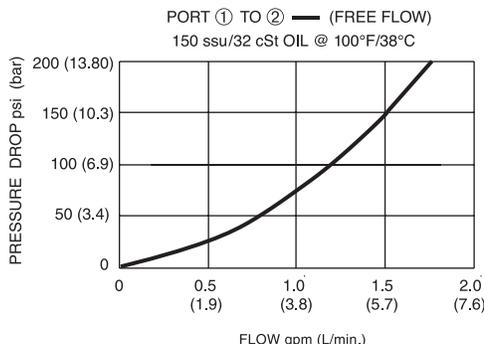
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

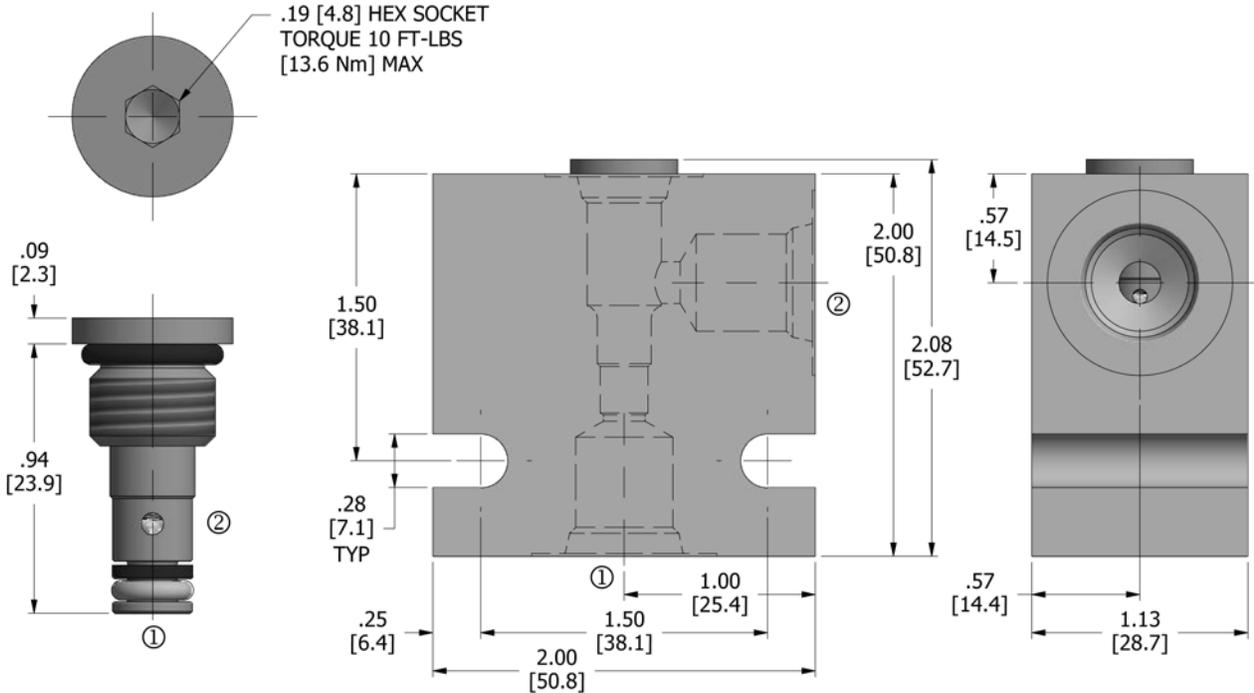
Cavity/Cavity Tool: ZP42, see page 11.04.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

ZCO - **42** - **U** - ******

Check Valve Cavity Seals Porting

Seals		Seal Kit	Porting [†]		In-Line Body w/o Cartridge
U	Urethane	(1) 10031-19	omit	Cartridge only	
		(1) 10181-09	4T	SAE 4	B-ZP42-A-4T
		(1) 10200-82	6T	SAE 6	B-ZP42-A-6T

[†] Other options available – consult factory

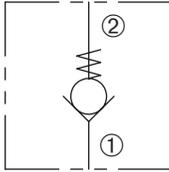
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZCP6

Direct-Acting, Poppet-Type
Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the poppet.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Low leak.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3500 psi (241 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 5 gpm (18.9 lpm).

Internal Leakage: 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 5 psi (0.5 bar)

10 psi (0.7 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

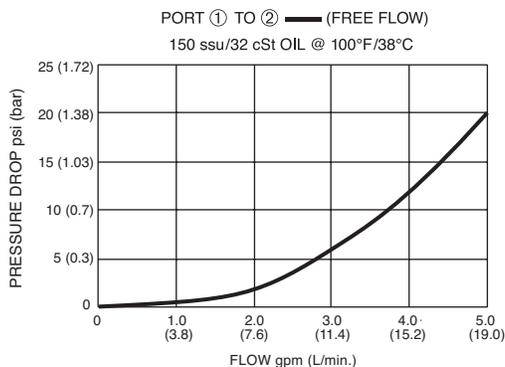
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

Cavity: ZCP6, see page 2.03.2

Installation/Removal Tool: Consult factory

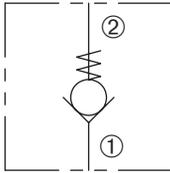
PRESSURE DROP VS. FLOW



ZC-62

Direct-Acting, Ball-Type
Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Slip in style.
- Torlon® ball for positive shut-off.
- Low leak.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 4 GPM (15.1 lpm)

Internal Leakage: 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 1-2 psi (0.07-0.14 bar)

5 psi (0.3 bar)

30 psi (2.1 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

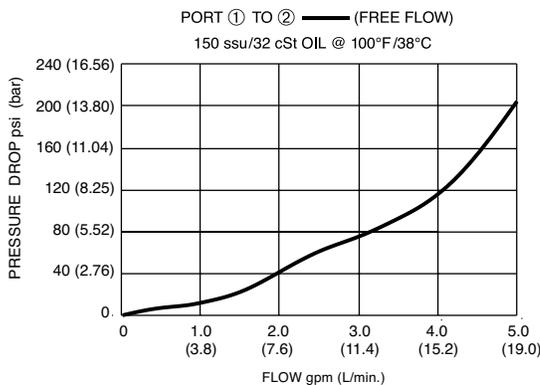
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

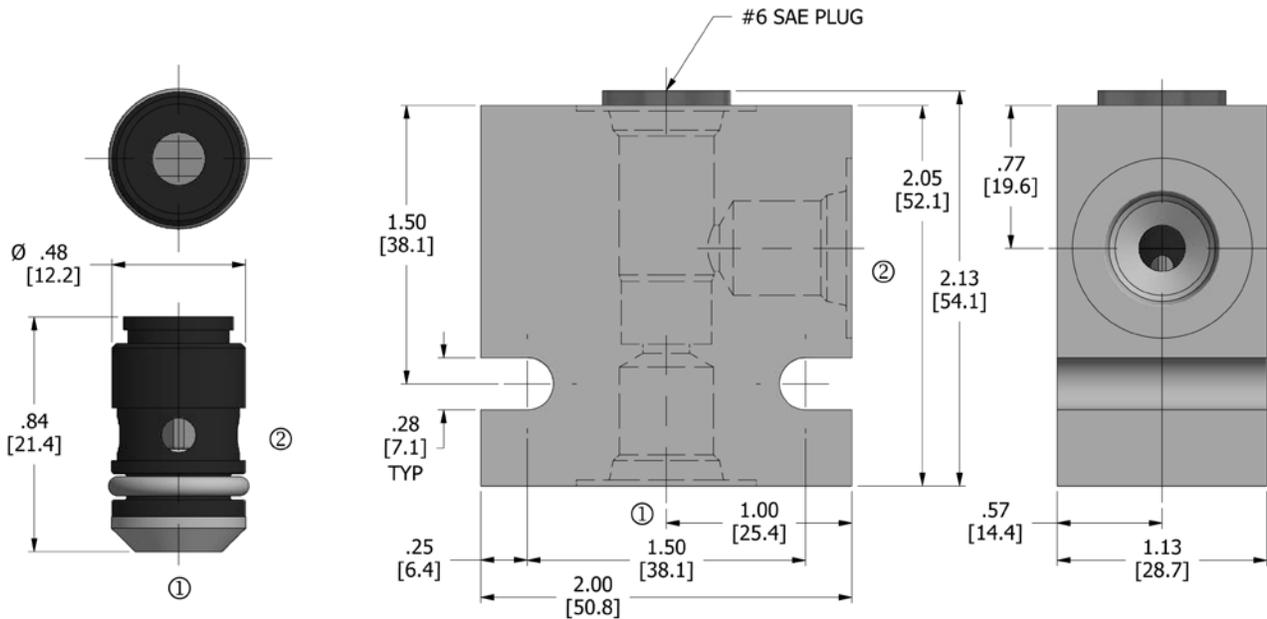
Cavity/Cavity Tool: ZP62, see page 11.06.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

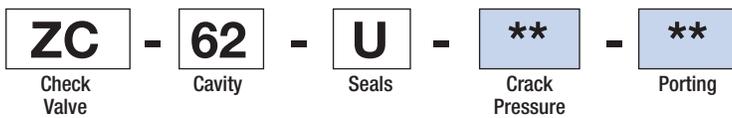
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit	Crack Pressure [†]		Porting [†]		In-Line Body w/o Cartridge
U	Urethane	(1) 10195-25	1	1-2 psi (0.07-0.14 bar)	omit	Cartridge only	
			5	5 psi (0.3 bar)	4T	SAE 4	B-ZP62-A-4T
			30	30 psi (2.1 bar)	6T	SAE 6	B-ZP62-A-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

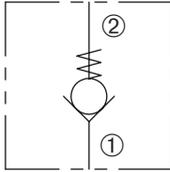
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



ZCO-62

Zero Leak, Direct-Acting,
Poppet-Type Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the poppet.



FEATURES and BENEFITS

- Slip in style.
- Zero leak.
- Compact size.

SPECIFICATIONS

Operating Pressure: 1500 psi (103 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 2 gpm (7.6 lpm)

Internal Leakage: 0 drops/min max. at 1500 psi (103 bar)

Crack Pressure: 1 - 2 psi (0.67-0.14 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids.

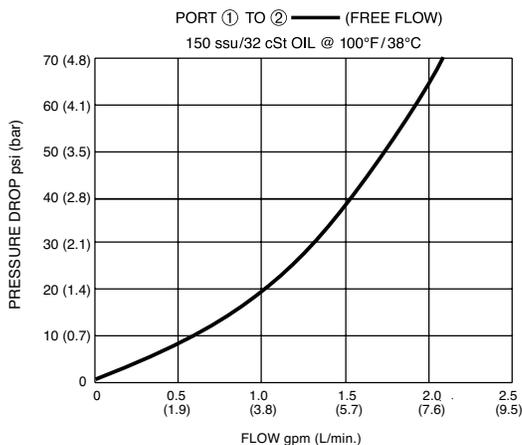
For other fluid compatibility, consult factory.

Cavity/Cavity Tool: ZP62, see page 11.06.2

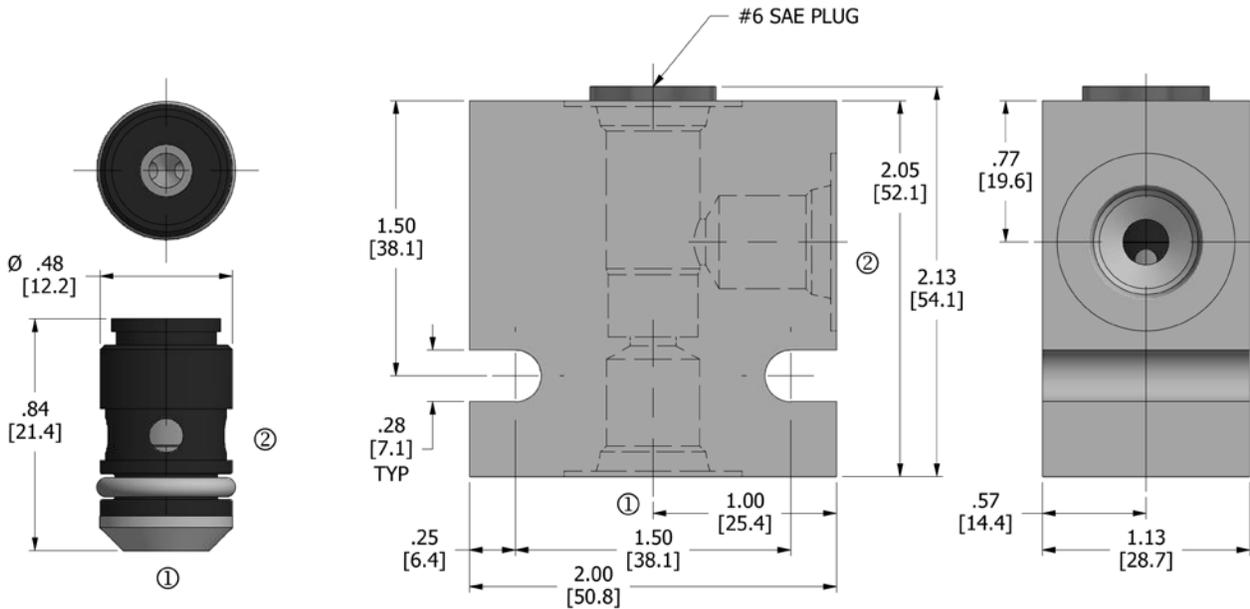
Installation/Removal Tool: Consult factory

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit	Crack Pressure		Porting [†]		In-Line Body w/o Cartridge
U	Urethane	(1) 10195-25	1	1-2 psi (0.07-0.14 bar)	omit	Cartridge only	
					4T	SAE 4	B-ZP62-A-4T
					6T	SAE 6	B-ZP62-A-6T

[†] Other options available – consult factory

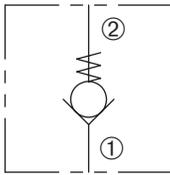
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DCV-080-B

Direct-Acting, Ball-Type
Check Valve

SERIES 8



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Guide ball assembly.
- Hardened seat and chrome alloy ball for long life.
- Low leak.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min. max. at 3000 psi (207 bar)

Crack Pressure: 2 psi (0.1 bar)

5 psi (0.3 bar)

10 psi (1.0 bar)

25 psi (1.7 bar)

Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

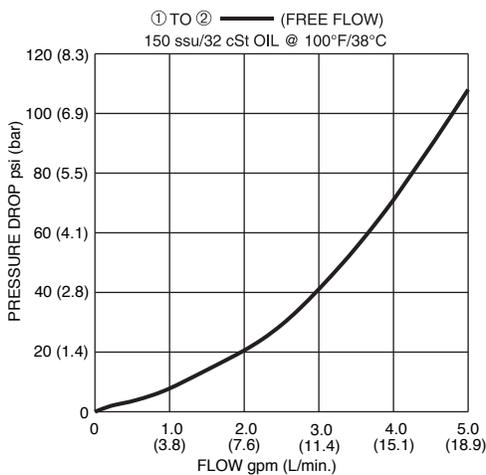
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

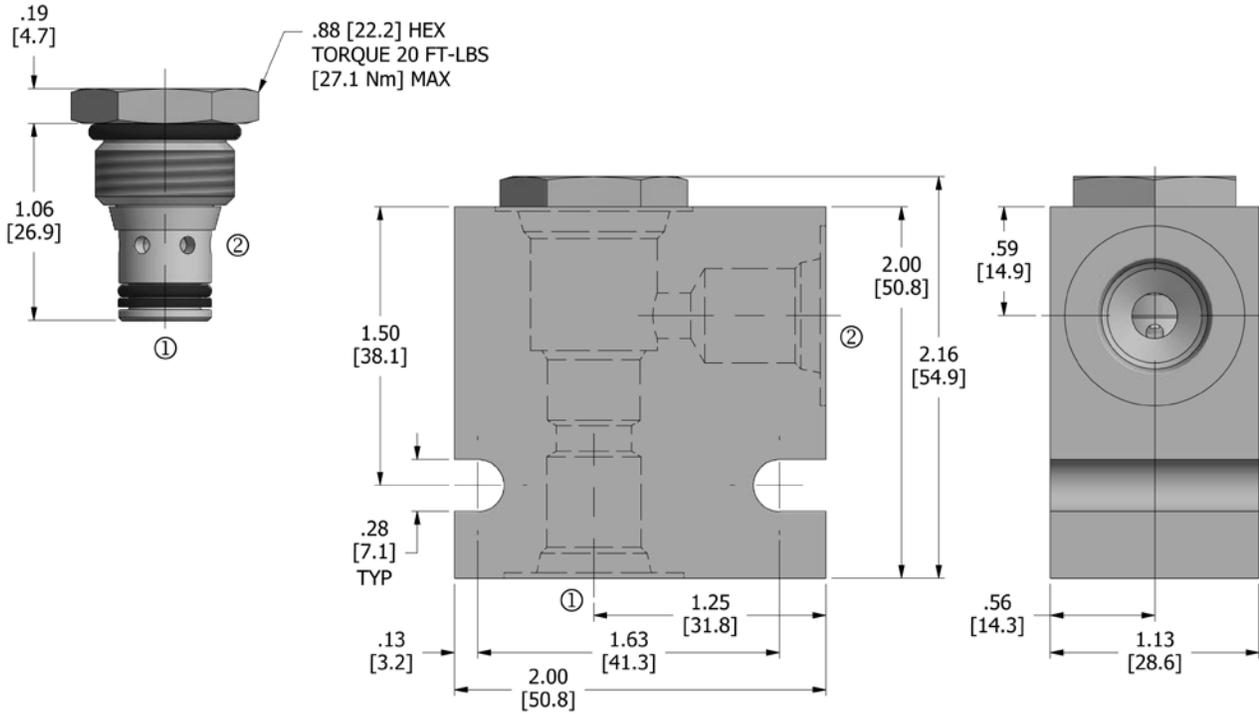
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

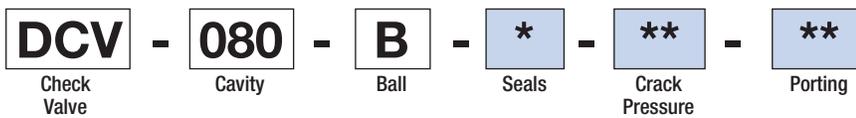
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Crack Pressure	
2	2 psi (0.1 bar)
5	5 psi (0.3 bar)
10	10 psi (0.7 bar)
25	25 psi (1.7 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

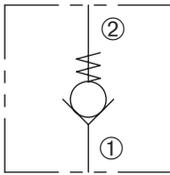
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DCV-100-B

Direct-Acting, Ball-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Chrome alloy ball for long life.
- Low leak.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 20 gpm (75.7 lpm)

Internal Leakage: 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 5 psi (0.3 bar)

15 psi (1.0 bar)

30 psi (2.1 bar)

60 psi (4.1 bar)

100 psi (6.9 bar)

140 psi (10.0 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

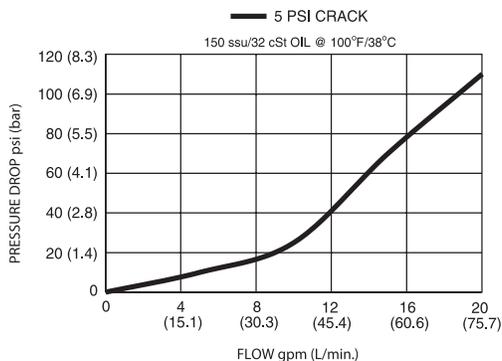
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

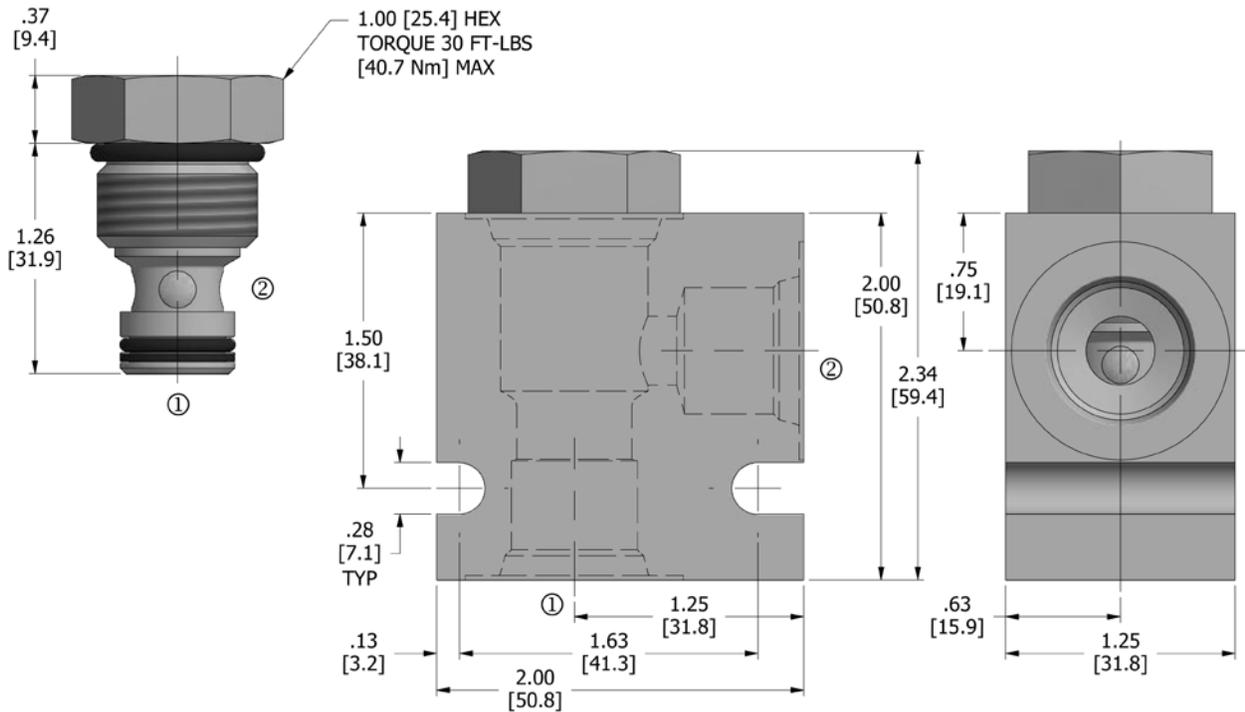
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

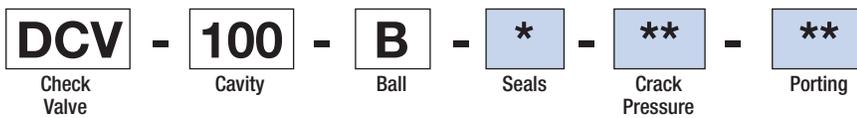
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Crack Pressure	
5	5 psi (0.3 bar)
15	15 psi (1.0 bar)
30	30 psi (2.1 bar)
60	60 psi (4.1 bar)
100	100 psi (6.9 bar)
140	145 psi (10.0 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

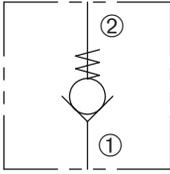
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DCV-080-PB

Direct-Acting, Ball-Type
Check Valve

SERIES 8



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Guide ball assembly
- Torlon® ball for positive shut-off.
- Low leak.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 5 gpm (18.9 lpm)

Internal Leakage: Less than 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 2 psi (0.1 bar)

5 psi (0.3 bar)

10 psi (0.7 bar)

30 psi (2.1 bar)

60 psi (4.1 bar)

100 psi (6.9 bar)

Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

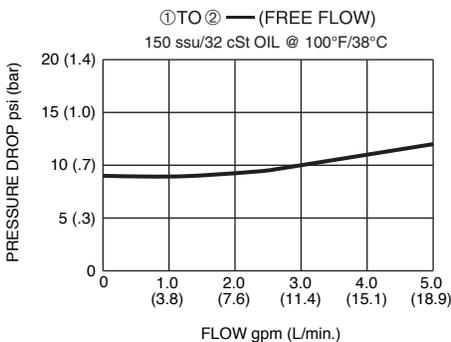
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

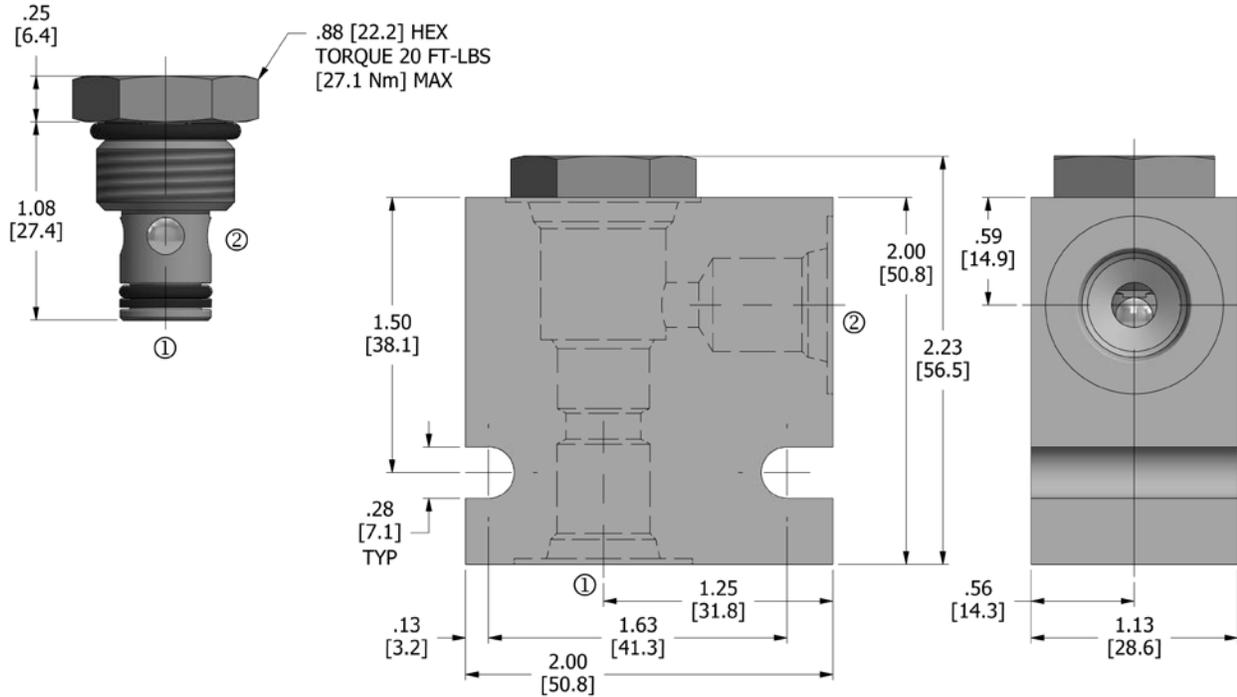
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Crack Pressure	
2	2 psi (0.1 bar)
5	5 psi (0.3 bar)
10	10 psi (0.7 bar)
30	30 psi (2.1 bar)
60	60 psi (4.5 bar)
100	100 psi (6.9 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only w/nut	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

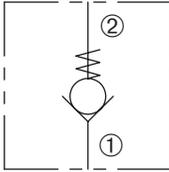
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DCV-100-PB

Direct-Acting, Ball-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball.



FEATURES and BENEFITS

- Guide ball assembly
- Torlon® ball for positive shut-off.
- Low leak.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 20 gpm (75.7 lpm)

Internal Leakage: Less than 2 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 5 psi (0.3 bar)

10 psi (0.7 bar)

30 psi (2.1 bar)

60 psi (4.1 bar)

100 psi (6.9 bar)

Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

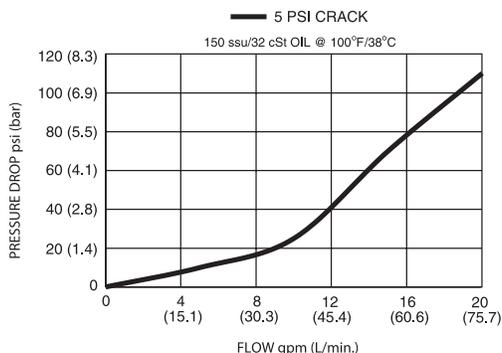
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

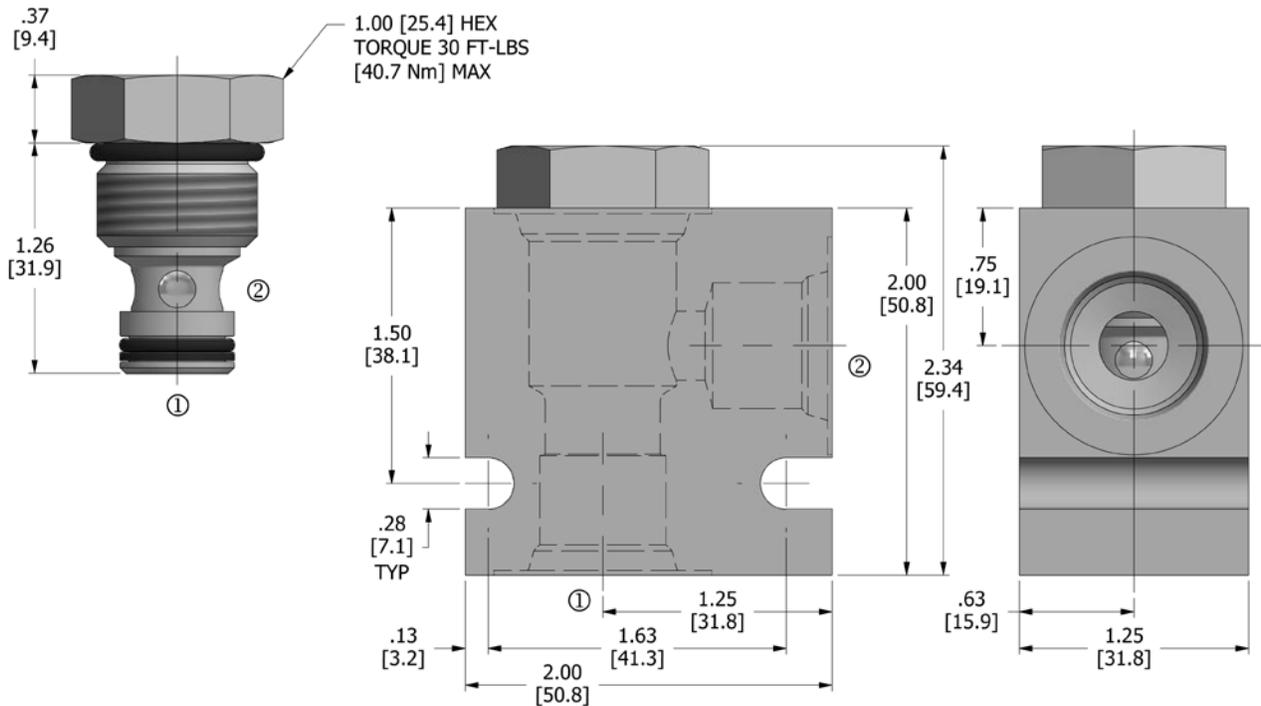
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Crack Pressure	
5	5 psi (0.3 bar)
10	10 psi (0.7 bar)
30	30 psi (2.1 bar)
60	60 psi (4.5 bar)
100	100 psi (6.9 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

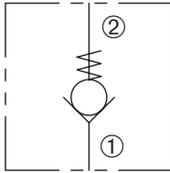
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DCV-100-P

Direct-Acting, Poppet-Type
Cartridge Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the poppet.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 10 gpm (37.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure:

- 5 psi (0.3 bar)
- 15 psi (1.0 bar)
- 30 psi (2.1 bar)
- 65 psi (4.5 bar)
- 100 psi (6.9 bar)
- 300 psi (20.7 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13
Non-Critical Application – ISO 20/18/14

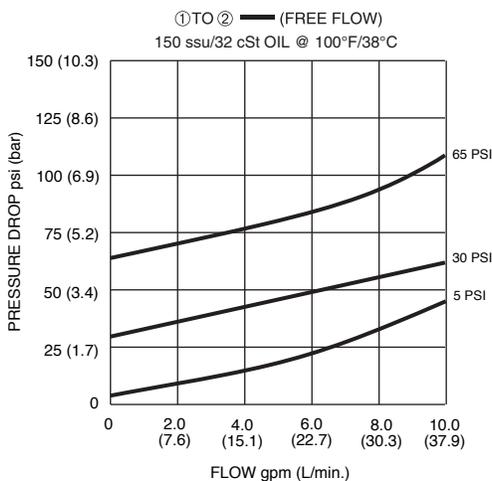
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

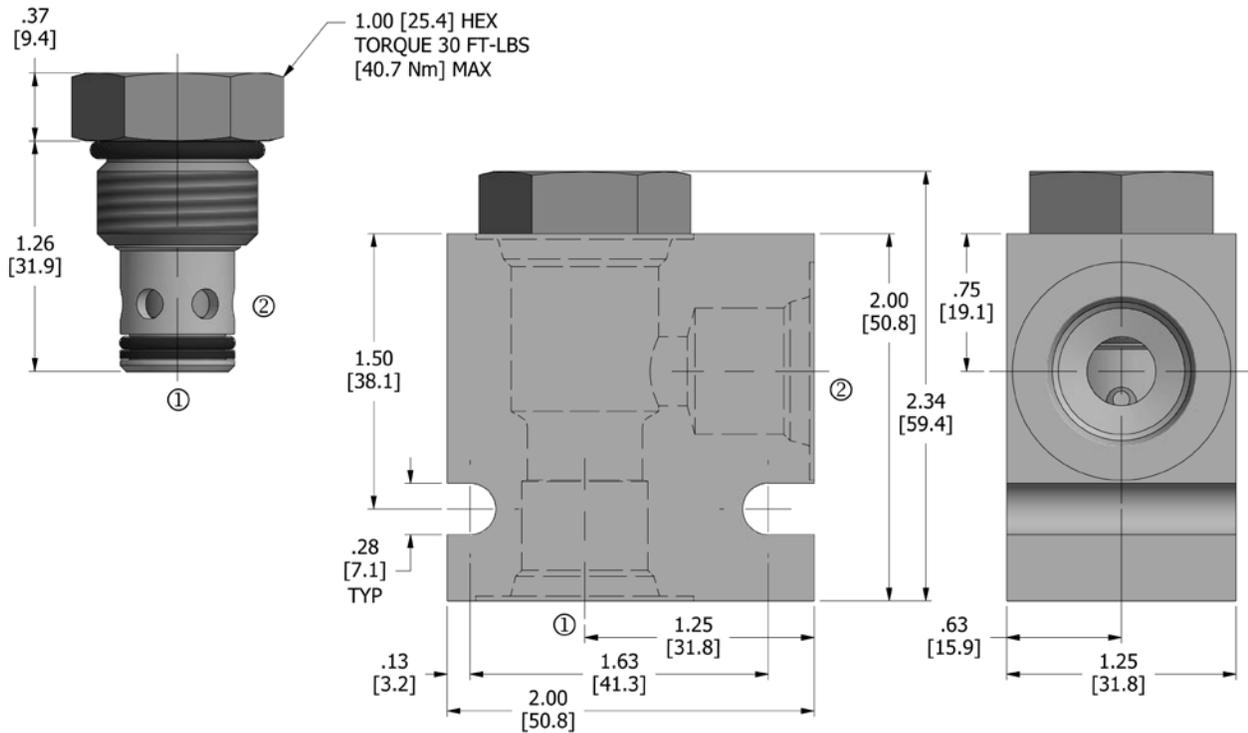
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

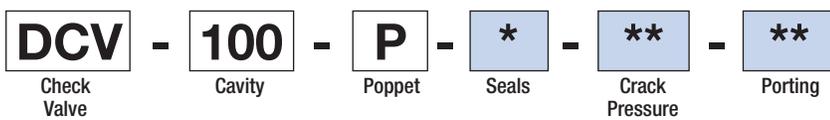
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Crack Pressure	
5	5 psi (0.3 bar)
15	15 psi (1.0 bar)
30	30 psi (2.1 bar)
65	65 psi (4.5 bar)
100	100 psi (6.9 bar)
300	300 psi (20.7 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

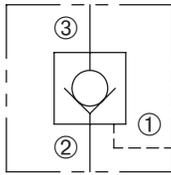
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZPC2-63

Pilot To Open, Ball-Type
Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ② overcomes the spring-bias ball and allows free flow to ③. Flow in the opposite direction, from ③ to ②, is blocked by the ball. When the required pilot pressure is achieved at ①, the ball unseats and allows flow between ③ and ②. The pilot piston area to poppet seat area ratio is 3:1.

FEATURES and BENEFITS

- Slip in style
- Compact size.

SPECIFICATIONS

Operating Pressure: 4000 psi (276 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 3 gpm (11.4 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 30 psi (2.1 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids.

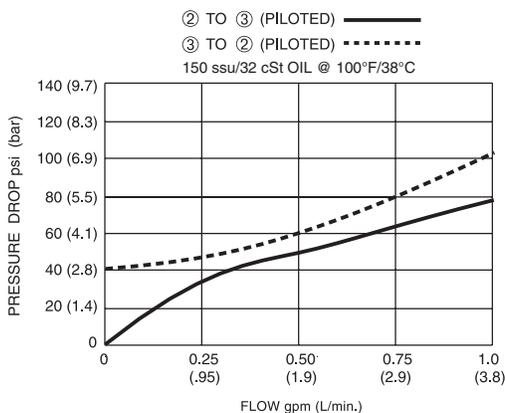
For other fluid compatibility, consult factory.

Cavity/Cavity Tool: ZP63, see page 11.06.3

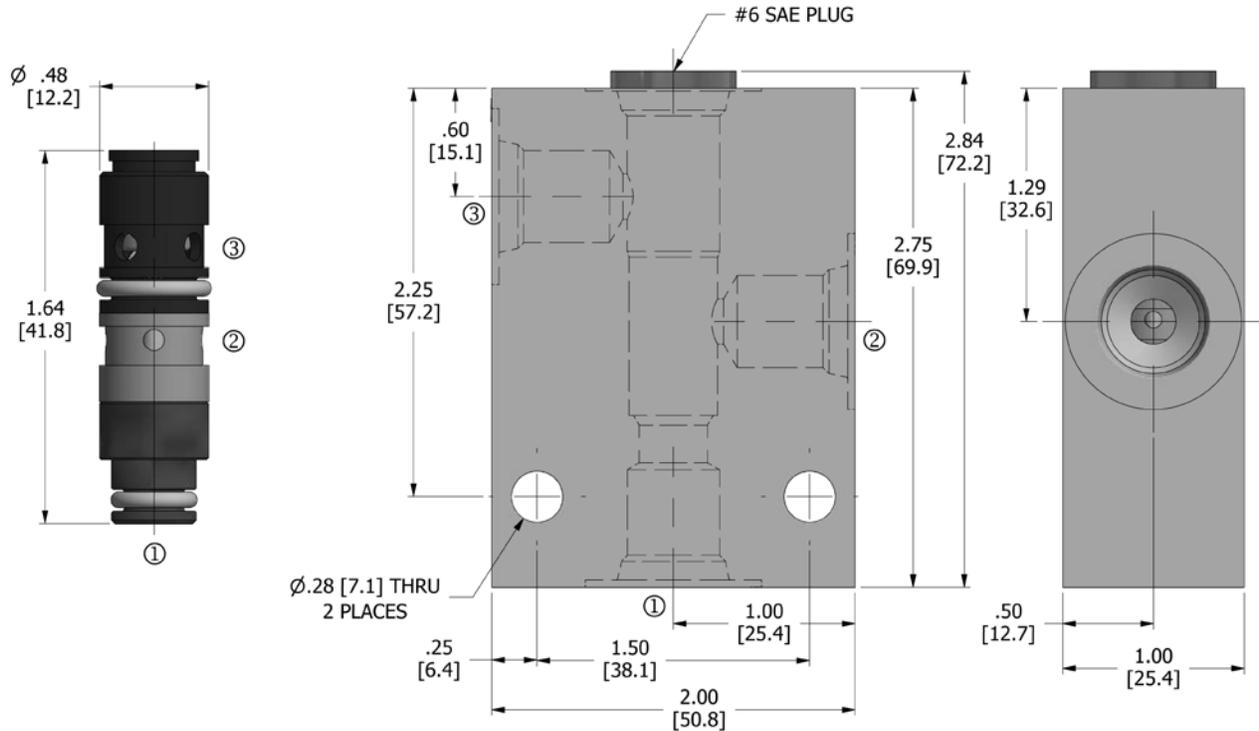
Installation/Removal Tool: Consult factory

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

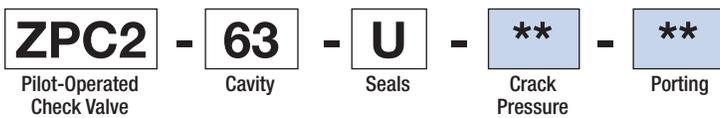
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	(1) 10195-24
		(1) 10195-25

Crack Pressure	
30	30 psi (2.1 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-ZP63-A-4T
6T	SAE 6	B-ZP63-A-6T

[†] Other options available – consult factory

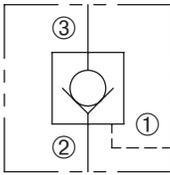
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPC-080-P

Pilot To Open, Poppet-Type
Check Valve

SERIES 8

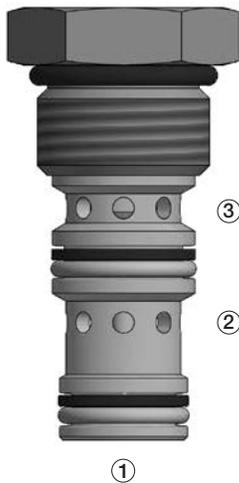


DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ② overcomes the spring-bias poppet and allows free flow to ③. Flow in the opposite direction, from ③ to ②, is blocked by the poppet. When the required pilot pressure is achieved at ①, the poppet unseats and allows flow between ③ and ②. The pilot piston area to poppet seat area ratio is 3:1.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 25 psi (1.7 bar)

50 psi (3.4 bar)

100 psi (6.9 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

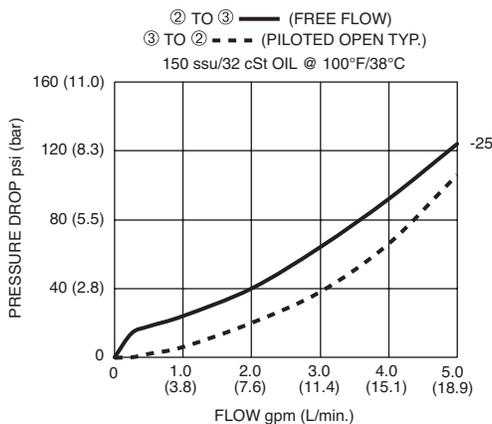
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

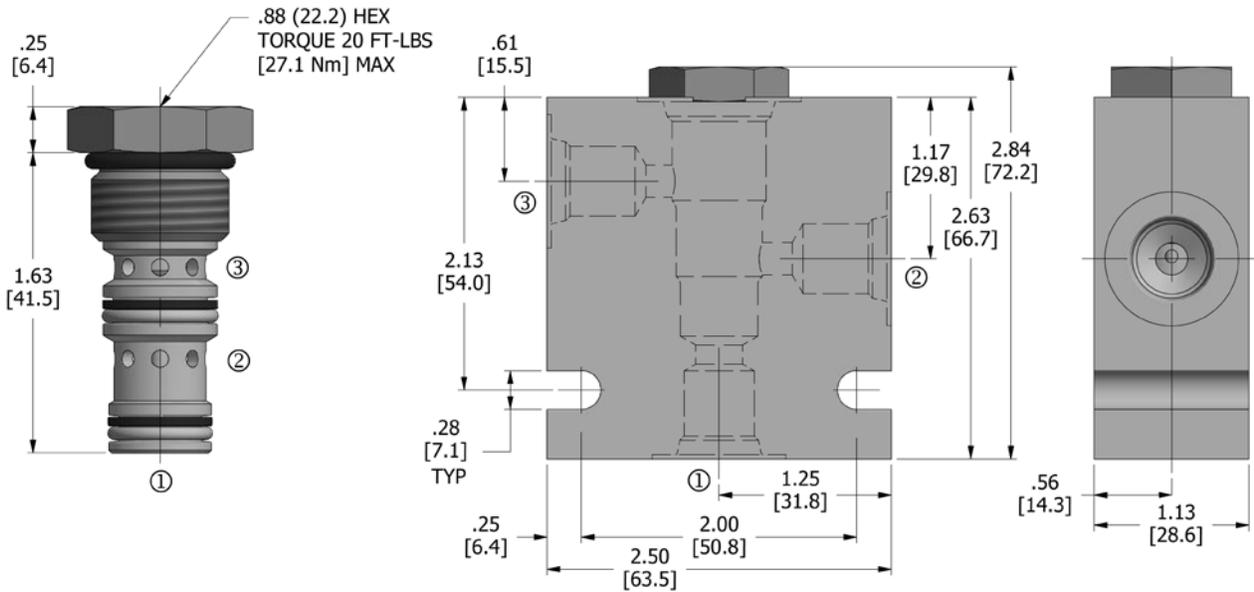
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

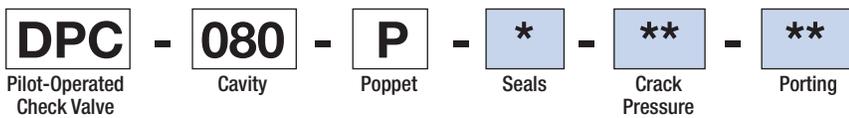
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Crack Pressure	
25	25 psi (1.7 Bar)
50	50 psi (3.4 Bar)
100	100 psi (6.9 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

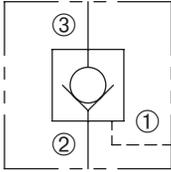
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



DPC-100-P

Pilot To Open, Poppet-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ② overcomes the spring-bias poppet and allows free flow to ③. Flow in the opposite direction, from ③ to ②, is blocked by the poppet. When the required pilot pressure is achieved at ①, the poppet unseats and allows flow between ③ and ②. The pilot piston area to poppet seat area ratio is 3.5:1.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 25 psi (1.7 bar)

50 psi (3.4 bar)

100 psi (6.9 bar)

Pilot Ratio: 3.5:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

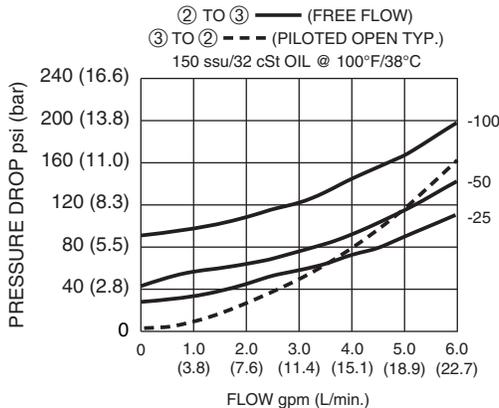
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

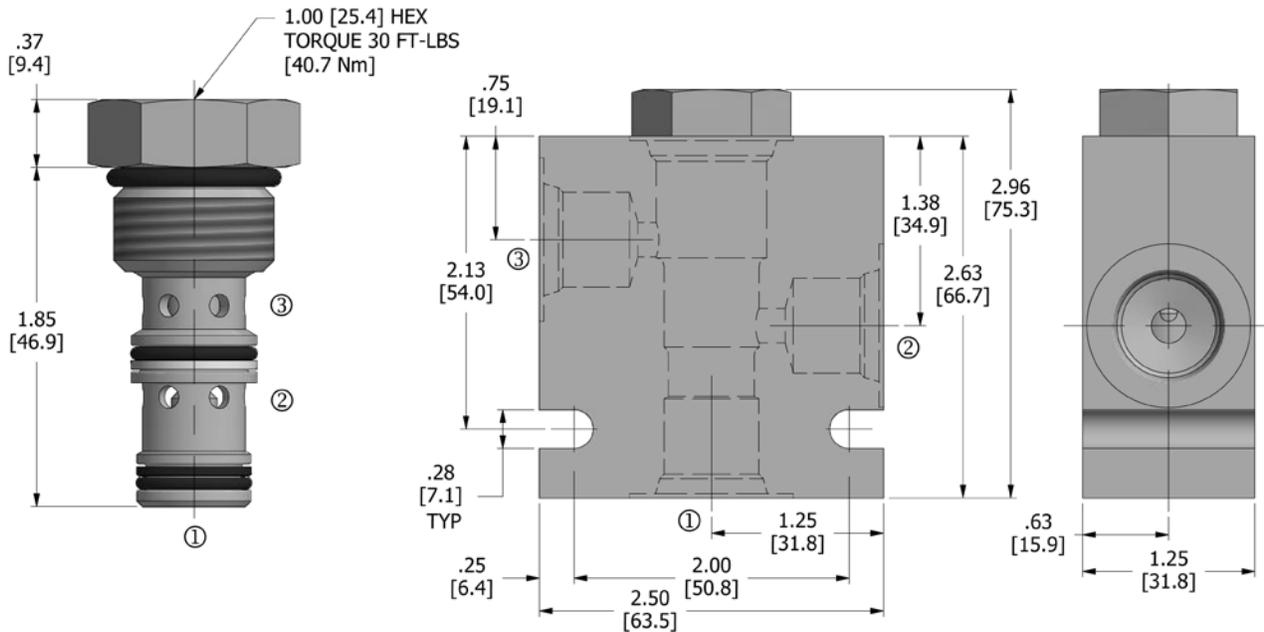
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

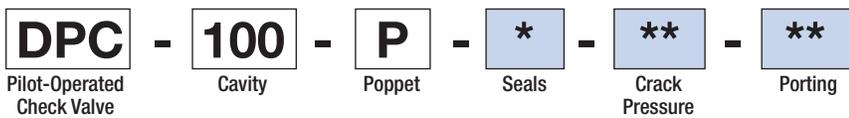
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-B
V	Viton	

Crack Pressure	
25	25 psi (1.7 Bar)
50	50 psi (3.4 Bar)
100	100 psi (6.9 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

[†] Other options available – consult factory

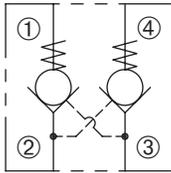
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DDPC-080-P

Dual Pilot To Open, Poppet-Type
Check Valve

SERIES 8

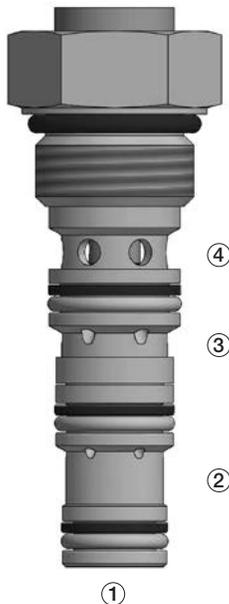


DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ② or ③ overcomes the spring-bias poppet and allows free flow to ① or ④ respectively. Flow in the opposite direction, from ① to ② or ④ to ③, is blocked by the poppet. When the required pilot pressure is achieved at ②, the poppet unseats and allows flow between ④ and ③. When the required pilot pressure is achieved at ③, the poppet unseats and allows flow between ① and ②. The pilot piston area to poppet seat area ratio is 3:1.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 4000 psi (276 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 2 gpm (7.6 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 5 psi (0.3 bar)

25 psi (1.7 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

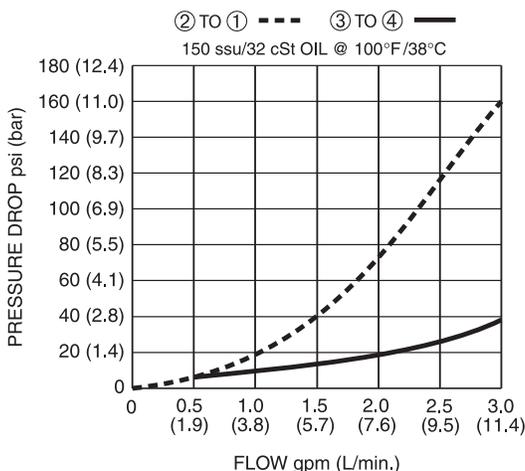
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

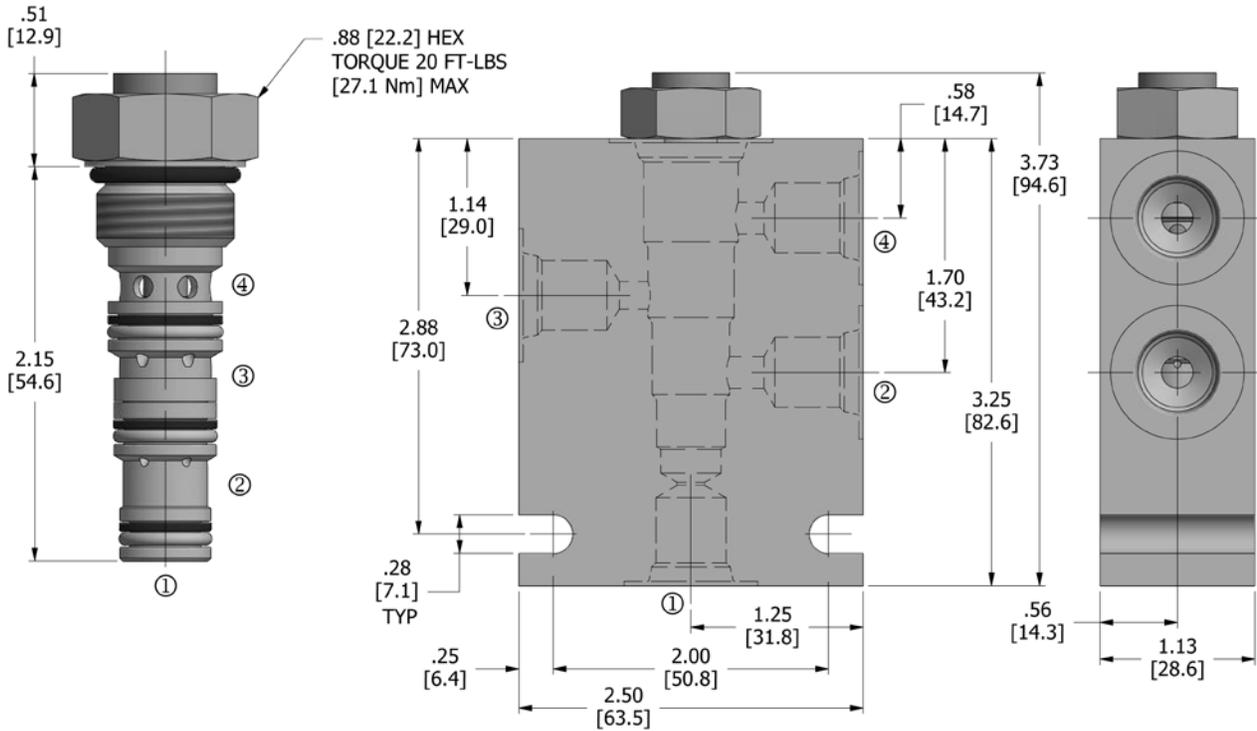
Cavity/Cavity Tool: 080-4, see page 11.08.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

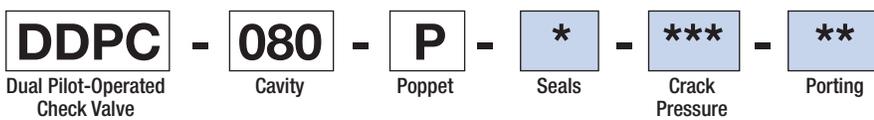
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-34-U-A

Crack Pressure	
005	5 psi (0.3 Bar)
025	25 psi (1.7 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-4-2N
3N	3/8 PTF	B-080-4-3N
4T	SAE 4	B-080-4-4T
6T	SAE 6	B-080-4-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

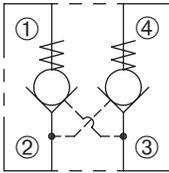
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DDPC-100-P

Dual Pilot To Open, Poppet-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ② or ③ overcomes the spring-bias poppet and allows free flow to ① or ④ respectively. Flow in the opposite direction, from ① to ② or ④ to ③, is blocked by the poppet. When the required pilot pressure is achieved at ②, the poppet unseats and allows flow between ④ and ③. When the required pilot pressure is achieved at ③, the poppet unseats and allows flow between ① and ②. The pilot piston area to poppet seat area is 4:1.



FEATURES and BENEFITS

- Hardened seat for long life and low leakage.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 4000 psi (276 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C).

Crack Pressure: 25 psi (1.7 bar)

Pilot Ratio: 4:1

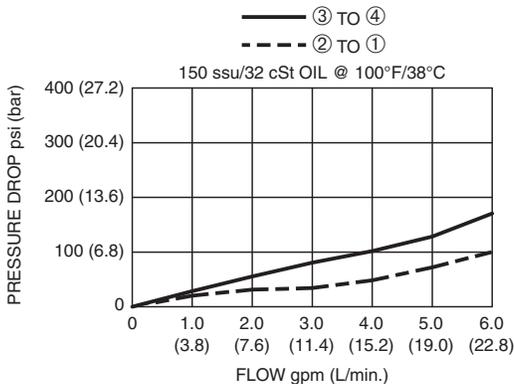
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

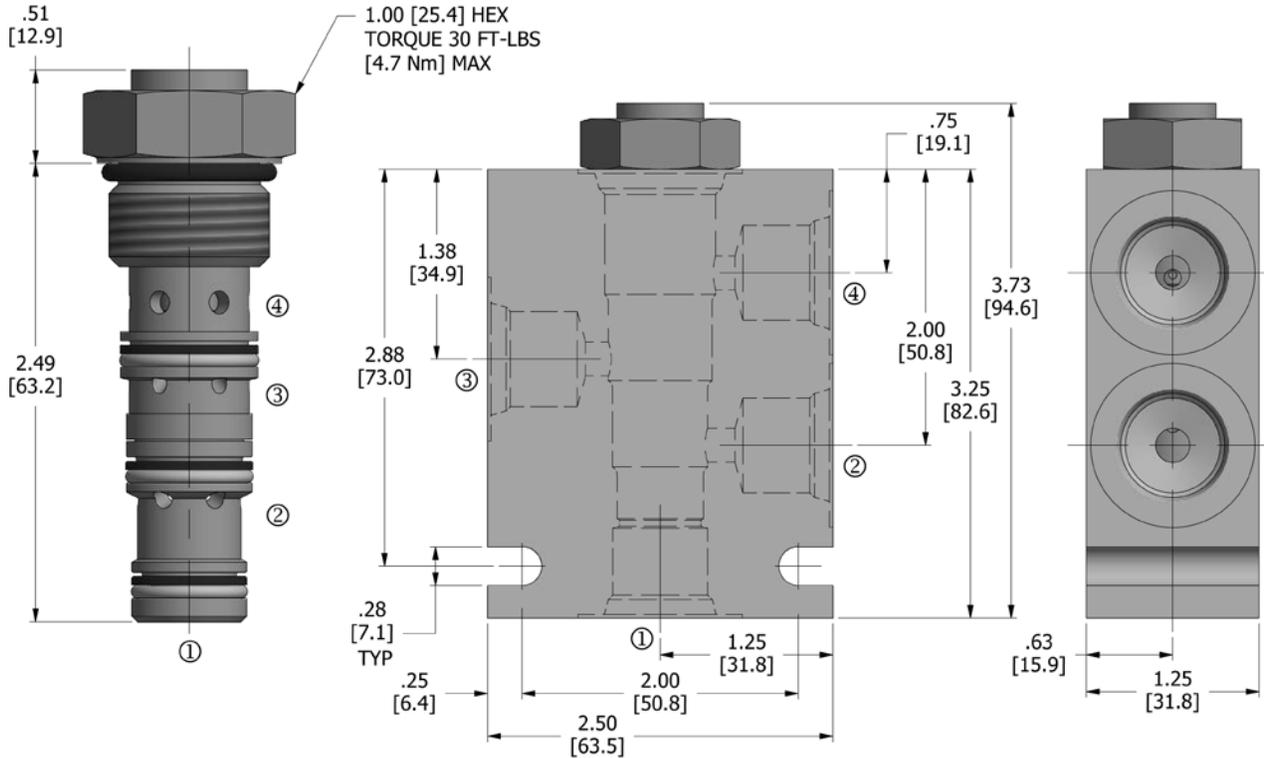
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum
allow rated at 3000 psi (207 bar).

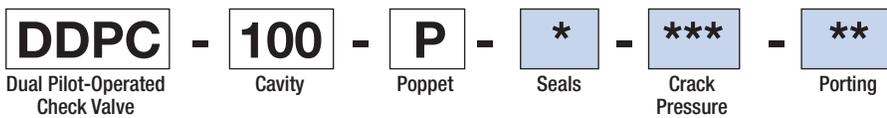
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Crack Pressure	
025	25 psi (1.7 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-4-2N
3N	3/8 PTF	B-100-4-3N
6T	SAE 6	B-100-4-6T
8T	SAE 8	B-100-4-8T

[†] Other options available – consult factory

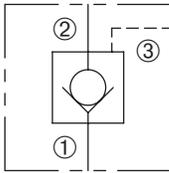
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZPTC-63

Pilot to Close
Check Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow free flow in one direction, while preventing flow in the opposite direction. Free flow can be blocked by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the ball. When the required pilot pressure is achieved at ③, the ball is held closed to block flow between ① and ②. The pilot piston area to ball seat area ratio is 3:1.

FEATURES and BENEFITS

- Slip-in style.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 3 gpm (11.4 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 25 psi (1.7 bar)
50 psi (3.4 bar)
100 psi (6.9 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C).

Recommended Filtration: Critical Application — ISO 17/15/13
Non-critical Application — ISO 20/18/14

Fluids: Mineral-based fluids.

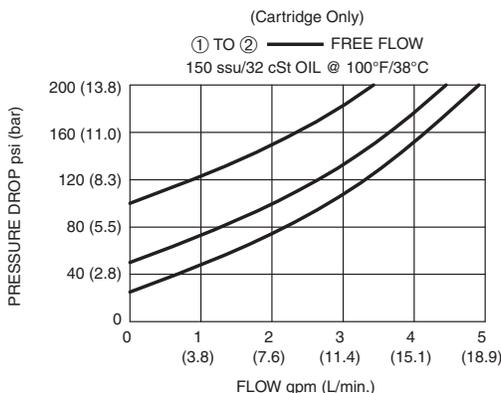
For other fluid compatibility, consult factory.

Cavity/Cavity Tool: ZP63, see page 11.06.3

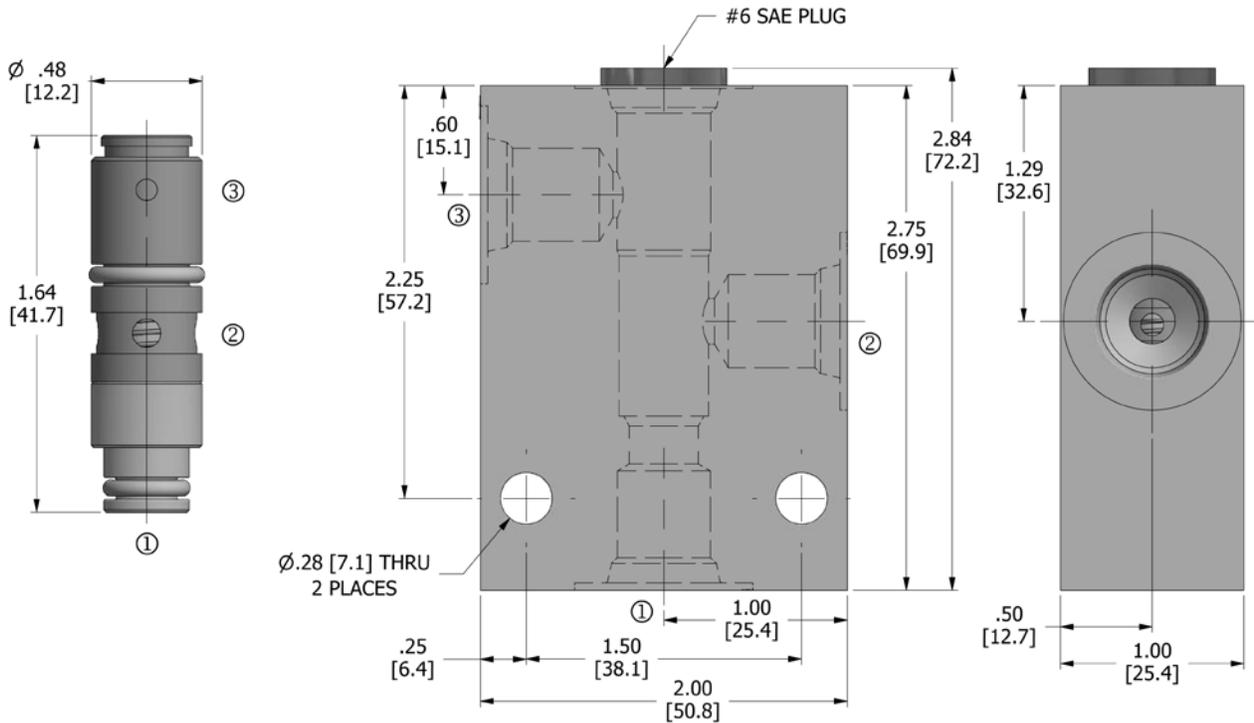
Installation/Removal Tool: Consult factory.

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

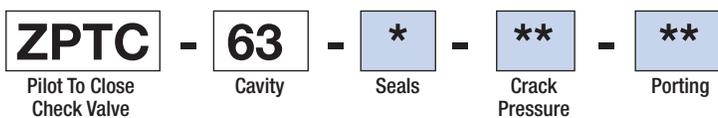
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	(1) 10195-24
		(1) 10195-25

Crack Pressure	
25	25 psi (1.7 Bar)
50	50 psi (3.4 Bar)
100	100 psi (6.9 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-ZP63-A-4T
6T	SAE 6	B-ZP63-A-6T

[†] Other options available – consult factory

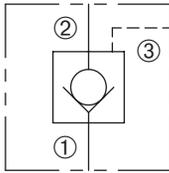
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPTC-100-P

Pilot To Close, Poppet-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Free flow can be blocked by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow to ②. Flow in the opposite direction, from ② to ①, is blocked by the poppet. When the required pilot pressure is achieved at ③, the poppet is held closed to block flow between ① and ②. The pilot piston area to poppet seat area ratio is 3:1.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 12 gpm (45.4 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 25 psi (1.7 bar)

50 psi (3.4 bar)

100 psi (6.9 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

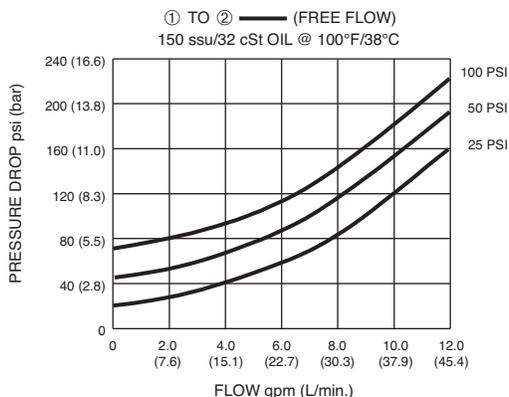
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

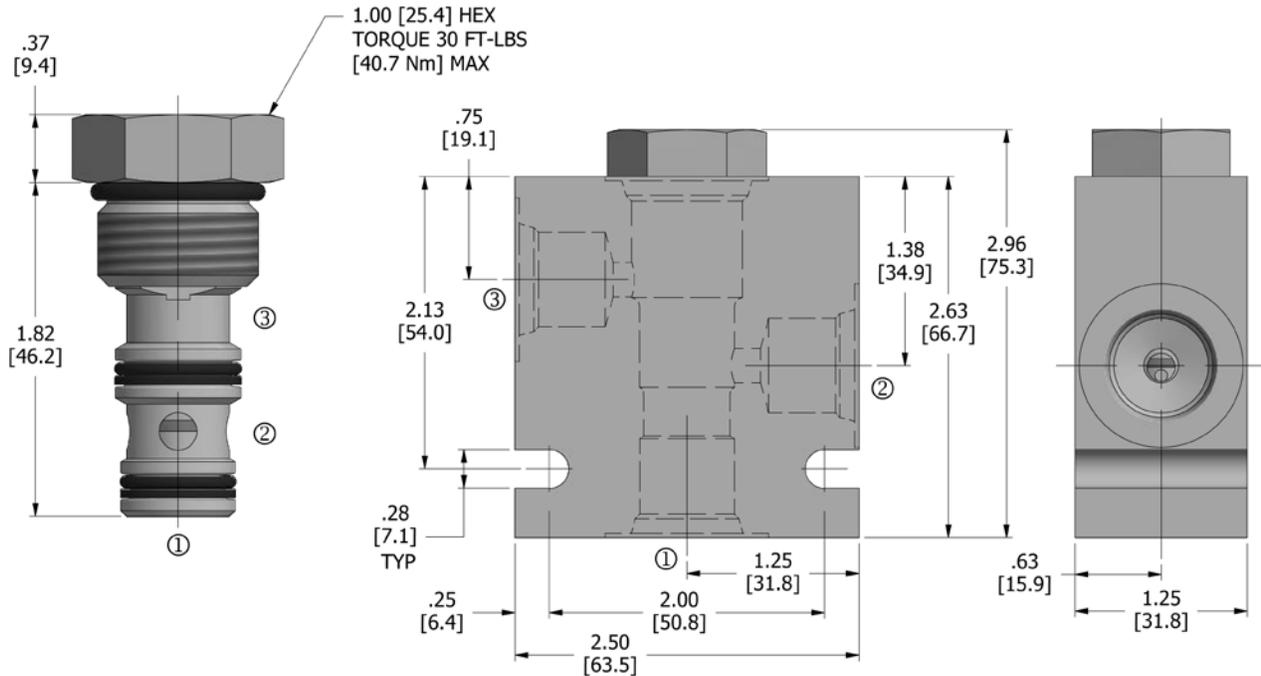
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

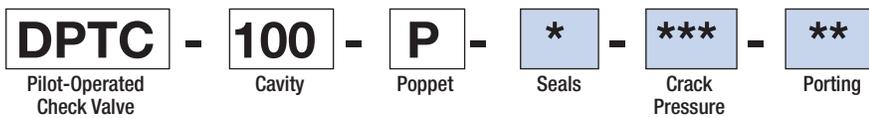
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Crack Pressure	
25	25 psi (1.7 Bar)
50	50 psi (3.4 Bar)
100	100 psi (6.9 Bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

[†] Other options available – consult factory

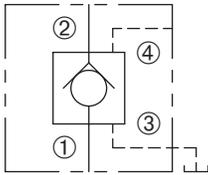
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPCV-100-P

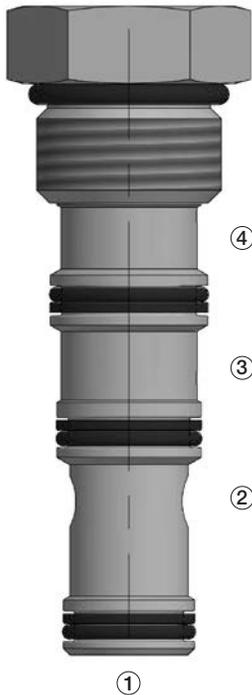
Vented, Pilot To Open, Poppet-Type
Check Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in one direction while preventing flow in the opposite direction. Reverse flow can be achieved by reaching the required pilot pressure. This valve is commonly used as a load-holding or blocking valve.



OPERATION

Pressure at ② overcomes the spring-bias poppet and allows free flow to ①. Flow in the opposite direction, from ① to ②, is blocked by the poppet. When the required pilot pressure is achieved at ④, the poppet unseats and allows flow between ① and ②. Port ③ is vented to tank to keep one side of the pilot piston low pressure and isolated from back pressure at port ②. The pilot piston area to poppet seat area ratio is 3:1.

FEATURES and BENEFITS

- Vented pilot design.
- Hardened poppet and seat for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 10 gpm (37.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 15 psi (1.0 bar)

Pilot Ratio: 3:1

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

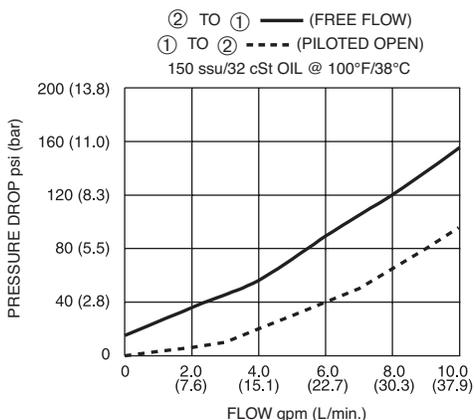
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids.

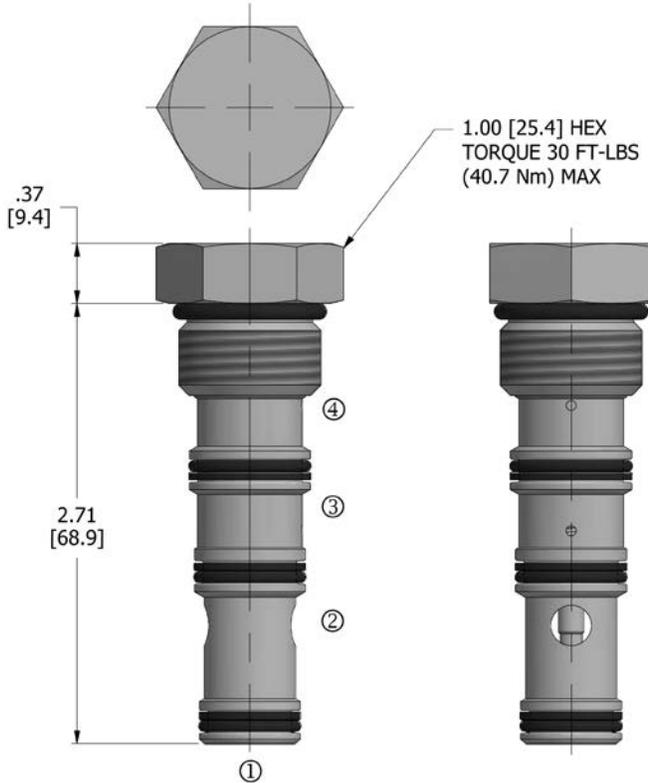
For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-4L, see page 11.10.4L

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DPCV - **100** - **P** - ***** - **15**
 Vented Pilot-Operated Check Valve Cavity Poppet Seals Crack Pressure

Seals		Seal Kit
N	Buna N	DSK-100-4L-N-B
V	Viton	

Crack Pressure	
15	15 psi (1.0 Bar)

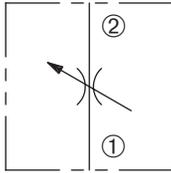
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DNV-080

Adjustable,
Needle Valve

SERIES 8



DESCRIPTION

A cartridge valve designed to provide a variable flow restriction with positive shut-off.

OPERATION

The DNV-080 varies flow restriction by adjusting needle in or out and will shut off when fully closed. This valve will meter flow in either direction.

FEATURES and BENEFITS

- Zero leakage at shut-off.
- Aluminum knob.
- Fully adjustable.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal flow 11 gpm (41.6 lpm)

Cv Flow Factor: (Full Open) .47

Internal Leakage: 0 drops/min at 3000 psi (207 bar) at shut-off.

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application-ISO 17/15/13

Non-Critical Application-ISO 20/18/14

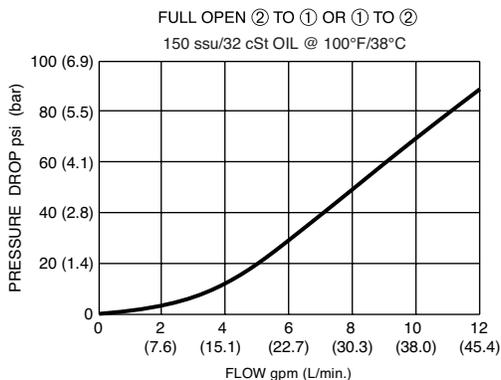
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

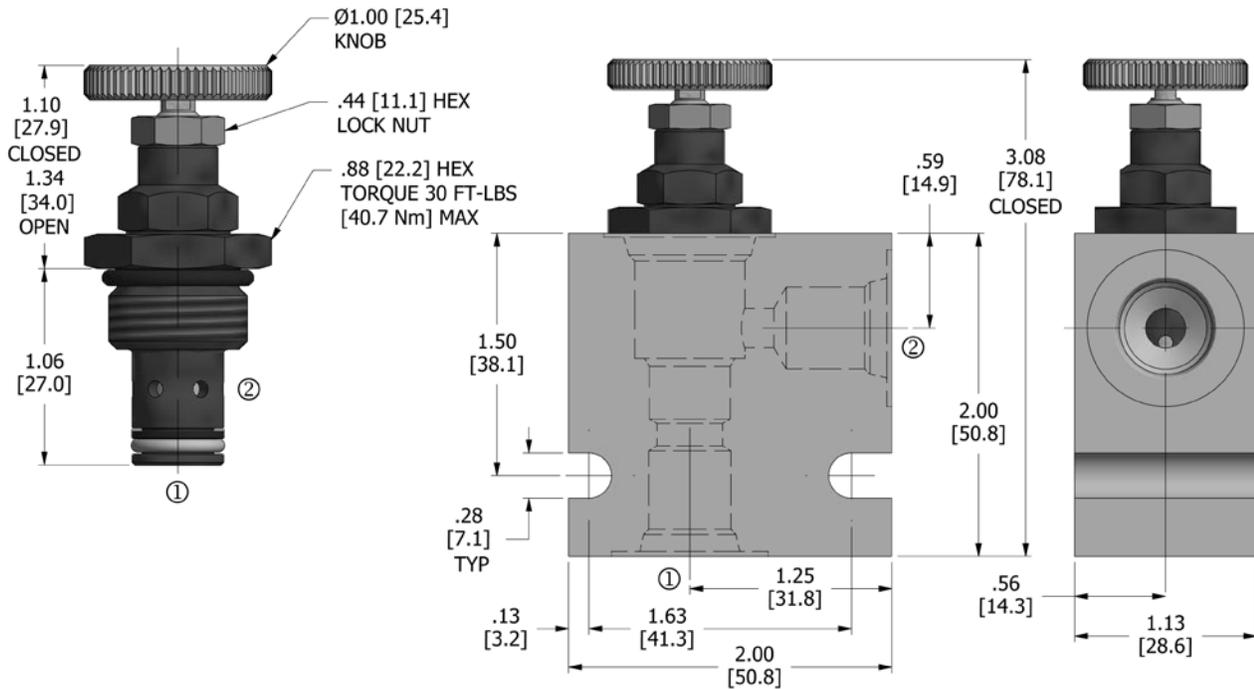
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

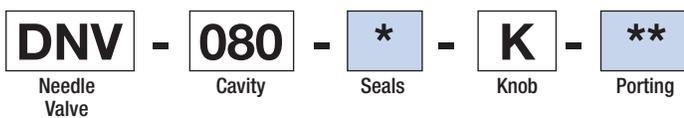
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

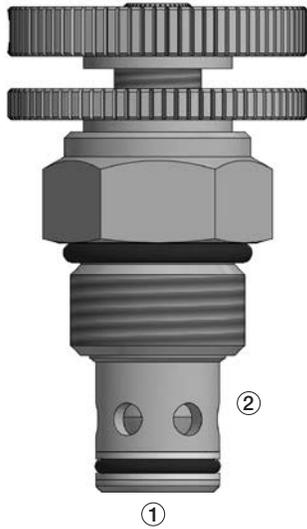
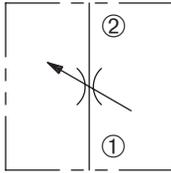
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DNV-100

Adjustable,
Needle Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to provide a variable flow restriction with positive shut-off.

OPERATION

The DNV-100 varies flow restriction by adjusting needle in or out and will shut off when fully closed. This valve will meter flow in either direction.

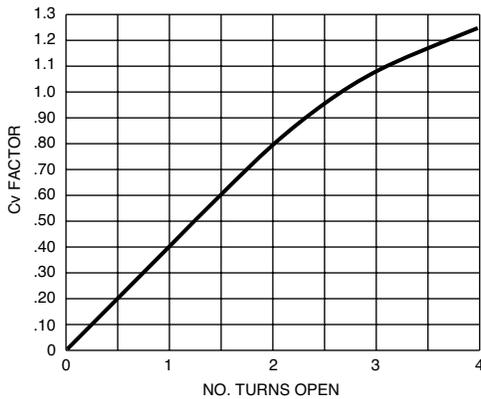
FEATURES and BENEFITS

- Hardened seat for long life.
- Low leakage at shut-off.
- Aluminum knob and disc nut.
- Fully adjustable.
- Adjustment may be locked in place.
- Positive shut-off.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)
Flow: 12 gpm (45.4 lpm) max. recommended input.
Internal Leakage: 2 drops/min max. at 3000 psi (207 bar) at shut-off.
Temperature: -30°F to +250°F (-35°C to +120°C)
Recommended Filtration: ISO 20/18/14
Fluids: Mineral-based fluids.
 For other fluid compatibility, consult factory.
Cavity/Cavity Tool: 100-2, see page 11.10.2
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

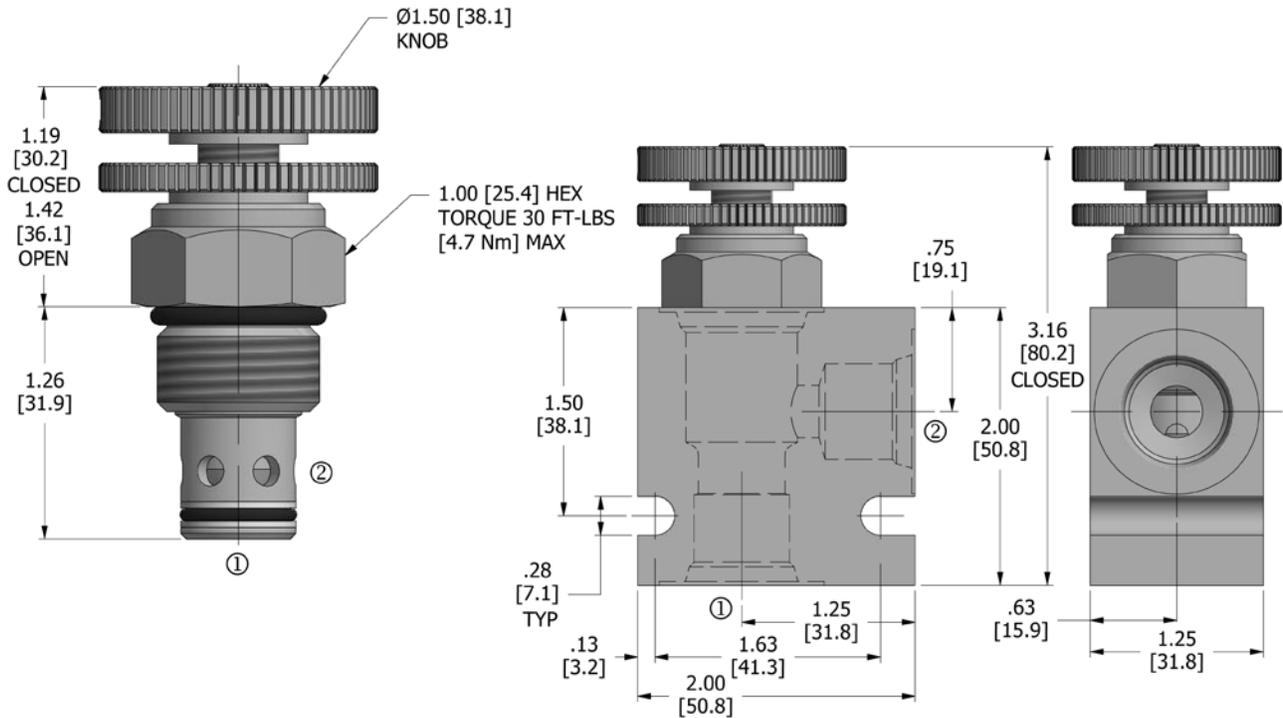
CV FACTOR VS. TURNS OPEN



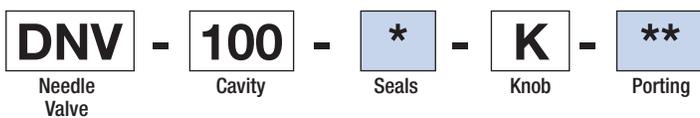
$$\text{FLOW IN GPM} = \frac{C_v \sqrt{P_1 - P_2}}{\sqrt{G_f}}$$

C_v = Flow Coefficient
 P_1 = Inlet Pressure (psi)
 P_2 = Outlet Pressure (psi)
 G_f = specific gravity of medium at operating temperature in °F.

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-B
V	Viton	

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-24-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

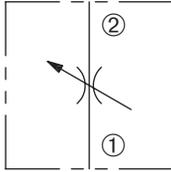
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

NC

Adjustable,
Needle Valve

SERIES NC



DESCRIPTION

A non-self-contained cartridge valve designed to provide a variable flow restriction with positive shut-off. Valve sizes range from 1/8" to 3/4". Available sizes; SAE 4, SAE 6 and NPTF sizes from 1/8" to 3/4".

OPERATION

The NC series of valves vary flow restriction by adjusting needle in or out and will shut off when fully closed. These valves will meter flow in either direction.

FEATURES and BENEFITS

- Aluminum knob.
- Fully adjustable.
- Adjustment may be locked in place.
- Positive shut-off.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See FLOW CHARACTERISTICS chart.

Temperature: -15°F to +400°F (-26°C to +204°C)

Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavities/Cavity Tools: NC10; NC20; NC25; NC30 & NC35, see page 11.21.1

NC4T, see page 11.21.2

NC6T, see page 11.21.3



FLOW CHARACTERISTICS

MODEL	FLOW MAX. RECOMMENDED gpm (lpm)	CV FLOW FACTOR (FULL OPEN)
NC-04-S	13.5 (51.1)	.78
NC-06-S	22.5 (85.2)	1.24
NC-10-S	3.2 (12.1)	.19
NC-20-S	7.0 (26.5)	.43
NC-25-S	13.5 (51.1)	.78
NC-30-S	22.5 (85.2)	1.24
NC-35-S	34.0 (128.7)	1.78

DIMENSIONS Inches [Millimeters]

CLOSED STATE **OPEN STATE**

NPT SIZES
MALE THREAD SUPPLIED
WITH PRE-APPLIED
THREAD LOCKER FOR
POSITIVE SEAL

SAE SIZES
USES AN O-RING

SAE SIZES ONLY

MODEL	A (WIDTH ACROSS HEX. FLATS)	B (WIDTH ACROSS HEX. FLATS)	C (DIA.)	D (CLOSED)	E (FULL OPEN)	INSTALLATION TORQUE
NC-04-S	.44 [11.2]	.56 [14.2]	1.03 [26.2]	1.02 [25.9]	1.24 [31.5]	135 IN-LBS [15.3 Nm]
NC-06-S	.50 [12.7]	.69 [17.5]	1.03 [26.2]	1.20 [30.6]	1.45 [36.9]	
NC-10-S	.38 [9.7]	.38 [9.7]	.78 [19.8]	.75 [19.1]	.88 [22.4]	
NC-20-S	.44 [11.2]	.50 [12.7]	.78 [19.8]	.86 [21.8]	1.00 [25.4]	
NC-25-S	.44 [11.2]	.50 [12.7]	1.03 [26.2]	.97 [24.6]	1.19 [30.2]	
NC-30-S	.50 [12.7]	.56 [14.2]	1.03 [26.2]	1.19 [30.2]	1.44 [36.6]	
NC-35-S	.69 [17.5]	.75 [19.1]	1.03 [26.2]	1.31 [33.3]	1.63 [41.4]	

HOW TO ORDER

NC - ****** - **S**

Needle Valve Size Carbon Steel

Size	Flow - Maximum	Cavity	Seals	Seal Kit (external)
04	SAE 4 13.5 gpm (51.1 lpm)	NC4T	Viton	(1) 10031-20
06	SAE 6 22.5 gpm (85.2 lpm)	NC6T	Buna N	(1) 10031-22
10	1/8" NPT 3.2 gpm (12.1 lpm)	NC10	Viton (internal)	Thread Locker
20	1/4" NPT 7.0 gpm (26.5 lpm)	NC20		
25	3/8" NPT 13.5 gpm (51.1 lpm)	NC25		
30	1/2" NPT 22.5 gpm (85.2 lpm)	NC30		
35	3/4" NPT 34.0 gpm (128.7 lpm)	NC35		

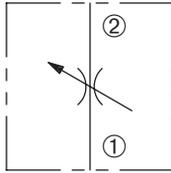
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

S-210, S-310 and S-410

Adjustable, High Pressure,
Needle Valve
5000 psi (345 bar)

SERIES S



DESCRIPTION

A cartridge valve designed as a shut-off. The optional SM needle provides fine metering characteristics.

OPERATION

The S-210, S-310, and S-410 series of valves will allow flow in either direction.

FEATURES and BENEFITS

- High pressure range.
- High flow capabilities.
- Fine metering option.
- Positive shut-off.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

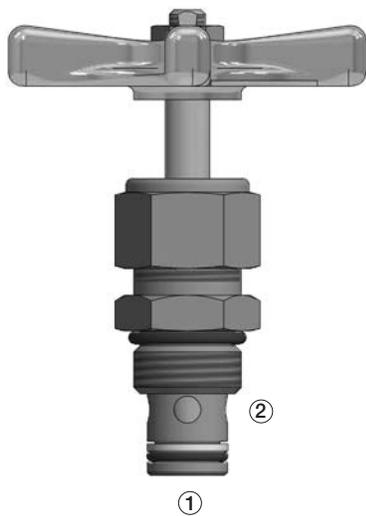
Flow: See FLOW CHARACTERISTICS chart.

Temperature: -30°F to +250°F (-34°C to +121°C)

Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

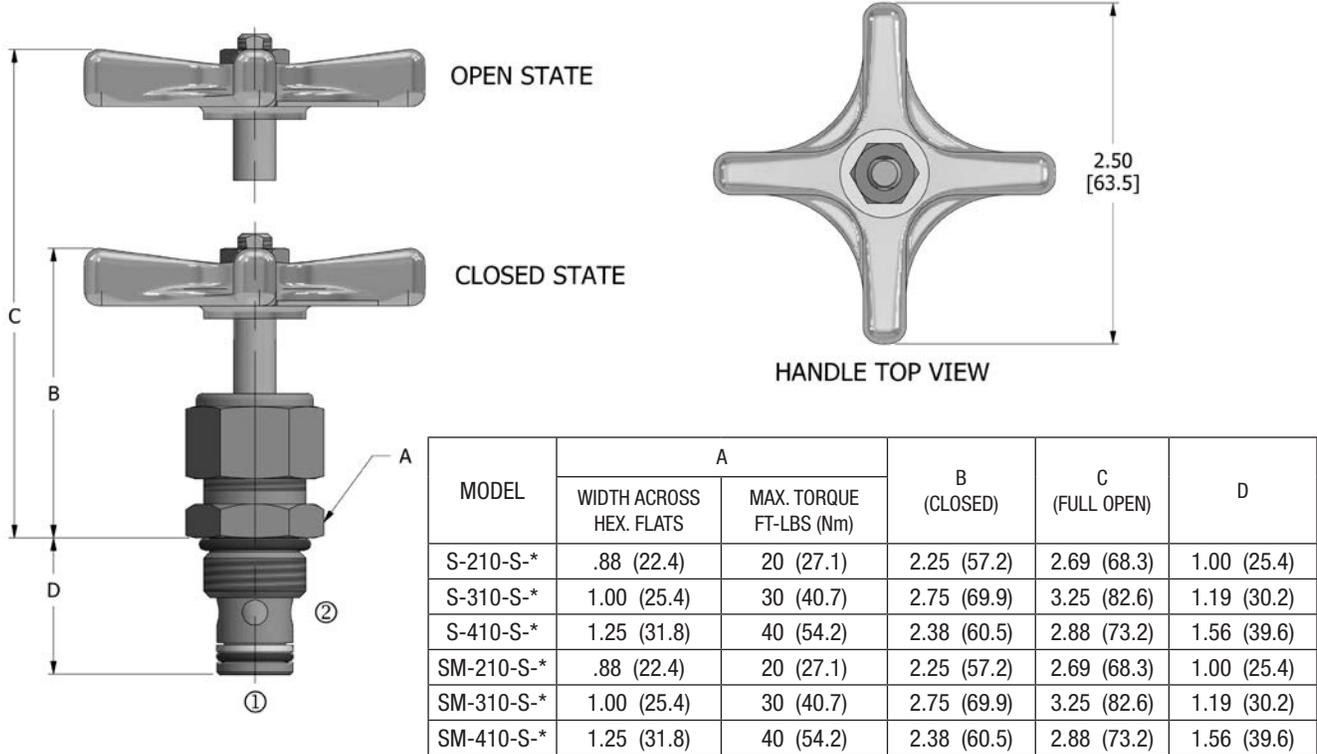
Cavities /Cavity Tools: S210; S310; S410, see page 11.22.1



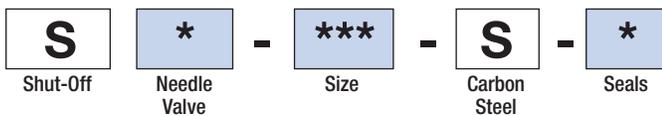
FLOW CHARACTERISTICS

MODEL	FLOW MAX. RECOMENDED GPM (L/min.)	CV FLOW FACTOR (FULL OPEN)
S-210-S-*	13.5 (51.1)	.85
S-310-S-*	25.0 (94.6)	1.67
S-410-S-*	40.0 (151.4)	1.89
SM-210-S-*	13.5 (51.1)	.85
SM-310-S-*	25.0 (94.6)	1.67
SM-410-S-*	40.0 (151.4)	1.89

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Needle Valve	
omit	Standard metering
M	Fine metering

Size		Flow - Maximum	Cavity
210	1/4"	13.5 gpm (51.1 lpm)	S210
310	3/8"	25.0 gpm (94.6 lpm)	S310
410	1/2"	40.0 gpm (151.4 lpm)	S410

Seals	
3	Viton

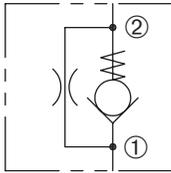
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

ZFC-62

Flow Control, Check Valve
With Fixed Orifice

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to allow restricted flow in one direction with free flow in the opposite direction.

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow to ②. Flow in the opposite direction, from ② to ①, is metered by an orifice.



FEATURES and BENEFITS

- Slip in style.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 4 gpm (15.2 lpm)

Bias-Spring: 5 psi (0.3 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids.

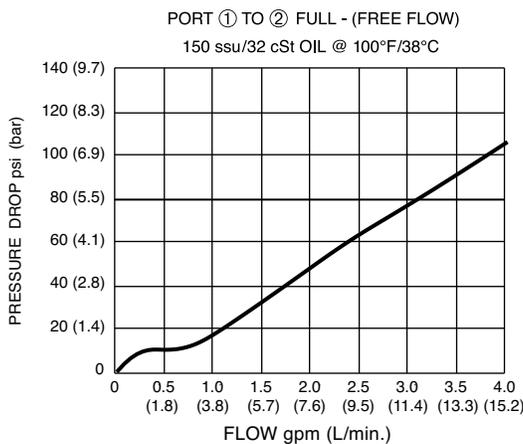
For other fluid compatibility, consult factory.

Installation/Removal Tool: Consult factory.

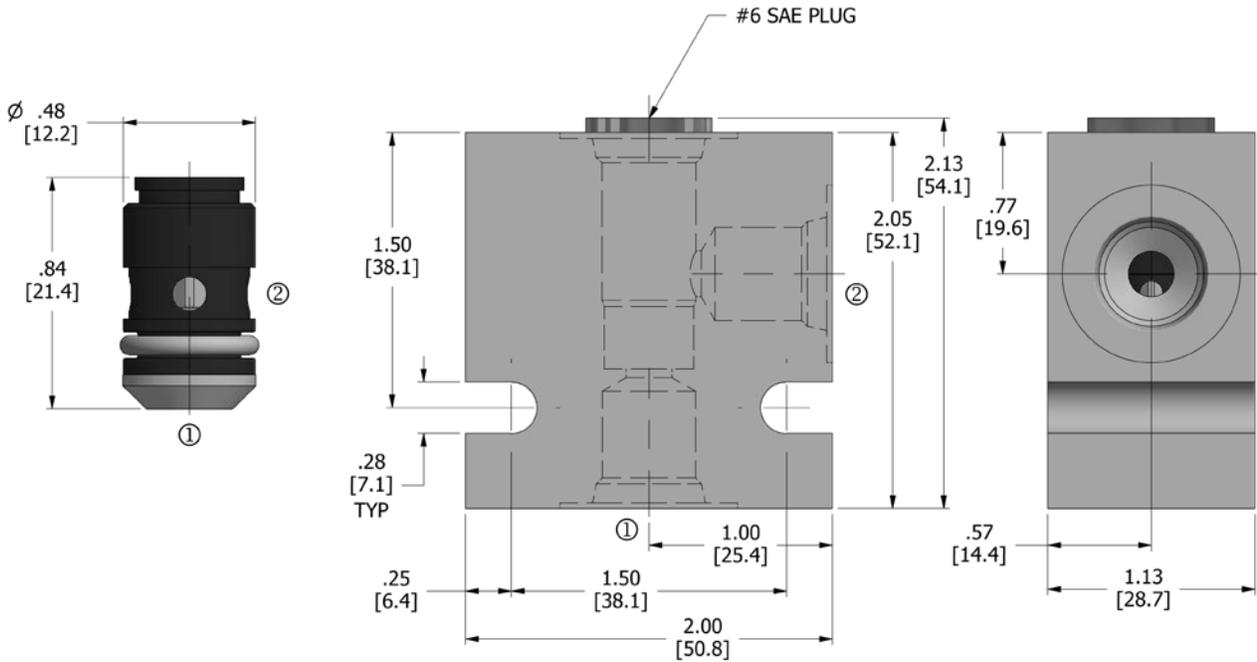
Cavity: ZP62, see page 11.06.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

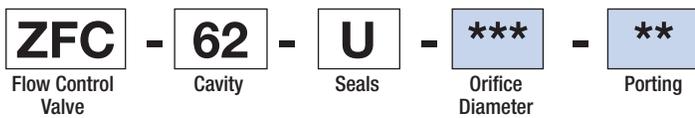
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	(1) 10195-25

Orifice Diameter†	
015	.015" (.38 mm)
031	.031" (.79 mm)
062	.062" (1.57 mm)
070	.070" (1.78 mm)
109	.109" (2.77 mm) Max. size available

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-ZP62-A-4T
6T	SAE 6	B-ZP62-A-6T

† Other options available – consult factory

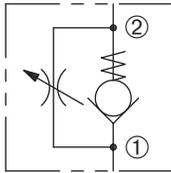
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFC-080

Adjustable,
Flow Control Valve

SERIES 8



DESCRIPTION

A cartridge valve designed to provide variable flow restriction in one direction with free flow in the opposite direction.

OPERATION

The DFC-080 varies flow restriction by adjusting needle in or out. Flow is metered from ② to ①. Free reverse flow is from ① to ②.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Aluminum knob and disc nut.
- Full range of adjustments.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: 10 gpm (37.9 lpm) max recommended input.

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 20/18/14

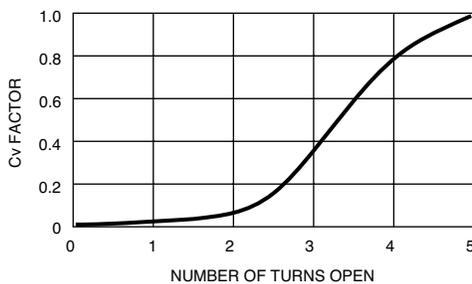
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

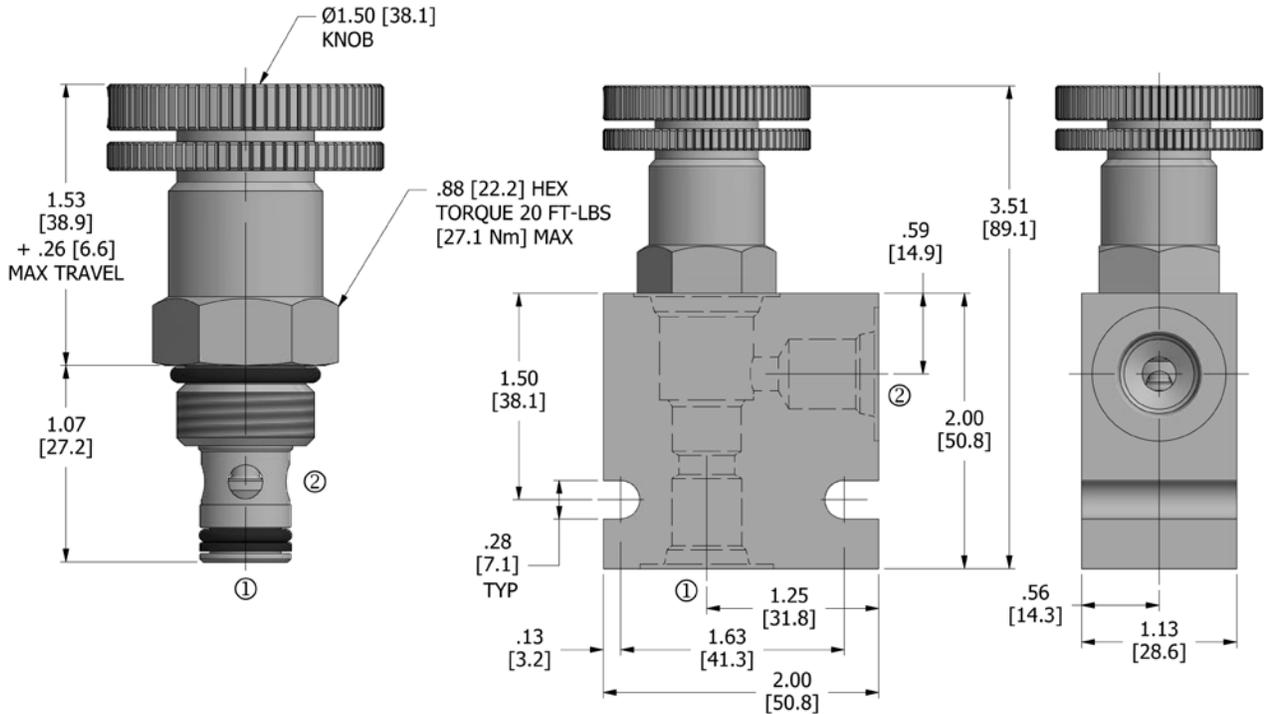
CV FACTOR VS. TURNS OPEN



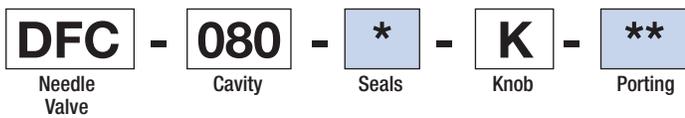
$$\text{FLOW IN GPM} = \frac{C_v \sqrt{P_1 - P_2}}{\sqrt{G_f}}$$

C_v = Flow Coefficient
 P_1 = Inlet Pressure (psi)
 P_2 = Outlet Pressure (psi)
 G_f = specific gravity of medium at operating temperature in °F.

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

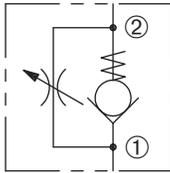
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFC-100

Adjustable, Flow Control Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to provide variable flow restriction in one direction with free flow in the opposite direction.

OPERATION

The DFC-100 varies flow restriction by adjusting needle in or out. Flow is metered from ② to ①. Free reverse flow is from ① to ②.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Aluminum knob and disc nut.
- Full range of adjustments.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: 20 gpm (75.7 lpm) max. recommended input.

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: ISO 20/18/14

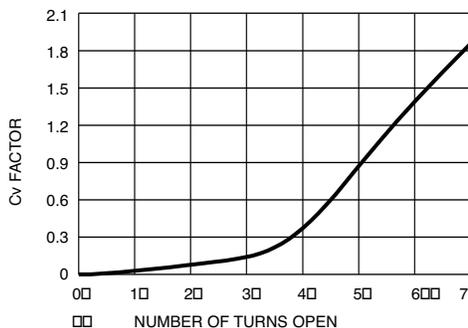
Fluids: Mineral-based fluids.

For other fluid compatibility consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

CV FACTOR VS. TURNS

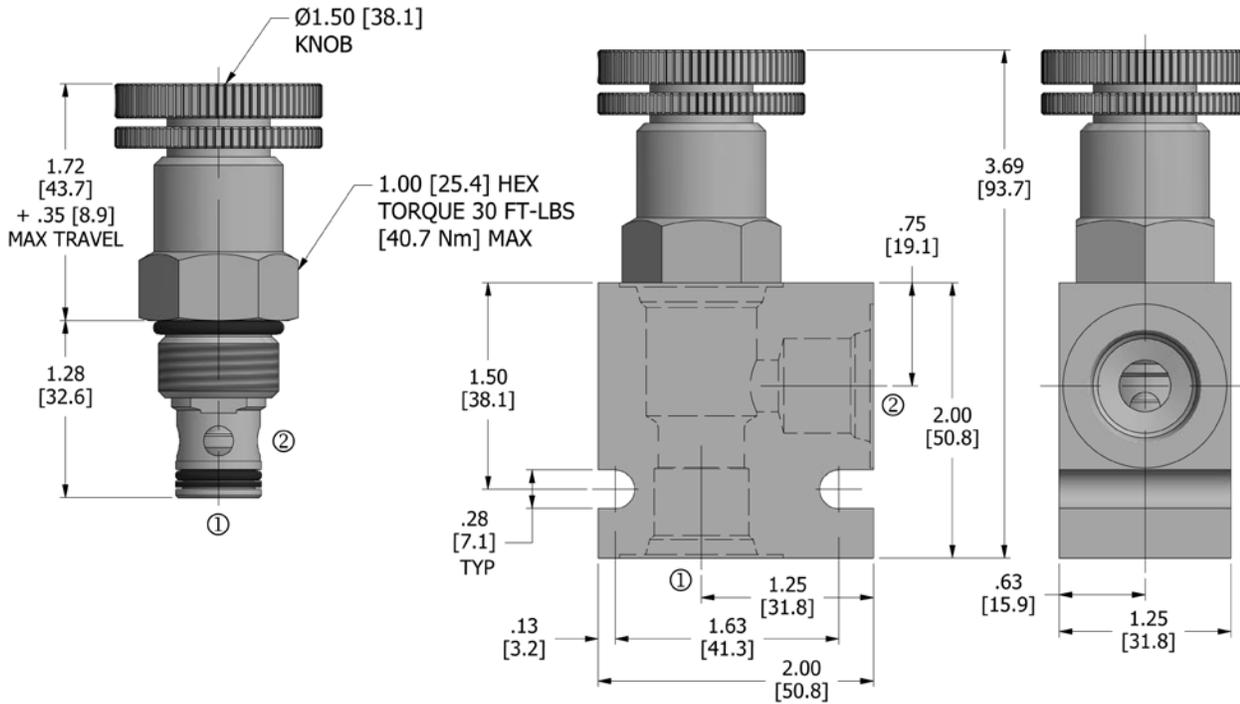


$$\text{FLOW IN GPM} = C_v \sqrt{\frac{P_1 - P_2}{G_f}}$$

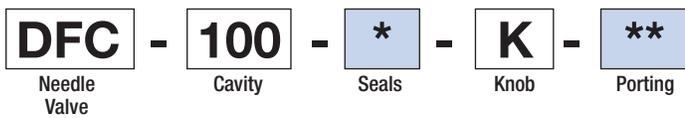
C_v = Flow Coefficient
 P_1 = Inlet Pressure (psi)
 P_2 = Outlet Pressure (psi)

G_f = specific gravity of medium at operating temperature in °F.

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

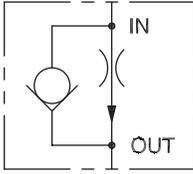
SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

PCM88

Fixed, Free Reverse, Externally Ported
Pressure-Compensated Flow Regulator Valve



IN-LINE



DESCRIPTION

A fixed cartridge valve designed to regulate flow regardless of load pressure. This valve is a restrictive-type flow regulator designed for a wide variety of flow applications.

The male outlet port allows for quick installation into existing manifolds for meter-in control with free flow in the opposite direction.

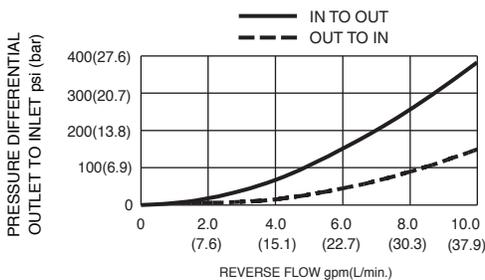
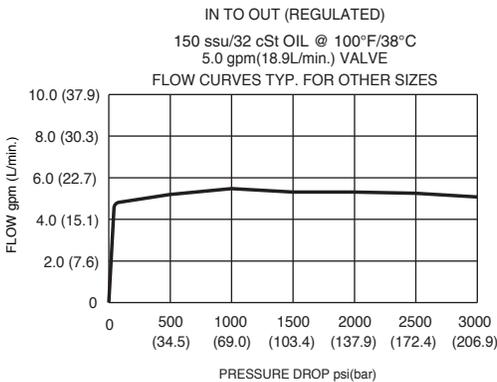
OPERATION

The PCM88 maintains a constant flow within specified accuracies from inlet to outlet regardless of downstream load pressure. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the flow setting. In the reverse direction the spool shifts to permit free flow.

FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Free-reverse.
- Industry common cavity.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: Ranges from 1 to 10 gpm (3.8 to 37.9 lpm)
(See ordering table)

Flow Tolerances: Flows up to and including
1.5 gpm (5.7 lpm) $\pm 15\%$
Flows over 1.5 gpm (5.7 lpm) $\pm 10\%$

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

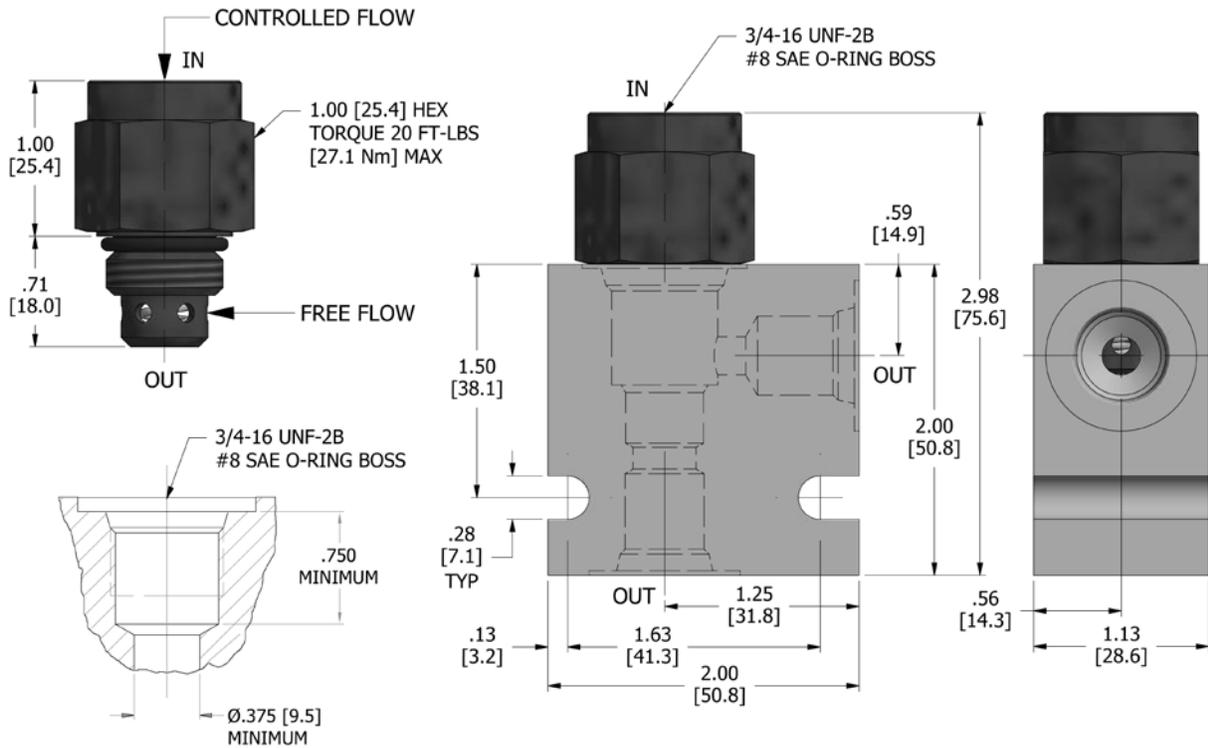
Cavity: #8 SAE, see page 4.13.2

Optional Cavity/Cavity Tool: 080-2, see page 11.08.02

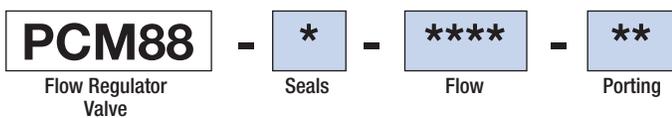
In-Line Body Material: Anodized 6061 T6 aluminum
alloy rated at 3000 psi (207 bar).

IN-LINE

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	(1) 10031-24

Flow - Nominal [†]	
100	1.00 gpm (3.78 lpm)
200	2.00 gpm (7.57 lpm)
300	3.00 gpm (11.36 lpm)
400	4.00 gpm (15.14 lpm)
500	5.00 gpm (18.93 lpm)
600	6.00 gpm (22.71 lpm)
700	7.00 gpm (26.50 lpm)
800	8.00 gpm (30.28 lpm)
900	9.00 gpm (34.07 lpm)
1000	10.00 gpm (37.85 lpm)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

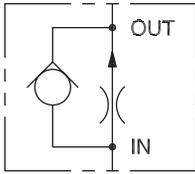
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

LLPC

Fixed, Free Reverse, Externally Ported Pressure-Compensated Flow Regulator Valve

IN-LINE



DESCRIPTION

A fixed cartridge valve designed to regulate flow regardless of load pressure. This valve is a restrictive-type flow regulator designed for low flow applications.

The male outlet port allows for quick installation into existing manifolds for meter-in control with free flow in the opposite direction.

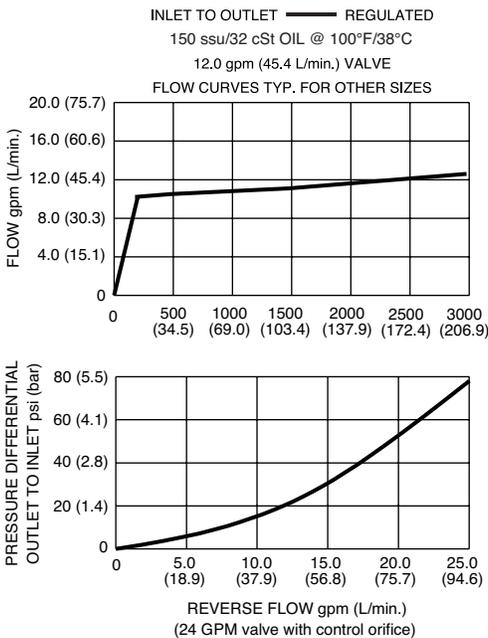
OPERATION

The LLPC maintains a constant flow within specified accuracies from inlet to outlet regardless of downstream load pressure. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the flow setting. In the reverse direction the spool shifts to permit free flow.

FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Free-reverse.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Available Flow: 8 gpm (30.3 lpm)
 12 gpm (45.4 lpm)
 17 gpm (64.3 lpm)
 24 gpm (90.8 lpm)

Flow Tolerances: All valves +5%-15%

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

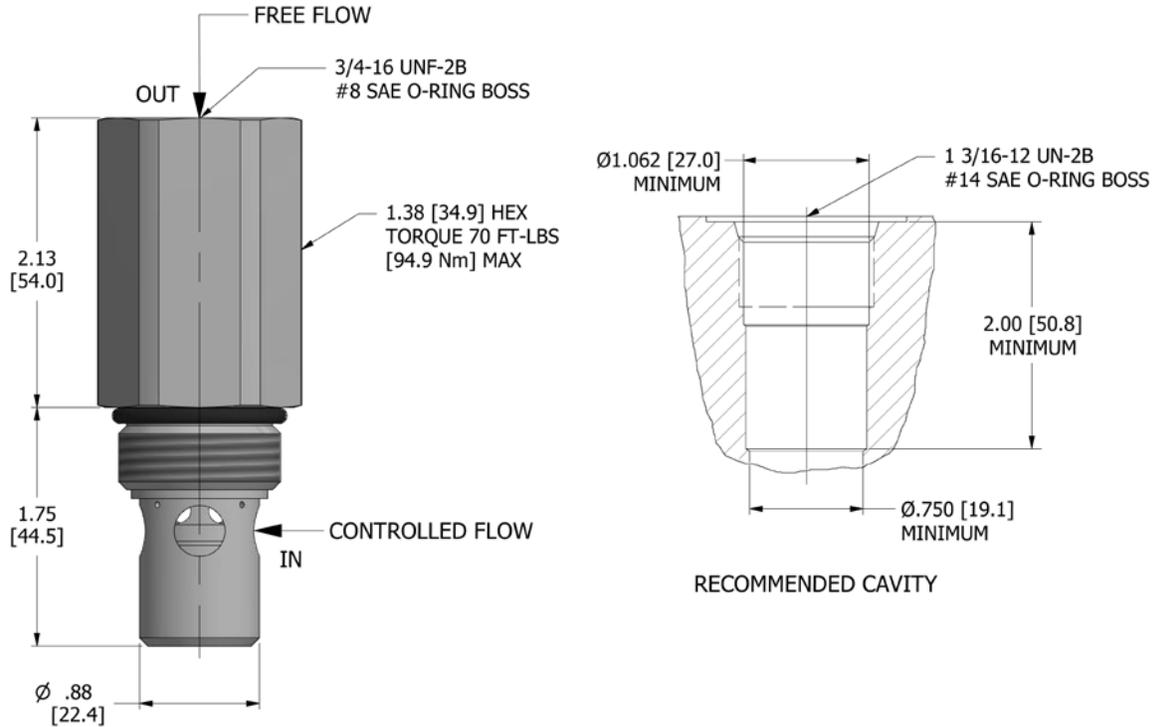
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

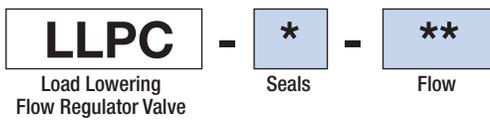
Cavity: See page 4.14.2

IN-LINE

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	(1) 10031-32

Flow @ 1500 psi (103.4 Bar)	
8	8.00 gpm (30.3 lpm)
12	12.00 gpm (45.4 lpm)
17	17.00 gpm (64.3 lpm)
24	24.00 gpm (90.8 lpm)

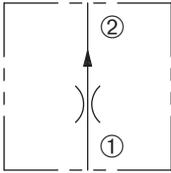
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DFR-080-2

Fixed, Pressure-Compensated
Flow Regulator Valve

SERIES 8



DESCRIPTION

A fixed cartridge valve designed to regulate flow regardless of load pressure. This valve is a restrictive-type flow regulator designed for low flow applications.

OPERATION

The DFR-080-2 maintains constant flow within specified accuracies from ① to ② regardless of downstream load pressure. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the flow setting. Reverse flow is not regulated.



FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Low flow capabilities.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar). A minimum pressure differential of 75 psid is required to operate valve.

Flow: Ranges from 0.1 to 2.0 gpm (0.4 to 7.6 lpm)
(See ordering table)

Flow Tolerances: Flows 0.1 to 1.5 gpm (0.4 to 5.7 lpm.)
±15% Flows over 1.5 gpm (5.7 lpm.) ±10%

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

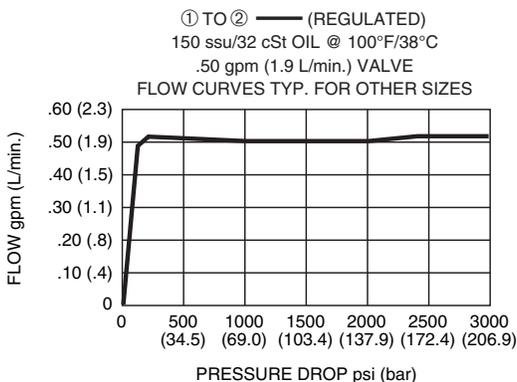
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

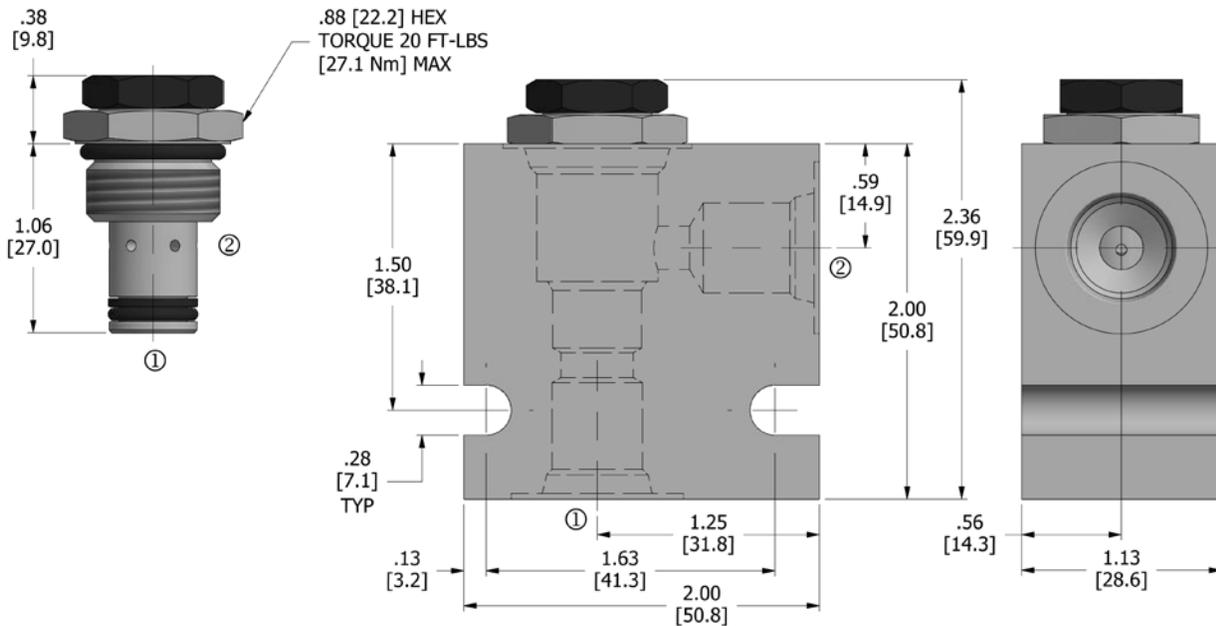
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

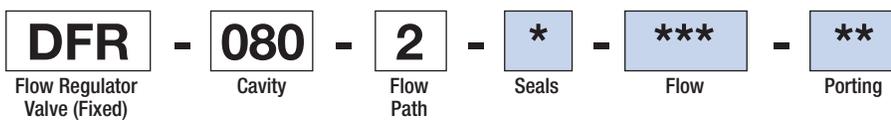
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Flow - Nominal†			
010	.10 gpm (.38 lpm)	060	.60 gpm (2.27 lpm)
015	.15 gpm (.57 lpm)	075	.75 gpm (2.84 lpm)
020	.20 gpm (.76 lpm)	100	1.00 gpm (3.79 lpm)
025	.25 gpm (.95 lpm)	125	1.25 gpm (4.73 lpm)
030	.30 gpm (1.14 lpm)	130	1.30 gpm (4.92 lpm)
040	.40 gpm (1.51 lpm)	150	1.50 gpm (5.68 lpm)
050	.50 gpm (1.89 lpm)	200	2.00 gpm (7.57 lpm)
050	.50 gpm (1.89 lpm)		

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

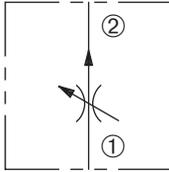
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DFRA-080-2

Adjustable, Pressure-Compensated
Flow Regulator Valve

SERIES 8



DESCRIPTION

An adjustable cartridge valve designed to regulate flow regardless of load pressure. This valve is a restrictive-type flow regulator designed for low flow applications.

OPERATION

The DFRA-080-2 maintains a constant flow within specified accuracies from ① to ② regardless of downstream load pressure. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the flow setting. The cartridge's flow may be adjusted -50% of maximum setting. Reverse flow is not regulated.



FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Low flow capabilities.
- Aluminum knob and disc nut.
- Adjustable flow -50% of maximum setting.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: Ranges from .15 to 2 gpm (0.6 to 7.6 lpm). A minimum pressure differential of 75 psid is required to operate valve. (See ordering table)

Flow may be adjusted -50% of maximum setting.

Flow Tolerances: Flows .15 gpm to 1.5 gpm (0.6 to 5.7 lpm) $\pm 15\%$
Flows over 1.5 gpm (5.7 lpm.) $\pm 10\%$

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

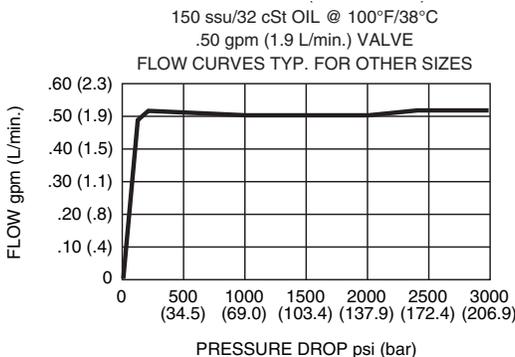
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

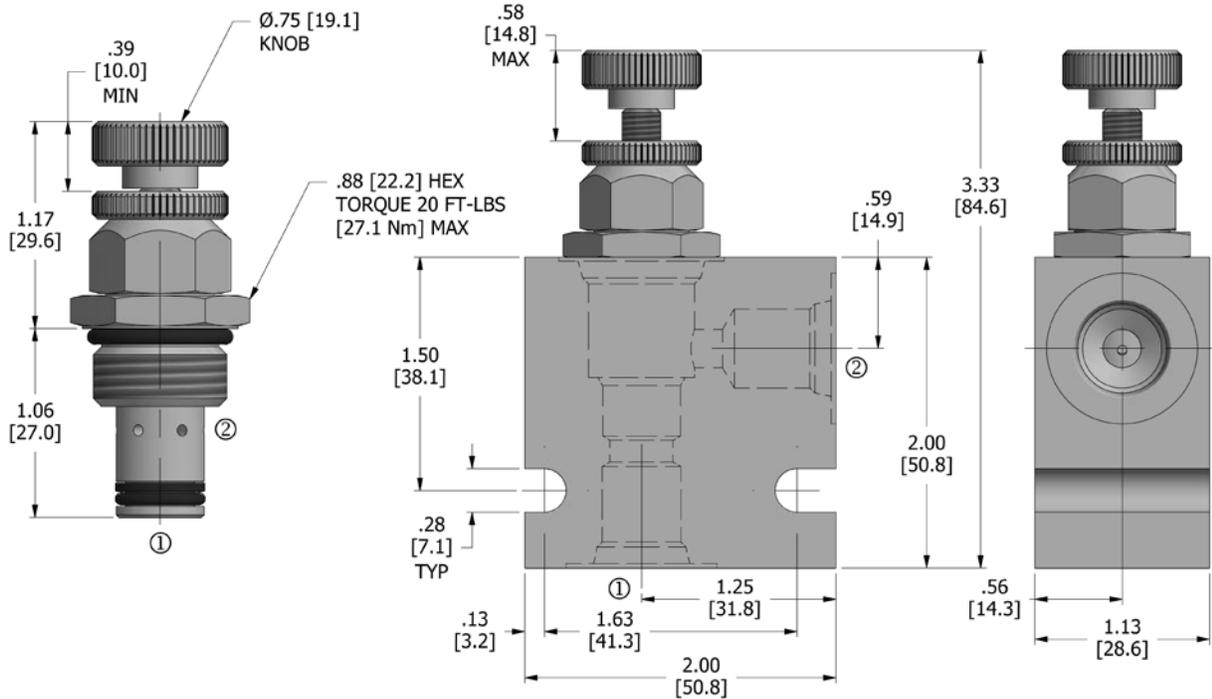
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

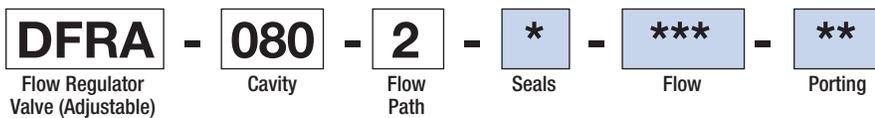
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Flow - Maximum	
015	.15 gpm (.57 lpm)
020	.20 gpm (.76 lpm)
045	.45 gpm (1.70 lpm)
065	.65 gpm (2.46 lpm)
100	1.00 gpm (3.79 lpm)
150	1.50 gpm (5.68 lpm)
200	2.00 gpm (7.57 lpm)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

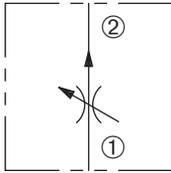
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DFRA-100-2

Adjustable, Pressure-Compensated
Flow Regulator Valve

SERIES 10



DESCRIPTION

An adjustable cartridge valve designed to regulate flow regardless of load pressure. This valve is a restrictive-type flow regulator designed for a wide variety of flow applications.

OPERATION

The DFRA-100-2 maintains a constant flow within specified accuracies from ① to ② regardless of downstream load pressure. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the flow setting. The cartridge's flow may be adjusted - 50% of maximum setting. Reverse flow is not regulated.



FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustable flow - 50% of maximum setting.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar).

Flow: Ranges from 1 to 10 gpm (3.8 to 37.9 lpm)

(See ordering table)

Flow may be adjusted -50% of maximum setting.

Flow Tolerances: Flows up to and including

1.5 gpm (5.7 lpm) $\pm 15\%$

Flows over 1.5 gpm (5.7 lpm) $\pm 10\%$

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

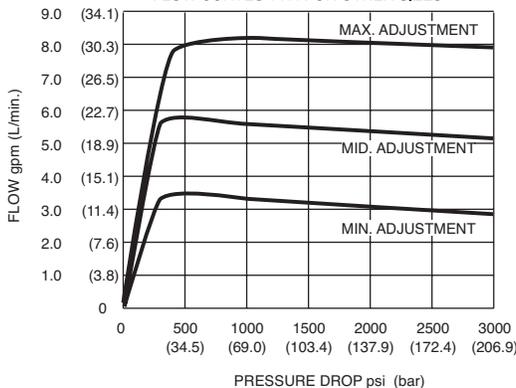
For other fluid compatibility consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

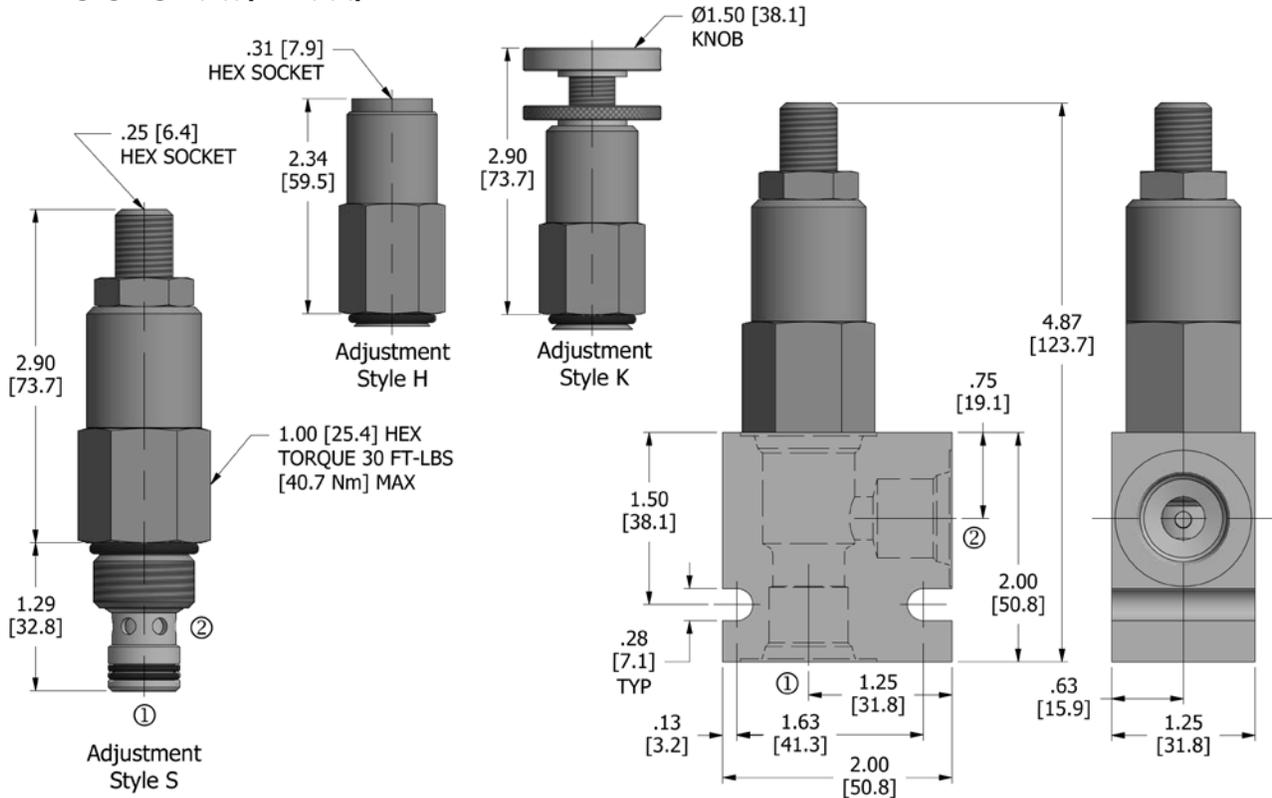
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

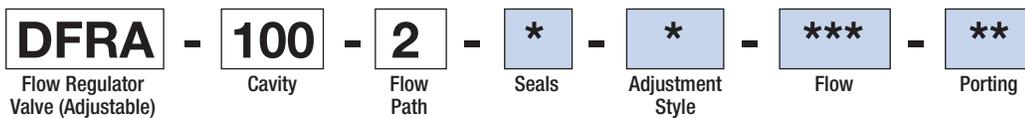
① TO ② (REGULATED)
150 ssu/32 cSt OIL @ 100°F/38°C
7.50 gpm (28.4 L/min.) VALVE
FLOW CURVES TYP. FOR OTHER SIZES



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Flow - Maximum	
100	1.00 gpm (3.79 lpm)
150	1.50 gpm (5.68 lpm)
200	2.00 gpm (7.57 lpm)
300	3.00 gpm (11.36 lpm)
500	5.00 gpm (18.93 lpm)
750	7.50 gpm (28.39 lpm)
1000	10.00 gpm (37.85 lpm)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

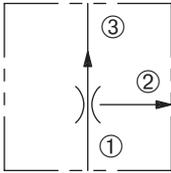
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFR-100-3

Fixed, Bypass-Type, Pressure-Compensated
Flow Regulator Valve

SERIES 10



DESCRIPTION

A fixed bypass-type cartridge valve designed to regulate priority flow while bypassing excess flow regardless of load pressure.

OPERATION

The DFR-100-3 maintains a constant flow within specified accuracies from ① to ③ regardless of downstream load pressure at ③ or bypass leg ②. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the priority flow setting. Reverse flow is not regulated.



FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Bypass port ② may be fully pressurized.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar). A minimum pressure differential of 100 psid is required to operate valve.

Flow: Ranges from 0.75 to 6 gpm (2.8 to 22.7 lpm)
10 gpm (37.9 lpm) max. input.
(See ordering table)

Flow Tolerances: Flows up to and including
1.5 gpm (5.7 lpm) $\pm 15\%$
Flows over 1.5 gpm (5.7 lpm) $\pm 10\%$

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

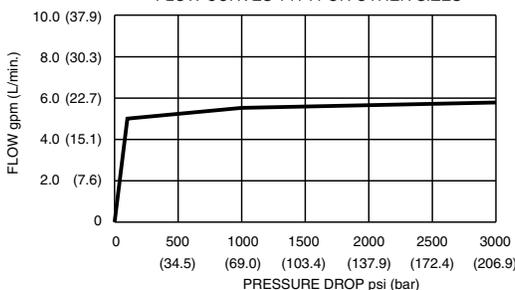
For other fluid compatibility consult factory.

Cavity/Cavity Tool: 100-3, see page 11.10.3

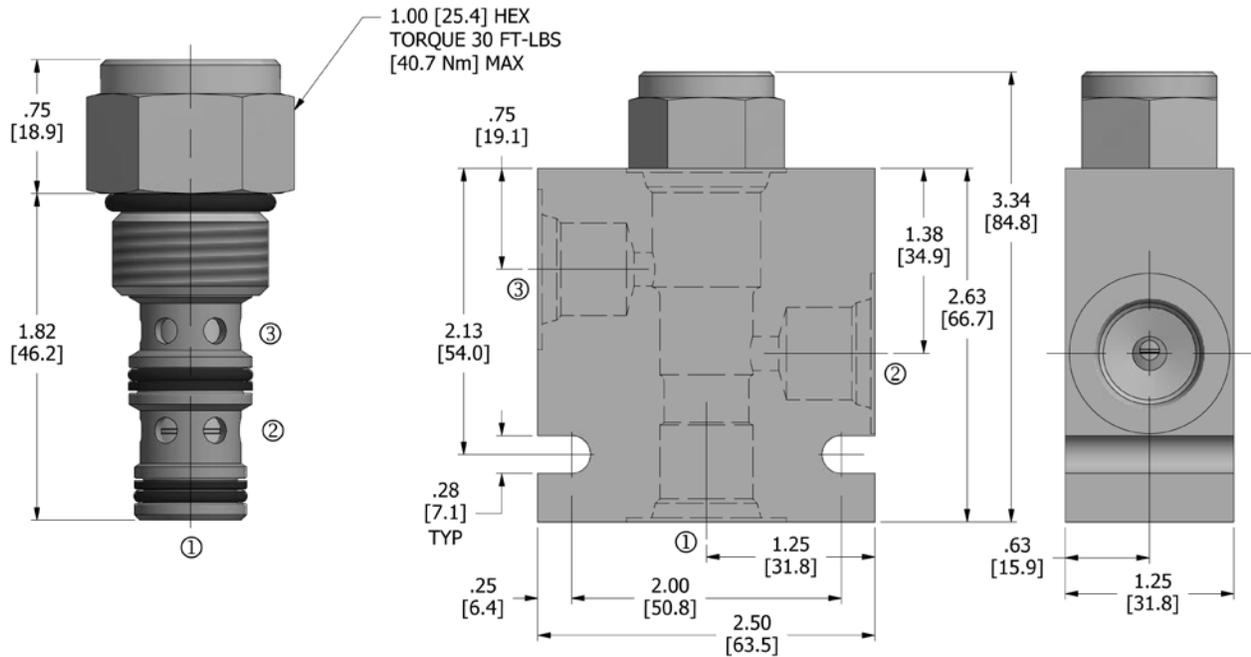
In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

① to ③ (REGULATED)
150 ssu/32 cSt OIL @ 100°F/38°C
5.00 gpm (18.9 L/min.) VALVE
FLOW CURVES TYP. FOR OTHER SIZES



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Flow - Nominal†	
075	0.75 gpm (2.84 lpm)
100	1.00 gpm (3.79 lpm)
150	1.50 gpm (5.68 lpm)
200	2.00 gpm (7.57 lpm)
250	2.50 gpm (9.46 lpm)
300	3.00 gpm (11.36 lpm)
350	3.50 gpm (13.25 lpm)
400	4.00 gpm (15.14 lpm)
450	4.50 gpm (17.03 lpm)
500	5.00 gpm (18.93 lpm)
600	6.00 gpm (22.71 lpm)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

† Other options available – consult factory

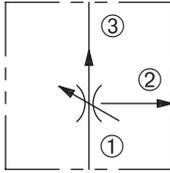
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFRA-100-3

Adjustable, Bypass-Type, Pressure-Compensated Flow Regulator Valve

SERIES 10



DESCRIPTION

An adjustable bypass-type cartridge valve designed to regulate priority flow while bypassing excess flow regardless of load pressure.

OPERATION

The DFRA-100-3 maintains a constant flow within specified accuracies from ① to ③ regardless of downstream load pressure at ③ or bypass leg ②. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the priority flow setting. The cartridge's flow may be adjusted -40% of maximum setting. Reverse flow is not regulated.

FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Bypass port ② may be fully pressurized.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar).

Flow: Ranges from 1 to 10 gpm (3.8 to 37.9 lpm)

10 gpm (37.9 lpm) max. input.

(See ordering table)

Flow may be adjusted - 40% of maximum setting.

Flow Tolerances: Flows up to and including

1.5 gpm (5.7 lpm) $\pm 15\%$

Flows over 1.5 gpm (5.7 lpm) $\pm 10\%$

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: ISO 17/15/13

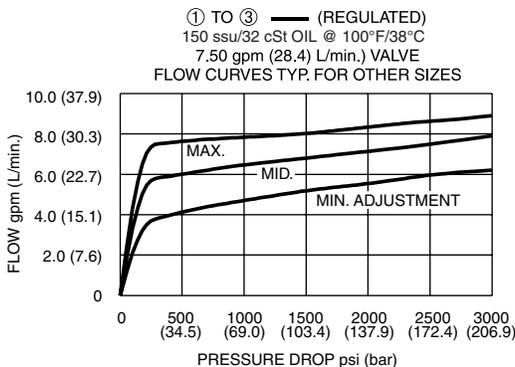
Fluids: Mineral-based fluids.

For other fluid compatibility consult factory.

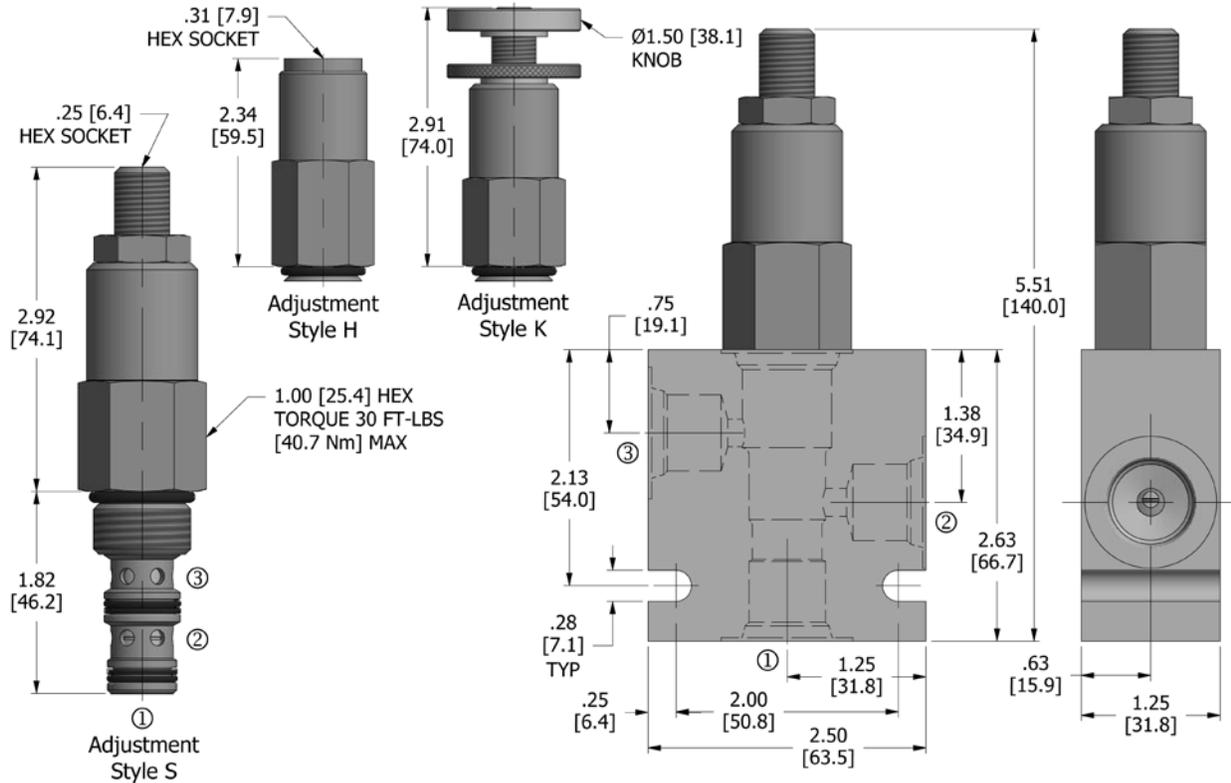
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

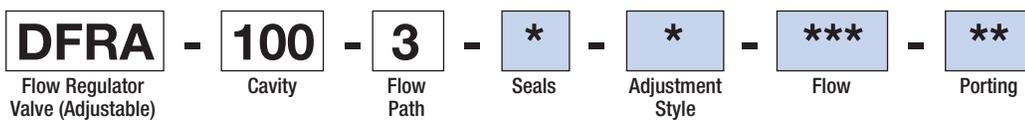
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Flow - Maximum	
100	1.00 gpm (3.79 lpm)
150	1.50 gpm (5.68 lpm)
200	2.00 gpm (7.57 lpm)
300	3.00 gpm (11.36 lpm)
500	5.00 gpm (18.93 lpm)
750	7.50 gpm (28.39 lpm)
1000	10.00 gpm (37.85 lpm)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

† Other options available – consult factory

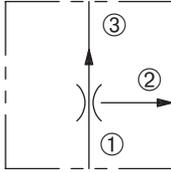
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFR-120-3

Fixed, Bypass-Type, Pressure-Compensated
Flow Regulator Valve

SERIES 12



DESCRIPTION

A fixed bypass-type cartridge valve designed to regulate priority flow while bypassing excess flow regardless of load pressure.

OPERATION

The DFR-120-3 maintains a constant flow within specified accuracies from ① to ③ regardless of downstream load pressure at ③ or bypass leg ②. When flow produces a minimum predetermined pressure differential across the compensator spool control orifice, the spool shifts against the spring force to throttle the flow and maintain the priority flow setting. Reverse flow is not regulated.



FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Bypass port ② may be fully pressurized.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: Ranges from 2 to 13 gpm (7.6 to 49.2 lpm)
25 gpm (94.6 lpm) max. input.
(See ordering table)

Flow Tolerances: Flows up to and including
3.0 gpm (11.4 lpm) $\pm 15\%$
Flows over 3.0 gpm (11.4 lpm) $\pm 10\%$

Temperature: -30° F to +250° F (-35°C to +120° C)

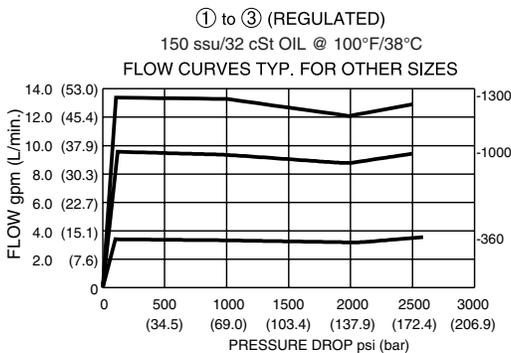
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

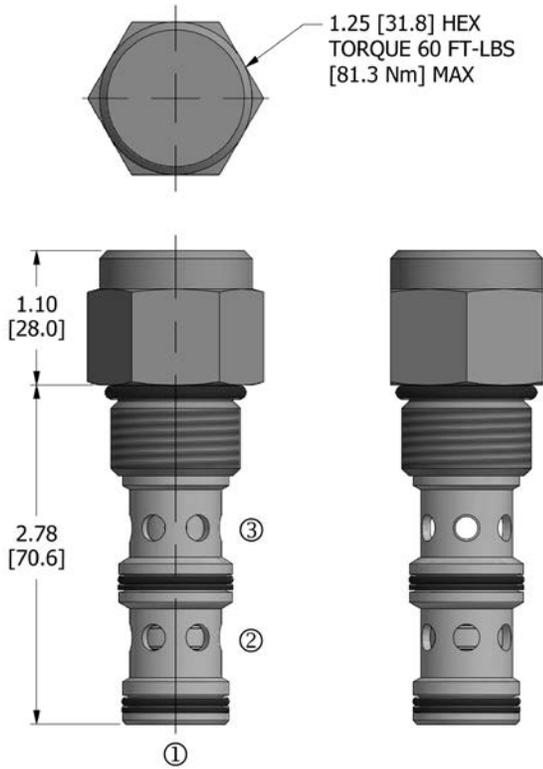
For other fluid compatibility consult factory.

Cavity/Cavity Tool: 120-3, see page 11.12.3

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DFR	-	120	-	3	-	*	-	***
Flow Regulator Valve (Fixed)		Cavity		Flow Path		Seals		Flow

Seals		Seal Kit
N	Buna N	
V	Viton	

Flow - Nominal†	
200	2.00 gpm (7.57 lpm)
225	2.25 gpm (8.52 lpm)
250	2.50 gpm (9.46 lpm)
300	3.00 gpm (11.36 lpm)
360	3.60 gpm (13.63 lpm)
400	4.00 gpm (15.14 lpm)
500	5.00 gpm (18.93 lpm)
600	6.00 gpm (22.71 lpm)
1000	10.00 gpm (37.85 lpm)
1300	13.00 gpm (49.21 lpm)

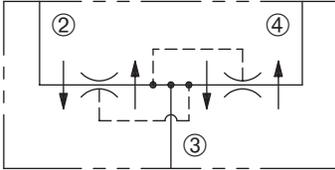
† Other options available – consult factory

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DFD-100

Pressure-Compensated,
Flow Divider/Combiner Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to divide or combine flow at designated ratios regardless of load pressures.

OPERATION

In the dividing mode, the DFD-100 will split the input flow from port ③ to ports ② and ④ per the ratio specified.

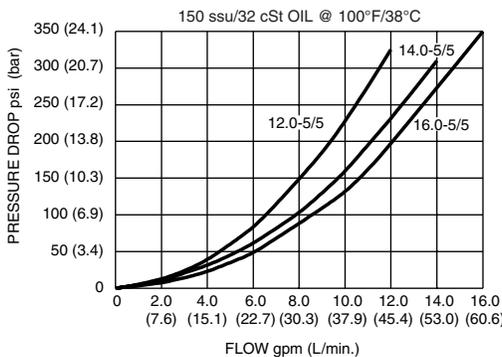
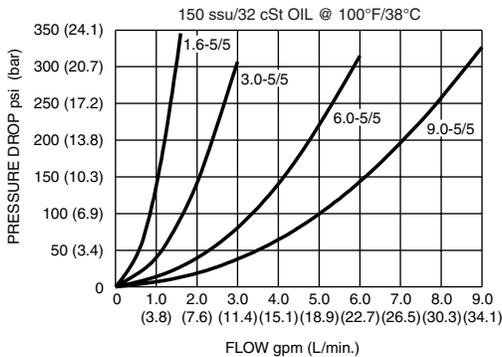
The DFD-100 will combine input flows from ports ② and ④ to a common port ③.

This valve has no port ① function.

FEATURES and BENEFITS

- Pressure-compensated.
- Quiet response.
- Optional dividing/combining ratios.
- Industry common cavity.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar) A minimum pressure differential of 40 psid is required to operate valve.

Flow: See max. rated input flow in ordering table.

Flow Tolerances: ±10% from 30-100% of rated flow for all 5/5 models except 16.0-5/5 which is ±10% from 40-100% of rated flow. (Consult factory for all other models.)

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: ISO 17/15/13

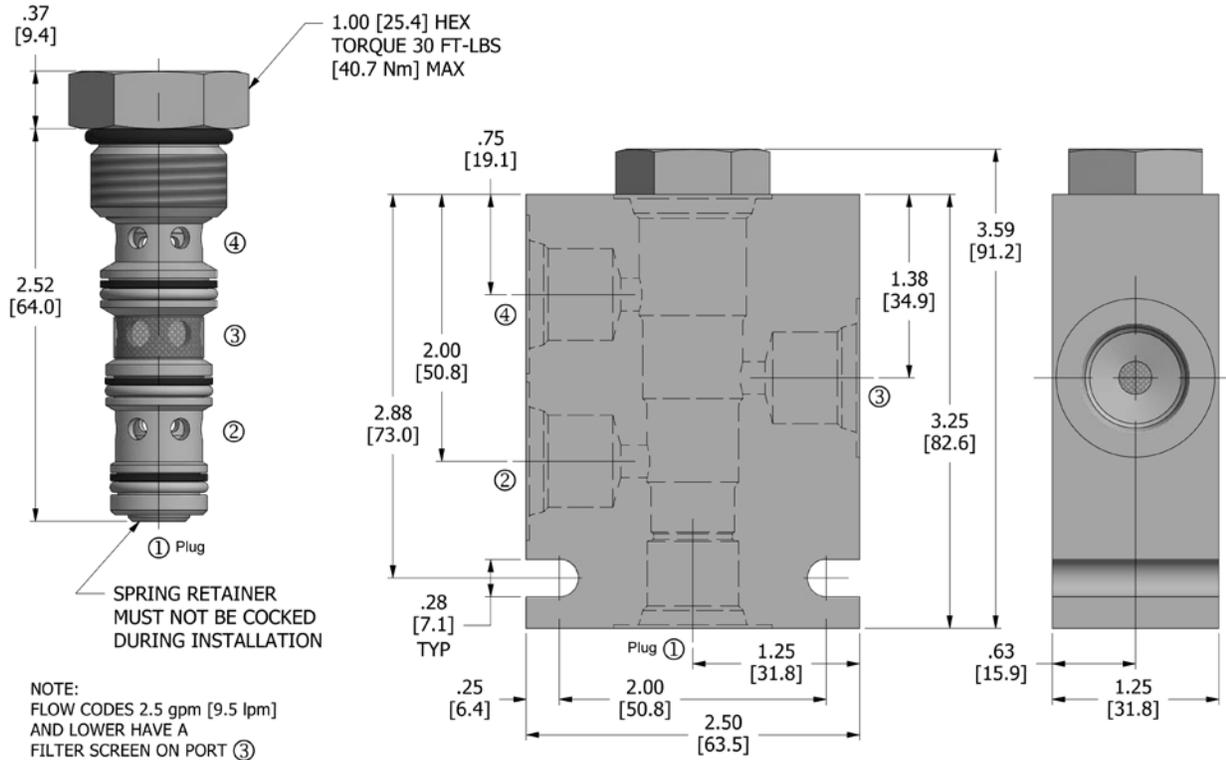
Fluids: Mineral-based fluids.

For other fluid compatibility consult factory.

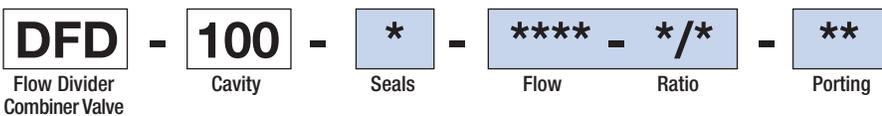
Cavity/Cavity Tool: 100-4, see page 11.10.4

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-4/3-2N
3N	3/8 PTF	B-100-4/3-3N
6T	SAE 6	B-100-4/3-6T
8T	SAE 8	B-100-4/3-8T

Use In-Line body without port ① or plug port ①.

Flow and Ratio† (Dividing or Combining)					
	Input Flow Max.	Ratio (Port 2/Port 4)		Input Flow Max.	Ratio (Port 2/Port 4)
0.6 - 5/5	0.6 gpm (2.3 lpm)	50:50	9.0 - 7/3	9.0 gpm (34.1 lpm)	67:33
1.6 - 5/5	1.6 gpm (6.1 lpm)	50:50	9.0 - 3/7	9.0 gpm (34.1 lpm)	33:67
2.5 - 7/3	2.5 gpm (9.5 lpm)	67:33	12.0 - 5/5	12.0 gpm (45.4 lpm)	50:50
2.5 - 3/7	2.5 gpm (9.5 lpm)	33:67	12.5 - 7/3	12.5 gpm (47.3 lpm)	67:33
3.0 - 5/5	3.0 gpm (11.4 lpm)	50:50	12.5 - 3/7	12.5 gpm (47.3 lpm)	33:67
4.5 - 7/3	4.5 gpm (17.0 lpm)	67:33	14.0 - 5/5	14.0 gpm (53.0 lpm)	50:50
4.5 - 3/7	4.5 gpm (17.0 lpm)	33:67	14.0 - 6/4	14.0 gpm (53.0 lpm)	60:40
6.0 - 5/5	6.0 gpm (22.7 lpm)	50:50	14.0 - 4/6	14.0 gpm (53.0 lpm)	40:60
7.5 - 6/4	7.5 gpm (28.4 lpm)	60:40	16.0 - 5/5	16.0 gpm (60.6 lpm)	50:50
7.5 - 4/6	7.5 gpm (28.4 lpm)	40:60			
9.0 - 5/5	9.0 gpm (34.1 lpm)	50:50			

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

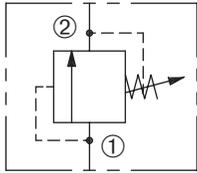
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



ZRV-63

Adjustable,
Direct-Acting Relief Valve

ZERO PROFILE

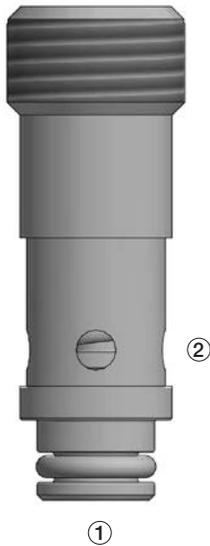


DESCRIPTION

An adjustable, direct-acting poppet cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The ZRV-63 prevents flow from ① to ② until the set crack pressure at ① is achieved. The poppet then unseats allowing flow from ① to ② protecting the circuit from over pressurization.



FEATURES and BENEFITS

- Rapid response to pressure surges.
- Hardened poppet and seat for long life.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3200 psi (221 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 2 gpm (11.4 lpm)

Internal Leakage: 10cc/min at 3000 psi (207 bar) at 80% set.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 100 to 3200 psi (7 to 221 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +220°F (-35°C to +104°C).

Recommended Filtration: ISO 20/18/14

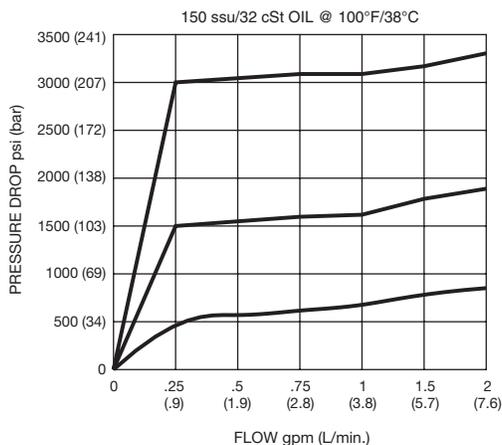
Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: ZP63, see page 11.06.3

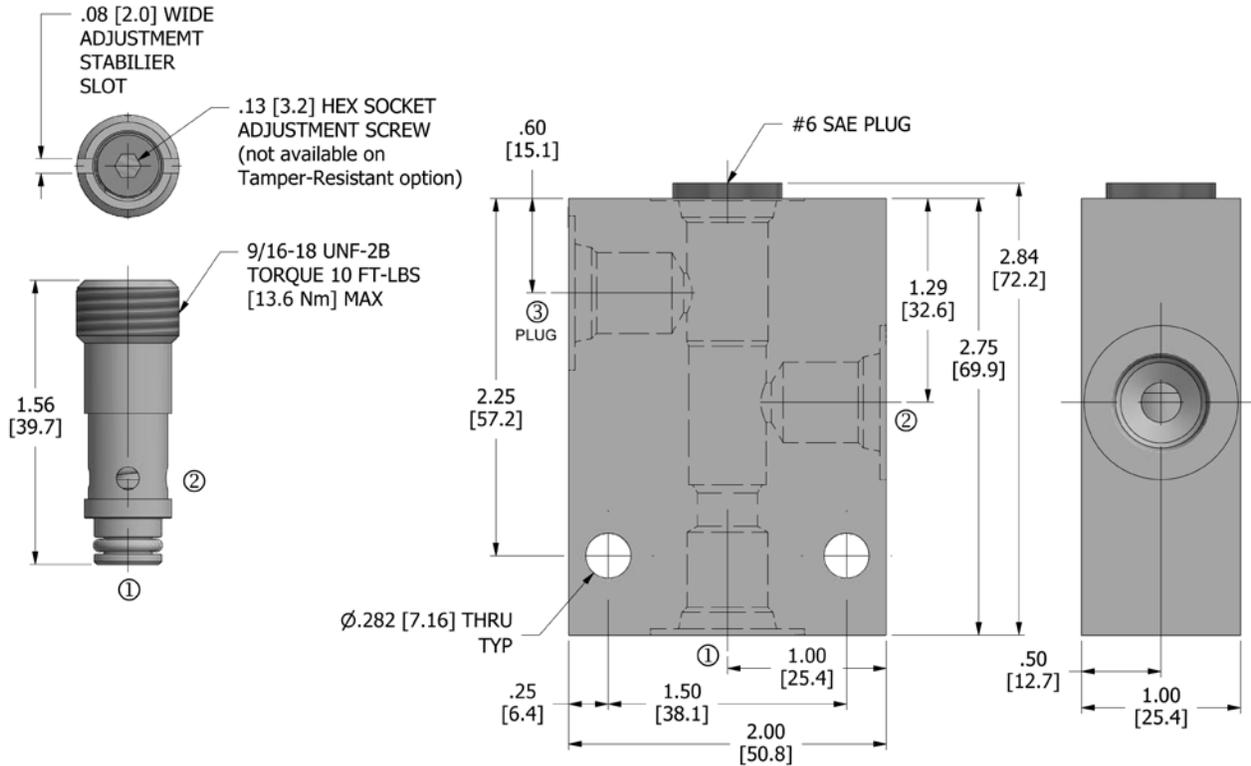
Installation/Removal Tool: Consult factory.

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

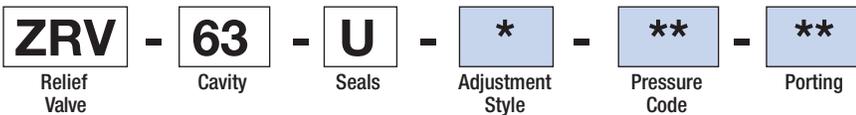
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	(1) 10195-24

Adjustment Style	
omit	For standard
H	Tamper resistant

	Pressure Code	
	Factory Preset	Spring Range
10	500 psi (34 bar)	100 to 1000 psi (7 to 69 bar)
01	750 psi (52 bar)	
09	925 psi (64 bar)	
20	1500 psi (103 bar)	900 to 2000 psi (62 to 138 bar)
02	1600 psi (110 bar)	
03	1950 psi (134 bar)	1900 to 3200 psi (131 to 221 bar)
30	2000 psi (138 bar)	
07	2200 psi (152 bar)	
04	2500 psi (172 bar)	
08	2800 psi (193 bar)	
05	3000 psi (207 bar)	
06	3200 psi (221 bar)	

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-ZP63-A-4T
6T	SAE 6	B-ZP63-A-6T

† Other options available – consult factory

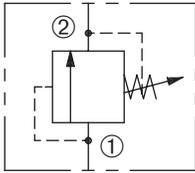
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DRV2-080

Adjustable,
Direct-Acting Relief Valve

SERIES 8



DESCRIPTION

An adjustable, direct-acting poppet cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DRV2-080 prevents flow from ① to ② until the set crack pressure at ① is achieved. The poppet then unseats allowing flow from ① to ② protecting the circuit from over pressurization.

FEATURES and BENEFITS

- Quiet operation.
- Rapid response to pressure surges.
- Hardened poppet and seat for long life.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Adjustment prevents spring from going solid.
- Hidden adjustment (tamper resistant option).
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 10 gpm (37.9 lpm)

Internal Leakage: 20 drops/min max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 50 to 3000 psi (3 to 207 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

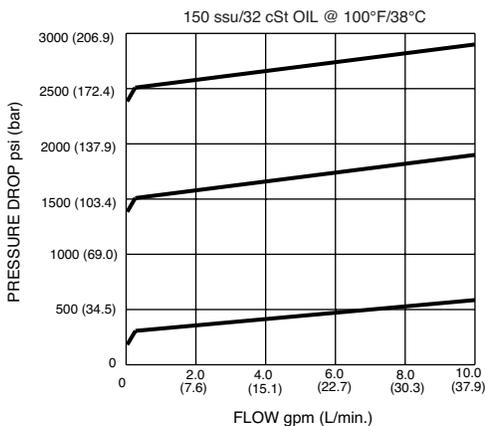
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

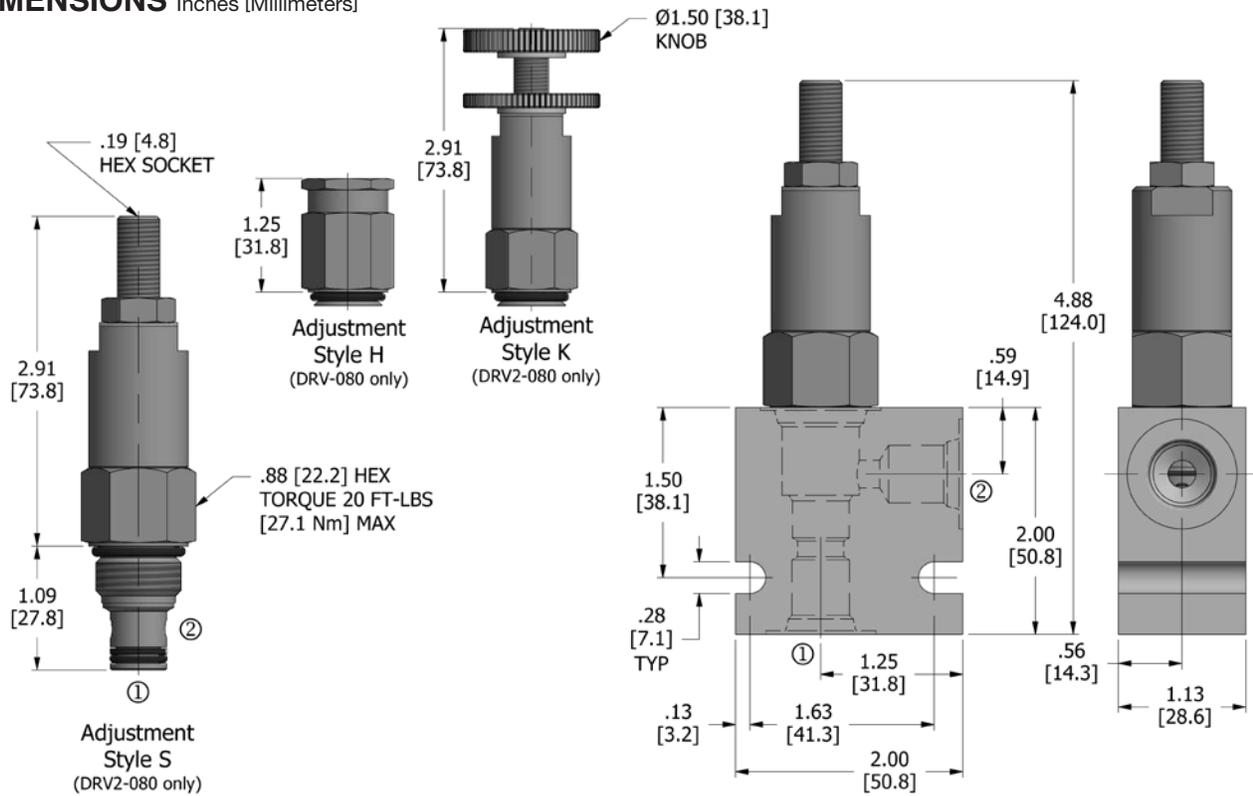
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

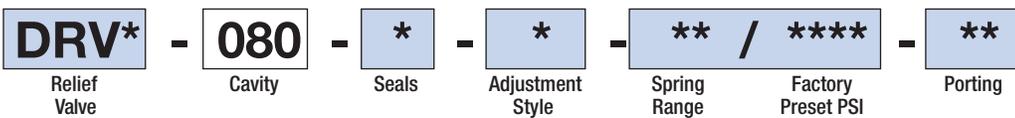
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Relief Valve		Spring Range		Preset	Porting†		In-Line Body w/o Cartridge
DRV2	Adjustment Style K & S	4	100 to 400 psi (7 to 28 bar)	300 psi (21 bar)	omit	Cartridge only	B-080-2-2N
DRV	Adjustment Style H	20	300 to 2000 psi (21 to 138 bar)	1500 psi (103 bar)	2N	1/4 PTF	B-080-2-2N
		30	1500 to 3000 psi (103 to 207 bar)	2500 psi (172 bar)	3N	3/8 PTF	B-080-2-3N
		DRV-080 Adjustment Style H			4T	SAE 4	B-080-2-4T
		30	50 to 3000 psi (3 to 207 bar)	1500 psi (103 bar)	6T	SAE 6	B-080-2-6T

Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Adjustment Style	
K	Knob
S	Screw
H	Hidden

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

† Other options available – consult factory

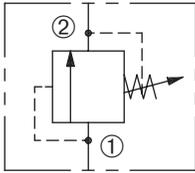
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DRV-100

Adjustable,
Direct-Acting Relief Valve

SERIES 10



DESCRIPTION

An adjustable, direct-acting poppet cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DRV-100 prevents flow from ① to ② until the set crack pressure at ① is achieved. The poppet then unseats allowing flow from ① to ② protecting the circuit from over pressurization.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Hardened poppet and seat for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Adjustment prevents spring from going solid.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 10 gpm (37.9 lpm).

Internal Leakage: 20 drops/min max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 100 to 3000 psi (7 to 207 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

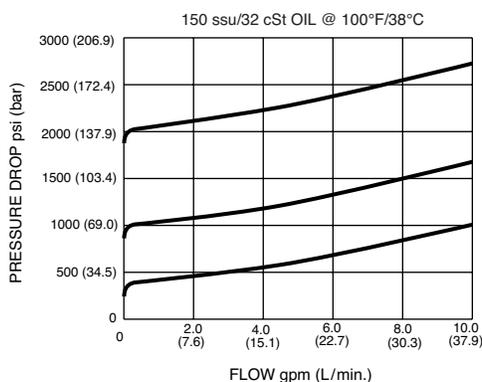
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

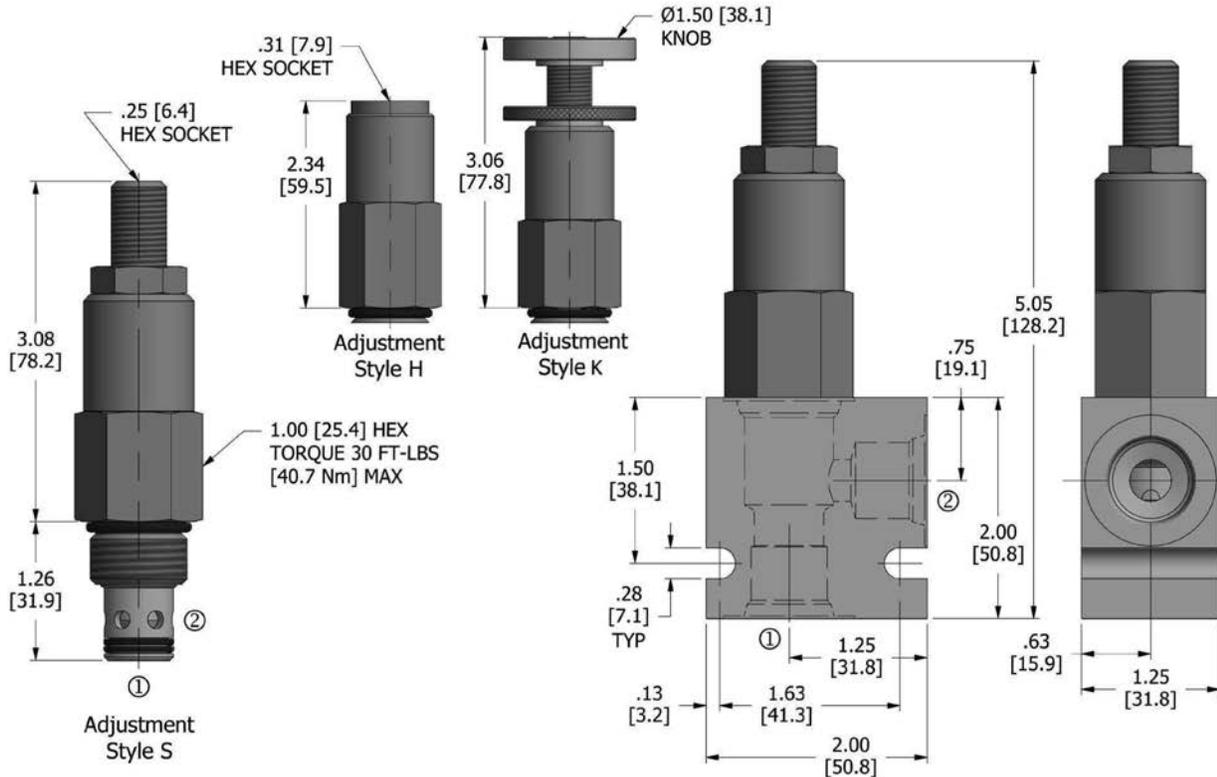
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

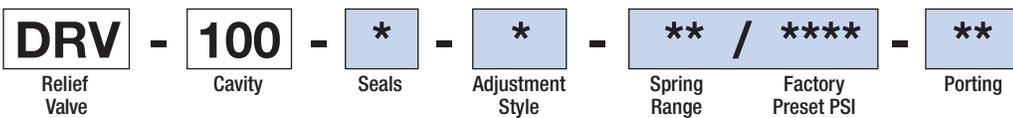
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Spring Range			Preset
4	100 to 400 psi (7 to 28 bar)		300 psi (21 bar)
10	300 to 1000 psi (21 to 69 bar)		500 psi (34 bar)
20	300 to 2000 psi (21 to 138 bar)		1500 psi (103 bar)
30	1500 to 3000 psi (103 to 207 bar)		2000 psi (138 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

† Other options available – consult factory

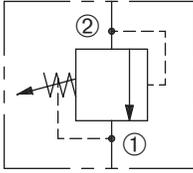
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DDRV-080

Adjustable, Direct-Acting,
Differential Area Relief Valve

SERIES 8



DESCRIPTION

An adjustable, direct-acting poppet cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DDRV-080 prevents flow from ② to ① until the set crack pressure at ② is achieved. The poppet then unseats allowing flow from ② to ① protecting the circuit from over pressurization.



FEATURES and BENEFITS

- Rapid response to pressure surges.
- Low pressure rise.
- Hardened poppet and seat for long life.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Adjustment prevents spring from going solid.
- Hidden adjustment (tamper resistant option).
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 10 gpm (37.9 lpm).

Internal Leakage: 10 drops/min max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure

Spring Range: 50 to 3000 psi (3 to 207 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

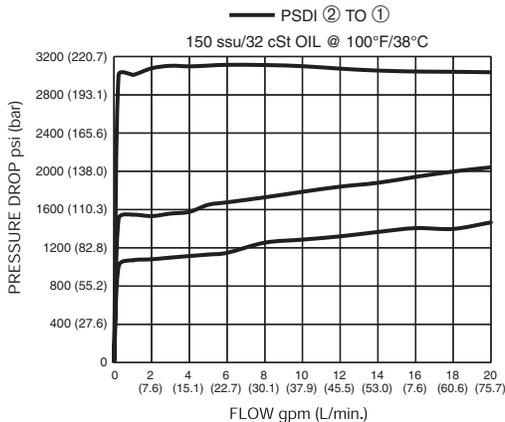
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

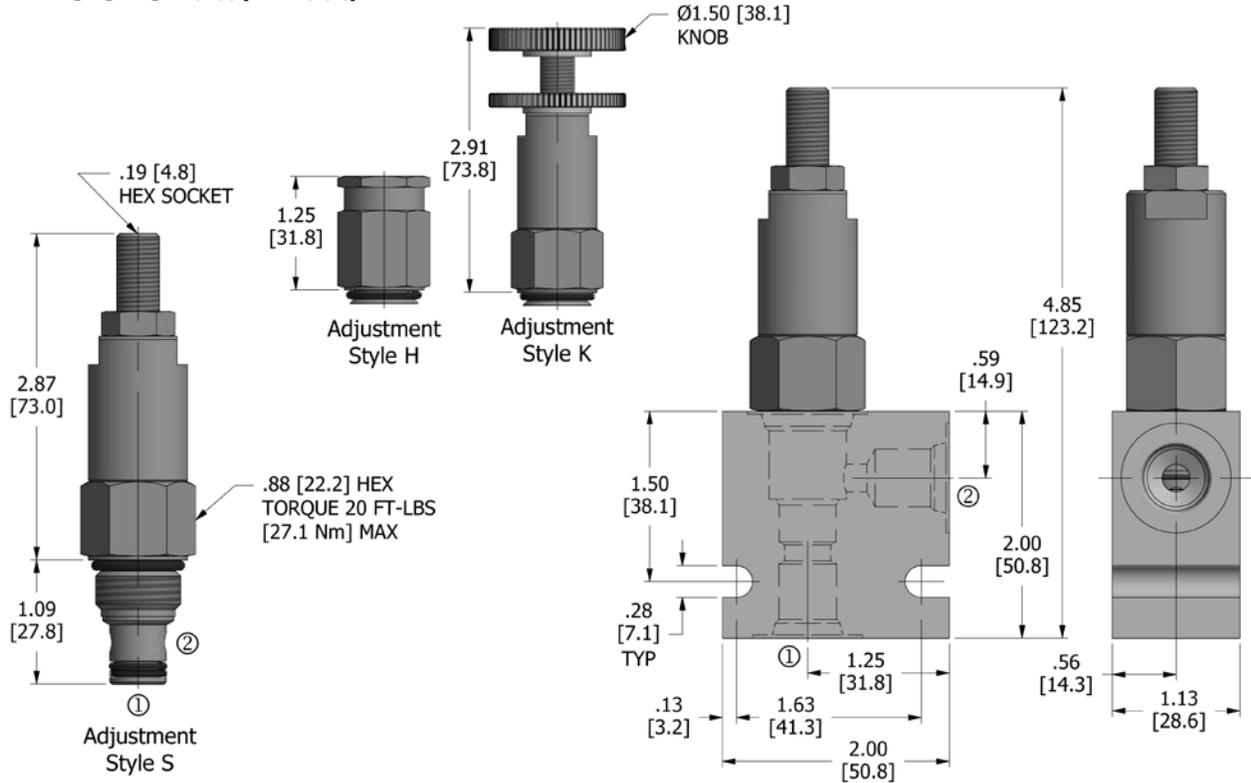
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

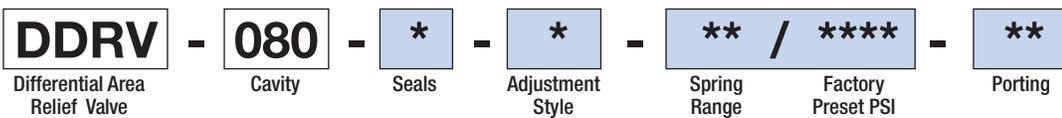
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Adjustment Style	
H	Hidden
S	Screw
K	Knob

Spring Range			Preset
Adjustment Style K & S			
4	100 to 400 psi (7 to 28 bar)		300 psi (21 bar)
20	300 to 2000 psi (21 to 138 bar)		1500 psi (103 bar)
30	1500 to 3000 psi (103 to 207 bar)		2500 psi (172 bar)
Adjustment Style H			
30	50 to 3000 psi (3 to 207 bar)		1500 psi (103 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

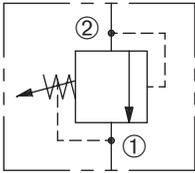
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DDRV-100

Adjustable, Direct-Acting,
Differential Area Relief Valve

SERIES 10

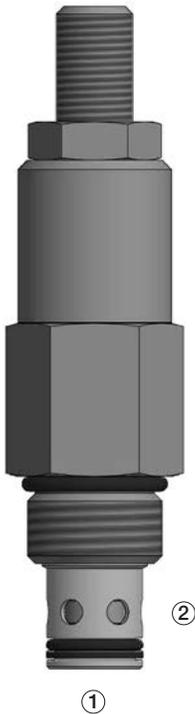


DESCRIPTION

An adjustable, direct-acting poppet cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DDRV-100 prevents flow from ② to ① until the set crack pressure at ② is achieved. The poppet then unseats allowing flow from ② to ① protecting the circuit from over pressurization.



FEATURES and BENEFITS

- Rapid response to pressure surges.
- Low pressure rise.
- Hardened poppet and seat for long life.
- Hidden adjustment (tamper resistant).
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3600 psi (248 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 20 gpm (75.7 lpm)

Internal Leakage: 20 drops/min max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure

Spring Range: 100 to 3600 psi (7 to 248 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

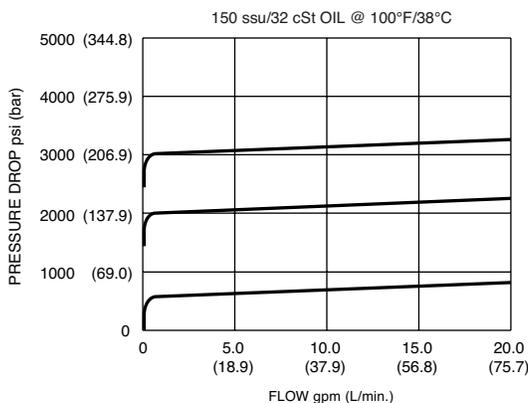
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

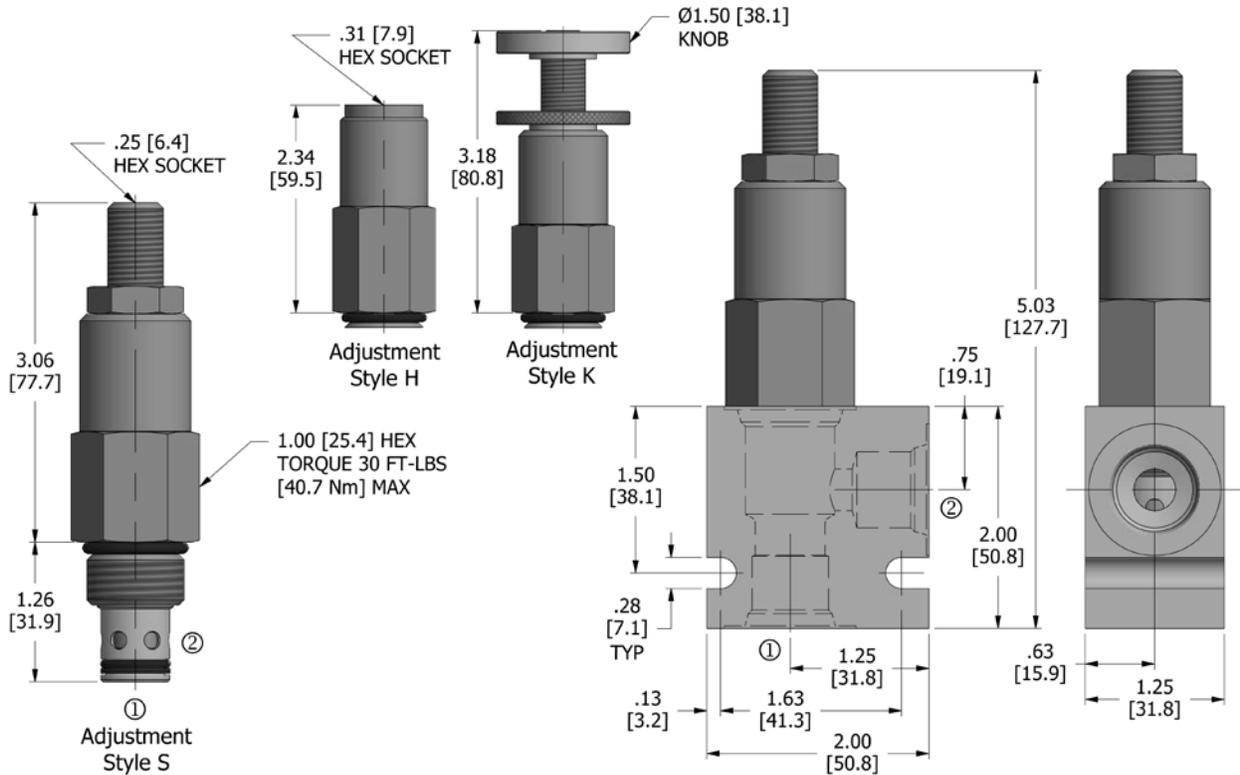
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

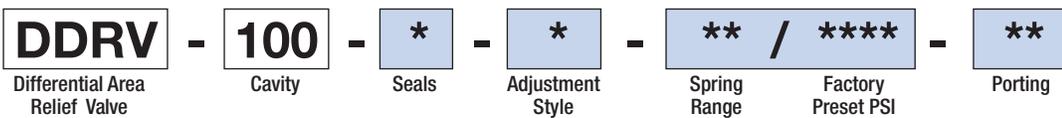
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Spring Range		Preset
6	100 to 600 psi (7 to 41 bar)	300 psi (21 bar)
20	250 to 2000 psi (17 to 138 bar)	1000 psi (69 bar)
36	600 to 3600 psi (41 to 248 bar)	2000 psi (138 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

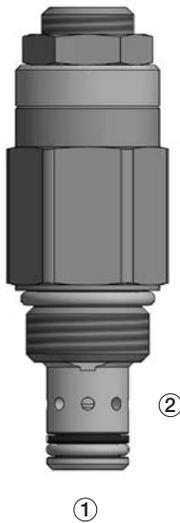
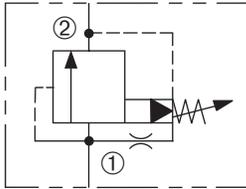
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DPOR-080

Adjustable, Pilot-Operated
Relief Valve
5000 psi (345 bar)

SERIES 8



DESCRIPTION

An adjustable, pilot-operated spool cartridge valve designed to limit flow in hydraulic circuits.

OPERATION

The DPOR-080 prevents flow from ① to ② until pressure at ① exceeds the set crack pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① to ② and thus protecting the circuit from over pressurization.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Quiet operation.
- Low pressure rise.
- High accuracy of pilot operated design.
- Hardened parts for long life.
- Adjustment may be locked in place.
- Hidden adjustment (tamper resistant) option.
- Adjustment prevents spring from going solid.
- Industry common cavity.
- High flow capacity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal Flow 20 gpm (75.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 80% of crack pressure

Crack Pressure Defined: Determined at .25 gpm (1.0 lpm)

Re-Set Pressure: Nominal 80% of crack pressure.

Spring Range: 300 to 5000 psi (21 to 345 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

Recommended Filtration: ISO 17/15/13

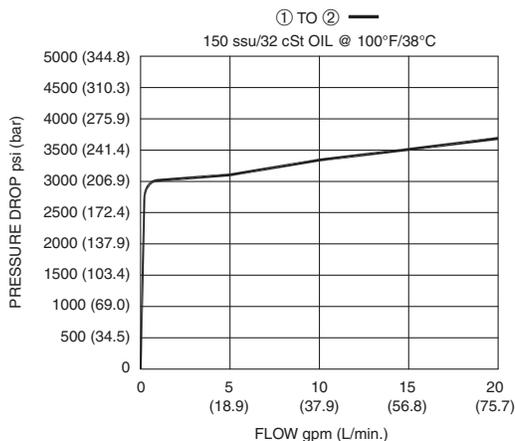
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory

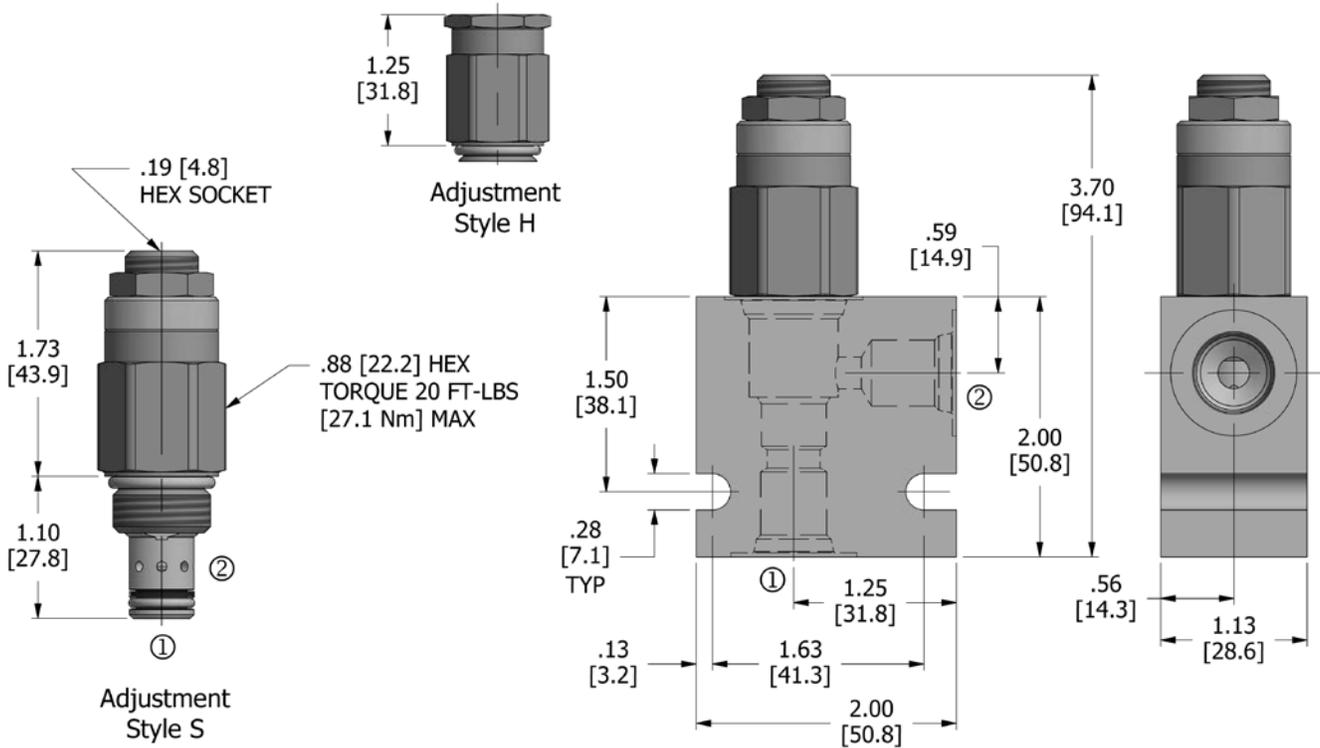
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

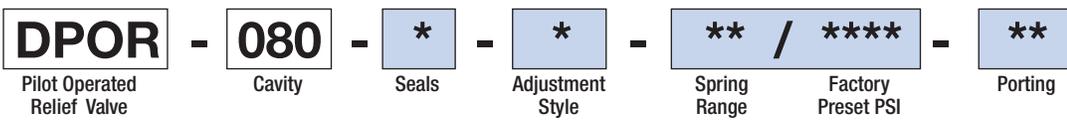
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals	Seal Kit
U Urethane	

Adjustment Style	
H Hidden	
S Screw	

Spring Range		Preset
20	300 to 2000 psi (21 to 138 bar)	1500 psi (103 bar)
50	300 to 5000 psi (21 to 345 bar)	4000 psi (276 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

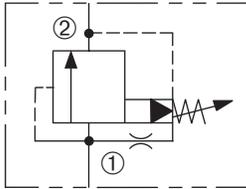
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPOR2-100

Adjustable, Pilot-Operated
Relief Valve
5000 psi (345 bar)

SERIES 10



DESCRIPTION

An adjustable, pilot-operated spool type cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DPOR2-100 prevents flow from ① to ② until pressure at ① exceeds the set crack pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① or ② protecting the circuit from over pressurization.



FEATURES and BENEFITS

- Rapid response to pressure surges.
- Low pressure rise.
- Accurate pilot-operated design.
- Hardened poppet and seat for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 30 gpm (113.6 lpm)

Internal Leakage: 5 in³/min (82cc/min) max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 100 to 5000 psi (7 to 345 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

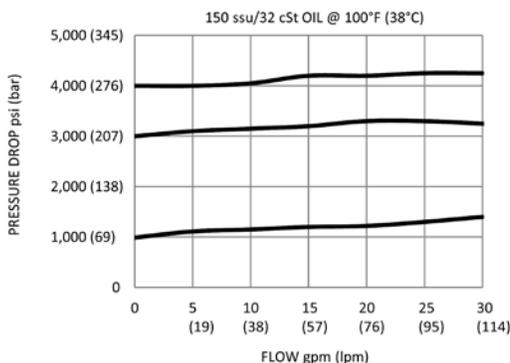
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

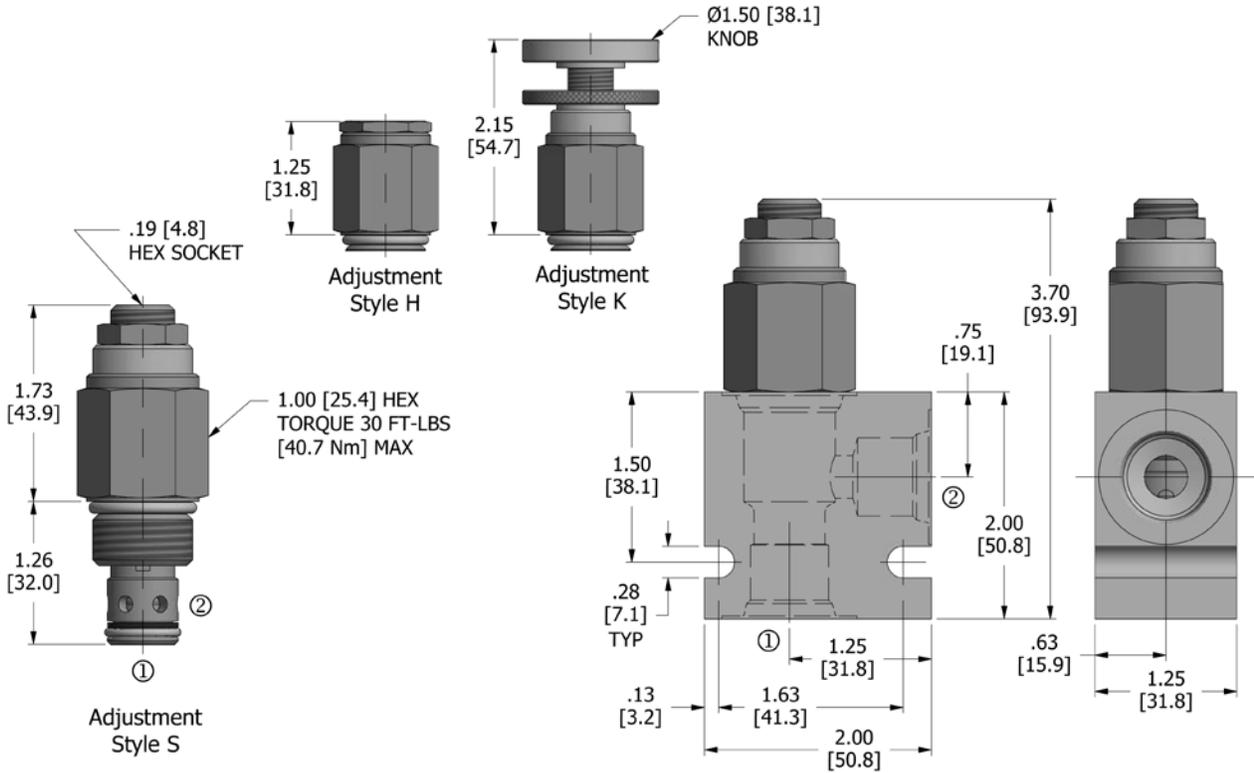
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

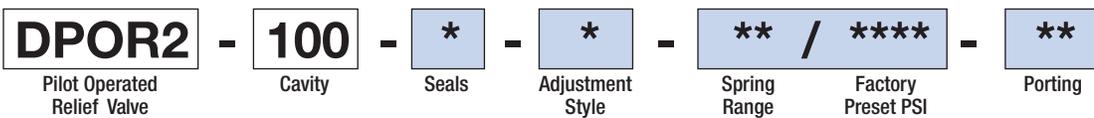
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Spring Range			Preset
10	100 to 1000 psi (7 to 69 bar)		200 psi (14 bar)
20	300 to 2000 psi (21 to 138 bar)		1000 psi (69 bar)
50	300 to 5000 psi (21 to 345 bar)		2000 psi (138 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

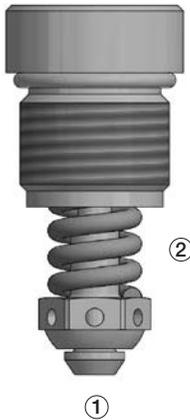
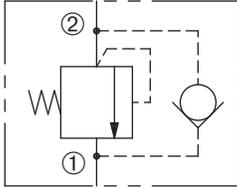
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

RV-050

Relief Valve,
Anti-Cavitation Check
5500 psi (380 bar)

SERIES 050



DESCRIPTION

A cartridge valve designed to combine a shock relief valve, (direct acting) and anti-cavitation function through the check valve.

OPERATION

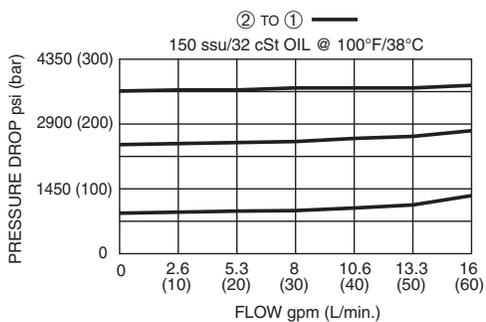
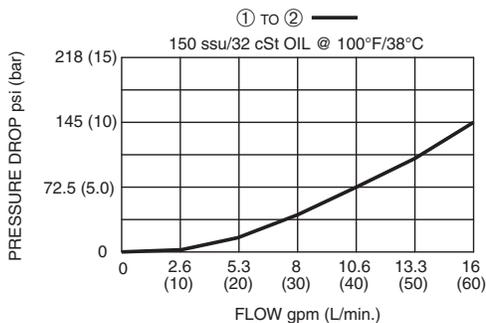
The RV-050 prevents flow from ② to ① until the set crack pressure at ② is achieved. The poppet then unseats, allowing flow from ② to ①, protecting the circuit from over pressurization.

The RV-050 allows free flow from ① to ②. As pressure at ① exceeds pressure at ②, the valve unseats from the cavity, allowing flow from ① to ②. This provides anti-cavitation function through the check valve.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Anti-cavitation function through the check valve.
- Hardened precision poppet and seat for long life.
- Fast opening and closing.
- Low hysteresis.
- Compact size.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 5500 psi (380 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 16 gpm (60 lpm)

Internal Leakage: 1.0 cc/min at 80% set

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure

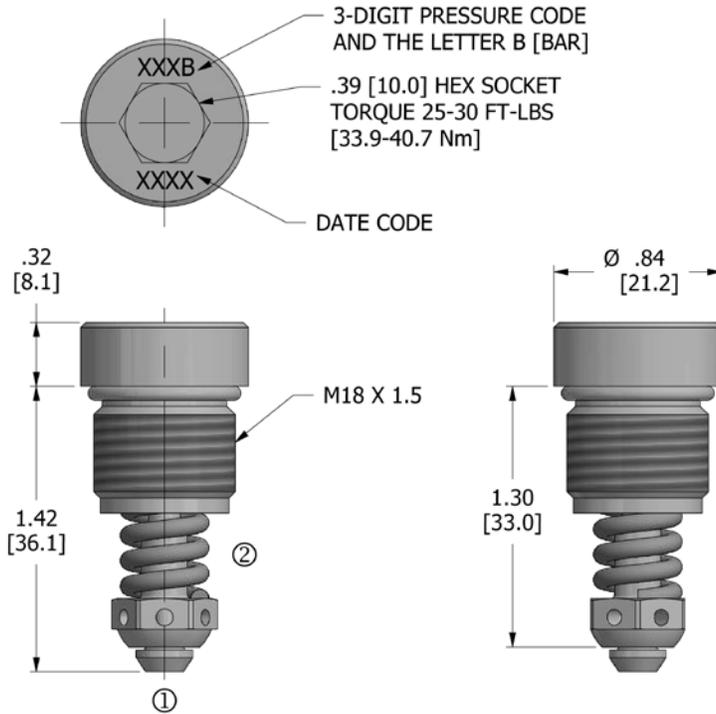
Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids.

Cavity/Cavity Tool: R05-2, see page 11.25.2

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals	Seal Kit
Buna N	(1) 10239-04

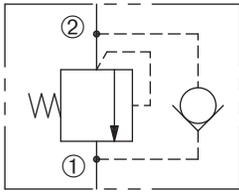
Factory Preset Bar					
	Available in 5 bar increments	Spring Color		Available in 5 bar increments	Spring Color
070	70 bar (1000 psi)	blue	275	275 bar (3988 psi)	gray
	to			to	
120	120 bar (1740 psi)	red	290	290 bar (4206 psi)	yellow
125	125 bar (1812 psi)			to	
215	215 bar (3118 psi)	white	295	295 bar (4278 psi)	yellow
220	220 bar (3190 psi)			to	
270	270 bar (3915 psi)		325	325 bar (4713 psi)	

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

RV-060

Relief Valve,
Anti-Cavitation Check
5500 psi (380 bar)

SERIES 060



DESCRIPTION

A cartridge valve designed to combine a shock relief valve, (direct acting) and anti-cavitation function through the check valve.

OPERATION

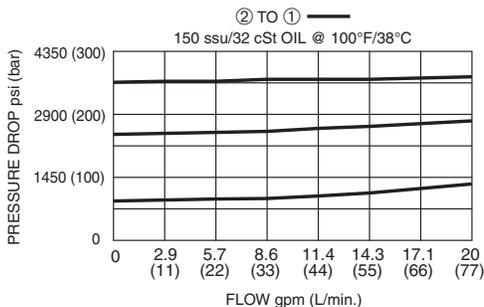
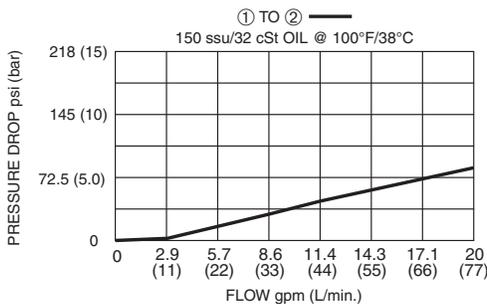
The RV-060 prevents flow from ② to ① until the set crack pressure at ② is achieved. The poppet then unseats allowing flow from ② to ①, protecting the circuit from over pressurization.

The RV-060 allows free flow from ① to ②. As pressure at ① exceeds pressure at ②, the valve unseats from the cavity allowing flow from ① to ②. This provides anti-cavitation function through the check valve.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Anti-cavitation function through the check valve.
- Hardened precision poppet and seat for long life.
- Fast opening and closing.
- Low hysteresis.
- Compact size.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 5500 psi (380 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 20 gpm (77 lpm)

Internal Leakage: 1.0 cc/min at 80% set

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure

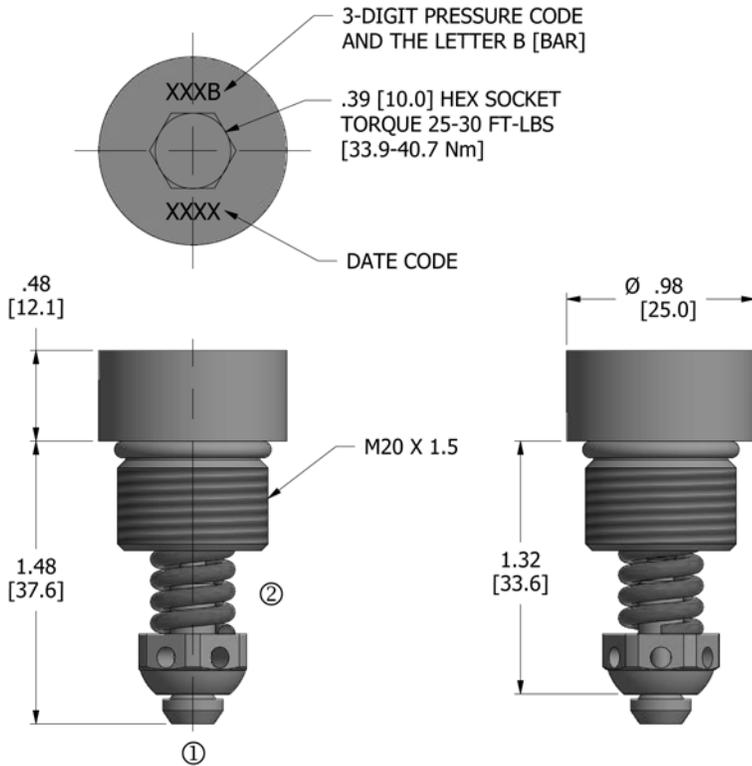
Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids.

Cavity/Cavity Tool: R06-2, see page 11.26.2

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals	Seal Kit
Buna N	(1) 10238-94

Factory Preset Bar					
	Available in 5 bar increments	Spring Color		Available in 5 bar increments	Spring Color
100	100 bar (1450 psi)	blue	235	235 bar (3408 psi)	gray
	to			to	
140	140 bar (2030 psi)	red	300	300 bar (4350 psi)	yellow
145	145 bar (2102 psi)			305	
	to			to	
180	180 bar (2610 psi)	white	380	380 bar (5510 psi)	
185	185 bar (2682 psi)				
	to				
230	230 bar (3335 psi)				

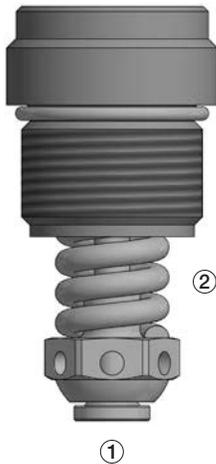
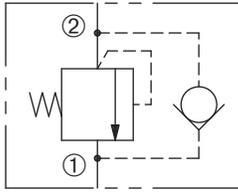
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



RV-080

Relief Valve,
Anti-Cavitation Check
5500 psi (380 bar)

SERIES 080



DESCRIPTION

A cartridge valve designed to combine a shock relief valve, (direct acting) and anti-cavitation function through the check valve.

OPERATION

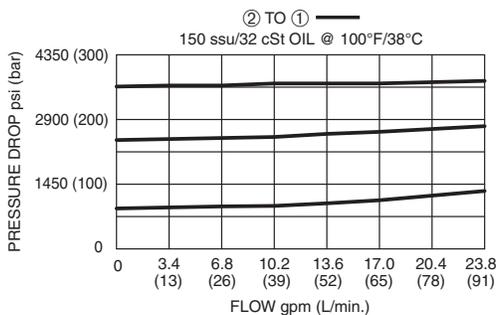
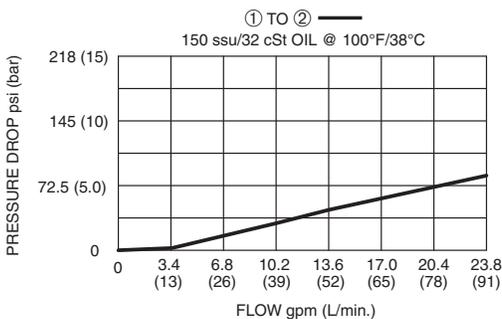
The RV-080 prevents flow from ② to ① until the set crack pressure at ② is achieved. The poppet then unseats allowing flow from ② to ①, protecting the circuit from over pressurization.

The RV-080 allows free flow from ① to ②. As pressure at ① exceeds pressure at ②, the valve unseats from the cavity allowing flow from ① to ②. This provides anti-cavitation function through the check valve.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Anti-cavitation function through the check valve.
- Hardened precision poppet and seat for long life.
- Fast opening and closing.
- Low hysteresis.
- Compact size.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 5500 psi (380 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 24 gpm (91 lpm)

Internal Leakage: 2.0 cc/min at 80% set

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure

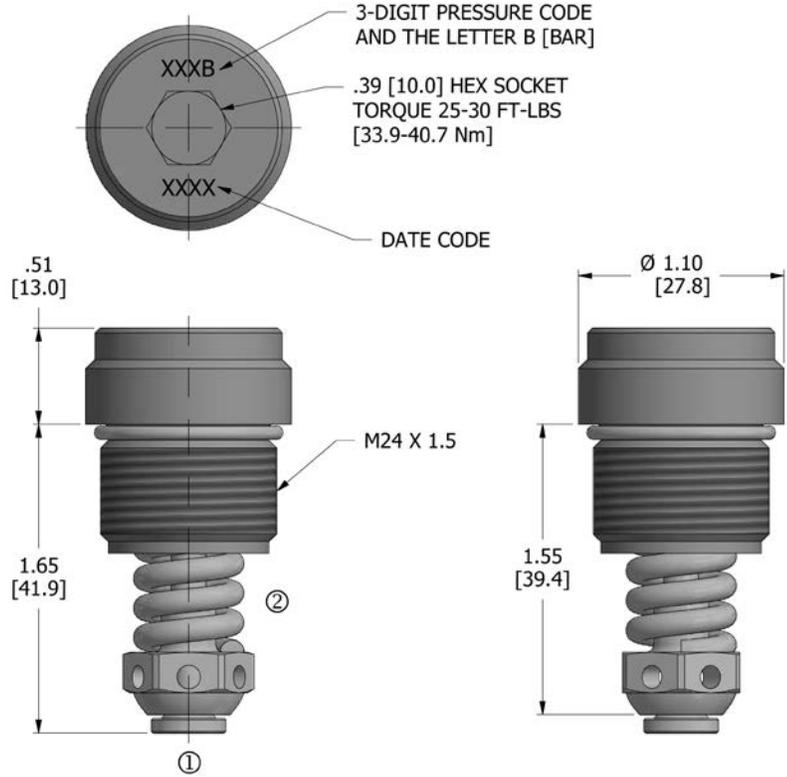
Temperature: -30°F to +220°F (-35°C to +104°C)

Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids.

Cavity/Cavity Tool: R08-2, see page 11.28.2

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals	Seal Kit
Buna N	(1) 10239-91

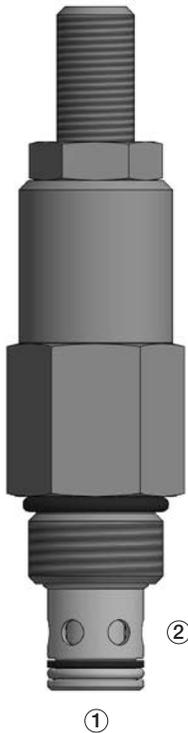
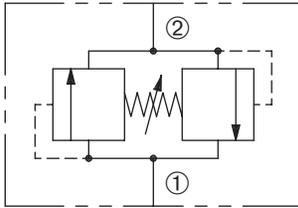
Factory Preset Bar		
	Available in 5 bar increments	Spring Color
070	70 bar (1000 psi)	green
	to	
230	230 bar (3335 psi)	gray
235	235 bar (3408 psi)	
	to	
270	270 bar (3915 psi)	

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DBRV-100

Adjustable, Bi-Directional
Relief Valve

SERIES 10



DESCRIPTION

An adjustable, bi-directional poppet type cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DBRV-100 is comprised of two relief valves which prevent flow from ① to ② or ② to ① until the set crack pressure is achieved at either port ① or ②. When the set crack pressure is reached, the poppet unseats allowing flow from ① to ② or ② to ① protecting the circuit from over pressurization.

FEATURES and BENEFITS

- Rapid response to pressure surges.
- Low pressure rise.
- Hardened poppet and seat for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3600 psi (248 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 15 gpm (56.8 lpm)

Internal Leakage: 5 in³/min (82cc/min) max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 100 to 3600 psi (7 to 248 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

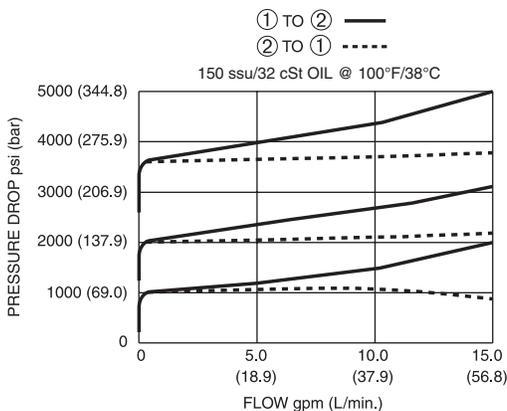
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

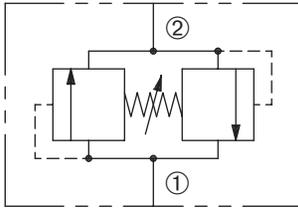
PRESSURE DROP VS. FLOW



DBRVS-100

Tamper-Resistant, Direct-Acting,
Bi-Directional Relief Valve
5000 psi (345 bar)

SERIES 10



DESCRIPTION

An adjustable, bi-directional poppet type cartridge valve designed to limit pressure in hydraulic circuits.

OPERATION

The DBRVS-100 is comprised of two relief valves which prevent flow from ① to ② or ② to ① until the set crack pressure is achieved at either port ① or ②. When the set crack pressure is reached, the poppet unseats allowing flow from ① to ② or ② to ① protecting the circuit from over pressurization.



FEATURES and BENEFITS

- Rapid response to pressure surges.
- Low pressure rise.
- Hardened poppet and seat for long life.
- Hidden adjustment (tamper resistant).
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 20 gpm (75.7 lpm)

Internal Leakage: 5 in³/min (82cc/min) max. at reseal.

Crack Pressure Defined: Determined at .25 gpm (0.9 lpm)

Reseat Pressure: Nominal 80% of crack pressure.

Spring Range: 100 to 5000 psi (7 to 345 bar)

Preset (See HOW TO ORDER)

Temperature: -30° F to +250° F (-35°C to +120° C)

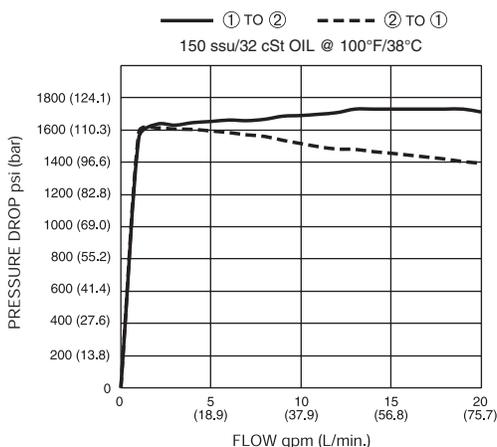
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

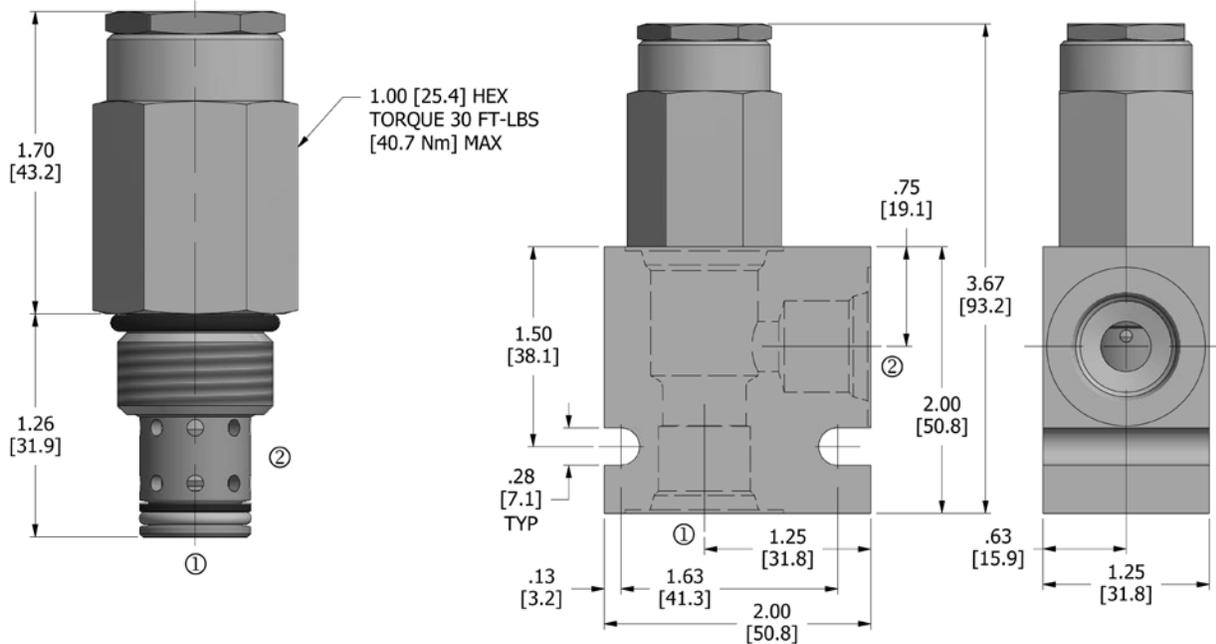
Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

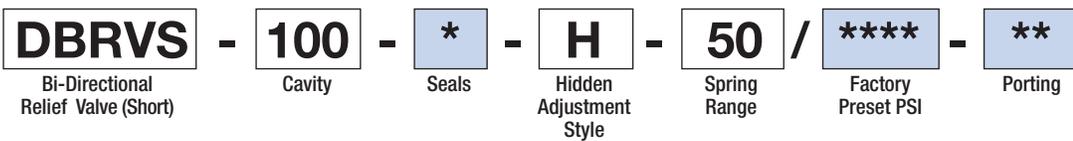
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-C
V	Viton	

Spring Range		Preset
50	100 to 5000 psi (7 to 345 bar)	2500 psi (172 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

† Other options available – consult factory

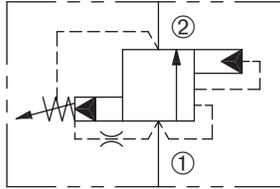
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DRVK-080

Adjustable, Pilot-Operated,
Kick-Down Relief Valve
5000 psi (345 bar)

SERIES 8



DESCRIPTION

An adjustable, pilot-operated spool cartridge valve designed to allow flow to actuator circuits until a predetermined pressure is attained, then to discharge flow back to tank at a low pressure.

OPERATION

Flow is blocked from ① to ② until system pressure exceeds the valve setting allowing flow through the pilot section to pass out of the vent port. As flow passes through the pilot section, the resulting differential pressure shifts the main spool to unload the system to a predetermined low pressure. When the system pressure is reduced below 50 psi (3.4 bar), the valve will reset itself and again block flow from port ① to ②.

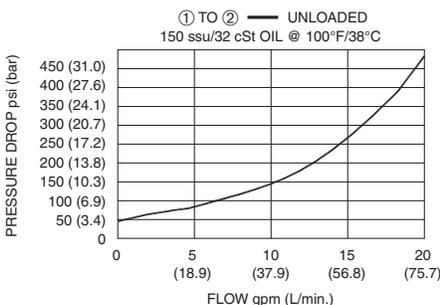
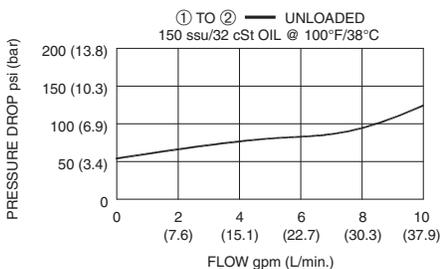
Flow is blocked from port ② to ①.

Pressure at port ② is added to valve setting

FEATURES and BENEFITS

- Quiet operation.
- High accuracy of pilot operated design.
- Hardened parts for long life.
- Hidden adjustment (tamper resistant) option.
- Adjustment prevents spring from going solid.
- Industry common cavity.
- High flow capacity.

PRESSURE DROP VS. FLOW



SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal Flow 10 gpm (37.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 80% of crack pressure

Crack Pressure Defined: Determined at .25 gpm (1.0 lpm)

Reset Pressure: When port ① pressure is below 50 psi (3.4 bar), valve will be reset to original pressure setting.

Spring Range: 300 to 5000 psi (21 to 345 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

Recommended Filtration: ISO 17/15/13

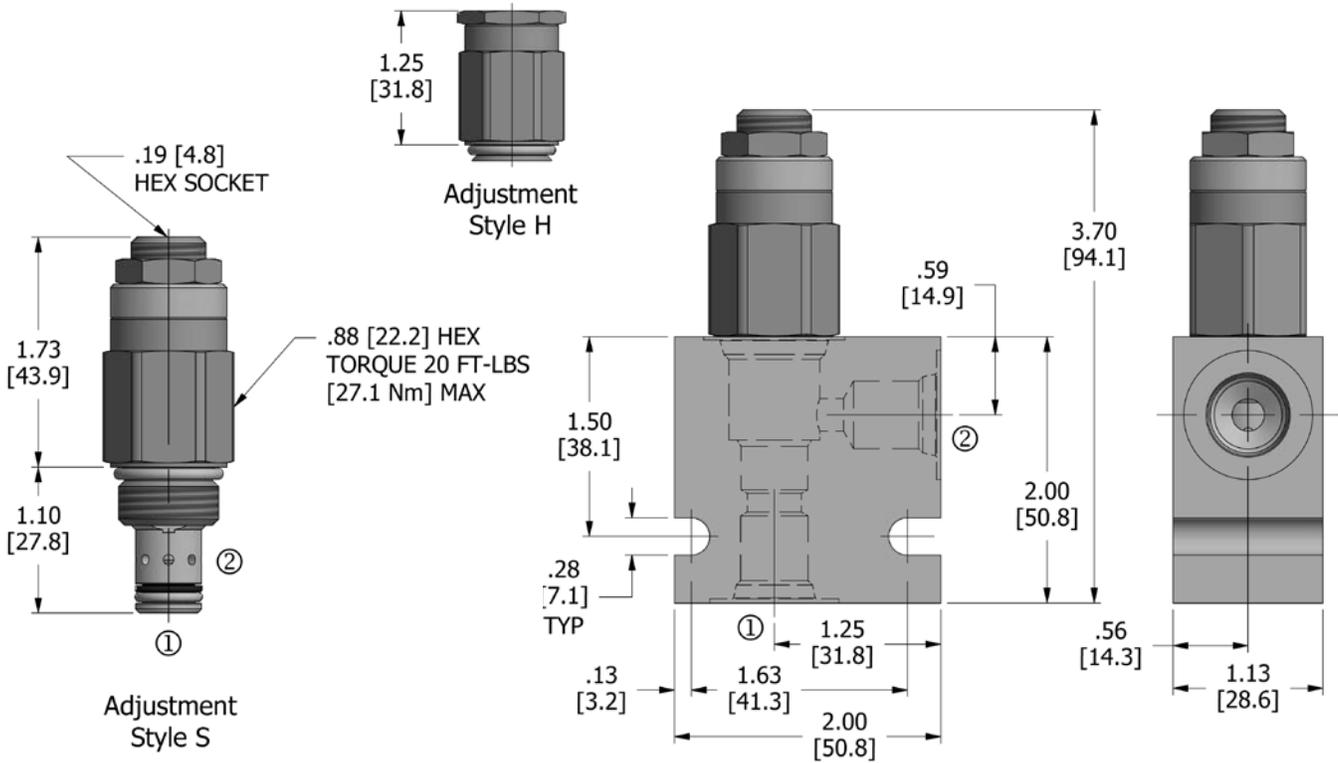
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory

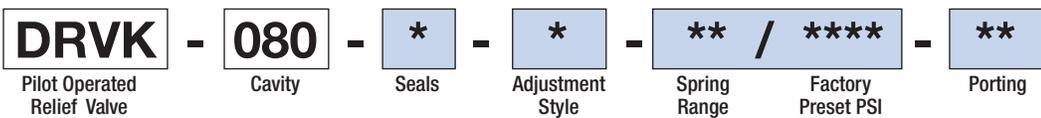
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	

Adjustment Style	
H	Hidden
S	Screw

Spring Range		Preset
15	400 to 1500 psi (28 to 103 bar)	500 psi (34 bar)
40	1000 to 4000 psi (69 to 276 bar)	2000 psi (138 bar)
50	300 to 5000 psi (21 to 345 bar)	4000 psi (276 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

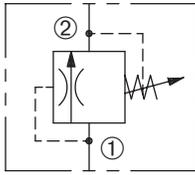
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZTRV-62

Thermal,
Relief Valve
6000 psi (414 bar)

ZERO PROFILE



DESCRIPTION

A directing poppet cartridge thermal relief valve designed to limit pressure in hydraulic circuits as a result of temperature induced pressure intensification.

OPERATION

The ZTRV-62 prevents flow from ① to ② until the set crack pressure at ① is achieved. The poppet then unseats, allowing flow from ① to ②, limiting system pressure.



FEATURES and BENEFITS

- Hardened parts for long life.
- Hidden adjustment (tamper resistant).
- Zero profile style cavity.
- Compact size.

SPECIFICATIONS

Operating Pressure: 6000 psi (414 bar)

Internal Leakage: 5 drops/min at reseal pressure.

Re-Set Pressure: Nominal 80% of crack pressure.

Spring Range: 2800 to 6000 psi (193 to 414 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C).

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory

Cavity/Cavity Tool: ZP62, see page 11.06.2

SOLENOID

CHECK

MOTION
CONTROL

FLOW
CONTROL

RELIEF

PRESSURE
CONTROL

SEQUENCE

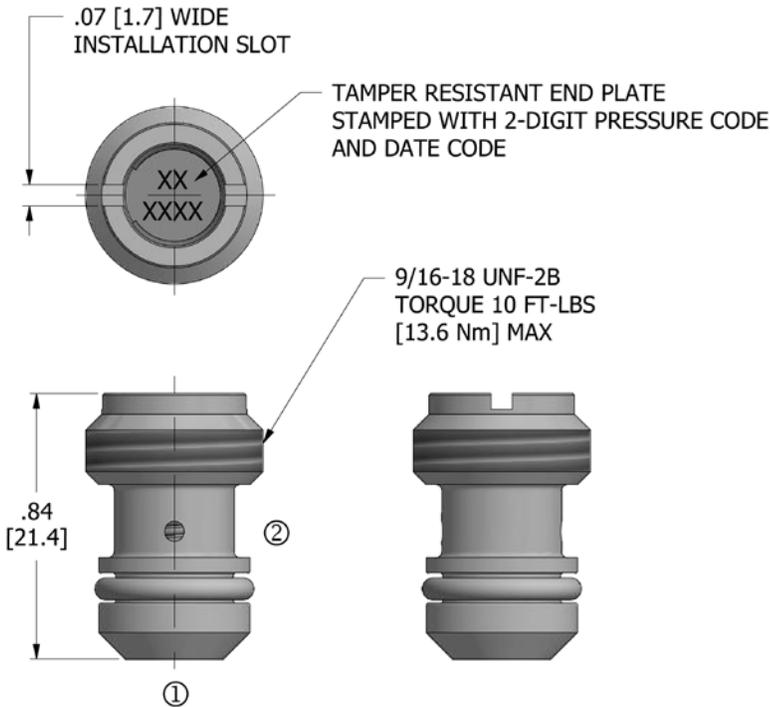
SHUTTLE

DIRECTIONAL
VALVES

HAND PUMPS

TECHNICAL
DATA

DIMENSIONS Inches [Millimeters]



HOW TO ORDER

ZTRV - **62** - **U** - **** / ******

Thermal Relief Valve Cavity Seals Spring Range Factory Preset PSI

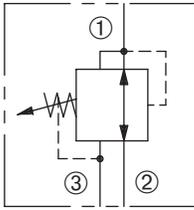
Seals		Seal Kit	Spring Range		Preset	Factory Preset PSI	
U	Urethane	(1) 10195-25	30	2800 to 3800 psi (193 to 262 bar)	2900 psi (200 bar)	****	example: 3550 = 3550 psi
			40	4000 to 6000 psi (276 to 414 bar)	4000 psi (276 bar)	2900	2900 psi
			50	4000 to 6000 psi (276 to 414 bar)	4000 psi (276 bar)	3500	3500 psi
						4000	4000 psi
						5000	5000 psi

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPR-100

Adjustable, Direct-Acting,
Pressure Reducing/Relieving Valve

SERIES 10



DESCRIPTION

An adjustable, direct-acting spool cartridge valve designed to regulate pressure in secondary circuits.

OPERATION

The DPR-100 in the steady state will allow bi-directional flow between ① and ② with spring chamber ③ vented. When the preset pressure at ① is achieved, the spool throttles to regulate pressure at ① by restricting flow at ②.



FEATURES and BENEFITS

- Variety of pressure ranges.
- Hardened precision spool and sleeve for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 4 gpm (15.1 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 50 to 2400 psi (3 to 166 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

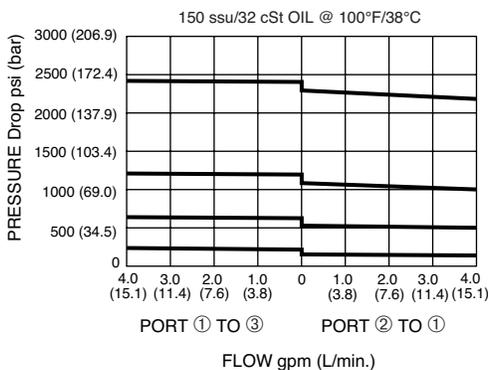
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

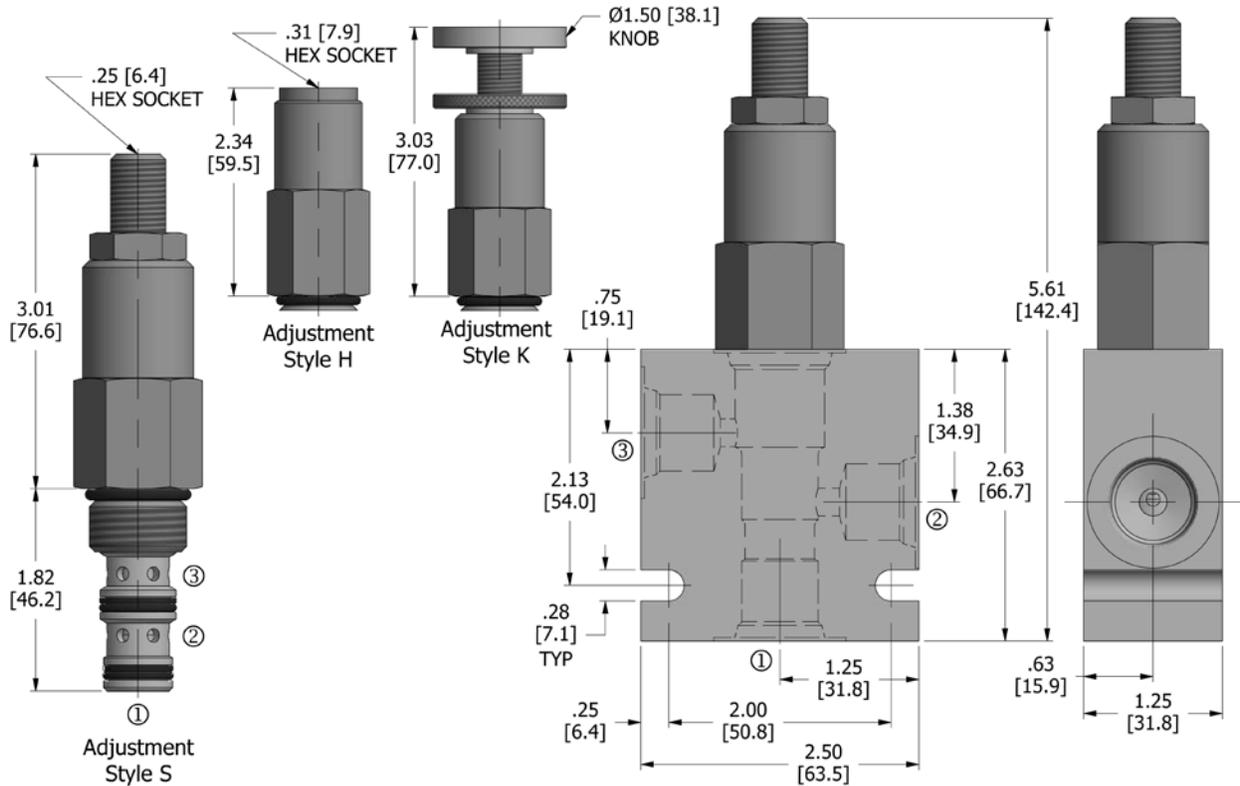
Cavity/Cavity Tool: 100-3 see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

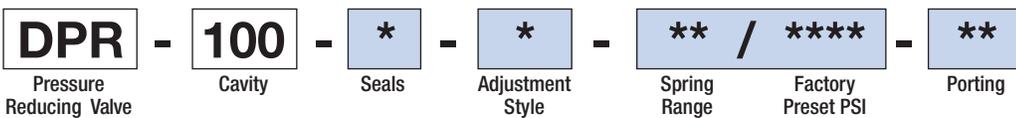
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Spring Range		Preset
2	50 to 200 psi (3 to 14 bar)	150 psi (10 bar)
9	100 to 900 psi (7 to 62 bar)	450 psi (31 bar)
24	700 to 2400 psi (48 to 166 bar)	1800 psi (124 bar)

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

† Other options available – consult factory

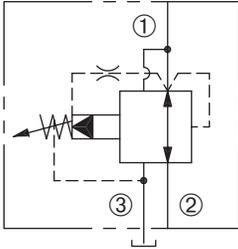
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPRR-080

Adjustable, Pilot-Operated,
Pressure Reducing/Relieving Valve
5000 psi (345 bar)

SERIES 8



DESCRIPTION

An adjustable, direct-acting spool cartridge valve designed to regulate pressure in secondary circuits.

OPERATION

The DPRR-080 in steady state will allow bi-directional flow between ① and ② with spring chamber ③ vented. When the preset pressure at ① is achieved, the spool throttles to regulate pressure at ① by restricting flow at ②.

The valve will relieve ① to ③.

FEATURES and BENEFITS

- Hardened precision spool and sleeve for long life.
- Variety of pressure ranges.
- High accuracy of pilot operated design.
- Adjustment prevents spring from going solid.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 300 to 5000 psi (21 to 345 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 19/15

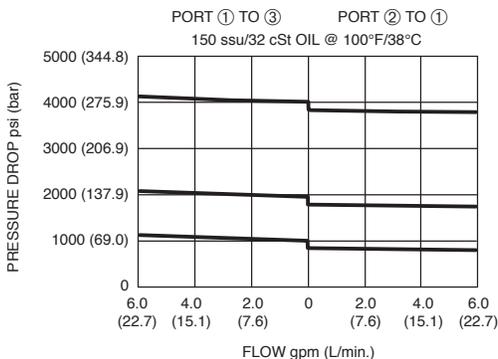
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

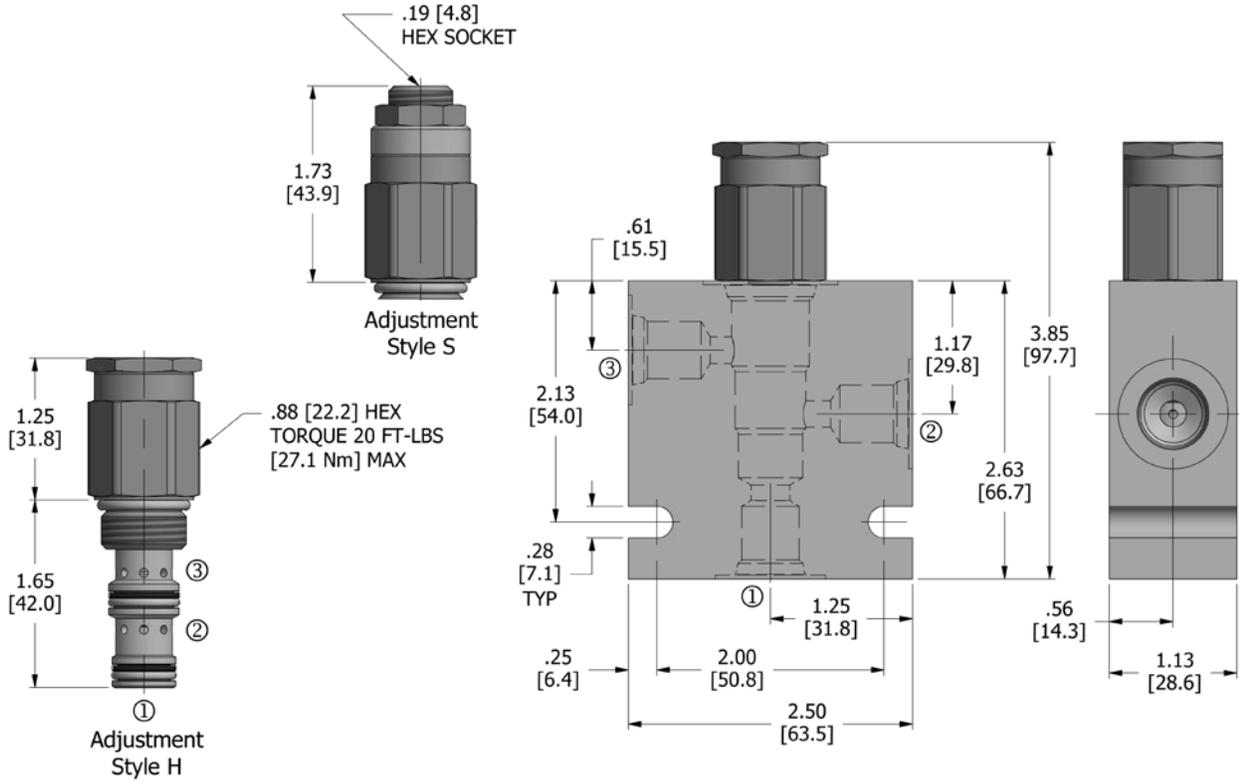
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum
allow rated at 3000 psi (207 bar).

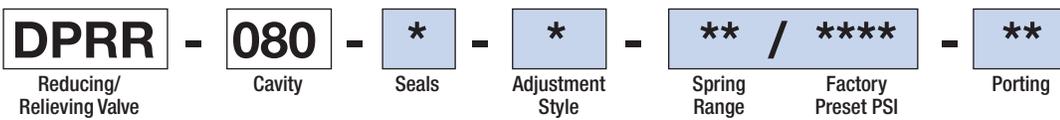
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	

Adjustment Style	
H	Hidden
S	Screw

Spring Range		Preset
20	300 to 2000 psi (21 to 138 bar)	300 psi (21 bar)
40	1800 to 4000 psi (124 to 276 bar)	3000 psi (207 bar)
50	2000 to 5000 psi (138 to 345 bar)	4000 psi (276 bar)

Factory Preset PSI	
****	example: 2550 = 2550 psi
300	300 psi
3000	3000 psi
4000	4000 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

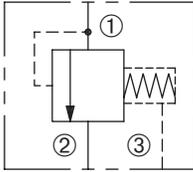
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



DDPS-100-3NCS

Differential Pressure
Sensing Valve

SERIES 10



DESCRIPTION

A fixed spool cartridge valve designed to direct oil to a circuit when a predetermined pressure differential has been reached.

OPERATION

The DDPS-100-3NCS in the steady state blocks flow from ① to ②. When the predetermined pressure differential between ① and ③ is achieved, the spool shifts to allow flow from ① to ②.



FEATURES and BENEFITS

- Hardened precision spool and sleeve for long life.
- Pressure differential setting options.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 20 gpm (75.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Differential Pressure Setting: 40 psi (2.8 bar)

75 psi (5.2 bar)

100 psi (6.9 bar)

150 psi (10.3 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

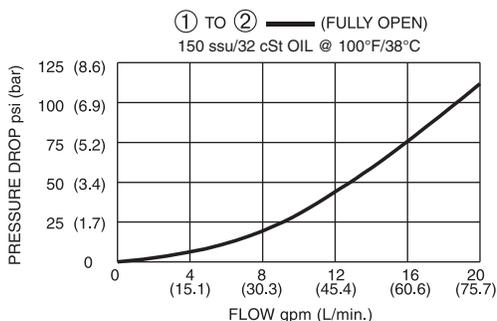
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

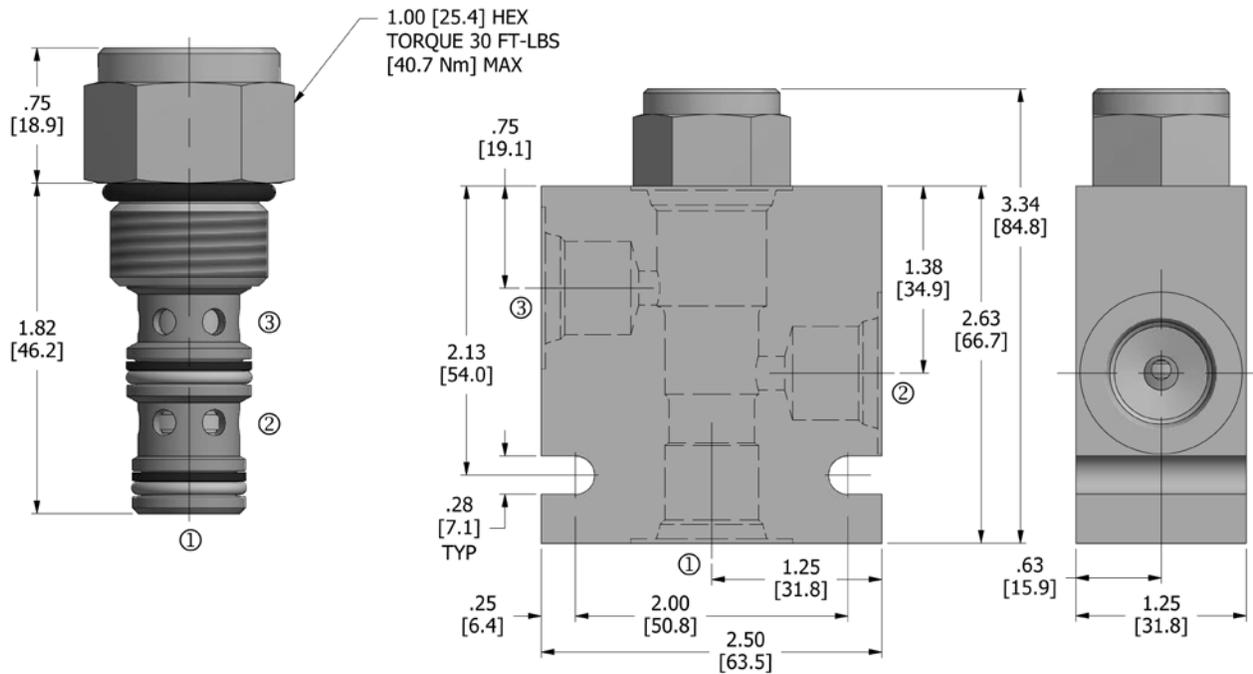
Cavity/Cavity Tool: 100-3 see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Differential Pressure	
40	40 psi (2.8 bar)
75	75 psi (5.2 bar)
100	100 psi (8.9 bar)
150	150 psi (10.3 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

[†] Other options available – consult factory

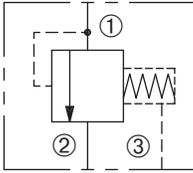
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DDPS-160

Differential Pressure Sensing Valve

SERIES 16



DESCRIPTION

A fixed spool cartridge valve designed to direct oil to a circuit when a predetermined pressure differential has been reached.

OPERATION

The DDPS-160 in the steady state blocks flow from ① to ②.

When the predetermined pressure differential between ① and ③ is achieved, the spool shifts to allow flow from ① to ②.

FEATURES and BENEFITS

- High flow capabilities.
- Hardened precision spool and sleeve for long life.
- Pressure differential setting options.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 Bar)

Flow: See PRESSURE DROP VS. FLOW graph
Nominal Flow 50 gpm (189.3 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 Bar)

Differential Pressure Setting: 5 psi (0.3 Bar)

10 psi (0.7 Bar)

20 psi (1.4 Bar)

40 psi (2.8 Bar)

80 psi (5.5 Bar)

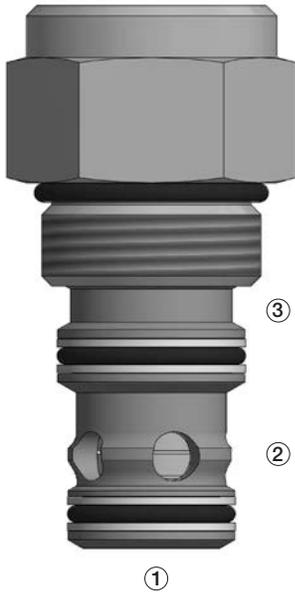
160 psi (11.0 Bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

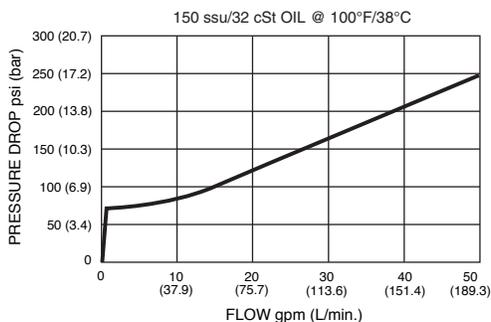
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

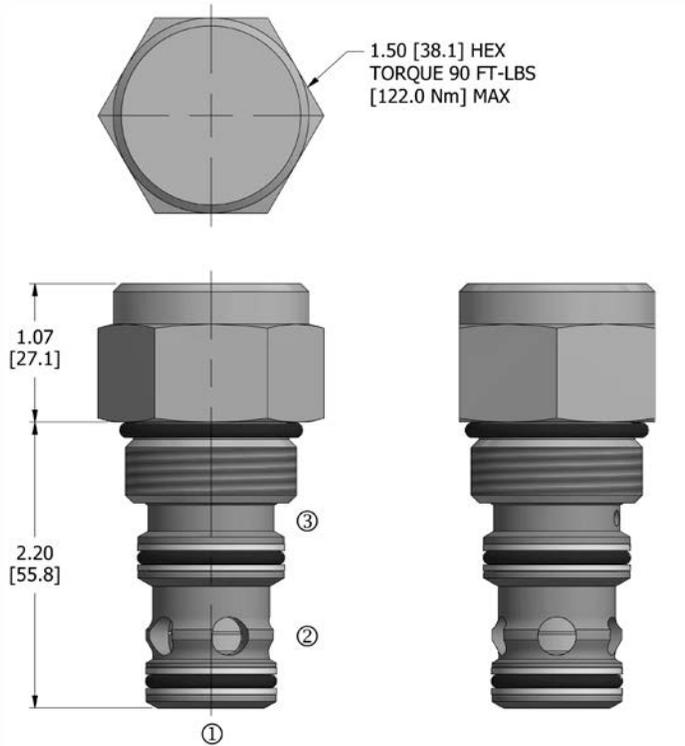
Cavity/Cavity Tool: 160-3S, see page 11.16.3S



PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DDPS - **160** - ***** - *******
 Differential Pressure Sensing Valve Cavity Seals Differential Pressure

Seals		Seal Kit
N	Buna N	
V	Viton	

Differential Pressure	
5	5 psi (0.3 bar)
10	10 psi (0.7 bar)
20	20 psi (1.4 bar)
40	40 psi (2.8 bar)
80	80 psi (5.5 bar)
160	160 psi (11.0 bar)

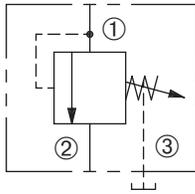
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

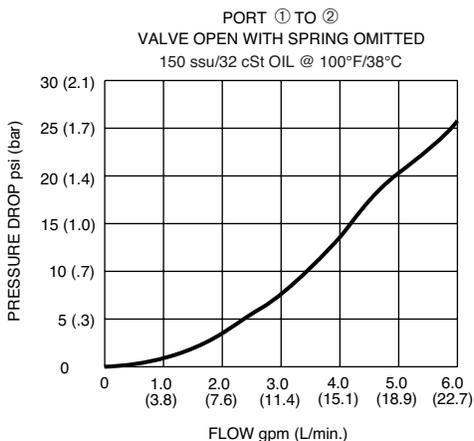
DPS-100

Adjustable, Direct-Acting
Externally-Drained Sequence Valve

SERIES 10



PRESSURE DROP VS. FLOW



DESCRIPTION

An adjustable, direct-acting spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPS-100 in the steady state blocks flow at ① and ② with spring chamber ③ drained. When the preset pressure at ① is achieved, the spool shifts to allow flow from ① to ②.

FEATURES and BENEFITS

- Variety of pressure ranges.
- Hardened precision spool and sleeve for long life.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 6 gpm (22.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 50 to 2400 psi (3 to 166 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

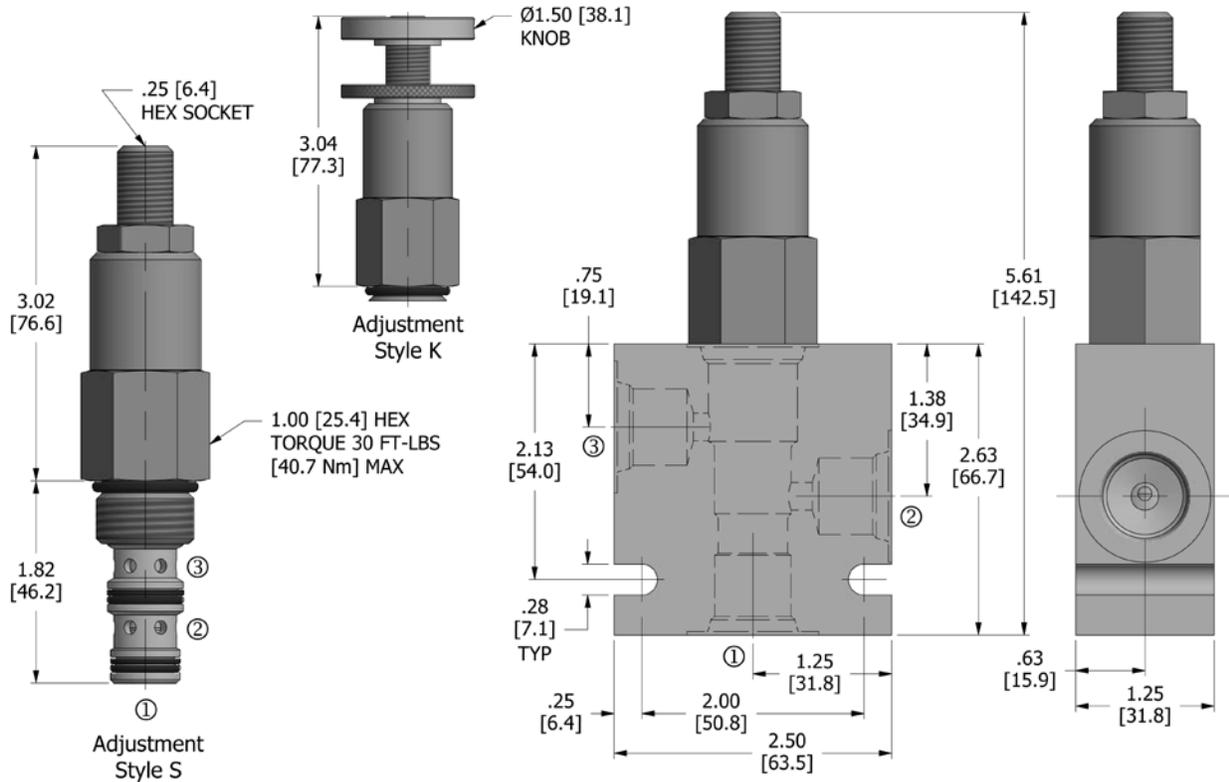
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

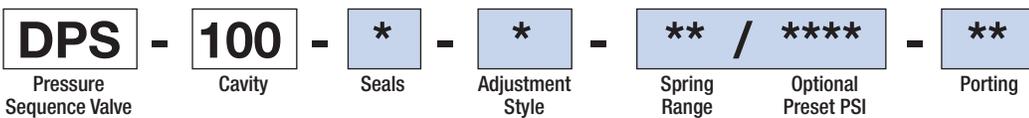
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Adjustment Style	
K	Knob
S	Screw

Spring Range		Preset
2	50 to 200 psi (3 to 14 bar)	150 psi (10 bar)
9	100 to 900 psi (7 to 62 bar)	450 psi (31 bar)
24	700 to 2400 psi (48 to 166 bar)	1800 psi (124 bar)

Optional Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

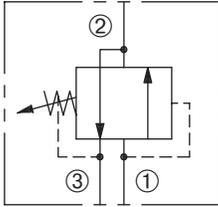
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DPS2-080

Adjustable, Internally-Piloted,
Internally-Drained Sequence Valve

SERIES 8



DESCRIPTION

An adjustable, internally-piloted spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPS2-080 in steady state allows flow from ② to ③ with ① blocked. When the preset pressure at ① is achieved, the spool shifts to allow flow ① to ②.

FEATURES and BENEFITS

- Hardened spool and sleeve for long life.
- Hidden adjustment option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 6 gpm (22.7 lpm)

Internal Leakage: 82 cc/min at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C).

Spring Range: 300 to 3000 psi (21 to 207 bar)
Preset (See HOW TO ORDER)

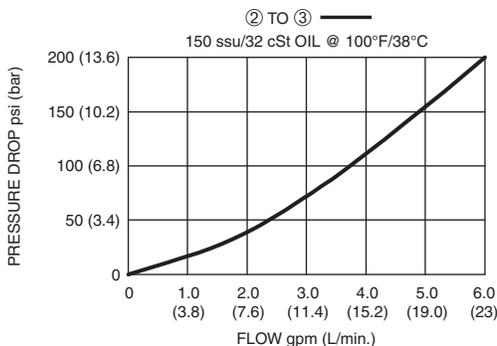
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids.

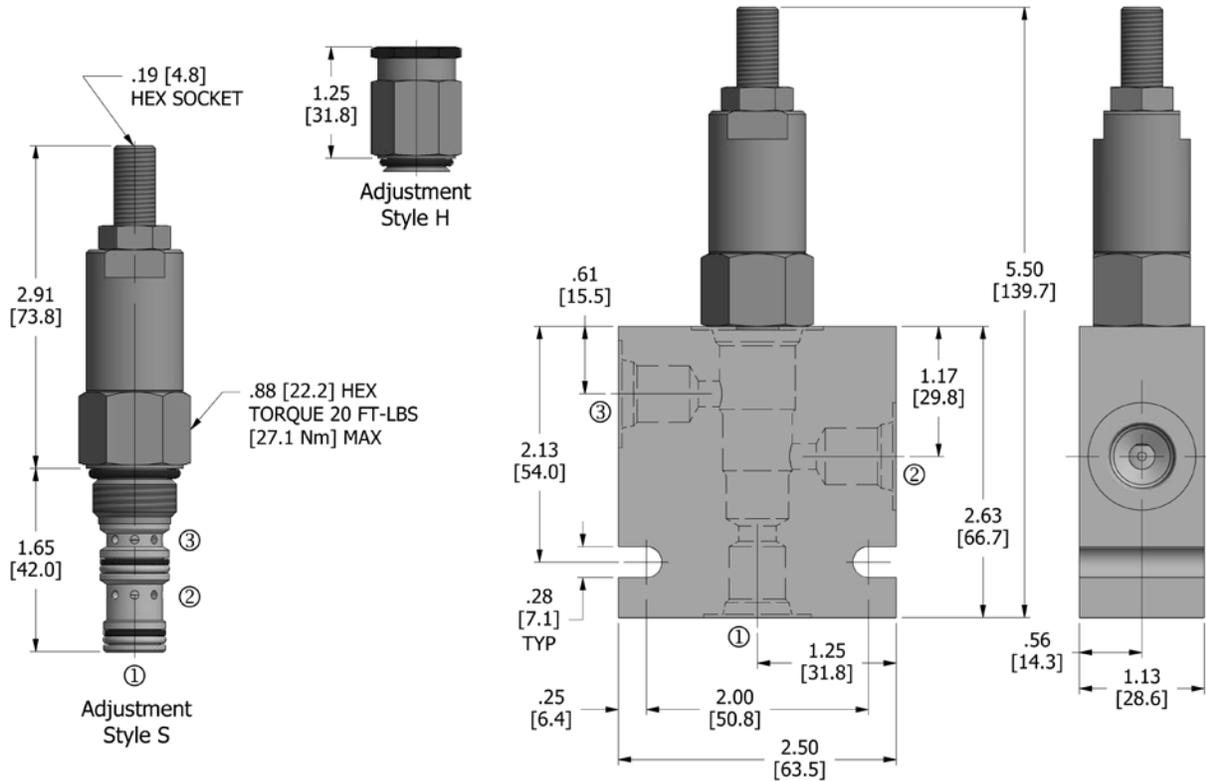
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum alloy
rated at 3000 psi (207 bar).

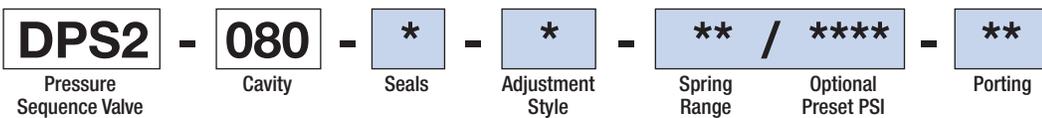
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Spring Range		Preset
20	300 to 2000 psi (21 to 138 bar)	1500 psi (103 bar)
30	1500 to 3000 psi (103 to 207 bar)	2000 psi (138 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

Adjustment Style	
H	Hidden
S	Screw

Optional Preset PSI	
****	example: 2550 = 2550 psi
700	700 psi
950	950 psi
1100	1100 psi
1500	1500 psi

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

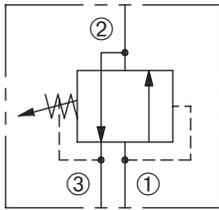
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



DPS2-100

Adjustable, Internally-Piloted,
Internally-Drained Sequence Valve

SERIES 10



DESCRIPTION

An adjustable, internally-piloted spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPS2-100 in the steady state allows flow from ② to ③ with ① blocked. When the preset pressure at ① is achieved, the spool shifts to allow flow from ① to ②.

FEATURES and BENEFITS

- Variety of pressure ranges.
- Hardened precision spool and sleeve for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 5 gpm (18.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 100 to 2400 psi (7 to 166 bar)

Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

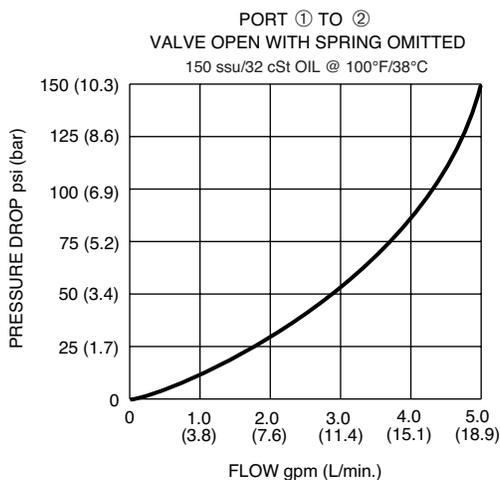
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

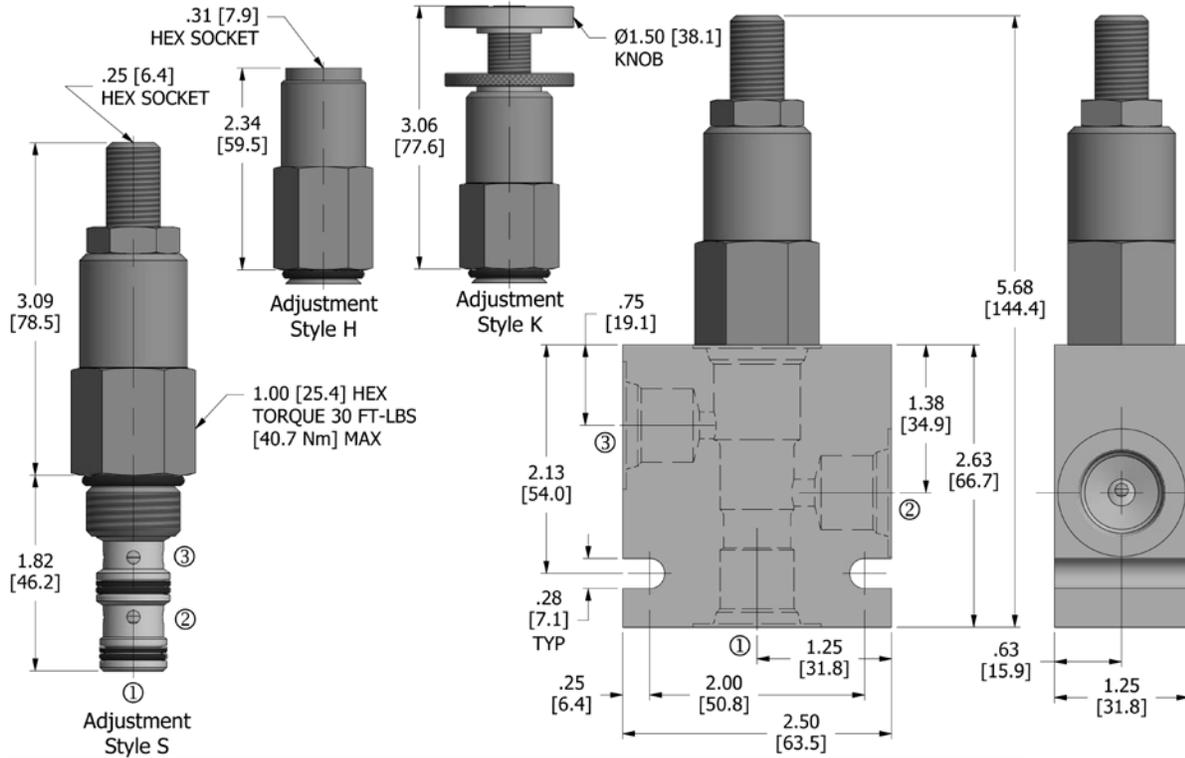
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

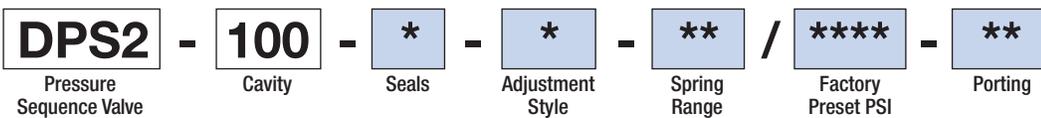
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Spring Range		Preset
10	100 to 1000 psi (7 to 69 bar)	500 psi (34 bar)
24	400 to 2400 psi (28 to 166 bar)	2000 psi (138 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

† Other options available – consult factory

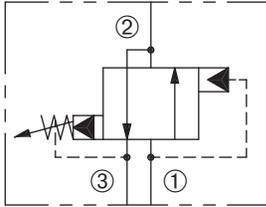
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPS3-080

Adjustable, Pilot-Operated,
Sequence Valve
5000 psi (345 bar)

SERIES 8



DESCRIPTION

An adjustable, pilot operated spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPS3-080 in steady state blocks flow at ① while allowing flow from ② to ③. When the preset pressure at ① is achieved the pilot section opens. This pilot flow creates a pressure differential across the spool, which causes the spool to shift to allow flow from ① to ②.



FEATURES and BENEFITS

- Hardened precision spool and sleeve for long life.
- Variety of pressure ranges.
- High accuracy of pilot operated design.
- Adjustment prevents spring from going solid.
- Adjustment may be locked in place.
- Hidden adjustment option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
6 gpm (22.7 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 300 to 5000 psi (21 to 345 bar)
Preset (See HOW TO ORDER)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 19/15

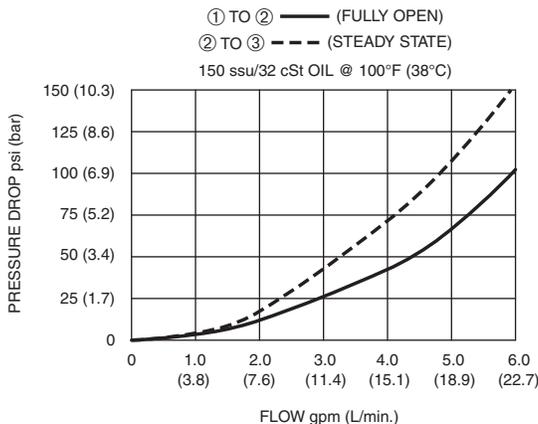
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

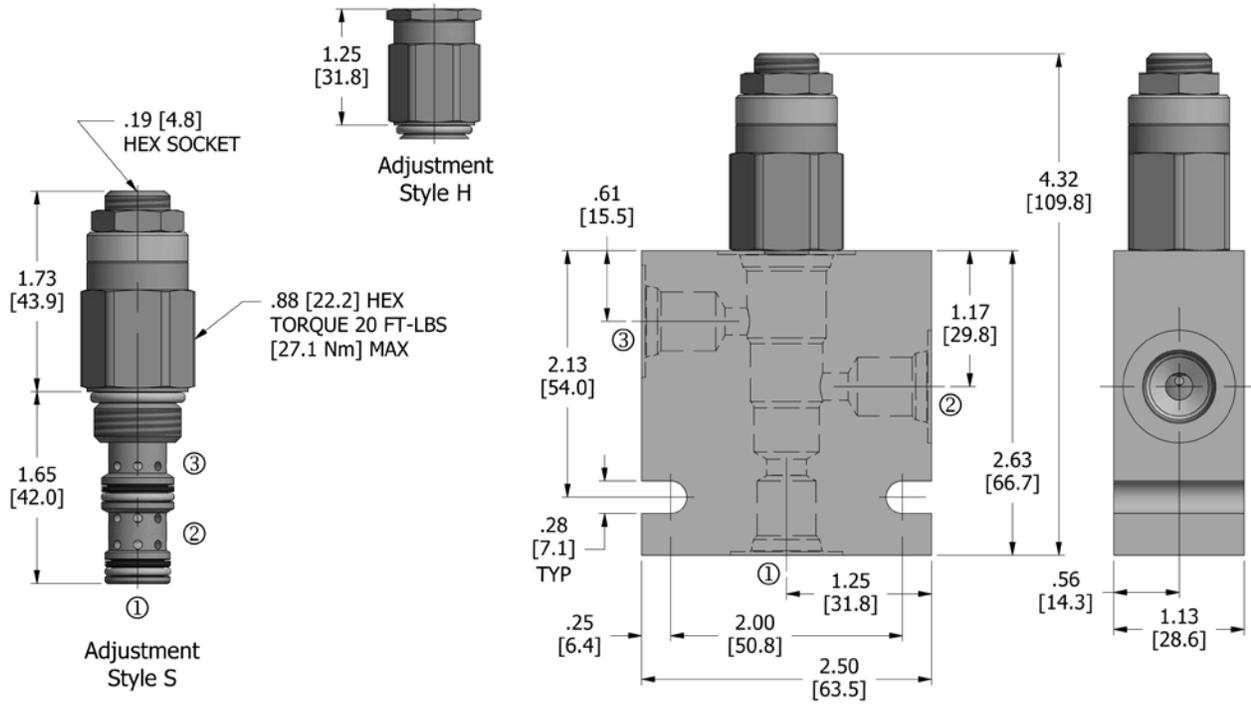
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

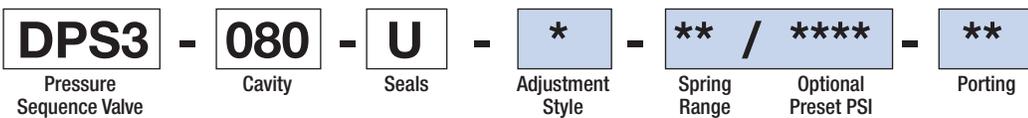
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	

Spring Range		Preset
15	300 to 1500 psi (21 to 103 bar)	300 psi (21 bar)
50	1000 to 5000 psi (69 to 345 bar)	3000 psi (206 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

Adjustment Style	
H	Hidden
S	Screw

Optional Preset PSI	
****	example: 2550 = 2550 psi
300	300 psi
1500	1500 psi
3000	3000 psi

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

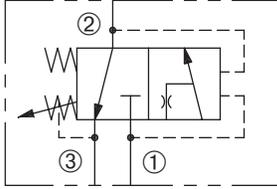
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.



DPSK-080

Adjustable, Pilot-Operated,
Kick-Down Sequence Valve
5000 psi (345 bar)

SERIES 8



DESCRIPTION

An adjustable, pilot-operated spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPSK-080 in steady state blocks flow at ① while allowing flow from ② to ③. When the preset pressure at ① is achieved, the pilot section opens. This pilot flow creates a pressure differential across the spool, which causes the spool to shift to allow flow from ① to ②.

The spool will not shift back (kick-down) until pressure at ② falls below a predetermined pressure.



FEATURES and BENEFITS

- Hardened precision spool and sleeve for long life.
- Variety of pressure ranges.
- High accuracy of pilot operated design.
- Adjustment prevents spring from going solid.
- Adjustment may be locked in place.
- Hidden adjustment option.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 5000 psi (345 bar)

Flow: See PRESSURE DROP VS. FLOW graph

Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 300 to 5000 psi (21 to 345 bar)

Preset (See HOW TO ORDER)

Reset Spring Pressure: 100 psi (7 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 19/15

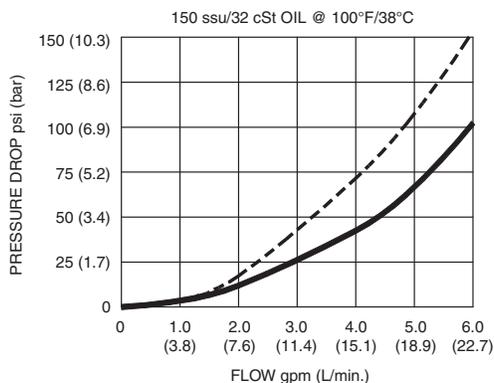
Fluids: Mineral-based fluids.

For other fluid compatibility, consult factory.

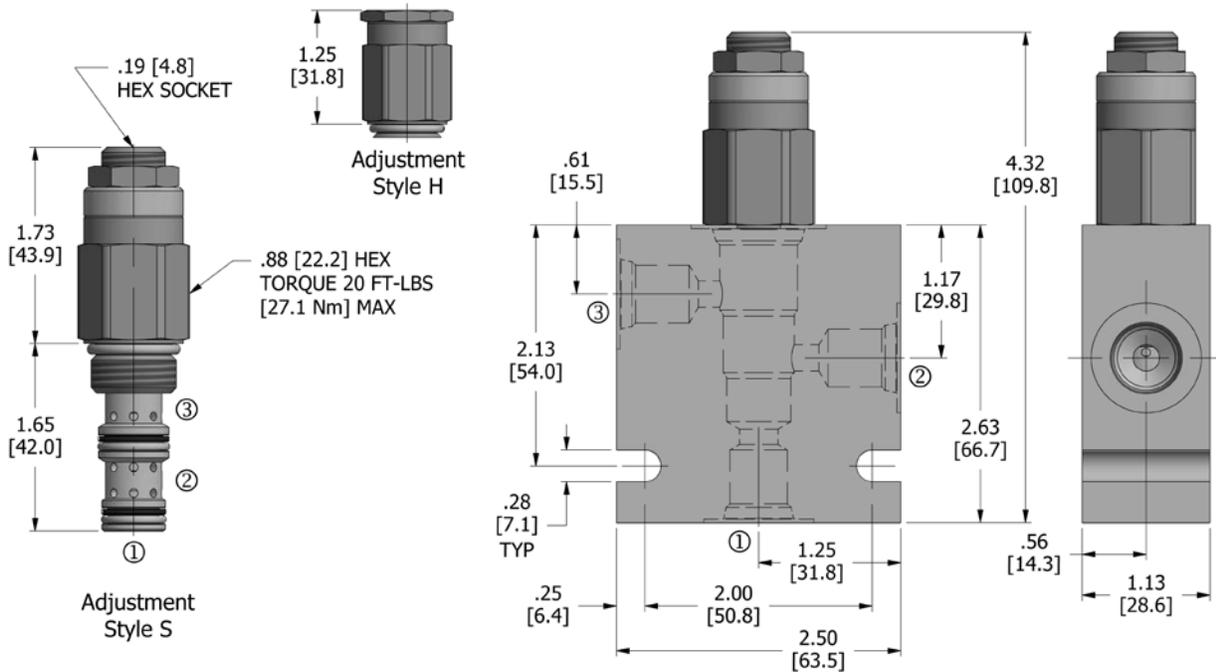
Cavity/Cavity Tool: 080-3, see page 11.08.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

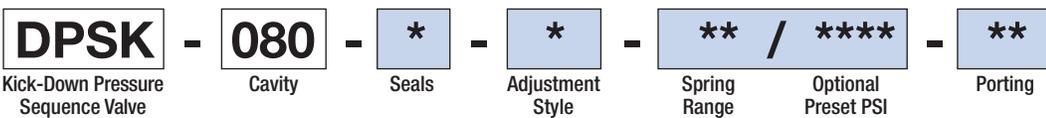
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	

Spring Range		Preset
15	300 to 1500 psi (21 to 103 bar)	300 psi (21 bar)
50	300 to 5000 psi (21 to 345 bar)	3000 psi (206 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-3-2N
3N	3/8 PTF	B-080-3-3N
4T	SAE 4	B-080-3-4T
6T	SAE 6	B-080-3-6T

Adjustment Style	
H	Hidden
S	Screw

Optional Preset PSI	
****	example: 2550 = 2550 psi
300	300 psi
3000	3000 psi

[†] Other options available – consult factory

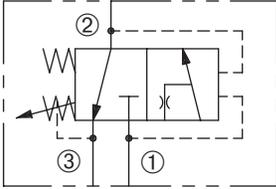
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPSK-100 (Reset 120 PSI)

Adjustable, Pilot-Operated Kick-Down Sequence Valve

SERIES 10



DESCRIPTION

An adjustable, pilot-operated spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPSK-100 in the steady state blocks flow at ① while allowing flow from ② to ③. When the preset pressure at ① is achieved, the pilot section opens. This pilot flow creates a pressure differential across the spool, which causes the spool to shift to allow flow from ① to ②. The spool will not shift back (kick-down) until pressure at ② falls below a predetermined pressure.

FEATURES and BENEFITS

- Lower kick-down pressure than DPSK2-100 (see page 7.06.1).
- Variety of pressure ranges.
- Hardened precision spool and sleeve for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 300 to 3000 psi (21 to 207 bar)
Preset (See HOW TO ORDER)

Reset Spring Pressure: 120 psi (8 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

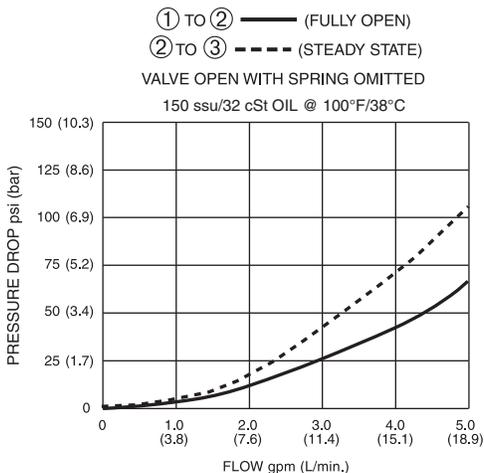
Recommended Filtration: ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

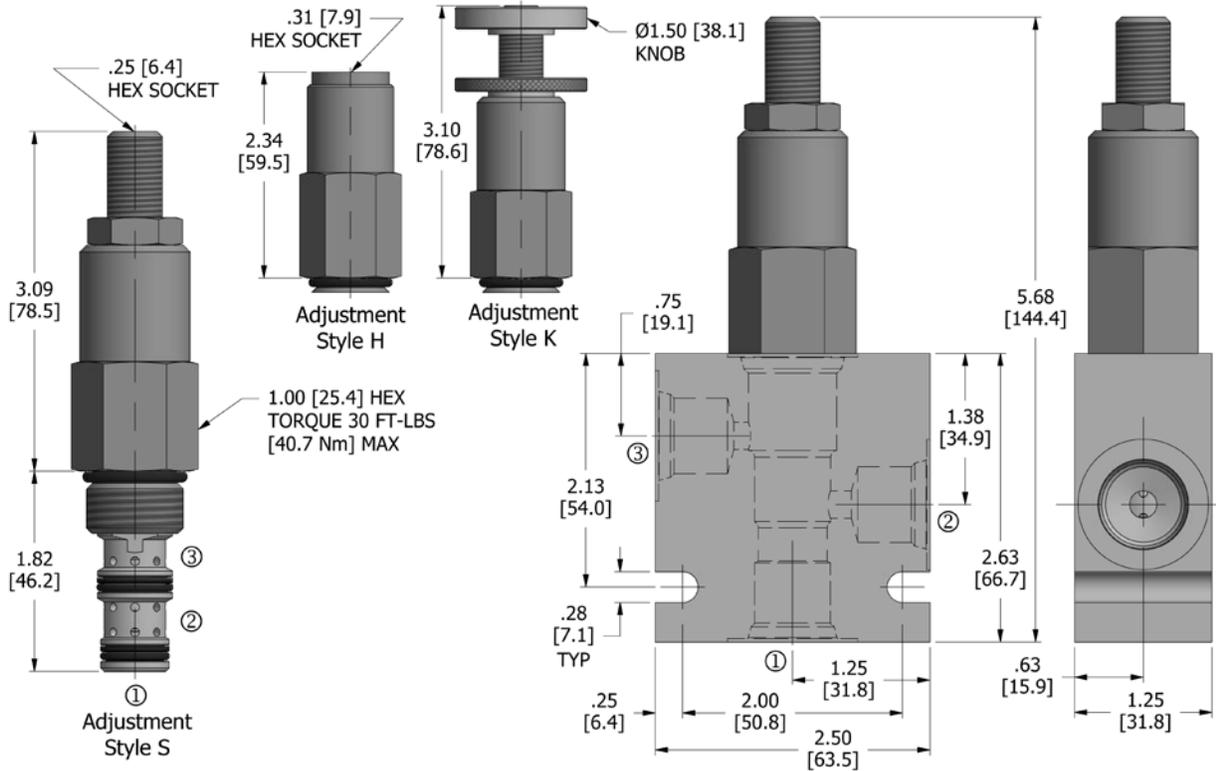
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

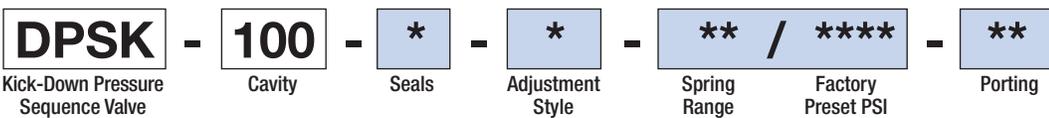
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Spring Range		Preset
5	300 to 500 psi (21 to 34 bar)	400 psi (28 bar)
30	350 to 3000 psi (24 to 207 bar)	2000 psi (138 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Factory Preset PSI	
omit	Standard preset
****	example: 2550 = 2550 psi

† Other options available – consult factory

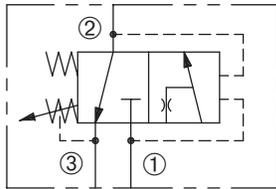
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPSK2-100 (Reset 300 PSI)

Adjustable, Pilot-Operated
Kick-Down Sequence Valve

SERIES 10



DESCRIPTION

An adjustable, pilot-operated spool cartridge valve designed to direct oil to a circuit when a predetermined pressure has been reached.

OPERATION

The DPSK2-100 in the steady state blocks flow at ① while allowing flow from ② to ③. When the preset pressure at ① is achieved, the pilot section opens. This pilot flow creates a pressure differential across the spool, which causes the spool to shift to allow flow from ① to ②. The spool will not shift back (kick-down) until pressure at ② falls below a predetermined pressure.

FEATURES and BENEFITS

- Higher kick-down pressure than DPSK-100 (see page 7.05.1).
- Variety of pressure ranges.
- Hardened precision spool and sleeve for long life.
- Hidden adjustment (tamper resistant) option.
- Aluminum knob and disc nut option.
- Adjustment may be locked in place.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 5 gpm (18.9 lpm)

Internal Leakage: 5 in³/min (82 cc/min) max. at 3000 psi (207 bar)

Spring Range: 350 to 3000 psi (24 to 207 bar)
Preset (See HOW TO ORDER)

Reset Spring Pressure: 300 psi (21 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 20/18/14

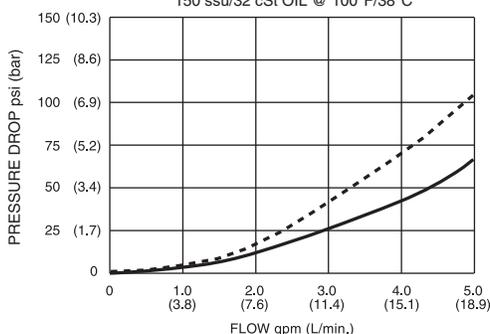
Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-3, see page 11.10.3

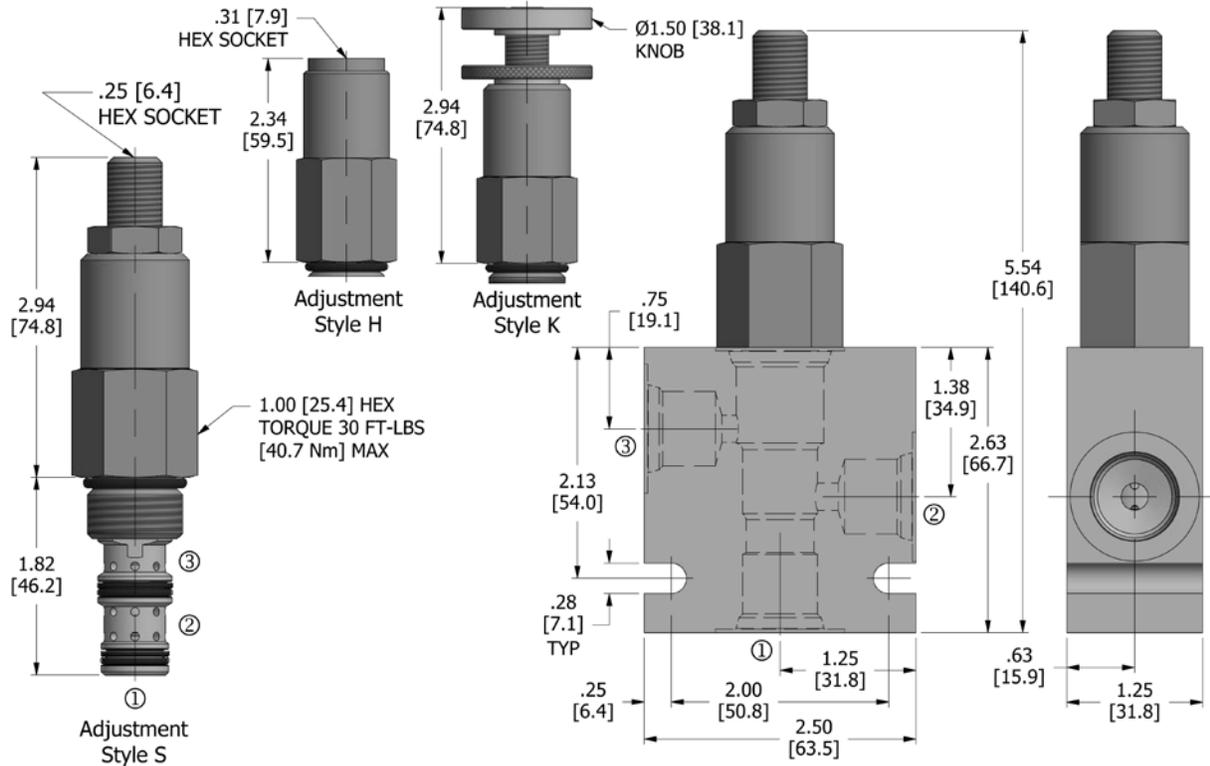
In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

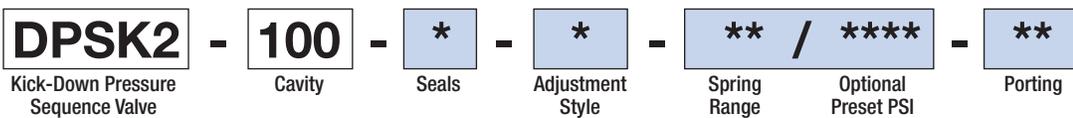
① TO ② — (FULLY OPEN)
② TO ③ - - - (STEADY STATE)
VALVE OPEN WITH SPRING OMITTED
150 ssu/32 cSt OIL @ 100°F/38°C



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Adjustment Style	
H	Hidden
K	Knob
S	Screw

Spring Range		Preset
30	350 to 3000 psi (24 to 207 bar)	1500 psi (103 bar)

Optional Preset PSI	
****	example: 2550 = 2550 psi
1100	1100 psi
1200	1200 psi
1300	1300 psi
3000	3000 psi

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

[†] Other options available – consult factory

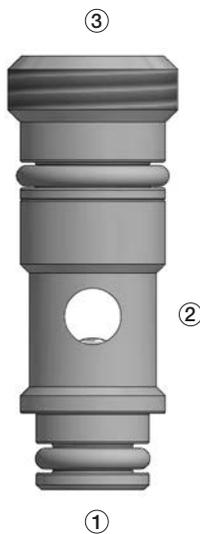
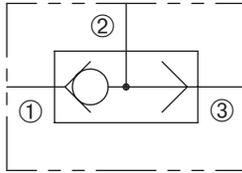
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZSHB-63

Ball-Type
Shuttle Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to direct flow from either of the two inlet ports to a common outlet port.

OPERATION

The ZSHB-63 allows the check ball to move away from inlet port ① or ③ with the greatest differential pressure and seat against the other inlet port having the least differential pressure. This provides a flow path to outlet port ②.

FEATURES and BENEFITS

- Excellent response to pressure changes.
- Chrome alloy ball for long life.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 4 gpm (15.1 lpm).

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

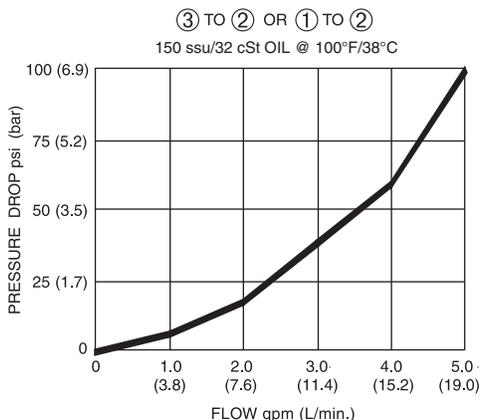
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

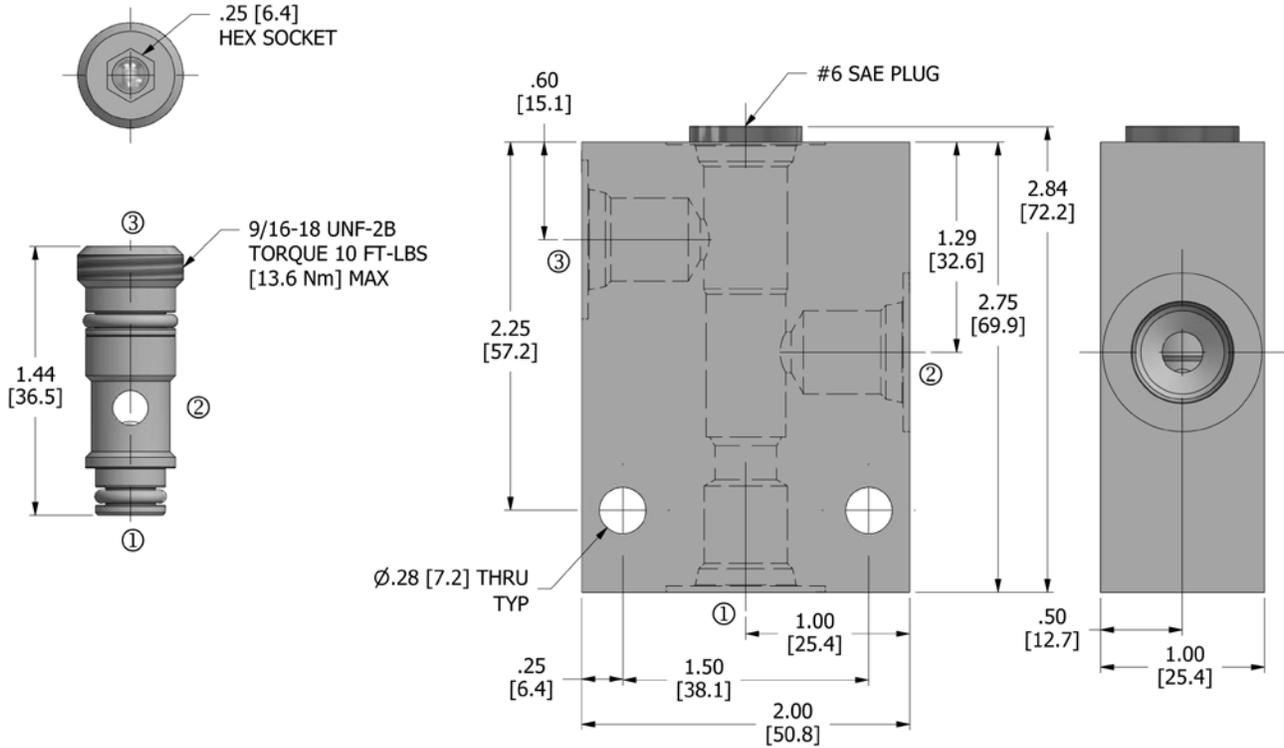
Cavity/Cavity Tool: ZP63, see page 11.06.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

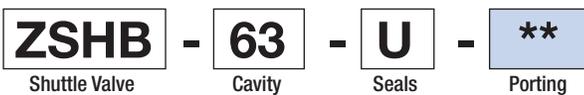
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit	Porting [†]		In-Line Body w/o Cartridge
U	Urethane	(1) 10195-24	omit	Cartridge only	
		(1) 10195-25	4T	SAE 4	B-ZP63-A-4T

[†] Other options available – consult factory

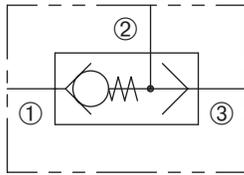
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

ZSH2-63

Zero Leak, Spring-Bias
Shuttle Valve

ZERO PROFILE



DESCRIPTION

A cartridge valve designed to direct flow from either of the two inlet ports to a common outlet port.

OPERATION

The ZSH2-63 allows the spring-bias poppet to move away from inlet port ① (biased closed) or ③ with the greatest differential pressure and seat against the other inlet port having the least differential pressure. This provides a flow path to outlet port ②.

FEATURES and BENEFITS

- Excellent response to pressure changes.
- Compact size.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 4 gpm (15.1 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

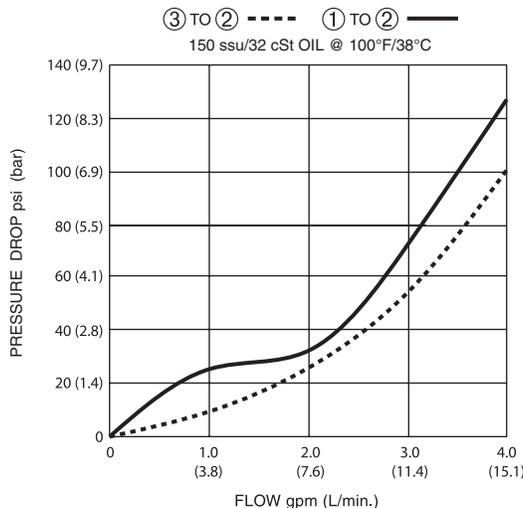
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

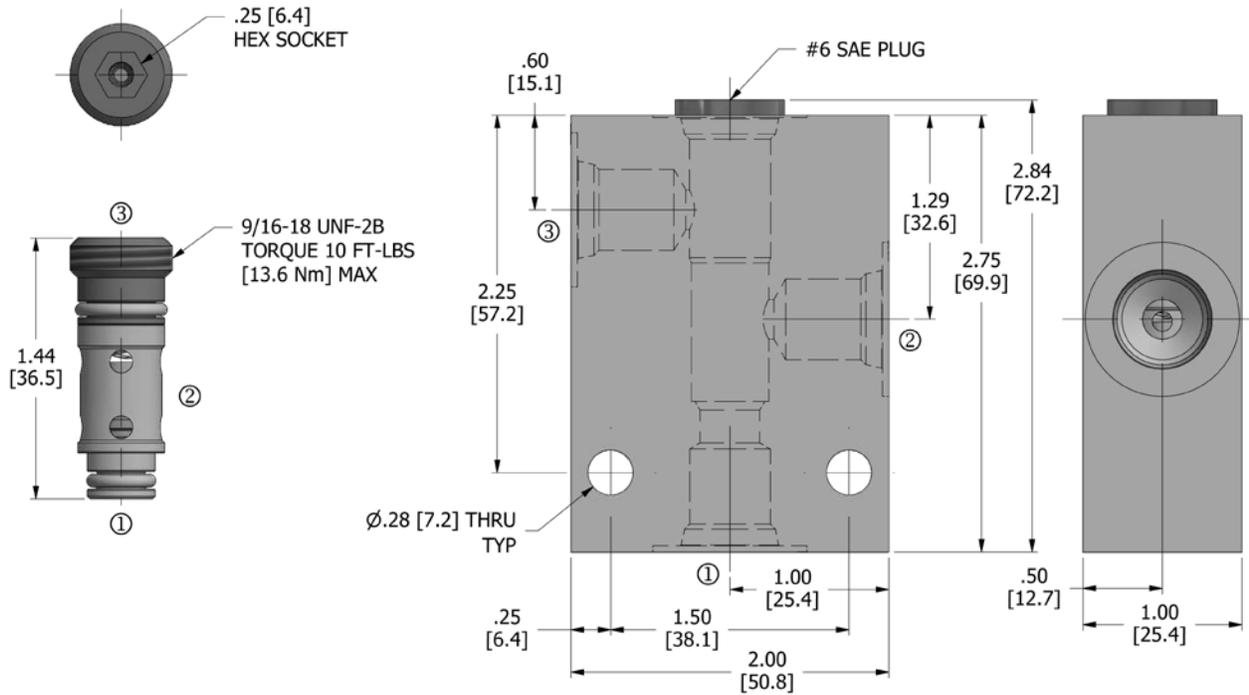
Cavity/Cavity Tool: ZP63, see page 11.06.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
U	Urethane	(1) 10195-24 (1) 10195-25

Spring-Biased	
2	Spring-biased port ① Cracking pressure: 1-2 psi
omit	No spring

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
4T	SAE 4	B-ZP63-A-4T

† Other options available – consult factory

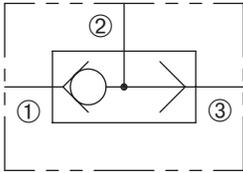
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DSH-100

Ball-Type
Shuttle Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to direct flow from either of the two inlet ports to a common outlet port.

OPERATION

The DSH-100 allows the check ball to move away from inlet port ① or ③ with the greatest differential pressure and seat against the other inlet port having the least differential pressure providing a flow path to outlet port ②.

FEATURES and BENEFITS

- Excellent response to pressure changes.
- Hardened working parts for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

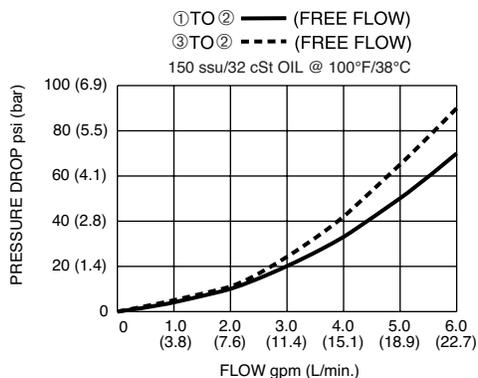
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

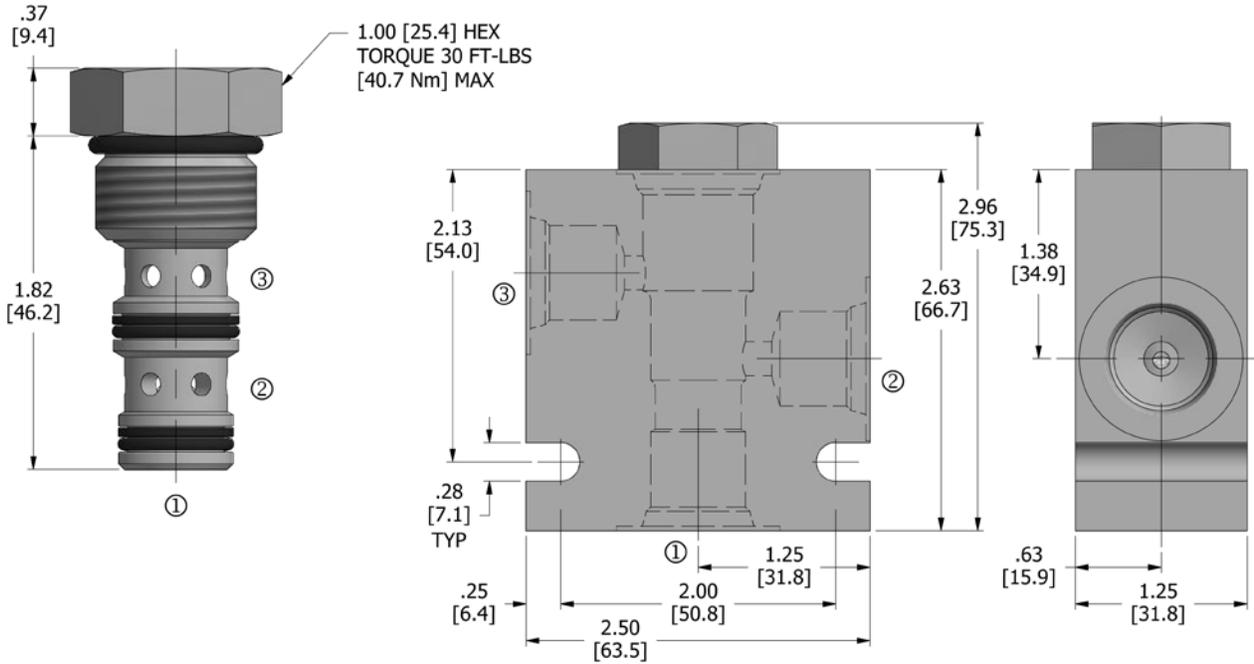
Cavity/Cavity Tool: 100-3, see page 11.10.3

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

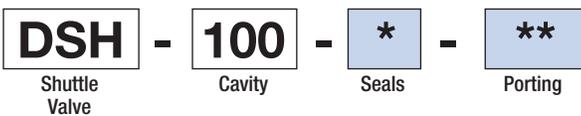
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-3-N-C
V	Viton	

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-3-2N
3N	3/8 PTF	B-100-3-3N
6T	SAE 6	B-100-3-6T
8T	SAE 8	B-100-3-8T

[†] Other options available – consult factory

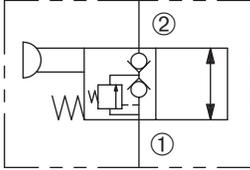
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DMP-080-2NCP

Manual Pull, Two-Way,
Normally Closed Valve

SERIES 8



DESCRIPTION

A manual operated pull style cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

The DMP-080-2NCP blocks flow from ② to ①, or ① to ②. When the knob is pulled, fluid flows from ② to ①, or ① to ②. The cartridge allows flow from ① to ② after overcoming the spring force of 450 PSI (31 Bar).

FEATURES and BENEFITS

- Large red knob for easy identification and use.
- Chrome alloy ball for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

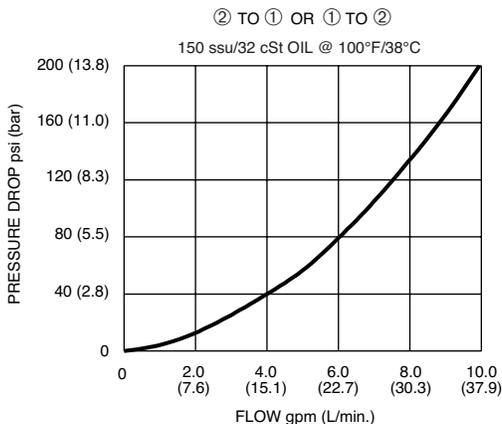
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

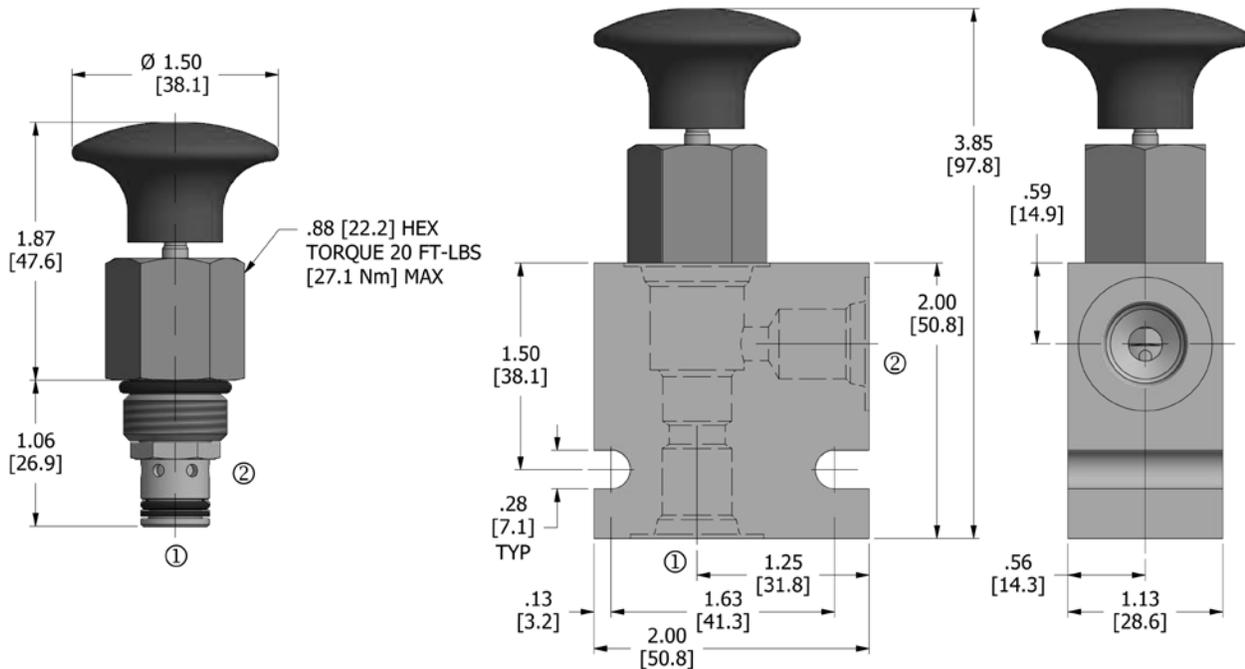
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

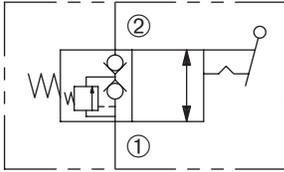
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DTV-080

Normally Closed, Detent,
Toggle-Operated Valve

SERIES 8



DESCRIPTION

A toggle-operated cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

The DTV-080 blocks flow from ② to ①, or ① to ②. When the toggle handle is actuated, fluid flows from ② to ①, or ① to ②. The cartridge allows reverse flow from ① to ② after overcoming the spring force of 450 PSI (31 Bar).

The DTV-080 can be actuated by pushing or pulling the toggle handle and will over-center detent open.



FEATURES and BENEFITS

- Chrome alloy ball for long life.
- Push or pull actuator.
- Over-center detents open.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

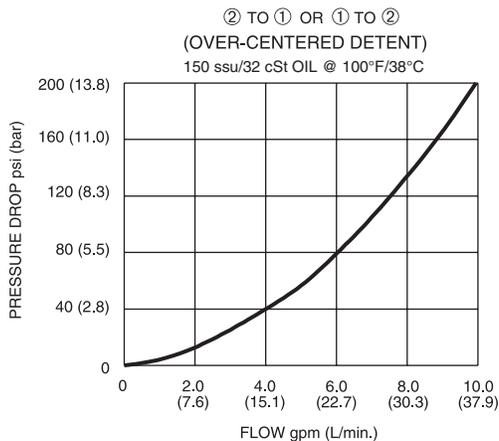
Recommended Filtration: Critical Application – ISO 17/15/13
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

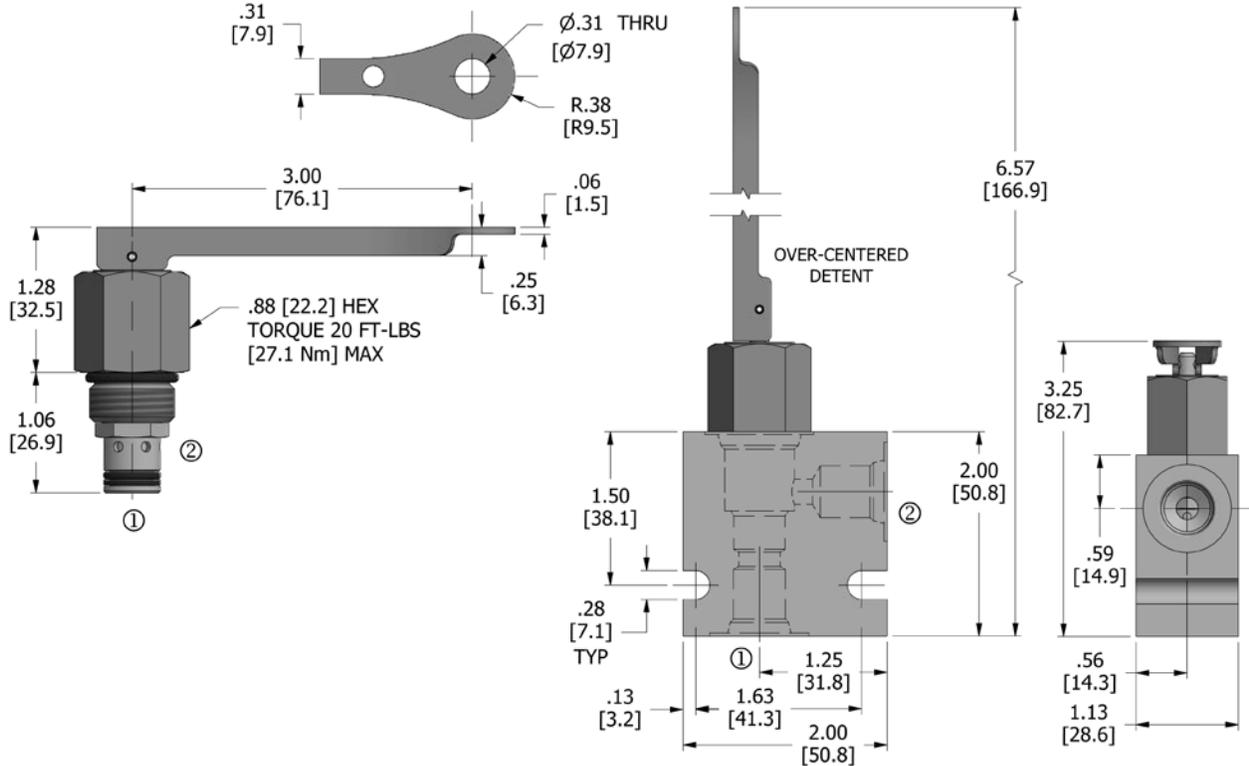
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

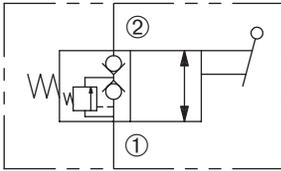
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DTV2-080

Normally Closed,
Toggle-Operated Valve

SERIES 8



DESCRIPTION

A toggle-operated cartridge valve designed with positive shut off to be used in load holding applications.

OPERATION

The DTV2-080 blocks flow from ② to ①, or ① to ②. When the toggle handle is actuated, fluid flows from ② to ①, or ① to ②. The cartridge allows reverse flow from ① to ② after overcoming the spring force of 450 PSI (31 Bar).

The DTV2-080 can be actuated by pushing or pulling the toggle handle.

FEATURES and BENEFITS

- Chrome alloy ball for long life.
- Push or pull actuator.
- Cannot over-center detent open (Safety purposes).
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 6 gpm (22.7 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Temperature: -30° F to +250° F (-35°C to +120° C)

Recommended Filtration: Critical Application-ISO 17/15/13

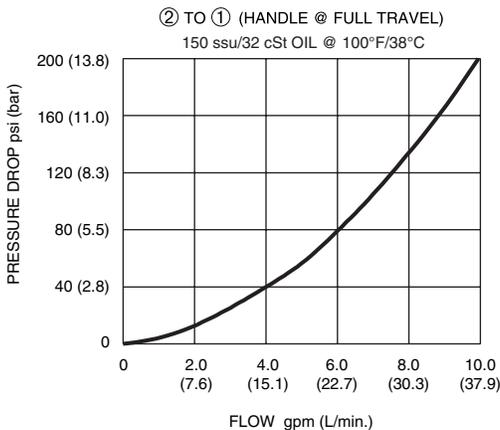
Non-Critical Application-ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility consult factory.

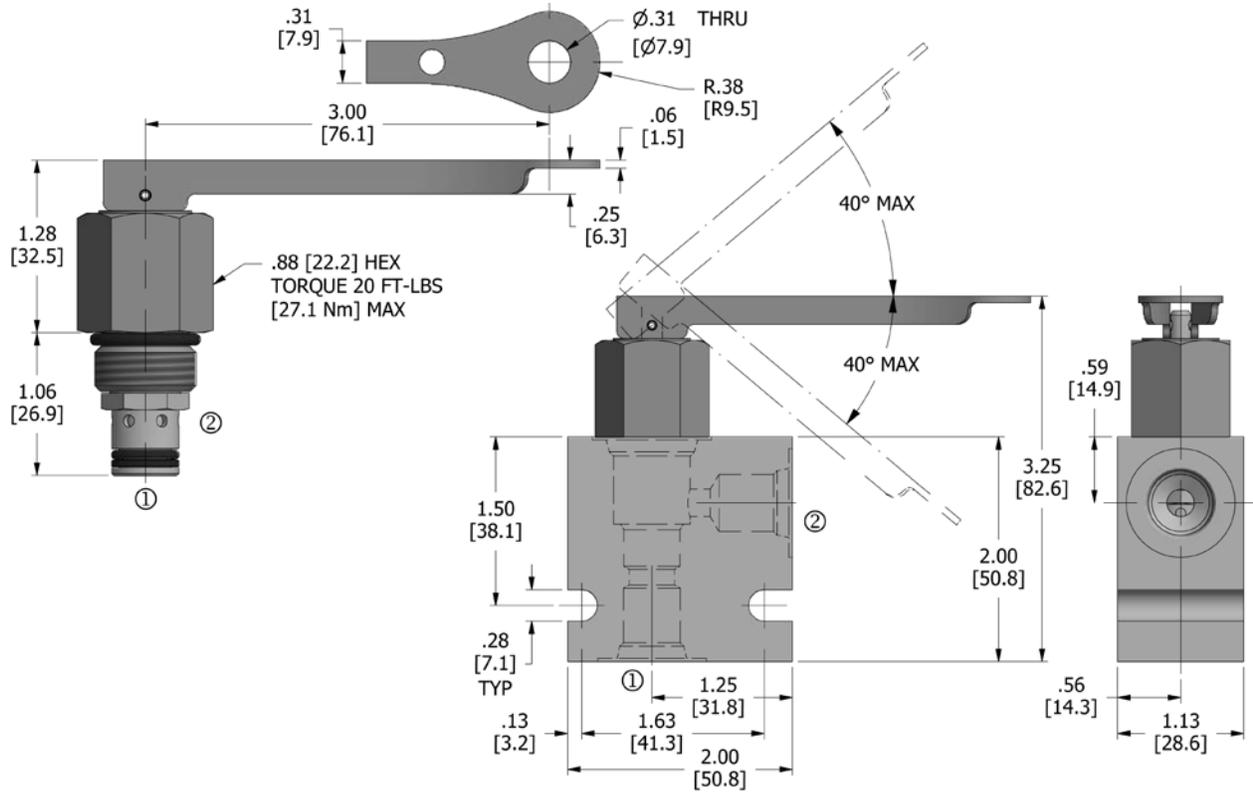
Cavity/Cavity Tools: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

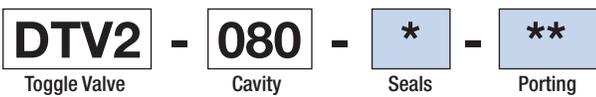
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

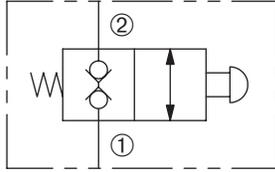
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DMR2-080

Normally Closed, Zero Leak
Mechanically-Operated Valve

SERIES 8



DESCRIPTION

A mechanically-operated cartridge valve designed with positive shut off to be used in load-holding applications.

OPERATION

The DMR2-080 blocks flow in both directions. When the plunger is actuated, the poppet opens, allowing flow in either direction.

The force required to depress the plunger is the summation of:

- Pressure psi at ① x .066
- Pressure psi at ② x .011
- 8-lb. spring constant

Note: Omit pressure at ① if no pressure exists.
Omit pressure at ② if no pressure exists.



FEATURES and BENEFITS

- Hardened poppet and seat for long life.
- Zero leak.
- Externally threaded for connecting a manual operator.
- Filter screen standard.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 5 gpm (18.9 lpm)

Internal Leakage: 0 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Actuation Force: Force (lbs.) = (P_① x .066) + (P_② x .011) + 8

Recommended Filtration: Critical Application – ISO 17/15/13

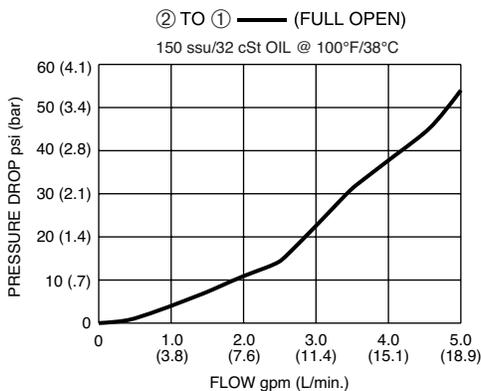
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

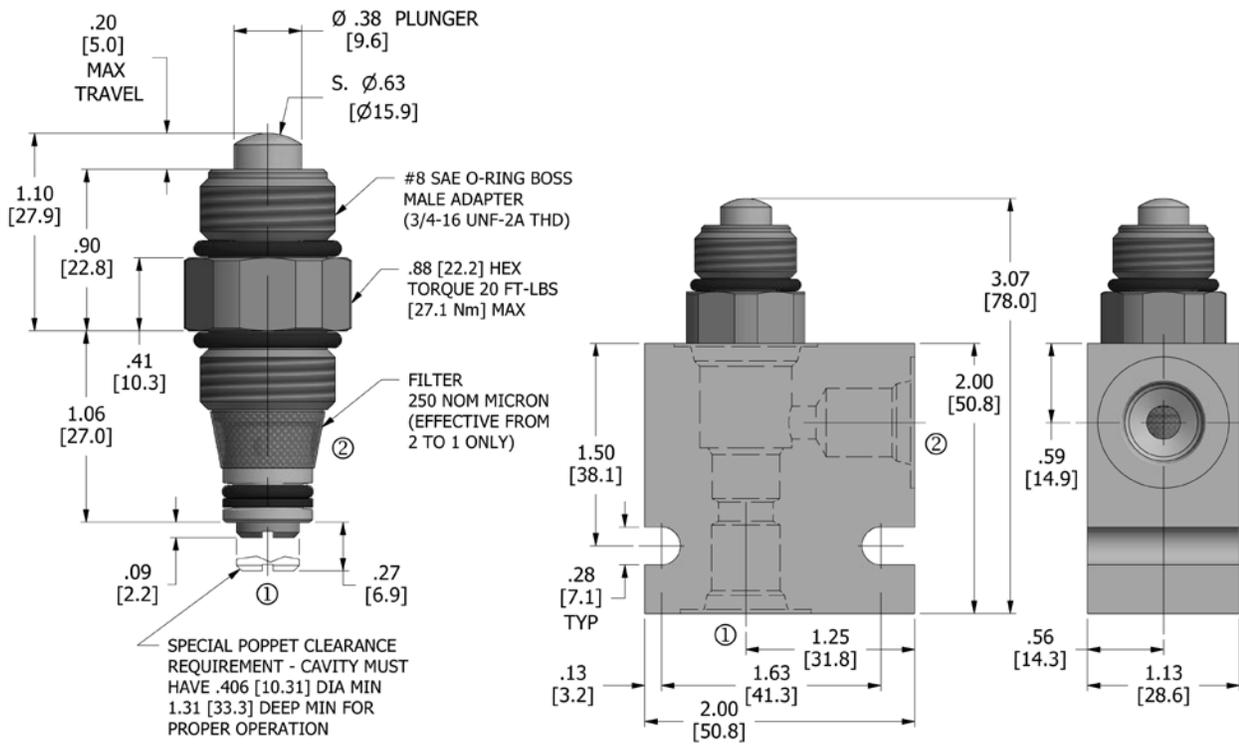
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DMR2 - **080** - ***** - ******

Manual Release Valve Cavity Seals Porting

Seals		Seal Kit
N	Buna N	DSK-080-2-N-A
V	Viton	DSK-080-2-V-A

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

† Other options available – consult factory

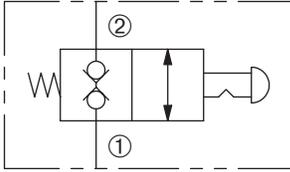
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DMO-080-2NCSP

Normally Closed, Bi-Directional
Manual-Operated Valve

SERIES 8



DESCRIPTION

A manually-operated cartridge valve designed with positive shut off, low leakage and blocking in both directions, to be used in load holding applications.

OPERATION

In the closed position flow is blocked in both directions.

Opening is achieved by pushing down on knob, turning in a counterclockwise direction and releasing into a detented open position allowing flow from either ① to ② or ② to ①.

To return to the normally closed position, push down on knob, turn clockwise and release.



FEATURES and BENEFITS

- Hardened poppet and seat for long life and low leakage.
- Low leak valve available.
- Positive detent open.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.
Nominal Flow 5 gpm (18.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)
Low leakage available-

Less than 2 drops/min max. at 3000 psi (207 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: Critical Application – ISO 17/15/13

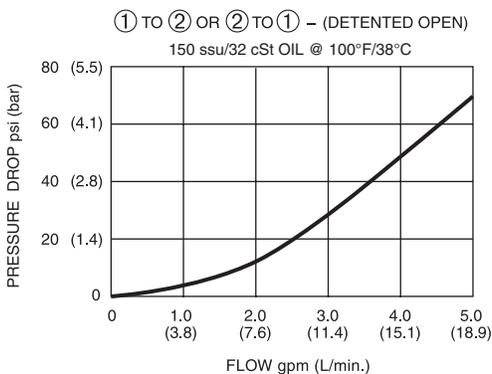
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

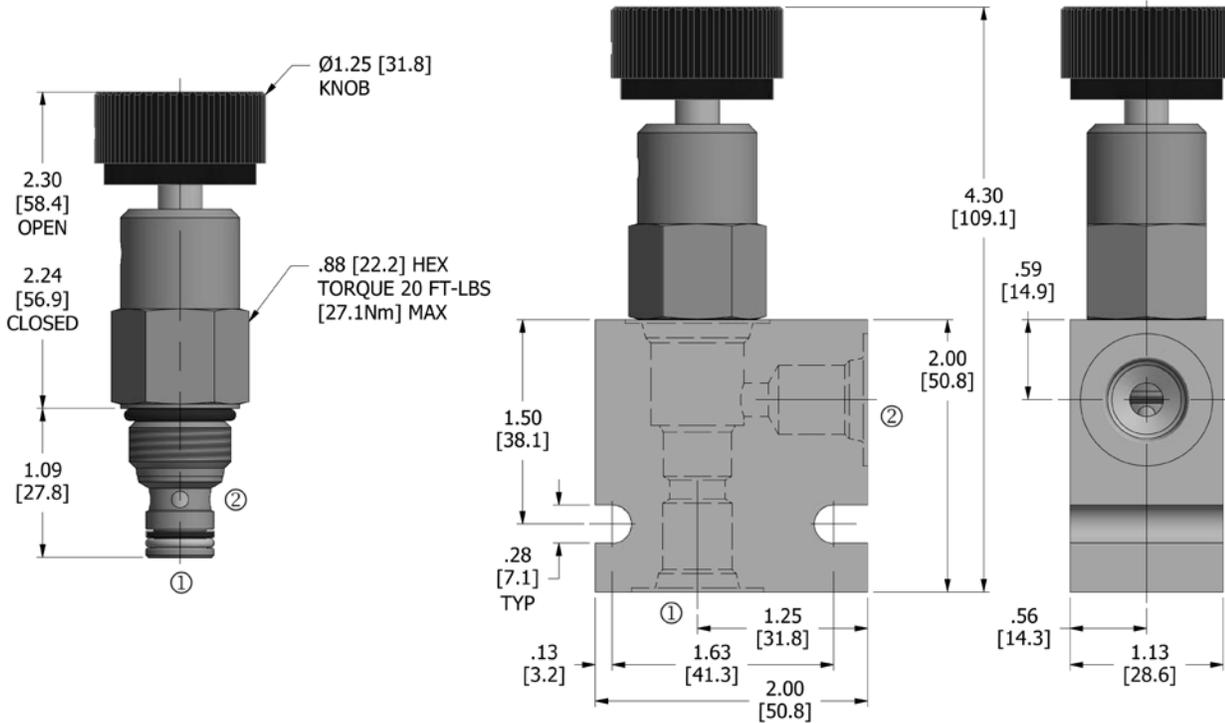
Cavity/Cavity Tool: 080-2, see page 11.08.2

In-Line Body Material: Anodized 6061T6 aluminum
alloy rated at 3000 psi (207 bar).

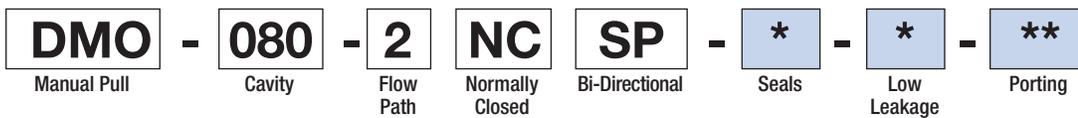
PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Low Leak	
omit	Standard leakage
L	Low leakage

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-080-2-2N
3N	3/8 PTF	B-080-2-3N
4T	SAE 4	B-080-2-4T
6T	SAE 6	B-080-2-6T

[†] Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

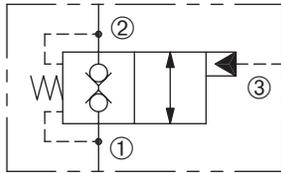
All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

DPOD-100S-2NCP

Pilot To Open, Poppet-Type,
Directional Control Valve

SERIES 10

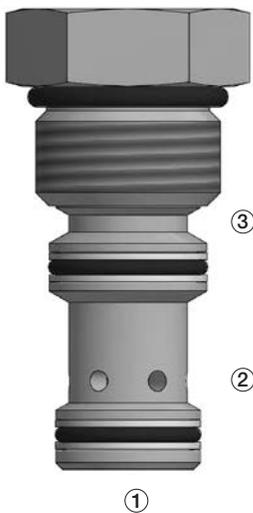


DESCRIPTION

A cartridge valve designed to block flow in both directions. Free flow can be achieved by reaching the required pilot pressure. This valve is commonly used in load holding or blocking applications.

OPERATION

In the steady state the poppet is held closed to block flow between ① and ② and ② and ①. When the required pilot pressure is achieved at ③, the poppet is held open to allow free flow between ② and ① or ① and ②. The pilot area ratio port ③ to ① is 1.3:1 and the area ratio port ③ to ② is 1.8:1.



FEATURES and BENEFITS

- Hardened spool and sleeve for long life and low leakage.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 8 gpm (30.4 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Bias Spring: 30 psi (2.1 bar) at port ③

Pilot Ratio: ③ to ① is 1.3:1 and ③ to ② is 1.8:1.

Temperature: -30°F to +250°F (-35°C to +120°C)

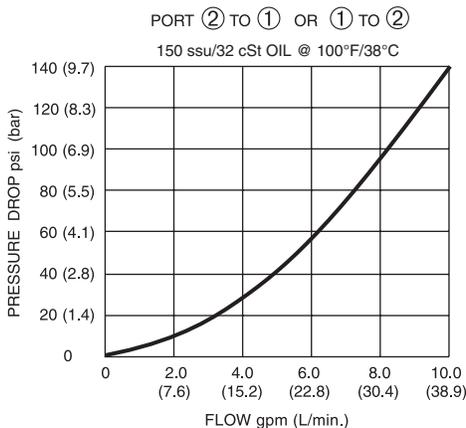
Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

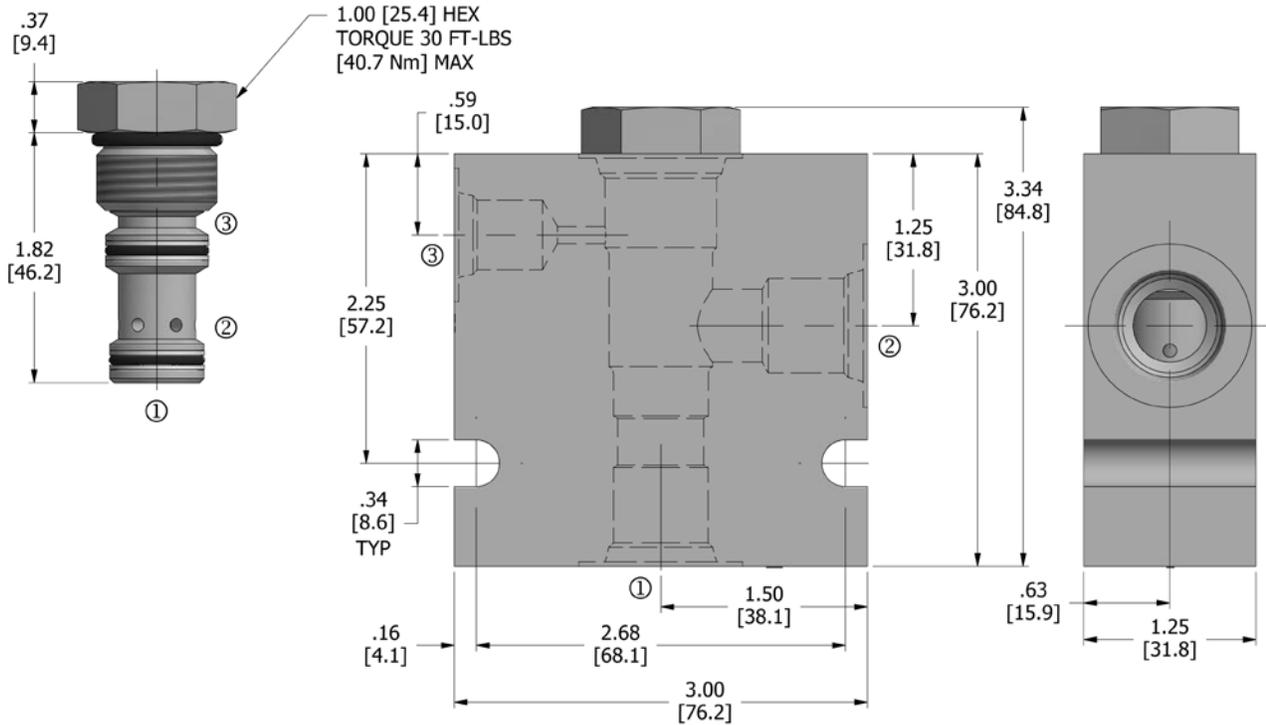
Cavity/Cavity Tool: 100-3S, see page 11.10.3S

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	
V	Viton	

Bias Spring	
30	30 psi (2.1 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
8T	SAE 8	B-100-3S-8T
10T	SAE 10	B-100-3S-10T

[†] Other options available – consult factory

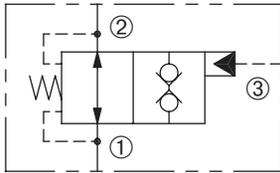
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPOD-100S-2NOP

Pilot To Close, Poppet-Type,
Directional Control Valve

SERIES 10



DESCRIPTION

A cartridge valve designed to allow free flow in both directions. The valve can be piloted to block flow in both directions. This valve can be used as a load holding or blocking valve.

OPERATION

Pressure at ① or ② overcomes the spring-bias poppet and allows free flow between ② and ① or ① to ②. When required the pilot pressure is achieved at ③, the poppet is held closed to block flow between ② and ① and ① and ②. The pilot area ratio port ③ to ① is 2:1 and the area ratio port ③ to ② is 2.8:1.



FEATURES and BENEFITS

- Hardened poppet and sleeve for long life and low leakage.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal flow 10 gpm (38.9 lpm)

Internal Leakage: 5 drops/min max. at 3000 psi (207 bar)

Crack Pressure: 65 psi (45 bar) at port 1 (biased spring).

85 psi (58.6 bar) at port 2 (biased spring).

Bias Spring: 65 psi (4.5 bar)

Pilot Ratio: ③ to ① is 2:1 and ③ to ② is 2.8:1.

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

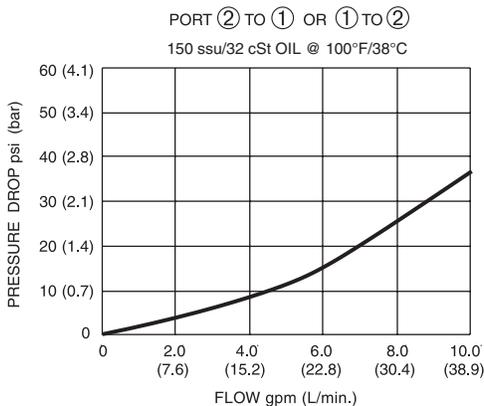
Non-Critical Application – ISO 20/18/14

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

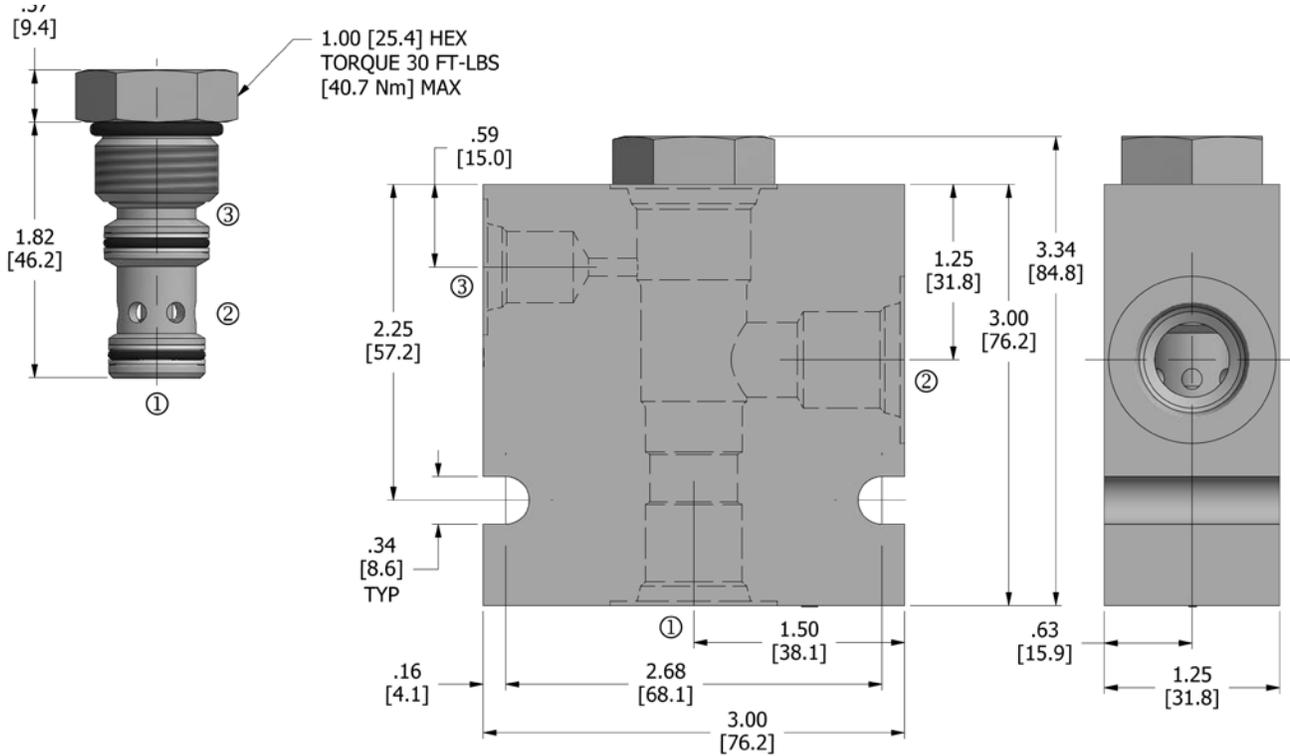
Cavity/Cavity Tool: 100-3S, see page 11.10.3S

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW



DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DPOD - **100S** - **2** **NO** **P** - ***** - ****** - *******

Pilot-Operated Directional Control Valve Cavity Flow Path Normally Open Poppet Seals Bias Spring Porting

Seals		Seal Kit
N	Buna N	
V	Viton	

Bias Spring	
65	65 psi (4.5 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
8T	SAE 8	B-100-3S-8T
10T	SAE 10	B-100-3S-10T

† Other options available – consult factory

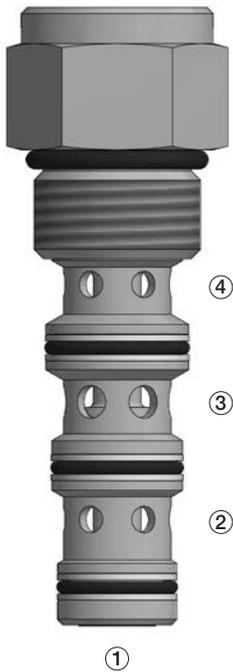
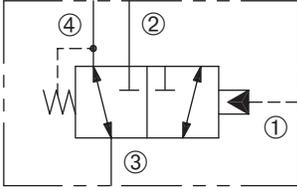
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPOD-100-3

Pilot-Operated, Three-Way, Two-Position,
Directional Control Valve

SERIES 10



DESCRIPTION

A cartridge valve designed as a pilot-operated, three-way, two-position, spool-type, directional valve.

OPERATION

With no pilot signal at port ①, port ② is blocked and flow is allowed between port ③ and ④. With the required pilot signal applied at port ①, the valve shifts to allow flow between ports ③ and ② while blocking flow at port ④.

The bias spring which is common to port ④ returns the spool to its original position when the pilot signal is removed.

Pressure at port ④ must be considered when determining the required pressure to shift.

FEATURES and BENEFITS

- Hardened spool and sleeve for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 10 gpm (38.9 lpm)

Internal Leakage: 5 in³/min (82cc/min) max. at 3000 psi (207 bar)

Pilot Pressure: 125 psi (8.6 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

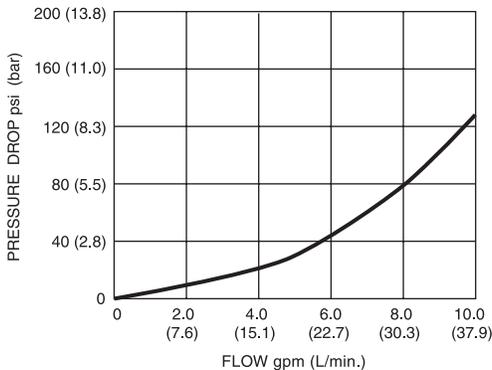
Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-4, see page 11.10.4

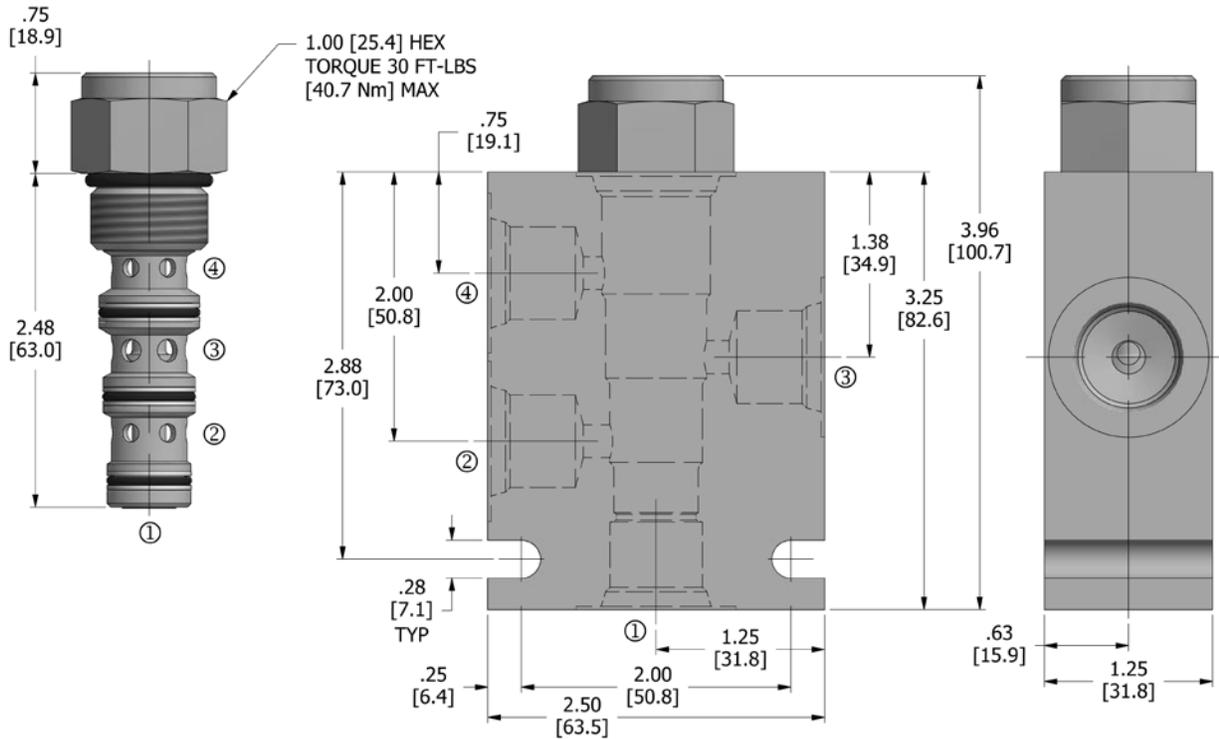
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

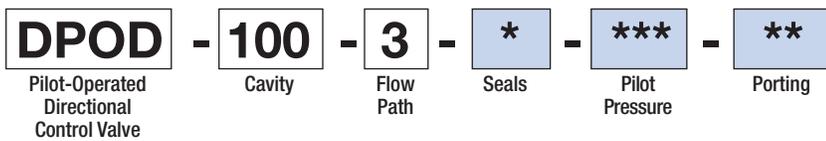
③ TO ④ (FREE FLOW)
OR
③ TO ② (PILOTED OPEN)
150 ssu/32 cSt OIL @ 100°F/38°C



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-4-N-A
V	Viton	

Pilot Pressure (Shift Pressure)	
125	125 psi (8.6 bar)

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-4-2N
3N	3/8 PTF	B-100-4-3N
6T	SAE 6	B-100-4-6T
8T	SAE 8	B-100-4-8T

[†] Other options available – consult factory

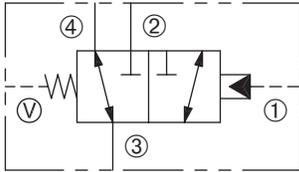
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DPOD2-100-3

Pilot-Operated, Externally Vented,
Three-Way, Two-Position, Directional Control Valve

SERIES 10



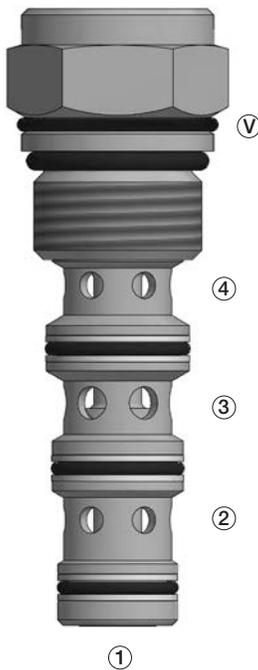
DESCRIPTION

A cartridge valve designed as a pilot-operated, three-way, two-position, spool-type, directional control valve.

OPERATION

With no pilot signal at port ①, port ② is blocked and flow is allowed between port ③ and ④. With the required pilot signal applied at port ①, the valve shifts to allow flow between ports ③ and ② while blocking flow at port ④.

The bias spring returns the spool to its original position when the pilot signal is removed.



FEATURES and BENEFITS

- Hardened spool and sleeve for long life.
- Industry common cavity.

SPECIFICATIONS

Operating Pressure: 3000 psi (207 bar)

Flow: See PRESSURE DROP VS. FLOW graph.

Nominal Flow 10 gpm (38.9 lpm)

Internal Leakage: 5 in³/min (82cc/min) max. at 3000 psi (207 bar)

Pilot Pressure: 125 psi (8.6 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-4, see page 11.10.4

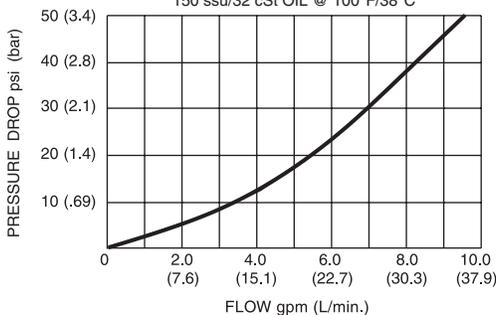
In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

PRESSURE DROP VS. FLOW

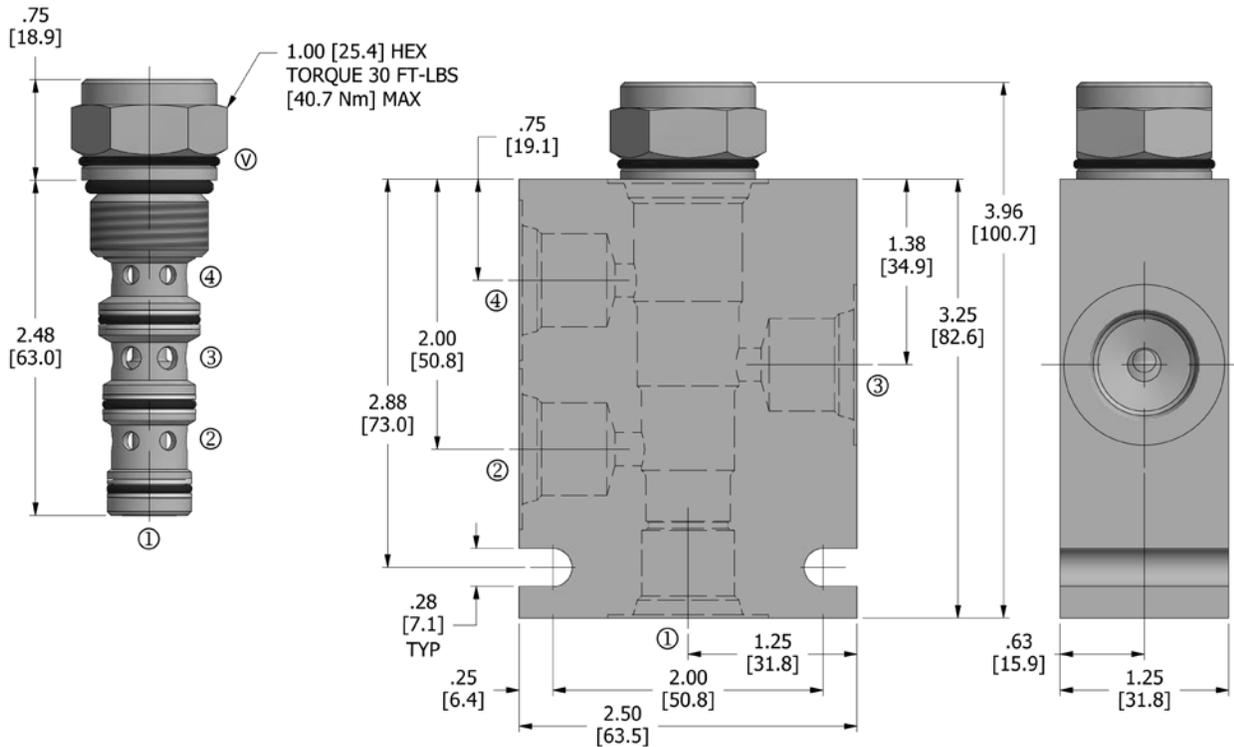
PORT ③ TO ④ - (FREE FLOW)

OR
PORT ③ TO ② - (PILOTED OPEN)

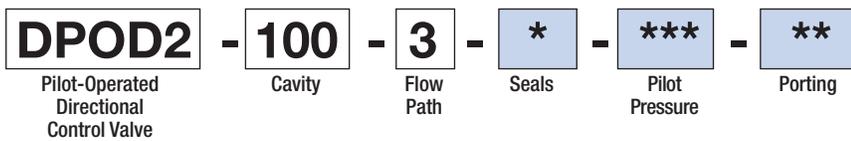
150 ssu/32 cSt OIL @ 100°F/38°C



DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit	Vent Seal
N	Buna N	DSK-100-4-N-A	(1) 10028-46
V	Viton		

Pilot Pressure (Shift Pressure)	
125	125 psi (8.6 bar)

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-4-2N
3N	3/8 PTF	B-100-4-3N
6T	SAE 6	B-100-4-6T
8T	SAE 8	B-100-4-8T

† Other options available – consult factory

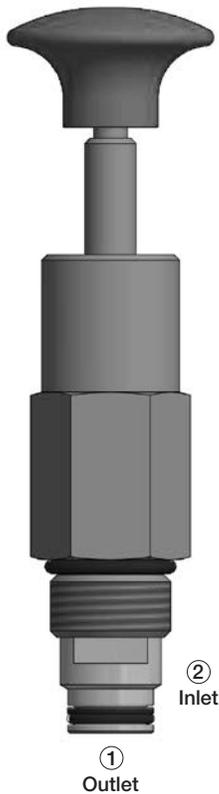
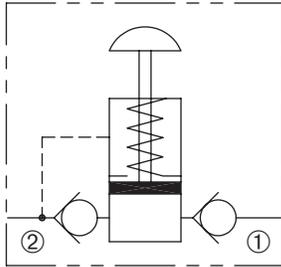
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DHP3-100

Hand Pump

SERIES 10



DESCRIPTION

A self-contained cartridge style hand pump designed to deliver flow when the operator is pushed. The inlet and outlet checks are integral to the cartridge.

OPERATION

When the operator is pushed, the DHP3-100 delivers nominal flow of .083 cu. in. to the ① port. When the operator is pulled, DHP3-100 draws fluid from the ② port.

FEATURES and BENEFITS

- Checks are integral to the cartridge.
- Hardened parts for long life.
- Industry common cavity.

SPECIFICATIONS

Maximum Pressure: 3000 psi (207 bar)

Operating Pressure: 2000 psi (138 bar)

Flow: .083 cu. in.

Internal Leakage: 2 drops/min max. at 2000 psi (138 bar)

Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).

SOLENOID

CHECK

MOTION CONTROL

FLOW CONTROL

RELIEF

PRESSURE CONTROL

SEQUENCE

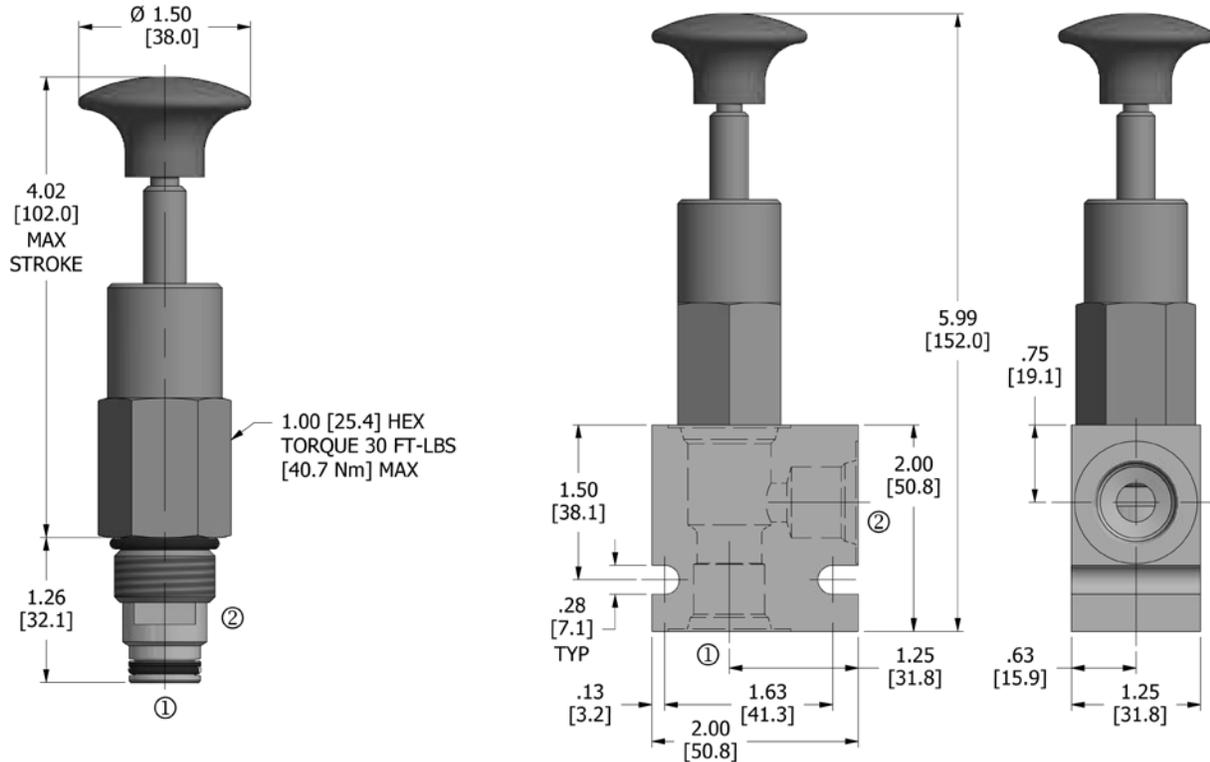
SHUTTLE

DIRECTIONAL VALVES

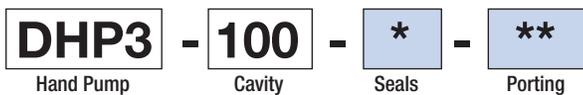
HAND PUMPS

TECHNICAL DATA

DIMENSIONS Inches [Millimeters]



HOW TO ORDER



Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Porting [†]		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

[†] Other options available – consult factory

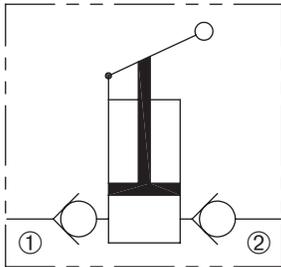
Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

DHP-100

Hand Pump

SERIES 10



DESCRIPTION

A self-contained cartridge style hand pump designed to deliver flow when the operator is pushed. The inlet and outlet checks are integral to the cartridge.

OPERATION

When the operator is pushed, the DHP-100 delivers nominal flow of 0.5 cu. in. to the ② port. When the operator is pulled, DHP-100 draws fluid from the ① port.

FEATURES and BENEFITS

- Cast Beam for heavy duty applications.
- Checks are integral to the cartridge.
- Hardened parts for long life.
- Beam rotates 360° for flexible installation and operation.
- Industry common cavity.

SPECIFICATIONS

Maximum Pressure: 3000 psi (207 bar)

Operating Pressure: 2000 psi (138 bar)

Flow: 0.5 cu. in. @ 45° rotation.

Hand Effort: 80 lbs. @ 1500 psi (103 bar) - 16 in. (406.4) long handle.

Internal Leakage: 2 drops/min max. at 2000 psi (138 bar)

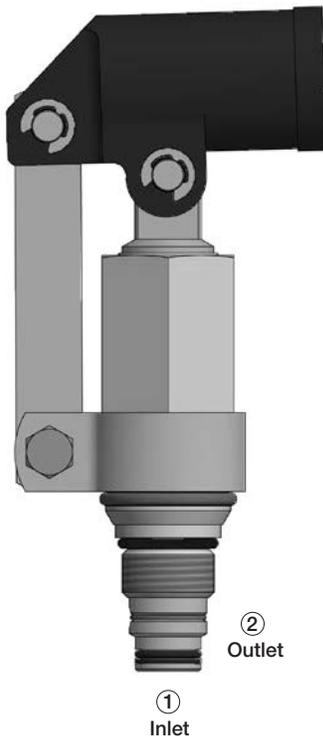
Temperature: -30°F to +250°F (-35°C to +120°C)

Recommended Filtration: ISO 17/15/13

Fluids: Mineral-based fluids. For other fluid compatibility, consult factory.

Cavity/Cavity Tool: 100-2, see page 11.10.2

In-Line Body Material: Anodized 6061T6 aluminum alloy rated at 3000 psi (207 bar).



SOLENOID

CHECK

MOTION
CONTROL

FLOW
CONTROL

RELIEF

PRESSURE
CONTROL

SEQUENCE

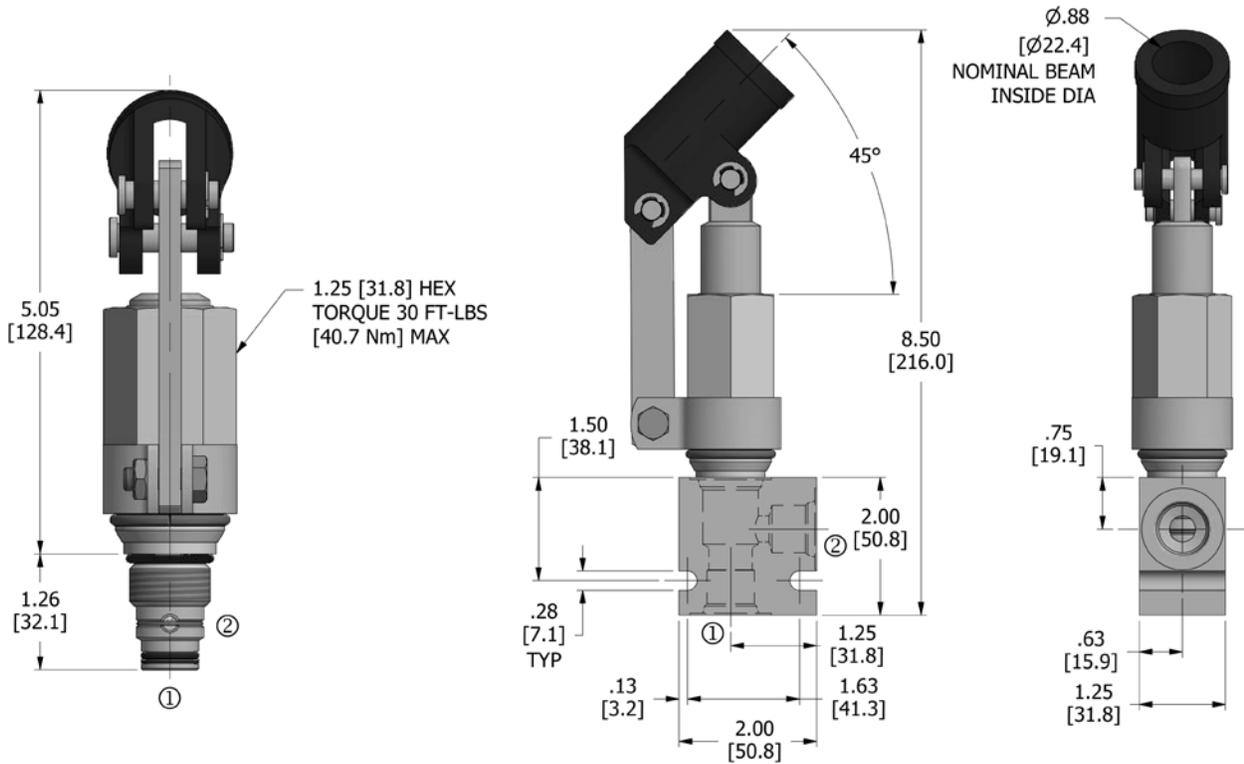
SHUTTLE

DIRECTIONAL
VALVES

HAND PUMPS

TECHNICAL
DATA

DIMENSIONS Inches [Millimeters]



HOW TO ORDER

DHP - **100** - ***** - **5** - ******
 Hand Pump - Cavity - Seals - Flow - Porting

Seals		Seal Kit
N	Buna N	DSK-100-2-N-A
V	Viton	DSK-100-2-V-A

Flow (Volume per stroke)	
5	0.5 cu. in. @ 45° rotation

Porting†		In-Line Body w/o Cartridge
omit	Cartridge only	
2N	1/4 PTF	B-100-2-2N
3N	3/8 PTF	B-100-2-3N
6T	SAE 6	B-100-2-6T
8T	SAE 8	B-100-2-8T

† Other options available – consult factory

Valve and In-Line Body are supplied individually and need to be assembled. For a completed assembly consult the factory.

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.

Notes

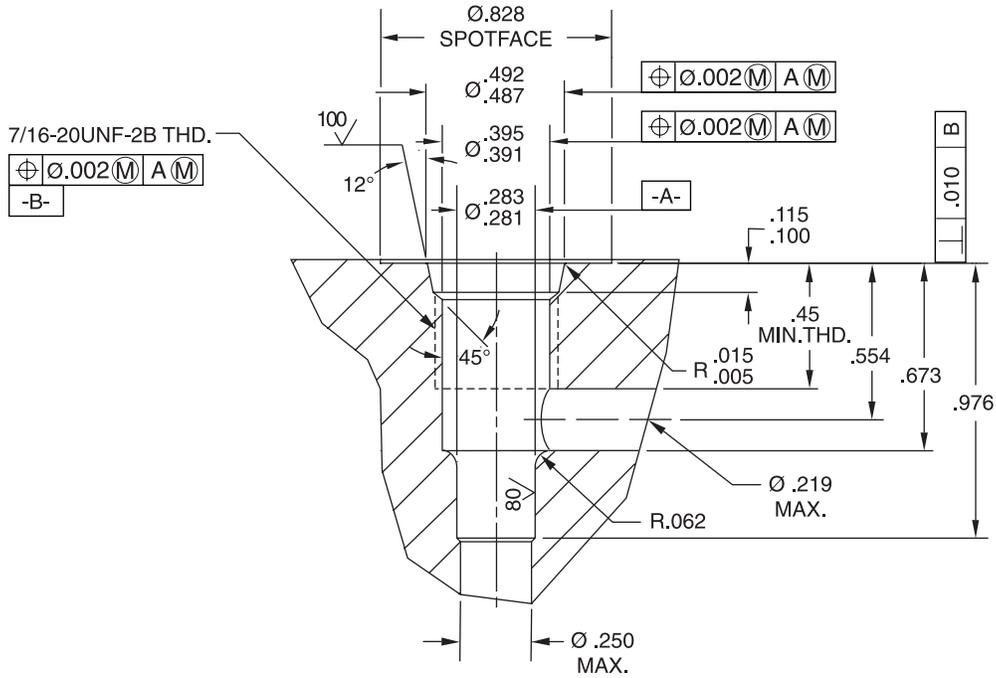
SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA

- SOLENOID
- CHECK
- MOTION CONTROL
- FLOW CONTROL
- RELIEF
- PRESSURE CONTROL
- SEQUENCE
- SHUTTLE
- DIRECTIONAL VALVES
- HAND PUMPS
- TECHNICAL DATA

APPLICATION	ISO CLEANLINESS CODE (PARTICLE SIZE CLASSIFICATION)	STANDARDS RATING ISO 4406:1999
Critical	4 μ (c) / 6 μ (c) / 14 μ (c)	17/15/13
Non-Critical	4 μ (c) / 6 μ (c) / 14 μ (c)	20/18/14

ZP42 Cavity

ZERO PROFILE



ZP42 Cavity

Rough Drill P/N - 10206-12

Finish Form Tool P/N - 10206-13

UNLESS OTHERWISE SPECIFIED

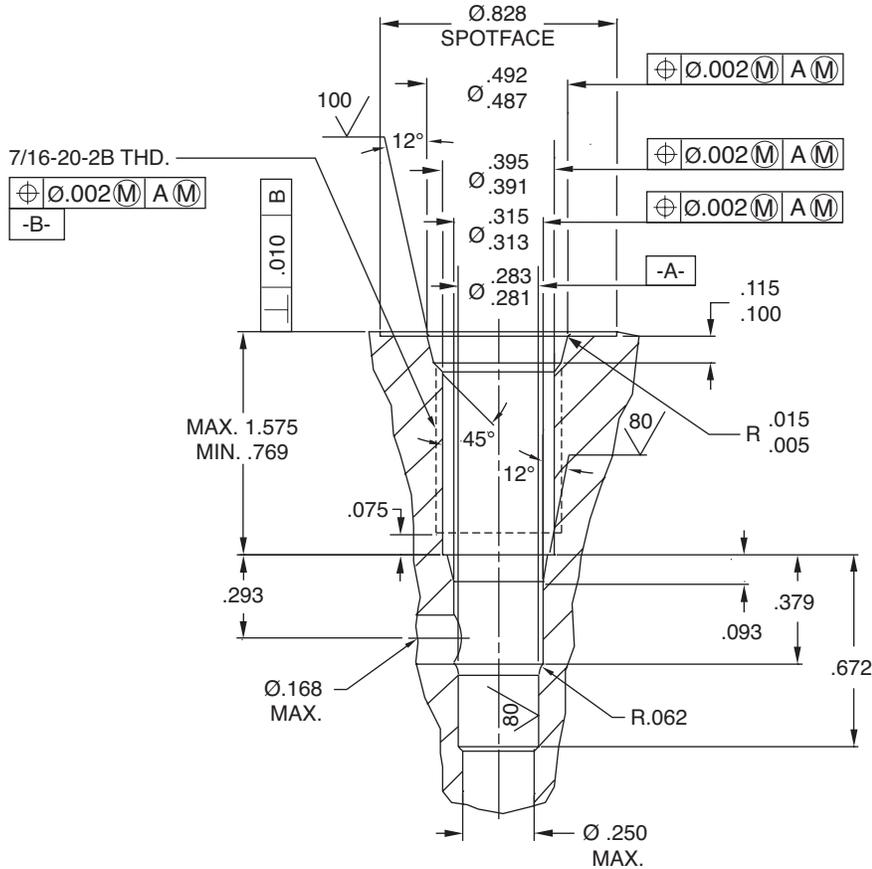
Specifications subject to change,
consult factory.

All dimensions in inches.

2 PLACE DIM $\pm .01$

3 PLACE DIM $\pm .005$

ANGLE $\pm .5^\circ$



ZP43 Cavity

Rough Drill P/N – 10201-56
Finish Form Tool P/N – 10201-57

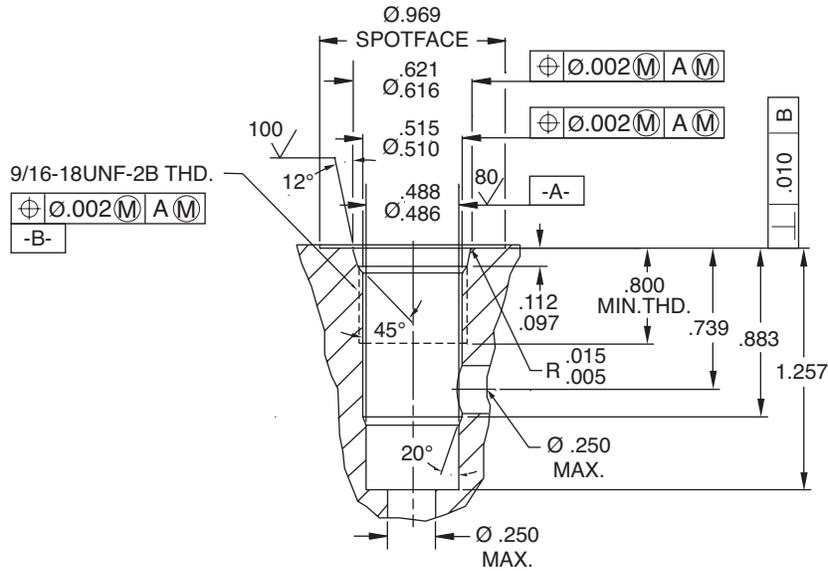
UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.
All dimensions in inches.

2 PLACE DIM $\pm .01$
3 PLACE DIM $\pm .005$
ANGLE $\pm .5^\circ$

ZP62 Cavity

ZERO PROFILE



ZP62 Cavity

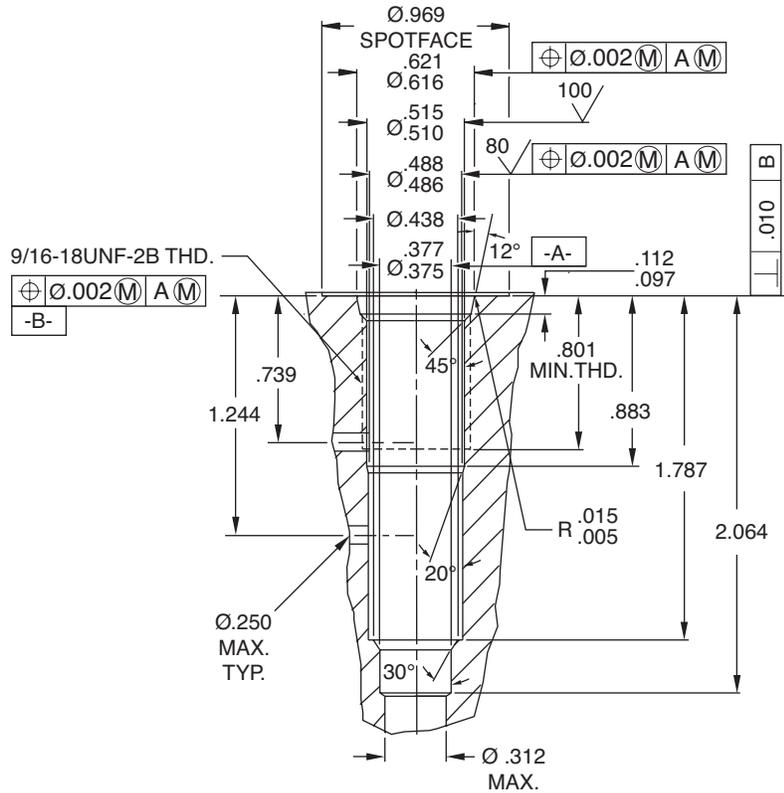
Rough Drill P/N – 10202-02
Finish Form Tool P/N – 10202-03

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

All dimensions in inches.

2 PLACE DIM $\pm .01$
3 PLACE DIM $\pm .005$
ANGLE $\pm .5^\circ$



ZP63 Cavity

Rough Drill P/N – 10201-54
Finish Form Tool P/N – 10201-55

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

All dimensions in inches.

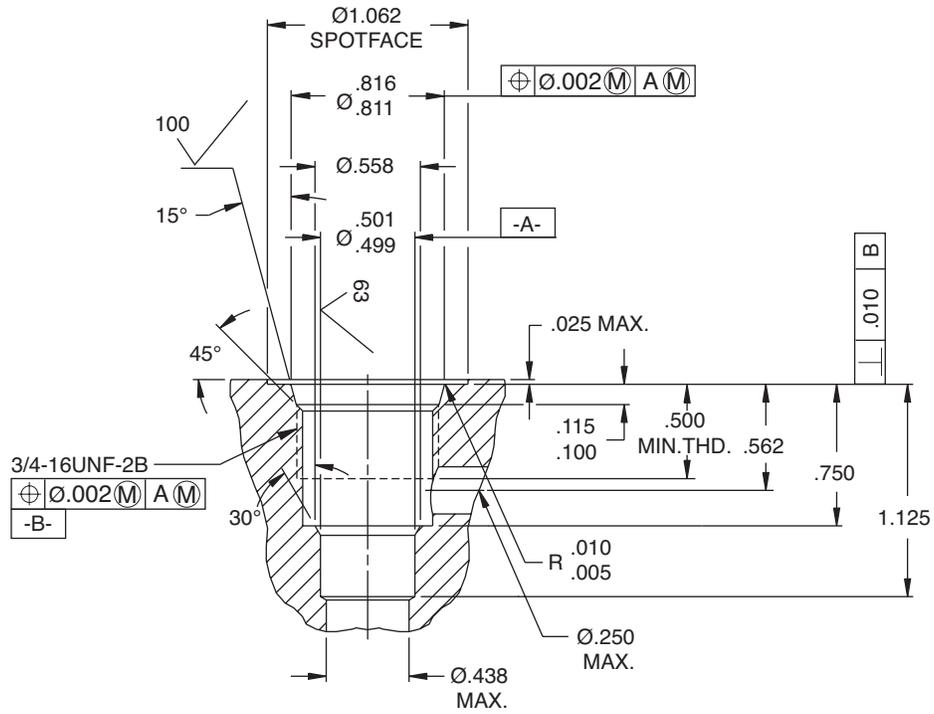
2 PLACE DIM ± .01

3 PLACE DIM ± .005

ANGLE ± .5°

080-2 Cavity

SERIES 8



080-2 Cavity

Rough Drill P/N – 10131-76
Finish Form Tool P/N – 10131-77

UNLESS OTHERWISE SPECIFIED

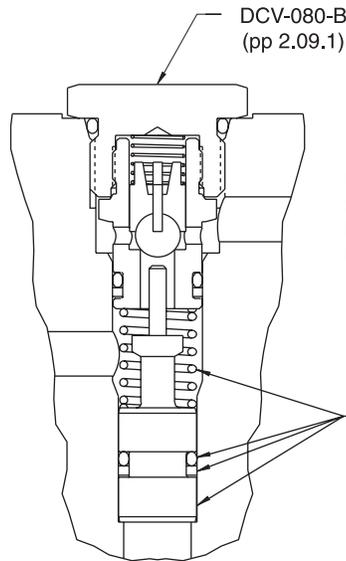
Specifications subject to change,
consult factory.

All dimensions in inches.

2 PLACE DIM $\pm .01$

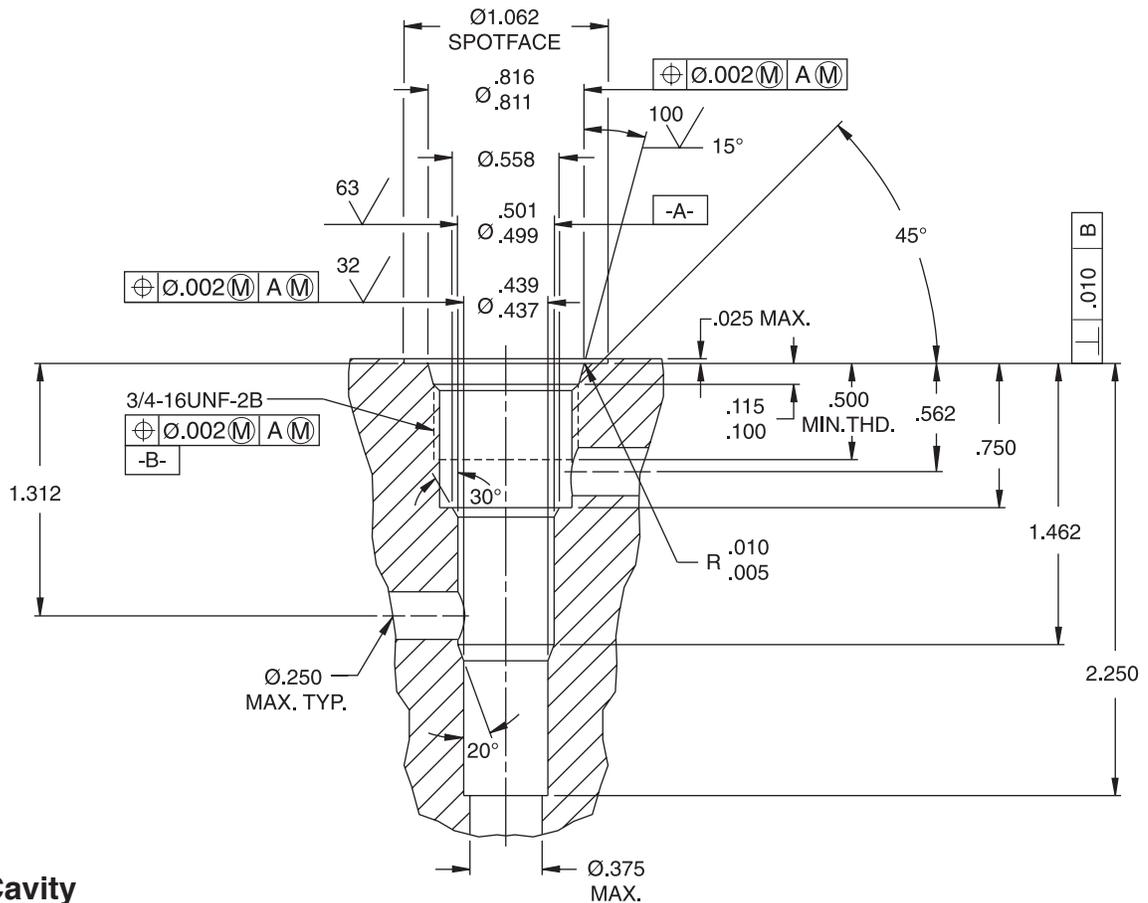
3 PLACE DIM $\pm .005$

ANGLE $\pm .5^\circ$



PILOT PISTON AREA TO PILOT SEAT AREA RATIO IS 5:1.
KIT IS NOT RECOMMENDED FOR USE WITH DCV-080-PB.

KIT, PILOT PISTON/SPRING (INCLUDES SEALS)
P/N-10130-28



080-2P Cavity

Rough Drill P/N – 10167-19
Finish Form Tool P/N – 10167-20

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

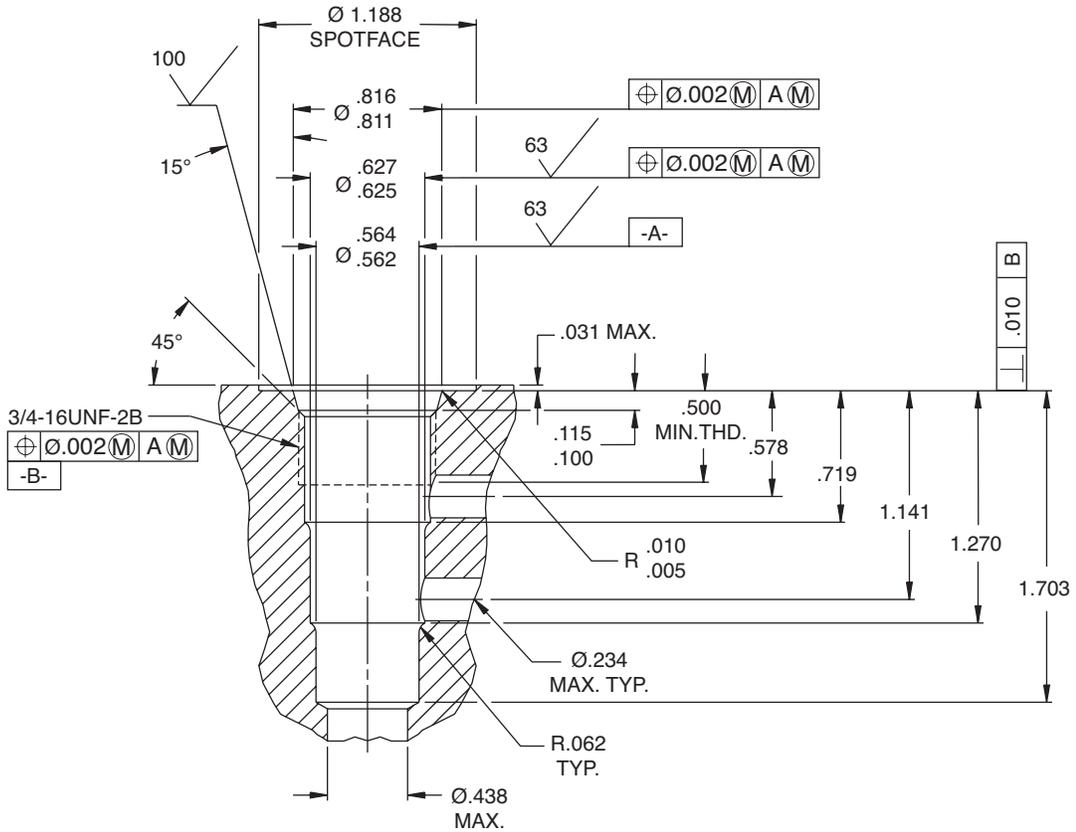
All dimensions in inches.

2 PLACE DIM ± .01
3 PLACE DIM ± .005

ANGLE ± .5°

080-3 Cavity

SERIES 8



080-3 Cavity

Rough Drill

P/N-10131-80

Finish Form Tool

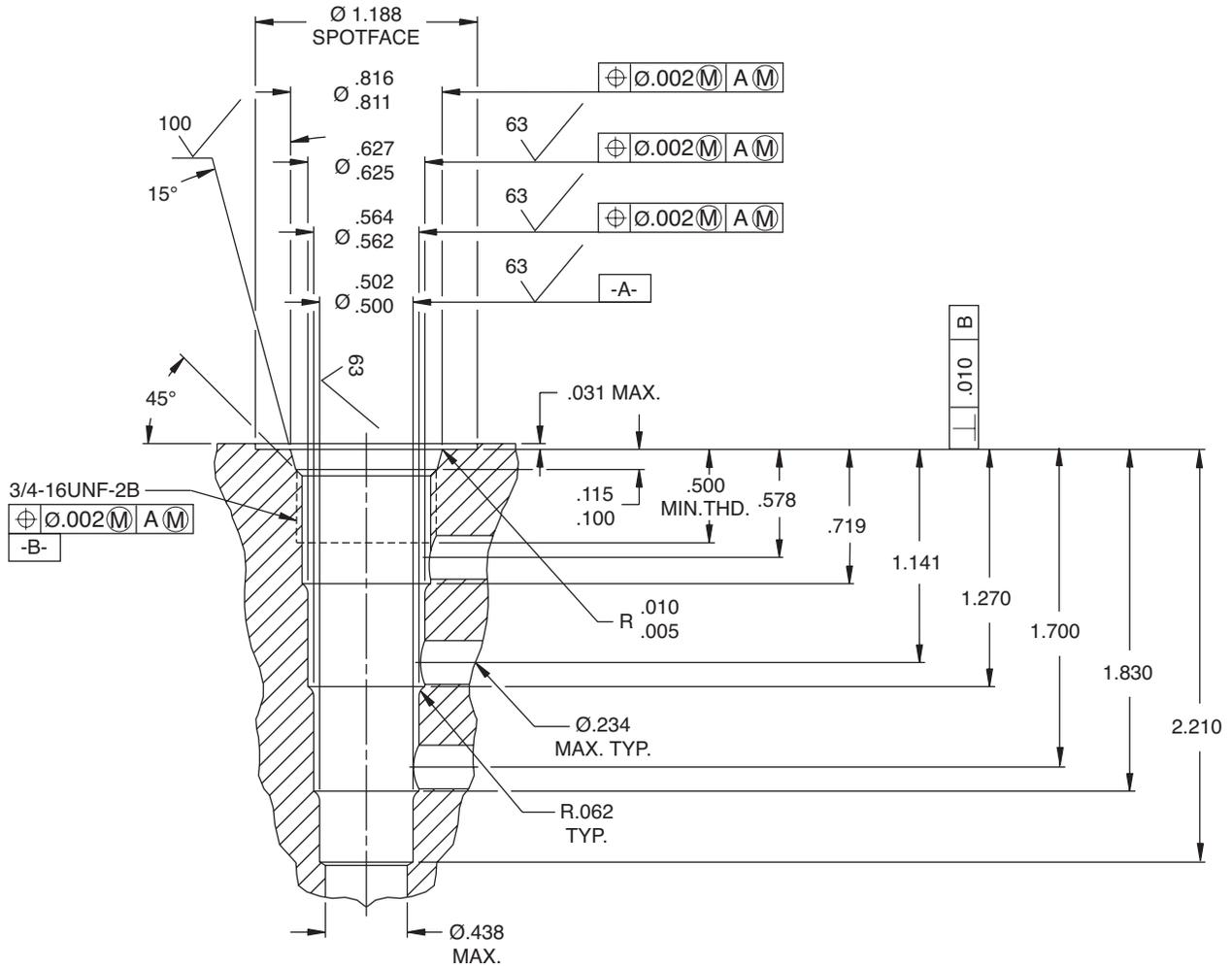
P/N-10131-81

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

2 PLACE DIM $\pm .01$
3 PLACE DIM $\pm .005$
ANGLE $\pm .5^\circ$

All dimensions in inches.



080-4 Cavity

Rough Drill
Finish Form Tool

P/N-10132-15

P/N-10132-16

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

All dimensions in inches.

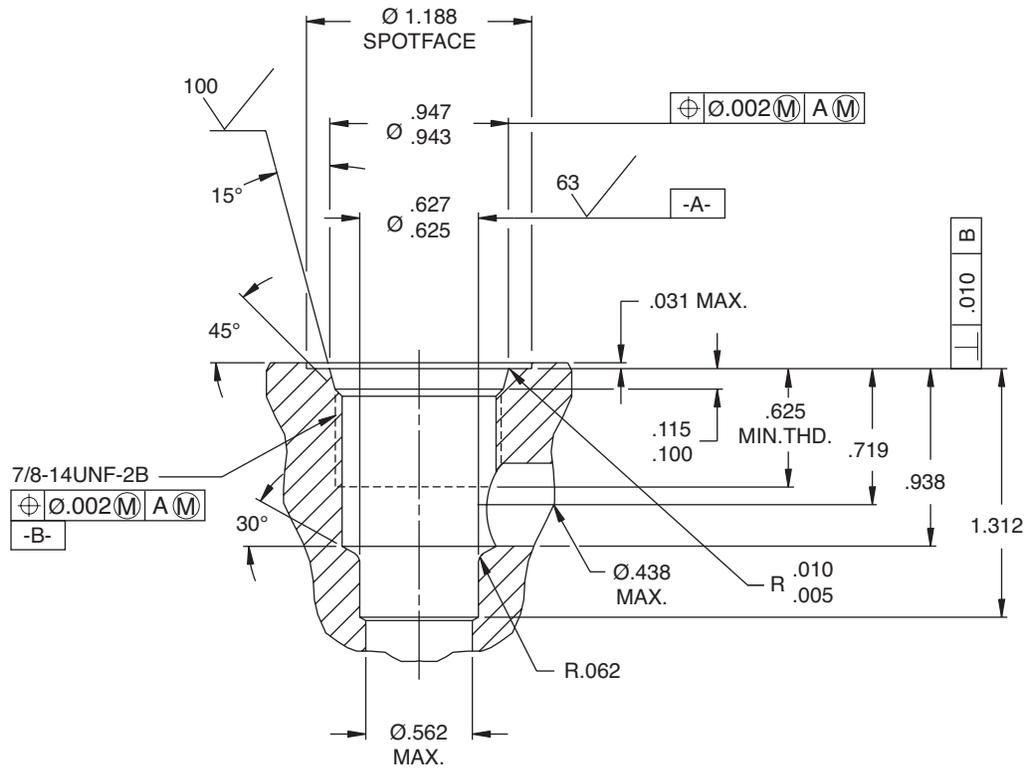
2 PLACE DIM ± .01

3 PLACE DIM ± .005

ANGLE ± .5°

100-2 Cavity

SERIES 10



100-2 Cavity

Rough Drill

P/N-10131-82

Finish Form Tool

P/N-10131-83

UNLESS OTHERWISE SPECIFIED

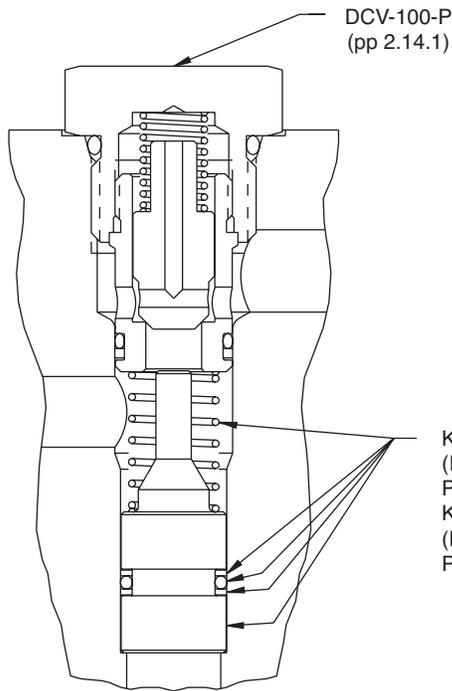
Specifications subject to change,
consult factory.

2 PLACE DIM ± .01

3 PLACE DIM ± .005

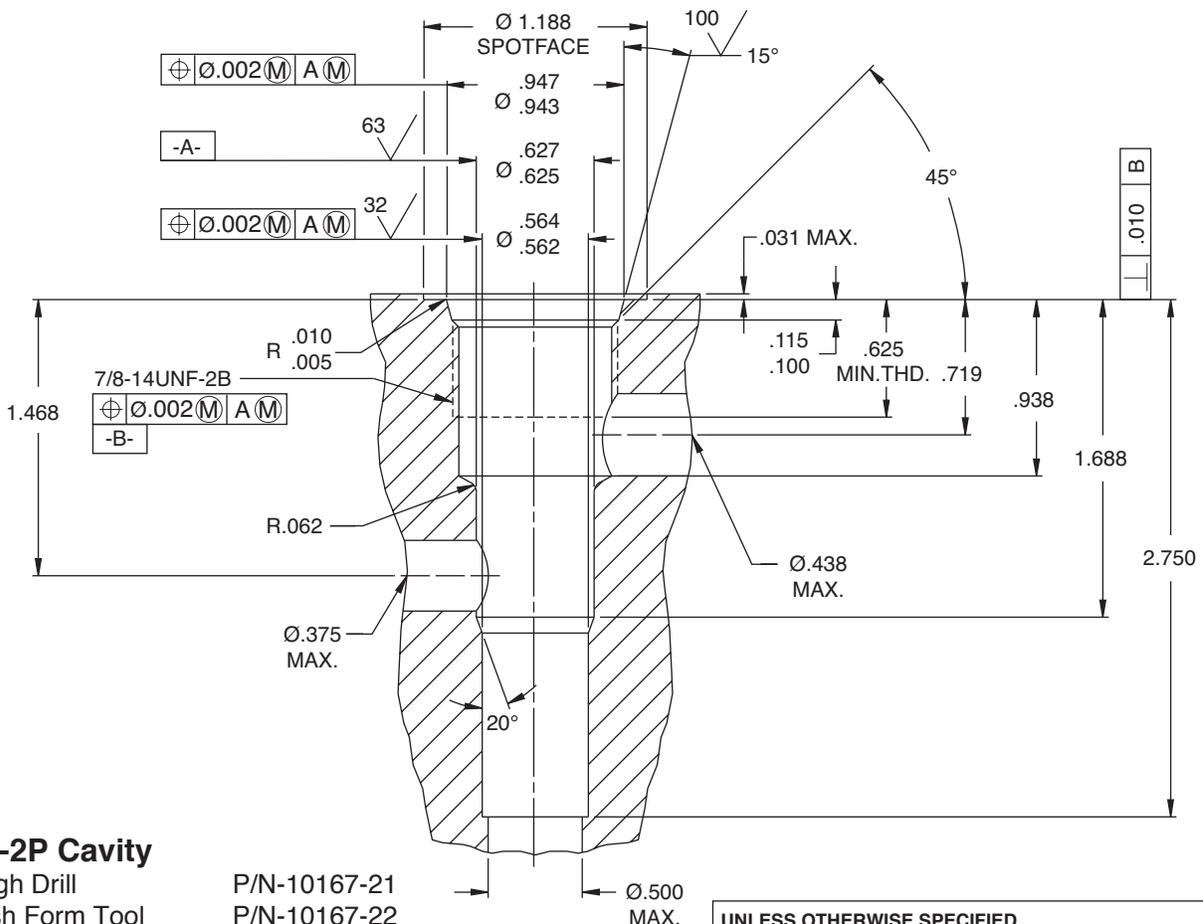
All dimensions in inches.

ANGLE ± .5°



PILOT PISTON AREA TO PILOT SEAT AREA RATIO IS 3.5:1.
KIT WITH SPRING IS RECOMMENDED FOR CHECK VALVES 30 PSI CRACK OR LOWER.

KIT, PILOT PISTON/SPRING (INCLUDES SEALS)
P/N-10146-76
KIT, PILOT PISTON (INCLUDES SEALS)
P/N-10146-70



100-2P Cavity
Rough Drill
Finish Form Tool

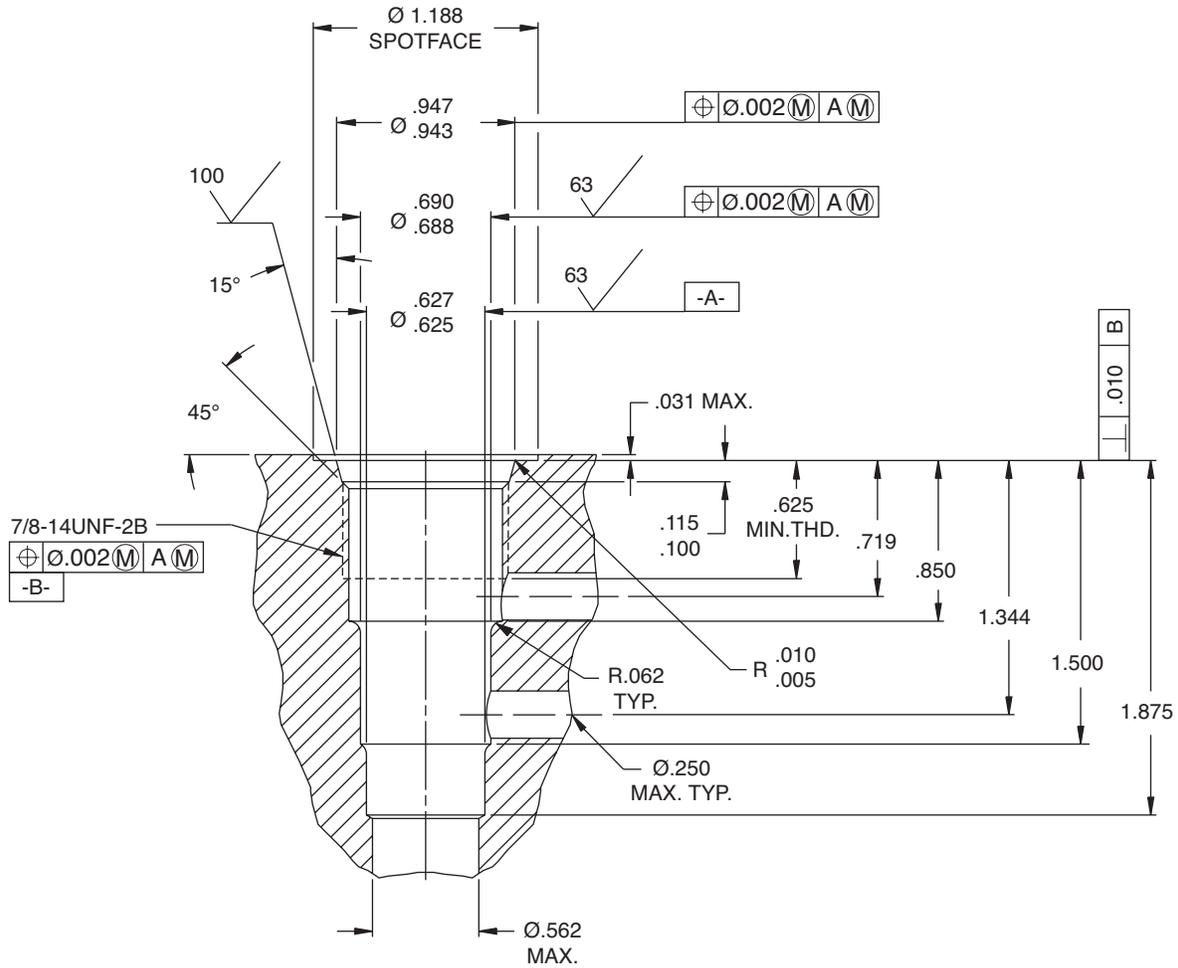
P/N-10167-21
P/N-10167-22

UNLESS OTHERWISE SPECIFIED
Specifications subject to change,
consult factory.
All dimensions in inches.

2 PLACE DIM $\pm .01$
3 PLACE DIM $\pm .005$
ANGLE $\pm .5^\circ$

100-3 Cavity

SERIES 10



100-3 Cavity

Rough Drill

P/N-10131-84

Finish Form Tool

P/N-10131-85

UNLESS OTHERWISE SPECIFIED

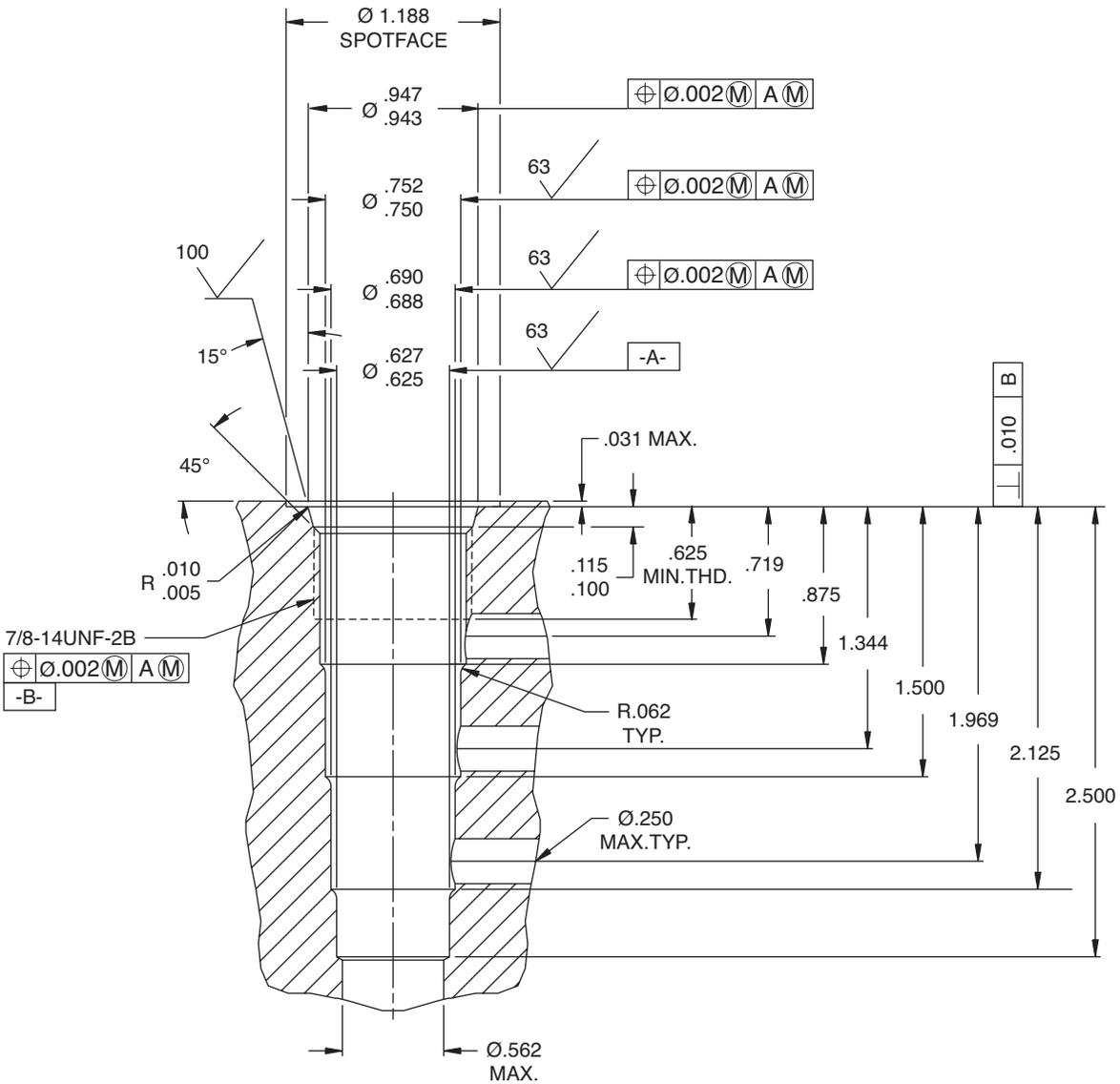
Specifications subject to change,
consult factory.

2 PLACE DIM ± .01
3 PLACE DIM ± .005
ANGLE ± .5°

All dimensions in inches.

100-4 Cavity

SERIES 10



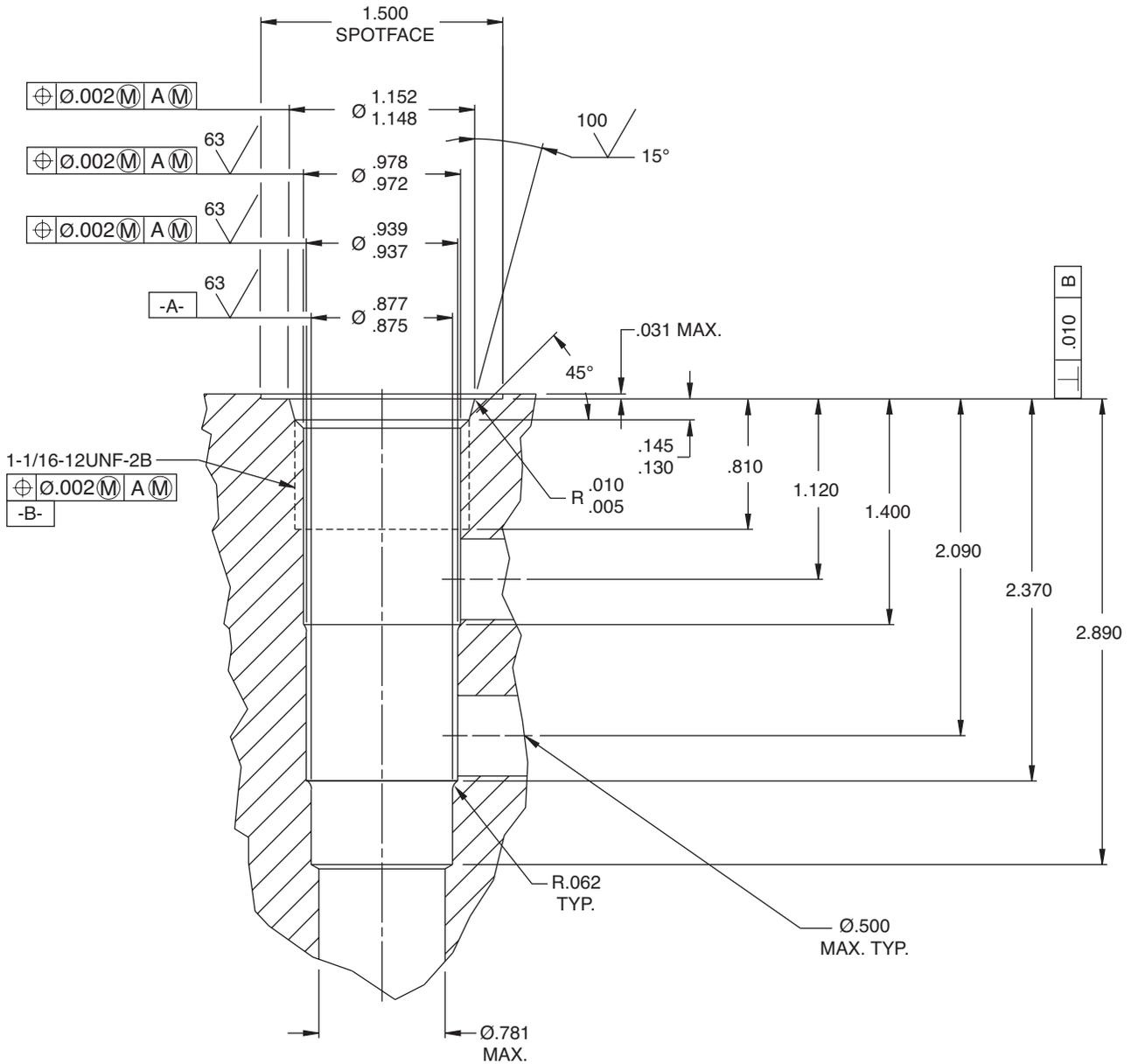
100-4 Cavity

Rough Drill P/N – 10131-86
 Finish Form Tool P/N – 10131-87

UNLESS OTHERWISE SPECIFIED
 Specifications subject to change, consult factory.
 All dimensions in inches.
 2 PLACE DIM ± .01
 3 PLACE DIM ± .005
 ANGLE ± .5°

120-3 Cavity

SERIES 12



120-3 Cavity

Rough Drill

P/N - 10144-91

Finish Form Tool

P/N - 10144-92

UNLESS OTHERWISE SPECIFIED

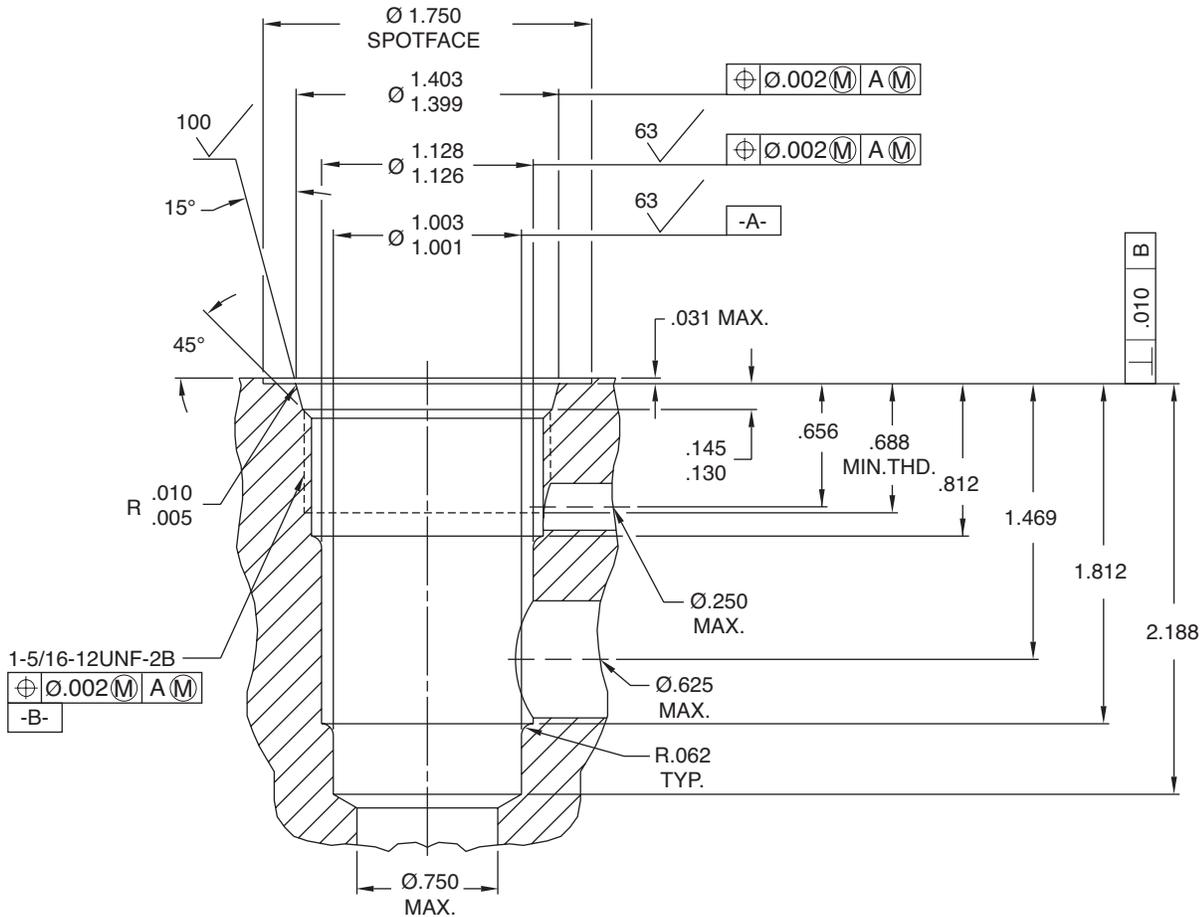
Specifications subject to change,
consult factory.

2 PLACE DIM $\pm .01$

3 PLACE DIM $\pm .005$

All dimensions in inches.

ANGLE $\pm .5^\circ$



160-3S Cavity

Rough Drill P/N – 10133-60

Finish Form Tool P/N – 10133-62

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

All dimensions in inches.

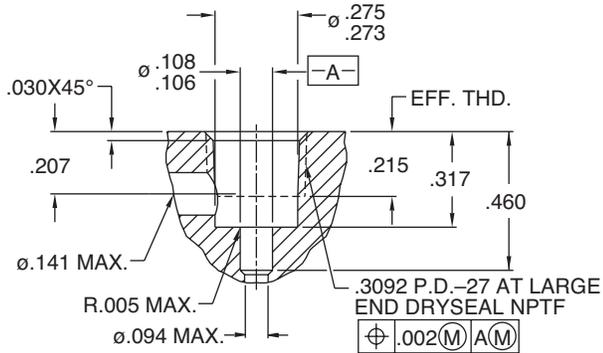
2 PLACE DIM ± .01

3 PLACE DIM ± .005

ANGLE ± .5°

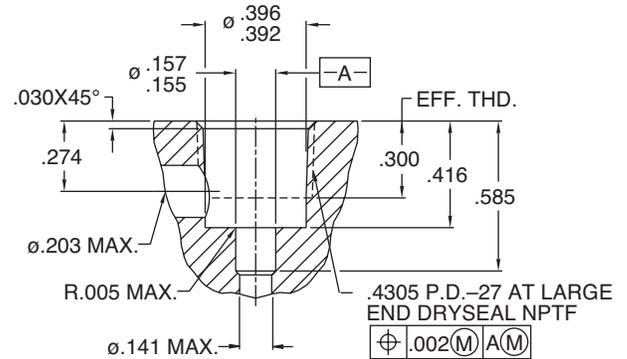
NC10, NC20, NC25, NC30 & NC35 Cavity

SERIES NC



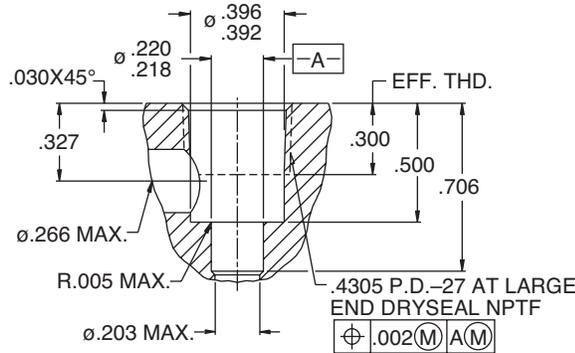
NC10 Cavity

Step Drill	P/N – 10131-90
Tap – Steel	P/N – 10131-91
Tap – Aluminum	P/N – 10131-92



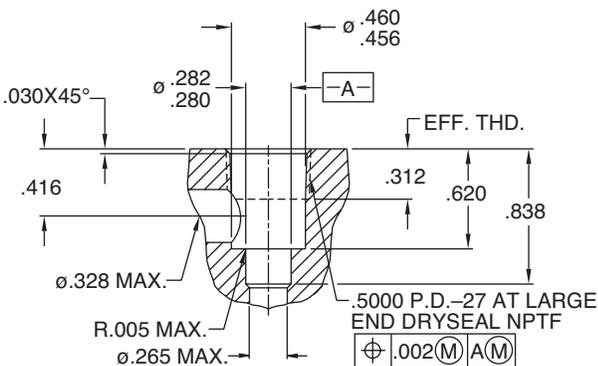
NC20 Cavity

Step Drill	P/N – 10131-93
Tap – Steel	P/N – 10131-94
Tap – Aluminum	P/N – 10131-95



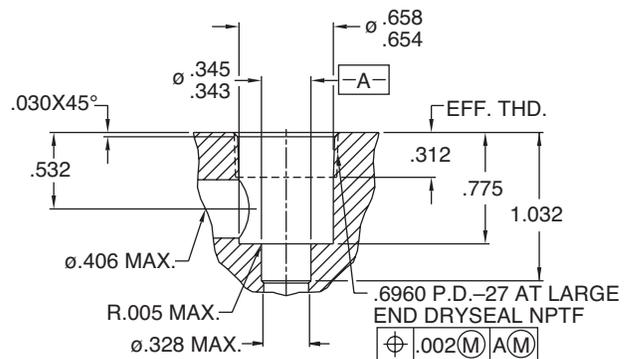
NC25 Cavity

Step Drill	P/N – 10131-96
Tap – Steel	P/N – 10131-94
Tap – Aluminum	P/N – 10131-95



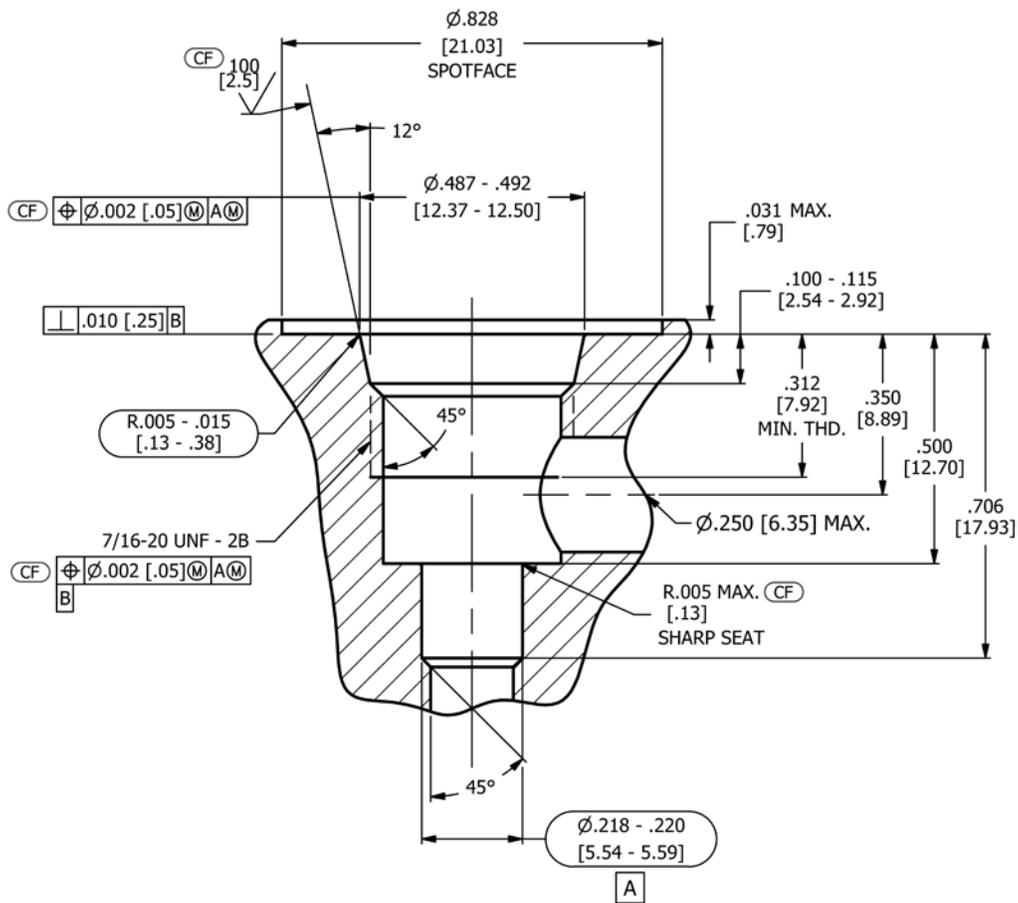
NC30 Cavity

Step Drill	P/N – 10131-99
Tap – Steel	P/N – 10132-00
Tap – Aluminum	P/N – 10132-01



NC35 Cavity

Step Drill	P/N – 10132-02
Tap – Steel	P/N – 10132-03
Tap – Aluminum	P/N – 10132-04

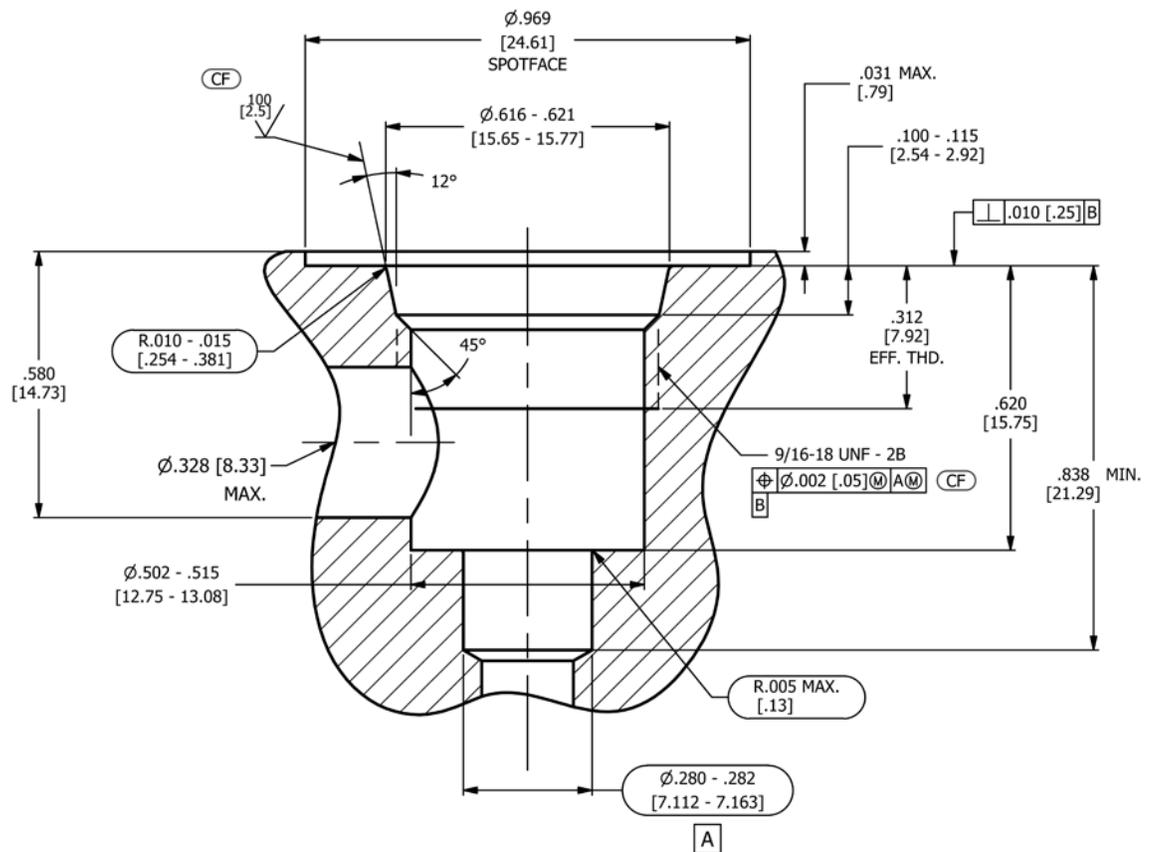


NC4T Cavity

Rough Drill P/N - 10201-59
Finish Form Tool P/N - 10201-60

NC6T Cavity

SERIES NC



NC6T Cavity

Rough Drill

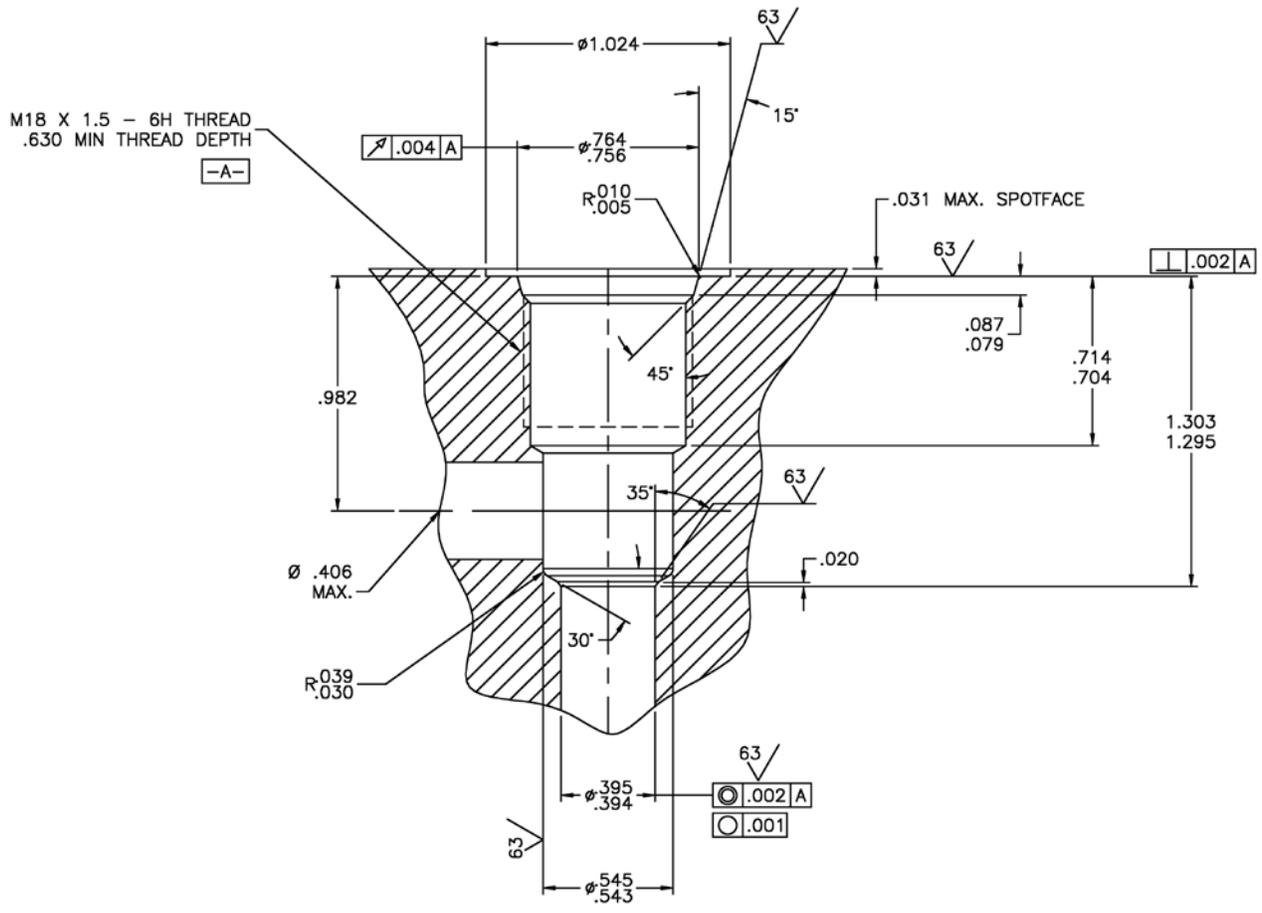
P/N - 10274-69

Finish Form Tool

P/N - 10274-70

R05-2 Cavity

SERIES 050

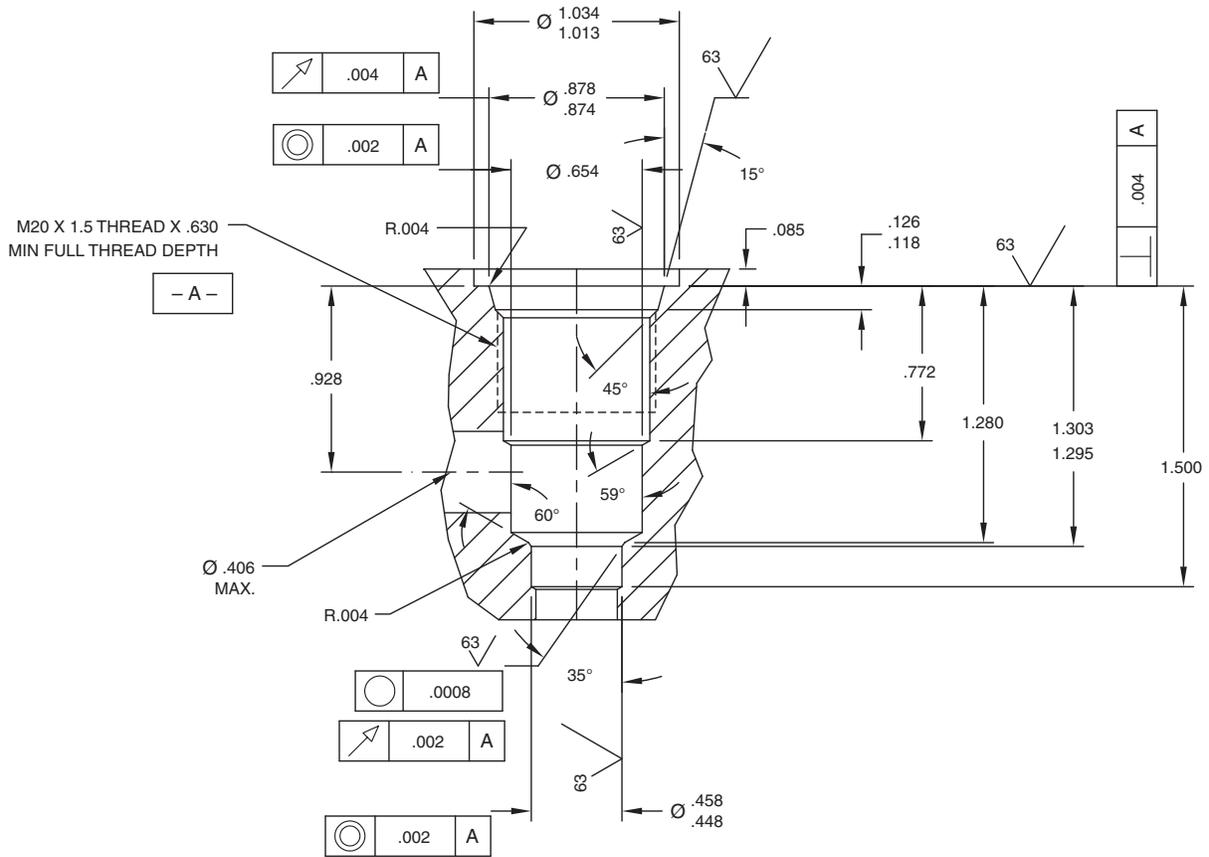


R05-2 CAVITY

UNLESS OTHERWISE SPECIFIED
 Specifications subject to change, consult factory.
 All dimensions in inches.

2 PLACE DIM $\pm .01$
 3 PLACE DIM $\pm .005$
 ANGLE $\pm .5^\circ$

SOLENOID
 CHECK
 MOTION CONTROL
 FLOW CONTROL
 RELIEF
 PRESSURE CONTROL
 SEQUENCE
 SHUTTLE
 DIRECTIONAL VALVES
 HAND PUMPS
 TECHNICAL DATA



R06-2 CAVITY

UNLESS OTHERWISE SPECIFIED

Specifications subject to change,
consult factory.

All dimensions in inches.

2 PLACE DIM $\pm .01$

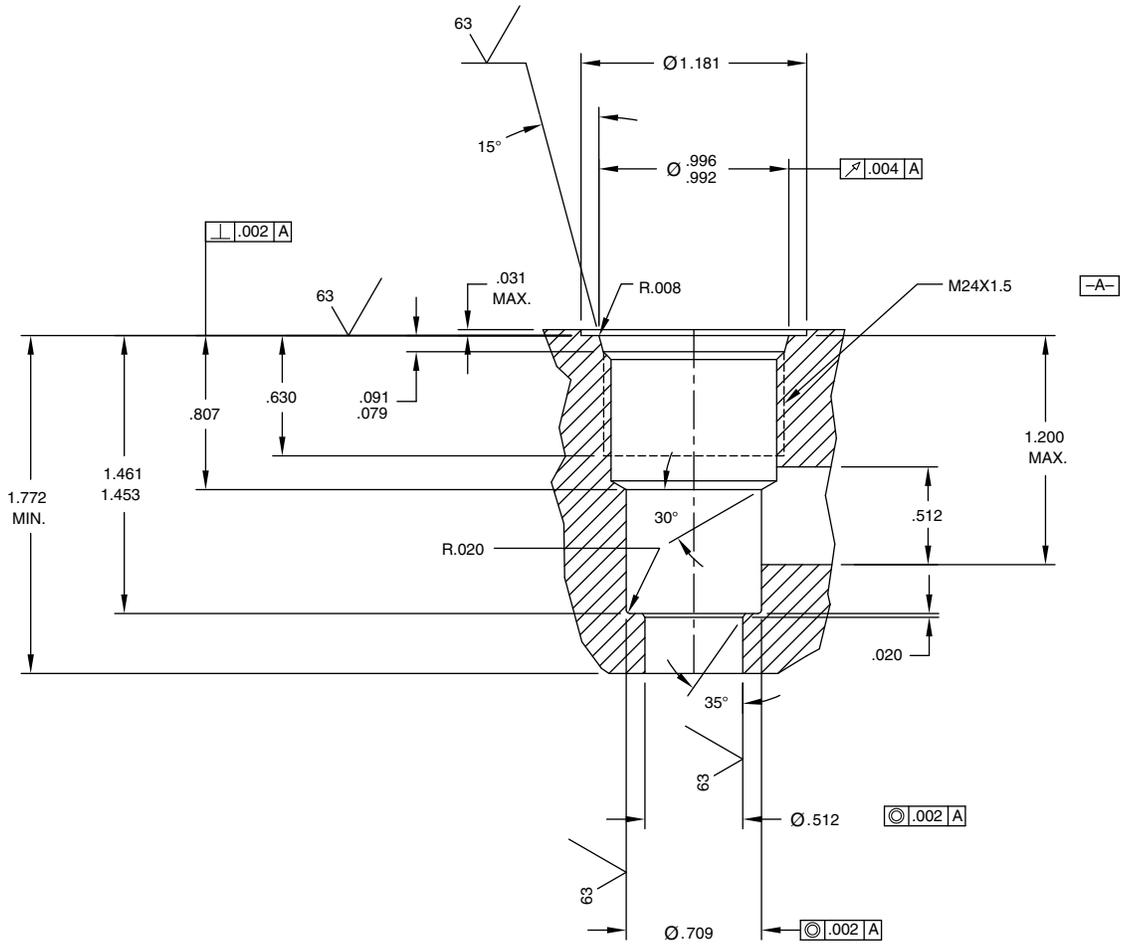
3 PLACE DIM $\pm .005$

ANGLE $\pm .5^\circ$

R08-2 Cavity

SERIES 080

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA



R08-2 CAVITY

UNLESS OTHERWISE SPECIFIED
 Specifications subject to change, consult factory.
 All dimensions in inches.

2 PLACE DIM $\pm .01$
 3 PLACE DIM $\pm .005$
 ANGLE $\pm .5^\circ$

MODEL	PAGE	MODEL	PAGE	MODEL	PAGE
DBRV-100	5.13.1	DPRR-080	6.03.1	DSV2-100-3D	1.26.1
DBRVS-100	5.14.1	DPS-100	7.02.1	DSV2-100-4CO	1.33.1
DCV-080-B	2.09.1	DPS2-080	7.03.1	DSV2-100-4NC	1.31.1
DCV-080-PB	2.11.1	DPS2-100	7.04.1	DTV-080	9.03.1
DCV-100-B	2.10.1	DPS3-080	7.04.3	DTV2-080	9.04.1
DCV-100-P	2.14.1	DPSK-080	7.04.7	LLPC	4.14.1
DCV-100-PB	2.12.1	DPSK-100	7.05.1	NC-04-S	4.04.1
DDPC-080-P	3.07.1	DPSK2-100	7.06.1	NC-06-S	4.04.1
DDPC-100P	3.07.3	DPTC-100-P	3.09.1	NC-10-S	4.04.1
DDPS-100-3NCS	6.11.1	DPV-100-2NC	1.80.1	NC-20-S	4.04.1
DDPS-160	6.13.1	DRV-100	5.04.1	NC-25-S	4.04.1
DDRV-080	5.06.1	DRV-080	5.02.1	NC-30-S	4.04.1
DDRV-100	5.08.1	DRV2-080	5.02.1	NC-35-S	4.04.1
DDSV-080-2NCP	1.18.1	DRVK-080	5.20.1	PCM88	4.13.1
DFC-080	4.11.1	DSH-100	8.05.1	RV-050	5.12.1
DFC-100	4.12.1	DSV-080-2NCP	1.01.1	RV-060	5.12.3
DFD-100	4.40.1	DSV-080-2NCSP	1.11.1	RV-080	5.12.5
DFR-080-2	4.23.1	DSV-080-34C	1.44.1	S-210	4.05.1
DFR-100-3	4.30.1	DSV-080-34M	1.40.1	S-310	4.05.1
DFR-120-3	4.32.1	DSV-080-34O	1.46.1	S-410	4.05.1
DFRA-080-2	4.24.1	DSV-080-34T	1.42.1	SM-210	4.05.1
DFRA-100-2	4.26.1	DSV-100-34C	1.45.1	SM-310	4.05.1
DFRA-100-3	4.31.1	DSV-100-34M	1.41.1	SM-410	4.05.1
DHP-100	10.02.1	DSV-100-34O	1.47.1	ZC-62	2.07.1
DHP3-100	10.01.1	DSV-100-34T	1.43.1	ZCO-42	2.01.1
DMO-080-2NCSP	9.07.1	DSV2-080-2NCS	1.14.1	ZCO-62	2.08.1
DMP-080-2NCP	9.01.1	DSV2-080-2NOP	1.08.1	ZCP6	2.03.1
DMR2-080	9.05.1	DSV2-080-2NOS	1.16.1	ZFC-62	4.10.1
DNV-080	4.01.1	DSV2-080-3	1.20.1	ZPC2-63	3.02.1
DNV-100	4.02.1	DSV2-080-3B	1.23.1	ZPTC-63	3.08.1
DPC-080-P	3.03.1	DSV2-080-4CO	1.32.1	ZRV-63	5.01.1
DPC-100-P	3.04.1	DSV2-080-4NC	1.30.1	ZSH2-63	8.03.1
DPCV-100-P	3.11.1	DSV2-080-4NO	1.36.1	ZSHB-63	8.02.1
DPOD-100-3	9.20.1	DSV2-080-4TC	1.34.1	ZTRV-62	5.30.1
DPOD-100S-2NCP	9.10.1	DSV2-100-2NCP	1.03.1		
DPOD-100S-2NOP	9.12.1	DSV2-100-2NCS	1.15.1		
DPOD2-100-3	9.22.1	DSV2-100-2NOP	1.09.1		
DPOR-080	5.09.1	DSV2-100-2NOS	1.17.1		
DPOR2-100	5.10.1	DSV2-100-3	1.21.1		
DPR-100	6.02.1	DSV2-100-3B	1.24.1		

Warranty and Customer Commitment



1-Year Limited Warranty on Workmanship and Materials of Construction

Deltrol warrants that, for one year following delivery, the products manufactured by Deltrol will (a) conform to all published Deltrol specifications and (b) be free from defects in materials and workmanship.

Deltrol will not be liable under any circumstances where the claimed damages result from (1) use of the products in non-fluid power applications, under extreme environmental conditions, or without proper physical protection or enclosures (if recommended by Deltrol), (2) faulty installation or incorrect connection of the products, (3) failure to maintain the products in accordance with Deltrol recommendations, including but not limited to hydraulic fluid cleanliness recommendations, (4) repair or alteration of the products by anyone other than Deltrol, (5) any abuse or neglect of the products, or (6) any accident involving the products caused by anyone other than Deltrol.

In addition, Deltrol will not be liable under any circumstances where the claimed damages result from customer or a third party failing to store, handle, use or distribute the products in accordance with Deltrol instructions or best practices in the fluid power industry.

Other than the Limited Warranty contained herein, Deltrol makes no warranties, express or implied, with respect to the quality or performance of the products, including but not limited to the implied warranties of merchantability and fitness for particular purpose which are hereby disclaimed and excluded.

For Deltrol's full warranty information, see our Terms & Conditions at:

<https://deltrolfluid.com/terms-and-conditions>

Committed to Complete Customer Satisfaction

Design Commitment

- Maintain two cross-functional groups; a valve design team and a systems design team that can work independently of each other or as one totally integrated group.
- Utilize the latest modeling software to develop the most compact and efficient solutions for our customers.
- Provide the responsiveness and flexibility to develop custom design solutions when the application requires it.

Manufacturing Commitment

- Produce high quality, cost effective parts at our vertically integrated manufacturing facilities.
- Meet or exceed demanding quality standards by employing our state-of-the-art assembly and testing equipment.

Delivery Commitment

- Learn our customers ERP systems and maintain the flexibility to integrate our packaging and delivery with their requirements.
- Meet or beat delivery requirements based on typical lead times and maintain those delivery schedules.

Disclaimer

- Dimensions and other parameters are subject to change at manufacturer's discretion.
- Some configurations or option combinations are not available. Consult factory for alternatives on a customized design to fit the need.
- A minimum order quantity may be required for certain configurations.
- Manufacturer maintains the right to alter materials used at its discretion.

We Work With OEMs In The Following Markets

- Material Handling
- Construction & Agricultural Equipment
- Power and Energy
- Forestry
- Automotive Manufacturing
- Medical and Patient Handling
- Fluid Power Component Manufacturers



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