HYDRAULIC CARTRIDGE VALVE

PRODUCT TECHNICAL CATALOG

Comercializadora MARTIZUR

HIGH PERFORMANCE

HYDRAULIC CARTRIDGE VALVE

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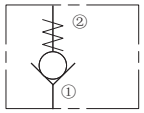
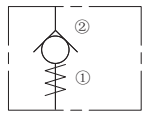
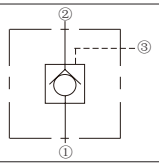
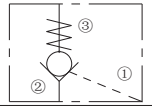
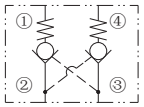
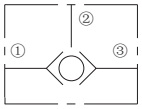
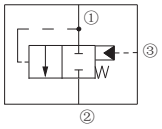
	DCV3000-G14	350bar	20L/min	019
	DCV04-20	240bar	6L/min	020
	DCV08-20		30L/min	022
	DCV10-20		76L/min	026
	DCV10-20B		38L/min	028
	DCV12-20		95L/min	030
	DCV16-20		150L/min	032
	DCV08-B20	250bar	20L/min	024
	DCV2500-G18	350bar	10L/min	034
	DCV2000-G14		23L/min	035
	DCV2000-G38		50L/min	036
	DCV2000-G12		80L/min	037
	DCV42-M20	240bar	380L/min	038
	DCV08-21		30L/min	040
	DCV10-24		56L/min	042
	DCV12-21		115L/min	044
	DCVR2000-G14	350bar	20L/min	046
	DCKCB-XCN	350bar	80L/min	048
	DPC08-30	240bar	30L/min	050
	DPC10-32		30L/min	052
	DDC08-40		19L/min	054
	DDC10-40		30L/min	056

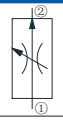
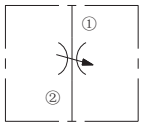
Introduction —— Check Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DLS04-B30	240bar	6L/min	058
	DLS08-30		19L/min	060
	DLS10-30		30L/min	062

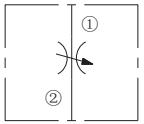
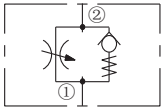
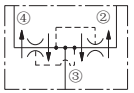
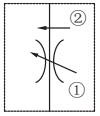
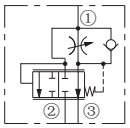
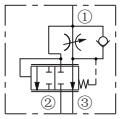
Introduction —— Logic Element

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DEP08-35	345bar	38L/min	064
	DEP10-S35	350bar	76L/min	066
	DEP12-S35	350bar	150L/min	068

Introduction —— Flow Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DNV-08	250bar	9L/min	070
	DNV08-20	240bar	45L/min	072
	DNV10-20		57L/min	074
	DNV12-20		130L/min	076
	DNV08-21		57L/min	078

Introduction —— Flow Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DNV10-22	240bar	60L/min	080
	DMR10-20		53L/min	082
	DFC08-20	240bar	23L/min	084
	DFC10-20		45.4L/min	086
	DFC12-20		130L/min	088
	DFC10-21	240bar	57L/min	090
	DFD50-45	345bar	45.4L/min	092
	DFD52-45		91L/min	094
	DFRA10	240bar	57L/min	096
	DFR10-39	240bar	57L/min	098
	DFR12-33	240bar	35L/min	100

Introduction —— Pressure Valves

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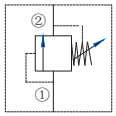
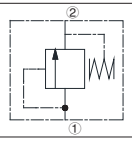
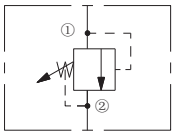
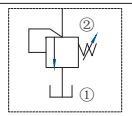
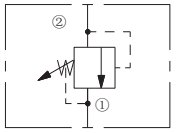
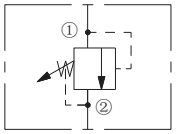
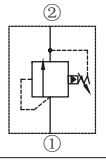
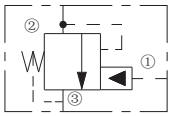
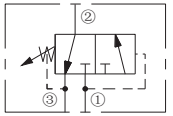
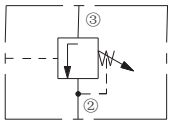
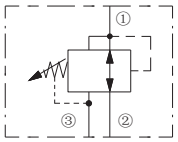
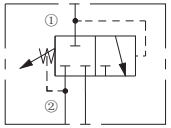
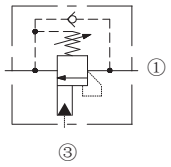
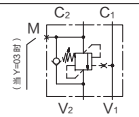
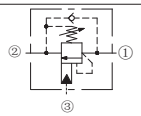
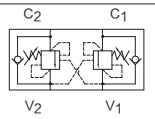
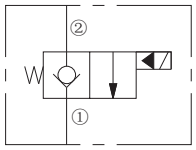
	DRV08	250bar	10 L/min	102
	DYF08-09H	350bar	8L/min	104
	DNRV-08		8L/min	106
	DRV08-20	248bar	23L/min	108
	DRV10-20	228bar	38L/min	110
	DRV10-D20	350bar	80L/min	112
	DDRV08	250bar	30L/min	114
	DRV08-22	240bar	30L/min	116
	DRV10-22		114L/min	118
	DRV10-23	240bar	114L/min	120
	DRV10-26	240bar	114L/min	122
	DRV12-26	241bar	139L/min	124
	DRV16-26	240bar	303L/min	126
	DRPEE	350bar	95L/min	128
	DRPGE		200L/min	130

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DUP10-30	207bar	4L/min	132
	DPS10-30	207bar	37.9L/min	134
	DPS08-32	240bar	19L/min	136
	DPS10-32	207bar	38L/min	138
	DPR08-32	240bar	11L/min	140
	DPR10-32	207bar	30L/min	142
	DPR10-36	210bar	56L/min	144
	DPS10-36	240bar	55L/min	146

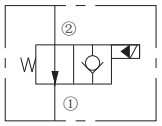
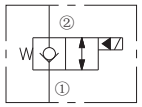
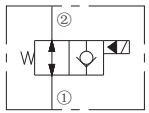
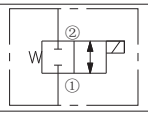
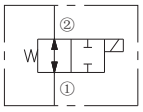
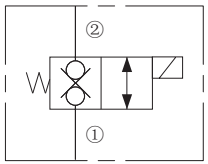
Introduction —— Counter Balance Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DCBCA-LHN	280bar	60L/min	148
	DCBBA-LHN		60L/min	150
	DCBGA-LHN		240L/min	152
	DCBEA-LHN		120L/min	154
	DCCCA-LJN	350bar	60L/min	156
	DCBHA-LHN	280bar	480L/min	158
	DCBBG-LJH	350bar	60L/min	160
	DCBCG-LJN	350bar	60L/min	162
	DCBGG-LJN	350bar	240L/min	164
	DCBEG-LJN	350bar	120L/min	166
	D08.39.59.XYZ	350bar	60L/min	168
	D04.52.25X58 Z00*	350bar	320L/min	170
	D08.44.07.XYZ	350bar	60L/min	172
	D08.44.11XYZ	350bar	60L/min	174

Introduction —— Solenoid Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DSV08-20	207bar	30.2L/min	176
	DSV08-B20		19L/min	178
	DSV10-20		56.8L/min	180
	DSV12-20	240bar	113.6L/min	182
	DSV08-20J	207bar	27L/min	184
	DSV16- 20		151L/min	186
	DSV38-20J		23L/min	188

Introduction —— Solenoid Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DSV08-21	207bar	37.9L/min	190
	DSV10-21		68.1L/min	192
	DSV12-21	240bar	113.6L/min	194
	DSV16-21	207bar	151L/min	196
	DSV08-22	207bar	30L/min	198
	DSV10-22		57L/min	200
	DSV12-22		113.6L/min	202
	DSV16-22		151L/min	204
	DSV08-23	207bar	30L/min	206
	DSV10-23		68L/min	208
	DSV16-23		151L/min	210
	DSV10-24	207bar	60.6L/min	212
	DSV10-25	207bar	22.7L/min	214
	DSV08-26	207bar	2L/min	216
	DSV38-26	207bar	3.4L/min	218
	DSV08-28	207bar	114L/min	220
	DSV08-C28	250bar	15L/min	222
	DSV08-D28	207bar	30L/min	224
	DSV10-28	240bar	76L/min	226

Introduction —— Solenoid Valves

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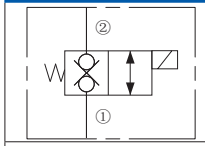
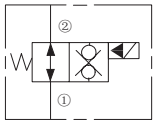
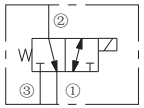
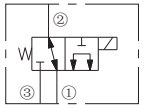
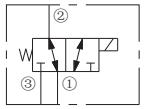
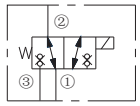
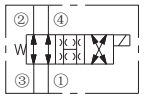
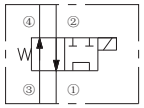
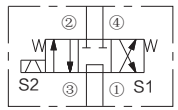
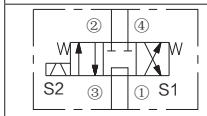
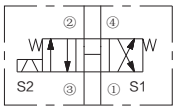
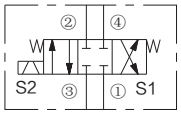
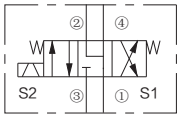
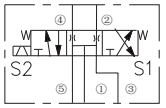
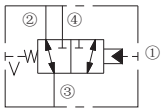
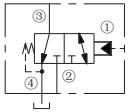
	DSV12-28	240bar	114L/min	228
	DSV08-29	207bar	11L/min	230
	DSV10-29	240bar	76L/min	232
	DSV08-30	207bar	11.4L/min	234
	DSV08-31	207bar	11.4L/min	236
	DSV10-34	207bar	22.7L/min	238
	DSV10-38	250bar	25L/min	240
	DSV38-38	207bar	11L/min	242
	DSV08-40	207bar	11.4L/min	244
	DSV10-40		22.7L/min	246
	DSV10-44	207bar	23L/min	248

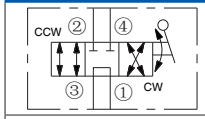
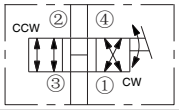
Introduction —— Solenoid Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DSV08-47A	210bar	11L/min	250
	DSV10-47A	240bar	19L/min	252
	DSV08-47B	207bar	11L/min	254
	DSV10-47B	240bar	23L/min	256
	DSV08-47C	207bar	11L/min	258
	DSV10-47C	240bar	23L/min	260
	DSV08-47D	207bar	11L/min	262
	DSV10-47D	240bar	23L/min	264
	DSV10-5915	247bar	15L/min	266

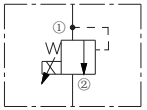
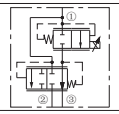
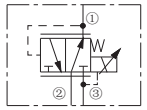
Directional Control Valve

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DPD10-40	240bar	38L/min	268
	DPD10-41	240bar	45L/min	270

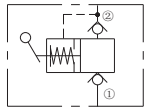
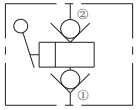
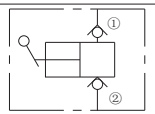
Directional Control Valve

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DMR10-47A	240bar	11L/min	272
	DMR10-47B	240bar	11L/min	274

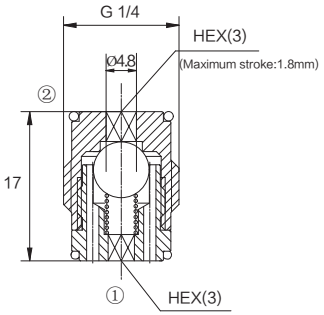
Proportional Valves

Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DTS10-26	241bar	100L/min	276
	DPV70-30	207bar	38L/min	278
	DPV72-30		76L/min	280
	DTS10-36	241bar	60L/min	282

Hand Pump

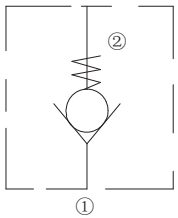
Function Selection	Product Selection	Max Operating Pressure	Max Flow	Page Number
	DHP10-20	207bar		284
	DHP10-21	240bar		286
	DHP16-21	241bar		288

DCV3000-G14 Check Valve In-Line

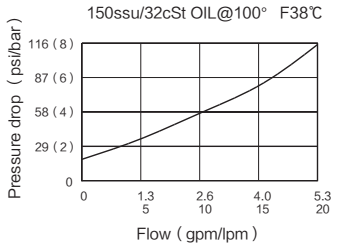


TORQUE：6Nm max

ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

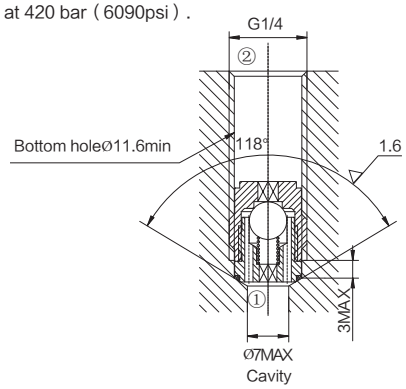
DCV3000-G14 Allows flow passage from ① to ②, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ②.

FEATURES

- Hardened seat for long life.
- low leakage.
- Compact size.

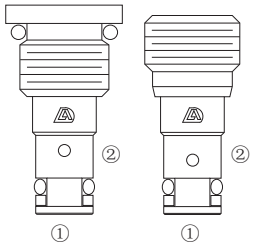
RATINGS

MAXPRESSURE: 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 350 bar (5000 psi)
Crack Pressure: 2.1 bar ;
Temperature:-30℃ ~ 120 ℃ (with Buna N seals) .
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body: Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).
Steel rated at 420 bar (6090psi) .



DCV04-20 & DCV04-B20 Check Valves

DCV04-20 & DCV04-B20



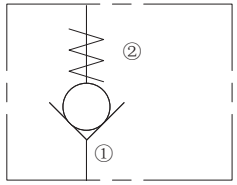
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device. Available in conventional surface mount or convenient "down-hole" versions.

OPERATION

The DCV04-20 and DCV04-B20 allow flow passage from ① to ②, while normally blocking oil flow in the opposite direction.The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at① to open to ②.

ISO SYMBOL



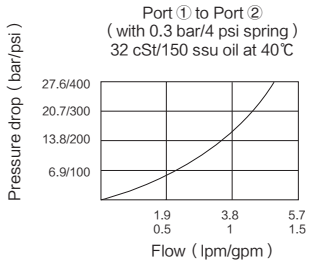
FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Miniature size.
- Fast closing and seating.

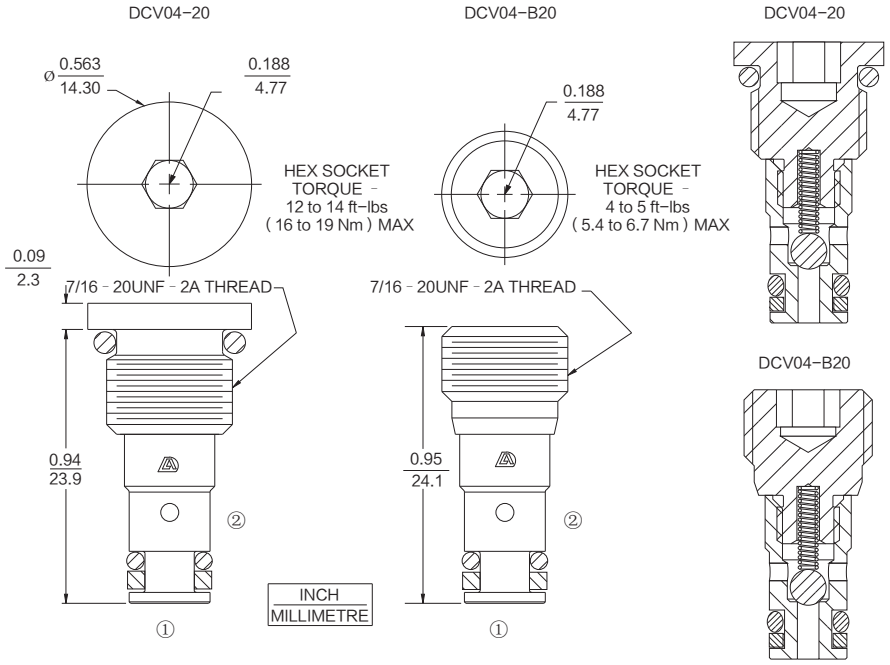
RATINGS

Operating Pressure:241.3 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage:0.10 cc/minute (2 drops/minute) max. at 206.8 bar (3000 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:0.34 bar (5 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity: T04-2A or T04-2B; See page 293.

PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight:0.05 kg (0.12 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.

TO ORDER

DCV04- 20 - - - -

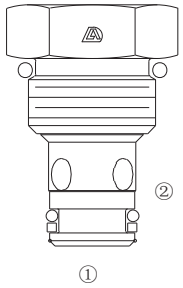
Bias Spring
5 0.3 bar (5 psi)

Seals
N Buna N (Std.)
V Fluorocarbon

Porting
0 Cartridge Only

Mounting
Blank Surface Mount
B Down-Hole Mount

DCV08-20 Check Valve



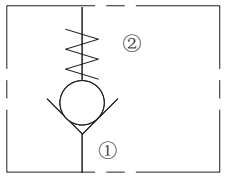
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV08-20 allows flow passage from ① to ② , while normally blocking oil flow in the opposite directionThe cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

ISO SYMBOL



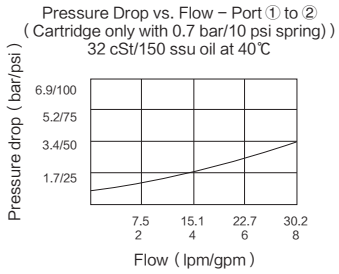
FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Compact size.
- Fast closing and seating.

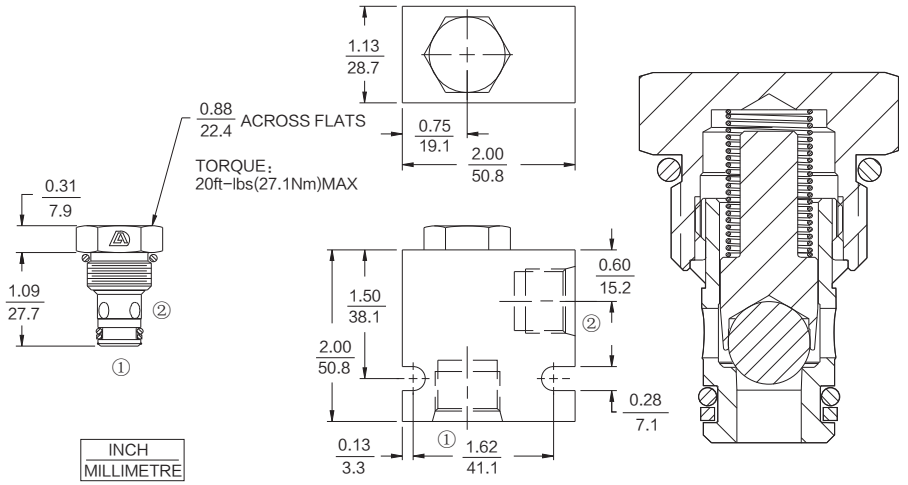
RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 350 bar (5075 psi)
Flow Rating: See Performance Chart
Internal Leakage: 0.10 ml/minute (2 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:0.3 bar (4 psi); 0.7 bar (10 psi); 1.7 bar (25 psi); 4.1 bar (60 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E; See page 297.

PERFORMANCE (Cartridge Only)



DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.05 kg (0.12 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:0.16kg (0.35 lbs) ;
Anodized highstrength
6061 T6 aluminum alloy,
rated to 240 bar (3500 psi).
Ductile iron bodies available;
dimensions may differ.

TO ORDER

DCV08-20 - -

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

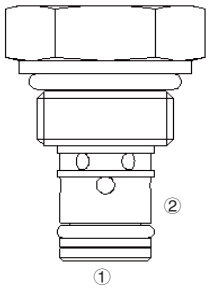
Bias Spring

4	0.3 bar (4 psi)
10	0.7 bar (10 psi)
25	1.7 bar (25 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100 psi)
150	10.3 bar (150 psi)
200	13.8 bar (200 psi)
270	18.3 bar (270 psi)

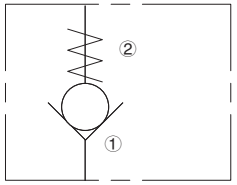
Seals

N Buna N (Std.)
V Fluorocarbon

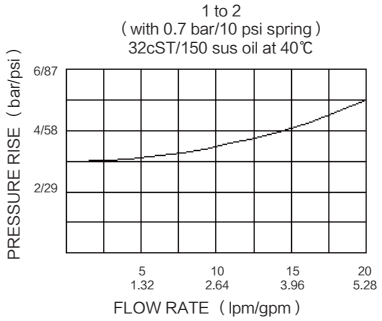
DCV08-B20 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV08-B20 allows flow passage from 1 to 2, while normally blocking oil flow in the opposite direction. The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 1 to open to 2

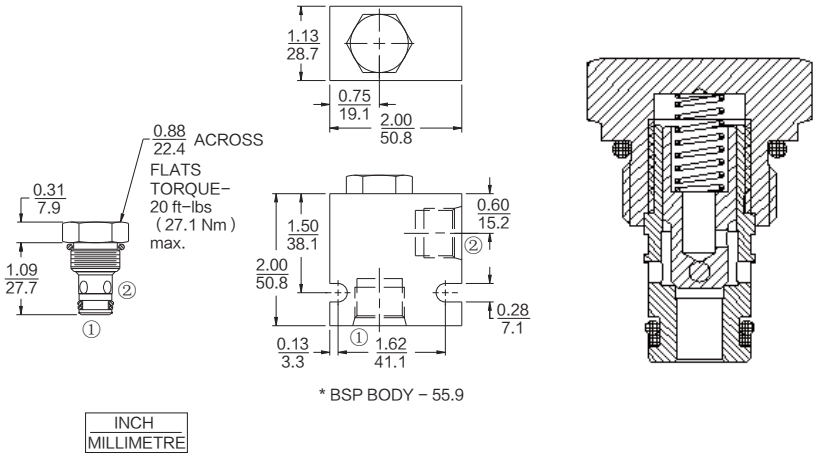
FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Compact size.
- Fast closing and seating.

RATINGS

Operating Pressure: 240 bar (3500 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage: 0.10 cc/minute (2 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/ minute (1 cu. in./minute) attained
Standard Bias Springs at Crack: 0.3 bar (4 psi); 0.7 bar (10 psi); 1.7 bar (25 psi);4.1 bar (60 psi)
Temperature: -40 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of
7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.08 kg. (0.17 lbs.)
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-up standard.
Standard Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength
6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DCV08-B20 - _ - _

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

*BSP Body; U.K. Mfr. Only

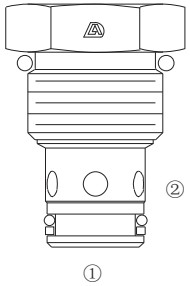
Bias Spring

4	0.3 bar (4 psi)
10	0.7 bar (10 psi)
30	2.1 bar (30 psi)
42	3.0 bar (42 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100psi)

Seals

N	Buna N (Std.)
V	Fluorocarbon

DCV10-20 Check Valve



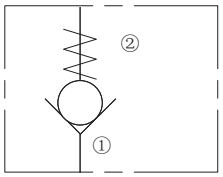
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV10-20 allows flow passage from ① to ② , while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

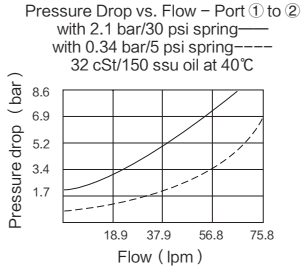
ISO SYMBOL



FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Industry common cavity.

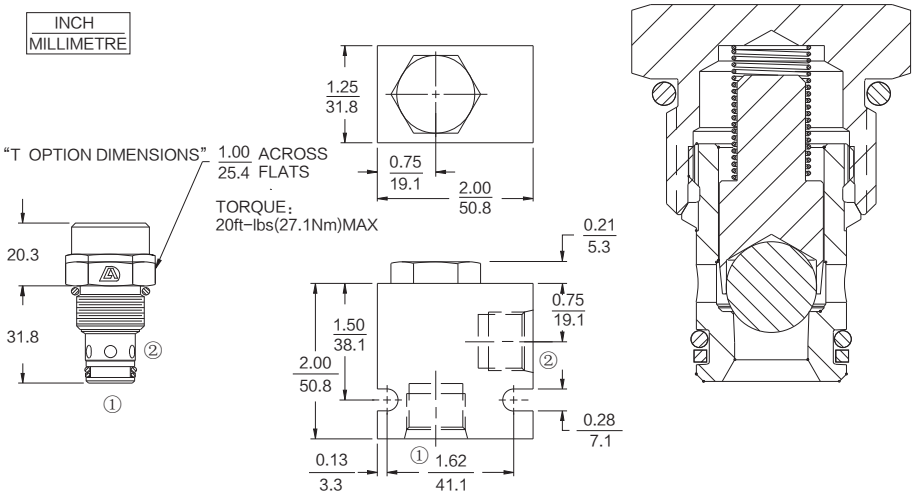
PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure:240 bar
Proof Pressure: 350 bar
Flow Rating: See Performance Chart
Internal Leakage: 0.10 ml/minute (2 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:0.34 bar; 1 bar ; 2.1 bar ; 4.8 bar ; 6.9 bar
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B; See page 300.
Standard Ported Body: Anodized highstrength 6061 T6 aluminum alloy, rated to 420 bar (3500 psi).Steel rated at 420 bar (6090psi) .

DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.08 kg (0.17 lbs) ;
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.43kg (0.95 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
rated to 345 bar (3500 psi) ;
Ductile iron bodies available;
dimensions may differ.

TO ORDER

DCV10-20 - - - -

*Required for 300 psi spring: T

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Bias Spring

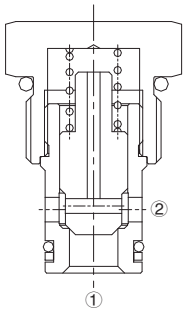
5	0.34 bar (5 psi)
15	1 bar (15 psi)
30	2.1 bar (30 psi)
40	2.8 bar (40 psi)
70	4.8 bar (70 psi)
100	6.9 bar (100 psi)
200	13.6 bar (200 psi)
300	20.4 bar (300 psi)*

*Requires "T" Option

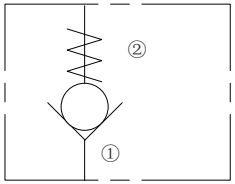
Seals

N Buna N (Std.)
V Fluorocarbon

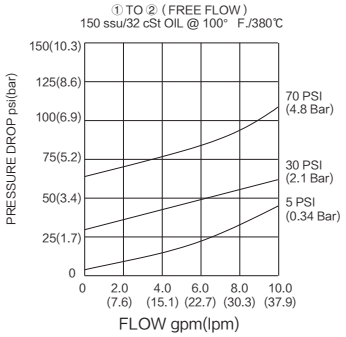
DCV10-20B Direct-Acting,Popper-Type Cartridge Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV10-20B allows flow passage from 1 to 2, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at 1 to open to 2.

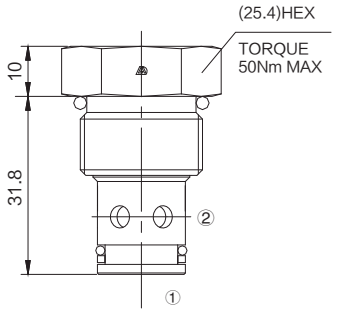
FEATURES

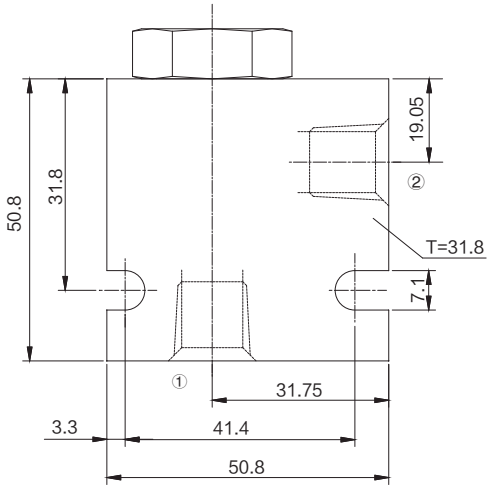
- Hardened poppet and seat for long life.
- Low leakage.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure: 240 bar
Proof Pressure: 350 bar
Flow: See PRESSURE DROP VS FLOW graph
Internal Leakage: 0.10 ml/minute (2 drops/minute) max. at 240 bar.
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack: 0.34 bar; 1 bar ; 2.1 bar ; 4.8 bar ; 6.9 bar
Temperature: -40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B; See page 300.
Standard Ported Body: Anodized highstrength 6061 T6 aluminum alloy, rated to 420 bar (3500 psi).Steel rated at 420 bar (6090psi) .

DIMENSIONS





MATERIALS

Cartridge: Weight: 0.08 kg (0.17lbs) ;
Buna N O-rings and back-up standard.
Standard Ported Body: Weight:
0.43kg (0.95 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
rated to 345 bar (3500 psi) ;
Ductile iron bodies available;
dimensions may differ.

TO ORDER

DCV10-20B - - - -

*Required for 300 psi spring: T

Saels

C artridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Bias Spring

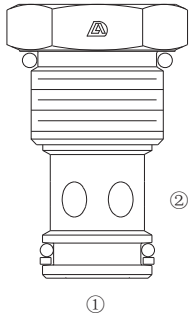
5	0.34 bar (5 psi)
15	1 bar (15 psi)
30	2.1 bar (30 psi)
40	2.8 bar (40 psi)
70	4.8 bar (70 psi)
100	6.9 bar (100 psi)
200	13.6 bar (200 psi)
300	20.4 bar (300 psi)*

*Requires "T" Option

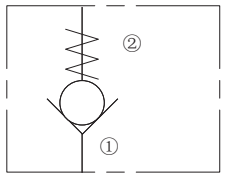
Seals

N	Buna N (Std.)
V	Fluorocarbon

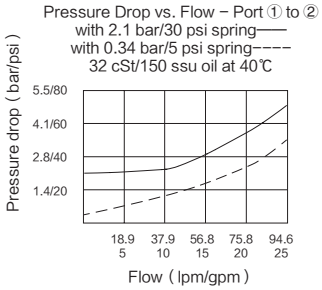
DCV12-20 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV12-20 allows flow passage from ① to ②, while normally blocking oil flow in the opposite direction.The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

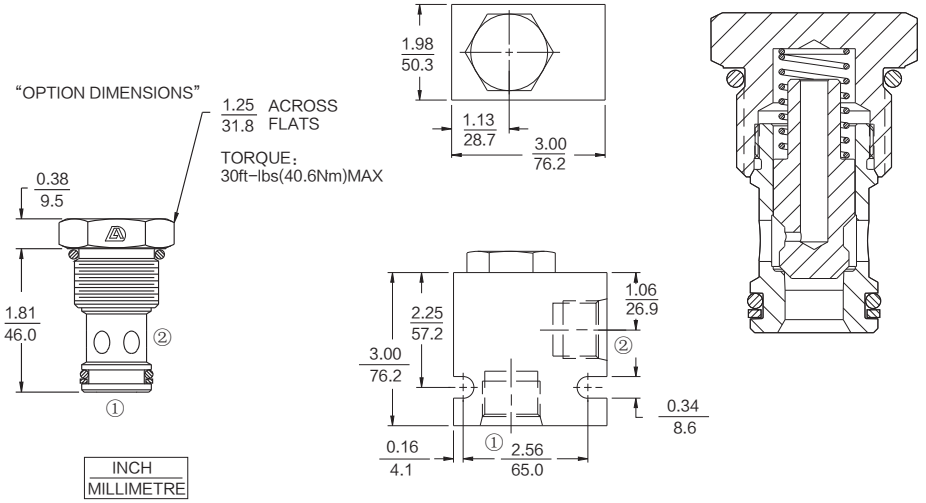
FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Fully guided check assembly.
- Cost-effective cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 420 bar (6090 psi)
Flow: See Performance Chart
Internal Leakage:0.25 ml/minute (5 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:0.34 bar (5 psi) ; 1.7 bar (25 psi) ; 4.1 bar (60 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T12-2A; See page 304.

DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.15 kg (0.40 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.57kg (1.25 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

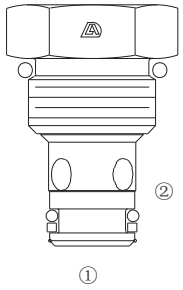
DCV12- 20 - - - -

Porting
Cartridge Only 0
SAE 10 10T
SAE 12 12T
SAE 16 16T

Bias Spring
5 0.34 bar (5 psi)
25 1.7 bar (25 psi)
30 2.1 bar (30 psi)
60 4.1 bar (60 psi)

Seals
N Buna N (Std.)
V Fluorocarbon

DCV16-20 Check Valve



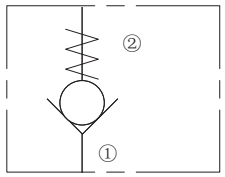
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV16-20 allows flow passage from ① to ②,
while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

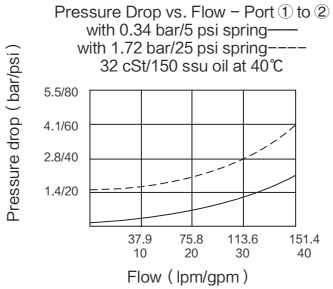
ISO SYMBOL



FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Industry common cavity.

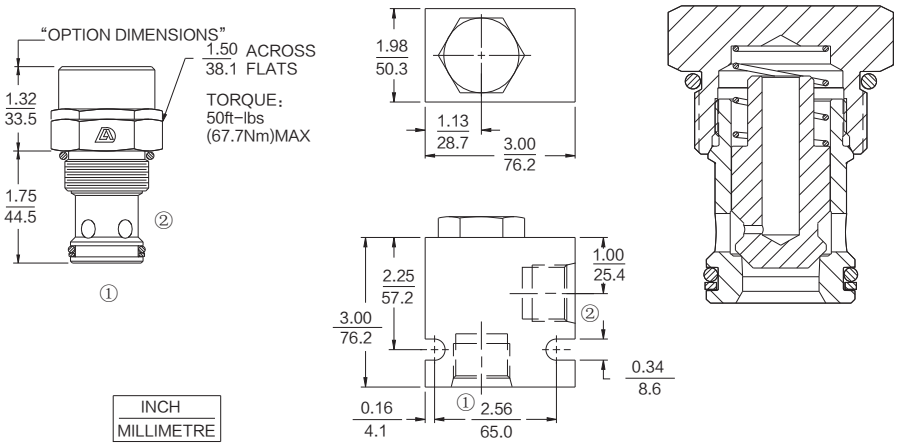
PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage:0.25 ml/minute (5 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:0.35 bar (5 psi) ; 1.7 bar (25 psi) ; 4.1 bar (60 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T16-2A; See page 307.

DIMENSIONS



BSPBODY-55.9

MATERIALS

Cartridge: Weight:0.29 kg (0.63 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.57kg (1.25 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

DCV16-20 - - - - - -

"T" Option*
*100 or 150psi spring. T

Porting

Cartridge Only	0
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

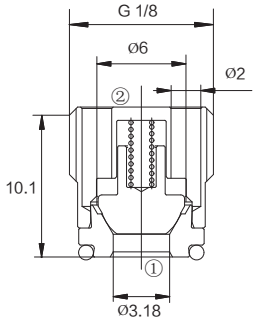
Bias Spring

5	0.35 bar (5 psi)
25	1.7 bar (25 psi)
60	4.1 bar (60 psi)
100	6.9 bar (100 psi)

*Requires "T" Option

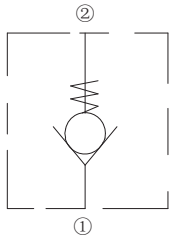
Seals
N Buna N (Std.)
V Fluorocarbon

DCV2500-G18 Check Valve In-Line

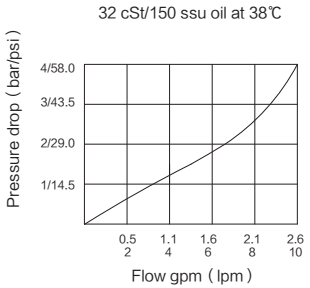


Maximum stroke:1.1mm TORQUE：5Nm max

ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

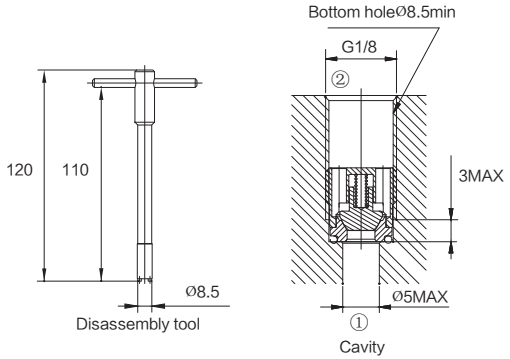
DCV2500-G18 allows flow passage from ① to ② ,
while normally blockiong oil flow in the opposite direction.The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

FEATURES

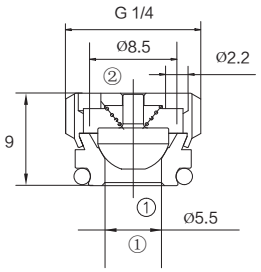
- Hardened seat for long life .
- low leakage.
- Compact size.

RATINGS

Max Pressure： 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 350 bar (5000 psi)
Standard Bias Springs at Crack：
1bar (14psi) (MDX06-02A);0.3bar(4psi) (MDX06-02A-X).
Temperature:-30℃ ~ 120 ℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body： Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500psi).Steel rated at 420 bar (6090psi) .

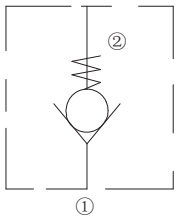


DCV2000-G14 Check Valve In-Line

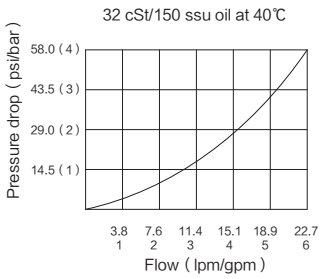


Maximum stroke:1.8mm TORQUE：6Nm max

ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

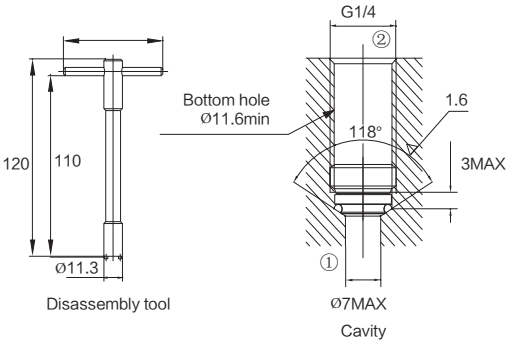
DCV2000-G14 Allows flow passage from ① to ② ,
while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

FEATURES

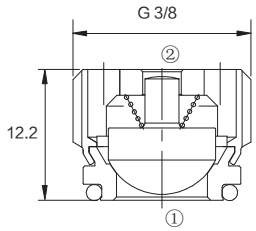
- Hardened seat for long life .
- low leakage.
- Fast closing and seating.

RATINGS

Max Pressure： 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 350 bar (5000 psi)
Crack Pressure Defined:
Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack： < 0.5 bar ;
Temperature:-40℃ ~ 120 ℃ (with Buna N seals) .
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body： Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).Steel rated at 420 bar (6090psi) .

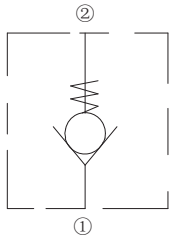


DCV2000-G38 Check Valve In-Line



TORQUE：6Nm max

ISO SYMBOL



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

DCV2000-G38 Allows flow passage from ① to ②, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ②.

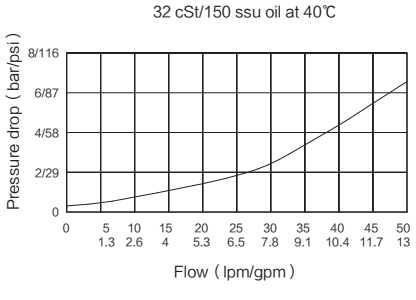
FEATURES

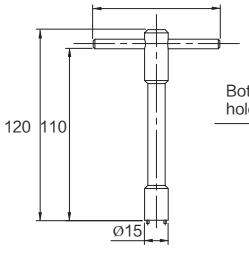
- Hardened seat for long life and low leakage.
- Compact size.
- Fast closing and seating.

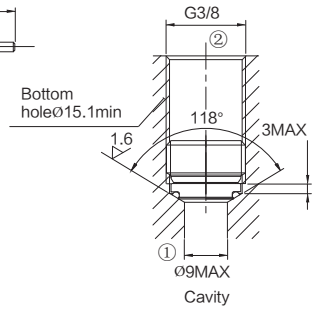
RATINGS

Max Pressure： 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 350 bar (5000 psi)
Crack Pressure Defined:
Gauge psi evident at 1 at 16.4 cc/minute(1 cu. in./minute) attained
Standard Bias Springs at Crack： < 0.5 bar ;
Temperature:-40℃ ~ 120 ℃ (with Buna N seals).
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body： Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).Steel rated at 420 bar (6090).

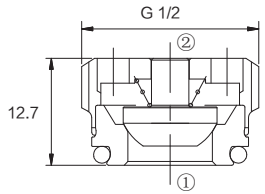
PERFORMANCE (Cartridge Only)





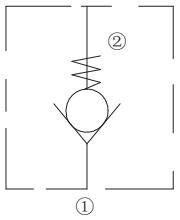


DCV2000-G12 Check Valve In-Line



TORQUE：10Nm max

ISO SYMBOL



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

DCV2000-G12 Allows flow passage from ① to ②, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ②.

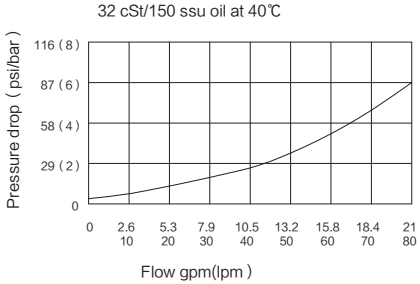
FEATURES

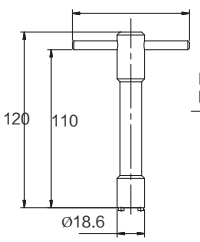
- Hardened seat for long life.
- low leakage.
- Compact size.

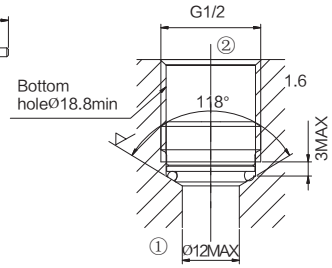
RATINGS

Max Pressure： 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 350 bar (5000 psi)
Crack Pressure Defined:
Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack： < 0.5 bar ;
Temperature:-30℃ ~ 120 ℃ (with Buna N seals).
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body： Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).Steel rated at 420 bar (6090).

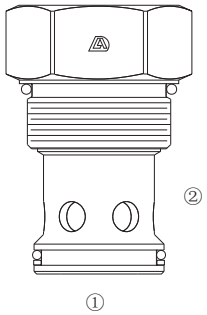
PERFORMANCE (Cartridge Only)



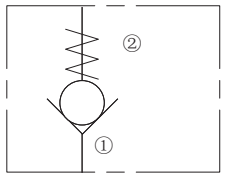




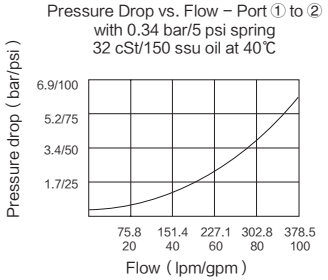
DCV42-M20 Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

DCV42-M20 allows flow passage from ① to ②, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

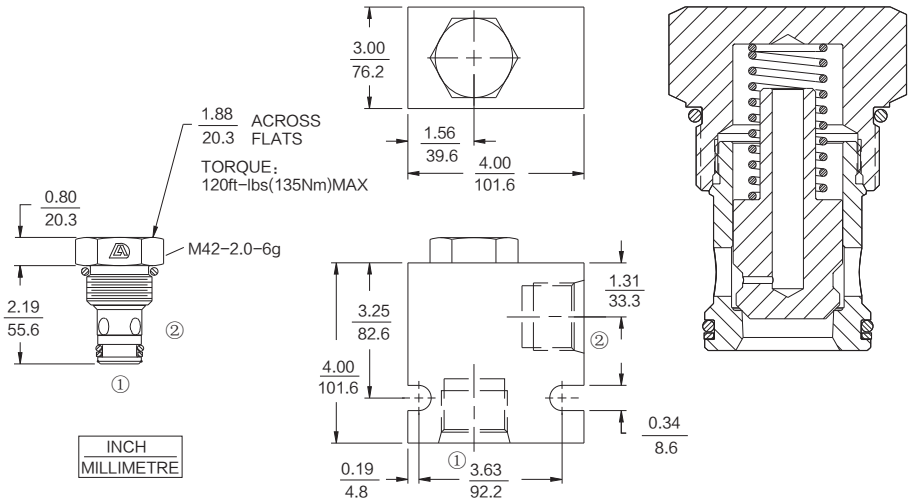
FEATURES

- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Conforms to ISO 7789 cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:
0.35 bar (5 psi) ; 1.7 bar (25 psi) ; 4.1 bar (60 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T42-2A; See page 310.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.43 kg (0.95 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
1.63kg (3.60 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

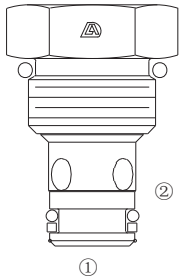
DCV42-M20 - - - -

Porting
Cartridge Only 0
SAE 20 20T

Bias Spring
5 0.35 bar (5 psi)
15 1.0 bar (4 psi)
30 2.1 bar (10 psi)
60 4.1 bar (60 psi)

Seals
N Buna N (Std.)
V Fluorocarbon

DCV08-21 Check Valve



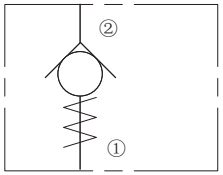
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV08-21 allows flow passage from ② to ①, while normally blocking oil fl ow in the opposite direction.
The cartridge has a fully guided poppet which is spring-biased closed until suffi cient pressure is applied at ② to open to ①.

ISO SYMBOL



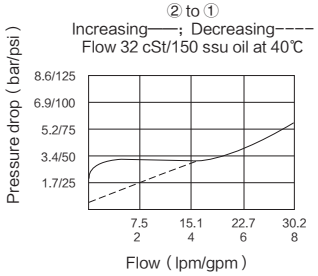
FEATURES

- Hardened seat for long life and low leakage.
- Fully guided poppet.
- Compact size.

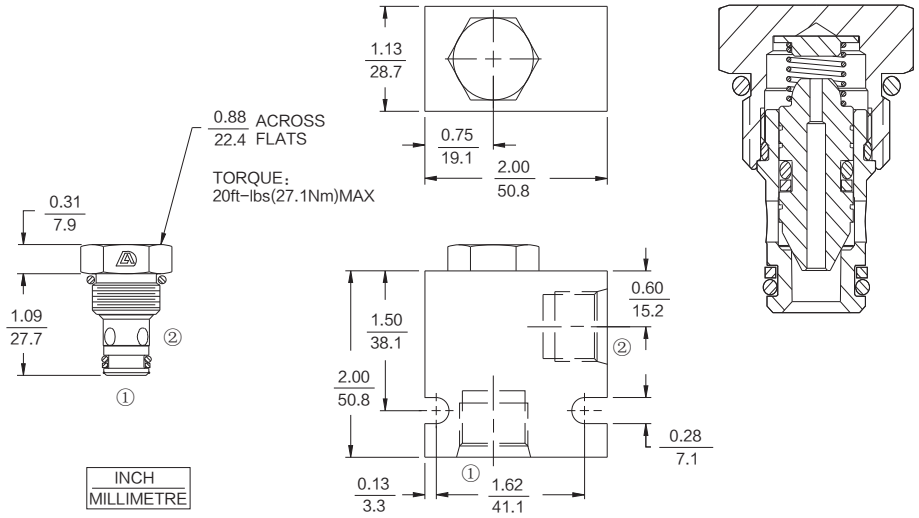
RATINGS

Operating Pressure:240 bar（3500 psi）
Flow: See Performance Chart
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack:2.1 bar (30 psi) nominal. Actual cracking pressure may vary from 1.9 to 2.8 bar (27 to 40 psi); valves which are not actuated for a period of time may initially crack at higher than subsequent cracking pressures.
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T08-2E；See page 297.

PERFORMANCE (Cartridge Only)



DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.05 kg（0.12 lbs）;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.16kg（0.35 lbs）;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar（3500 psi）;
Ductile iron bodies available; dimensions may differ.

TO ORDER

DCV08-21 - - - 30

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

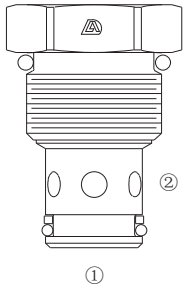
Seals

N Buna N (Std.)
V Fluorocarbon

Bias Spring

30 2.07 bar (30 psi)

DCV10-24 Check Valve



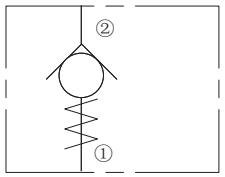
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

DCV10-24 allows flow passage from ② to ①, while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ② to open to ① .

ISO SYMBOL



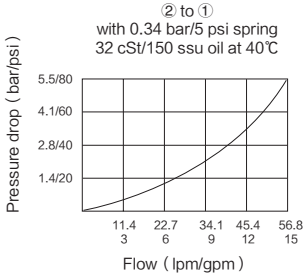
FEATURES

- Low check mass for anti-cavitation applications.
- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Industry common cavity.

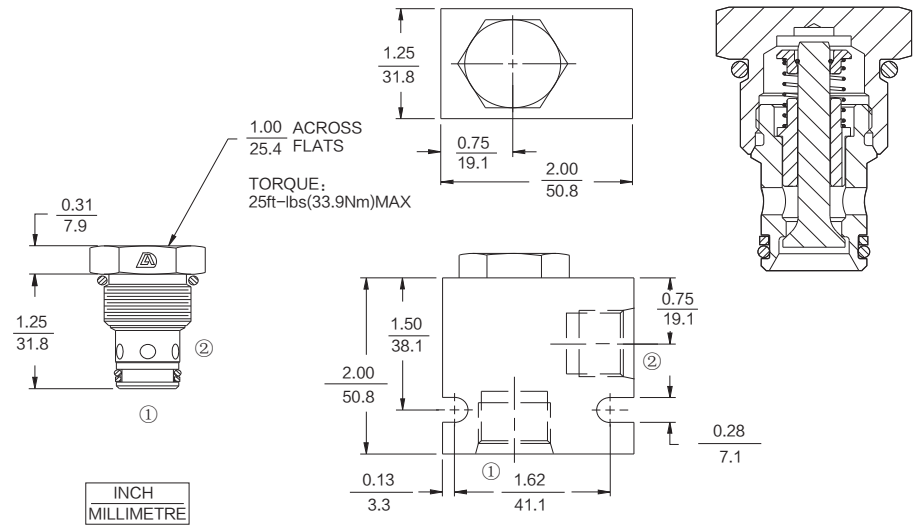
RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 420 bar (6090 psi)
Flow: See Performance Chart
Internal Leakage:0.25 cc/minute (5 drops/minute) max. at 207 bar (3000 psi)
Crack Pressure Defined: Gauge psi evident at 2 at 16.4 cc/minute (1 cu. in./minute)attained at 1
Standard Bias Springs at Crack:
0.35 bar (5 psi) ; 1.7 bar (25 psi) ; 3.8 bar (55 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B; See page 300.

PERFORMANCE (Cartridge Only)



DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.08 kg (0.17 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

DCV10-24 - - - -

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

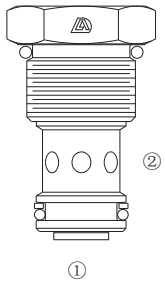
Seals

N Buna N (Std.)
V Fluorocarbon

Bias Spring

05 0.34 bar (5 psi)

DCV12-21 Check Valve



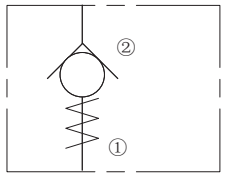
DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The DCV12-21 allows flow passage from ② to ①,
while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ② to open to ① .

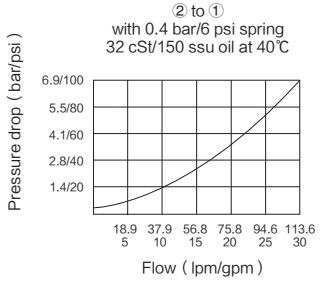
ISO SYMBOL



FEATURES

- Low check mass for anti-cavitation applications.
- Hardened seat for long life and low leakage.
- Optional bias springs for back-pressure application flexibility.
- Cost-effective cavity.

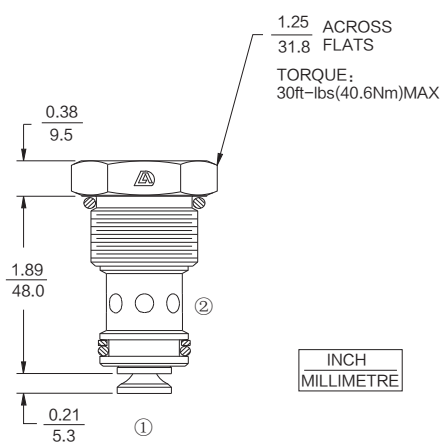
PERFORMANCE (Cartridge Only)

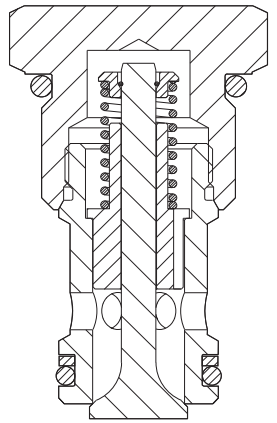


RATINGS

Operating Pressure:240 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage:0.25 cc/minute (5 drops/minute) max.
at 240 bar (3500 psi)
Crack Pressure Defined: Gauge psi evident at 2 at 16.4 cc/minute (1 cu. in./minute)attained at 1
Standard Bias Springs at Crack:
0.4 bar (6 psi) ; 1.8 bar (26 psi) ; 3.8 bar (56 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T12-2A; See page 304.

DIMENSIONS





ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

MATERIALS

Cartridge: Weight:0.08 kg (0.17 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.16kg (0.35 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

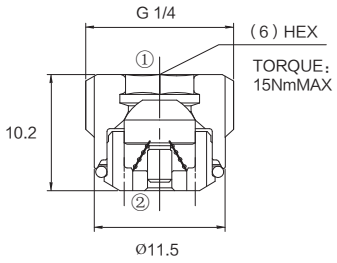
DCV12- 21 - - -

Porting
Cartridge Only 0

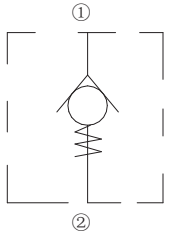
Bias Spring
6 0.4 bar (6 psi)
26 1.8 bar (26 psi)
56 3.8 bar (56 psi)

Seals
N Buna N (Std.)
V Fluorocarbon

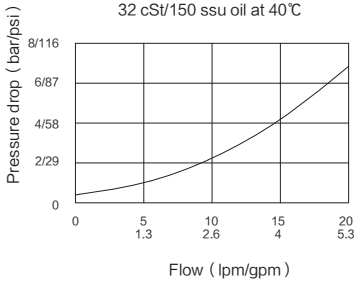
DCVR2000-G14 Check Valve In-Line



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

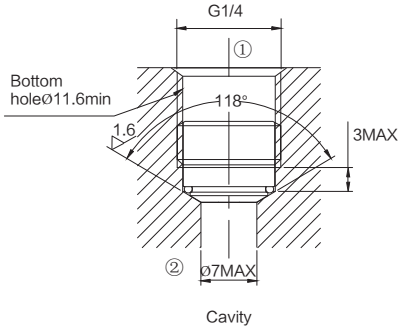
DCVR2000-G14 allows flow passage from ② to ① ,while normally blockiong oil flow in the opposite direction.The cartridge has a ful ly guided check which is spring-biased closed until sufficient pressure is applied at ② to open to ① .

FEATURES

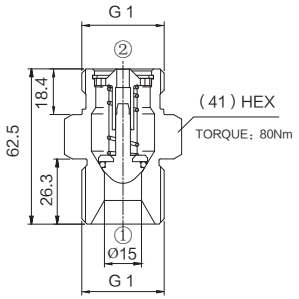
- Hardened seat for long life and low leakage.
- Compact size.
- Fast closing and seating.

RATINGS

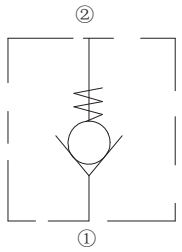
Max Pressure: 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 350 bar (5000 psi)
Crack Pressure Defined:
Gauge psi evident at 1 at 16.4 cc/minute (1 cu. in./minute) attained
Standard Bias Springs at Crack: < 0.5 bar ;
Temperature:-40℃ ~ 120 ℃ (with Buna N seals) .
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body: Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).Steel rated at 420 bar (6090).



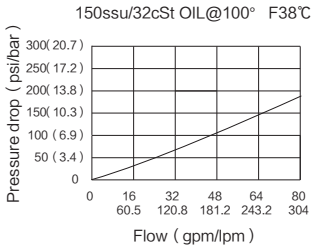
Check Valve In-Line DCV12-G1



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, direct acting,ball type in-line check valve. Main use as a blocking or load-holding device.

OPERATION

DCV12-G1, Allows flow passage from ① to ② , while normally blocking oil flow in the opposite direction.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

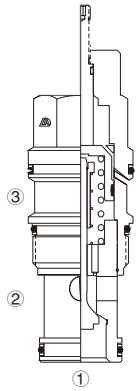
FEATURES

- Hardened seat for long life.
- low leakage.
- Compact size.

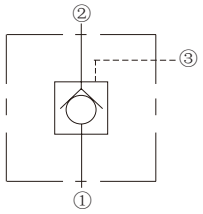
RATINGS

Max Pressure: 350bar (5000psi)
Flow: See Performance Chart
Internal Leakage: 0drops/min
Crack Pressure: 0.4 bar ;
Temperature:-30℃ ~ 120 ℃ (with Buna N seals).
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Standard Ported Body: Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi).Steel rated at 350 bar.

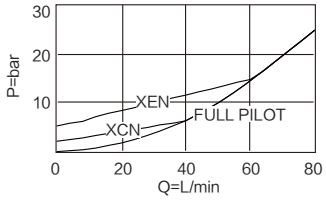
DCKCB-XCN, Pilot-to-Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, hydraulic check valve for use in blocking or load-holding circuits.

OPERATION

The DCKCB-XCN allows flow passage from ② to ① , while normally blocking flow from ① to ② . Flow will be allowed from ① to ② when sufficient pressure is applied at ① .
The cartridge has a 3:1 pilot ratio, meaning that at least one-third of the load pressure held at ① is required at ③ to open the valve. The check is spring-biased to assure holding in static or no-load conditions. A sealed pilot piston option is available.

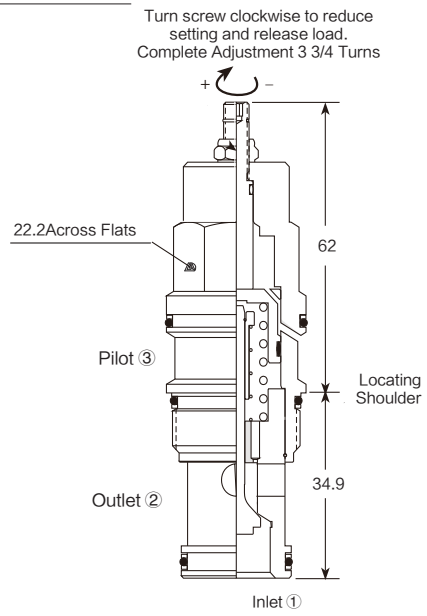
FEATURES

- Hardened seat for long life and low leakage.
- Optional sealed piston.
- Optional spring ranges.
- Compact size.

RATINGS

Operating Pressure: 350bar (5100 psi)
Flow: See Performance Chart
Internal Leakage: at 350 bar (3500 psi):
① to ② t: 0.1ml/minute (2 drops/minute)
Pilot Ratio: standard
Pilot Ratio: Standard to pressure3:1
Check Spring Bias: 2bar (29psi) standard;
Temperature: -40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3B；See page 302.

DIMENSIONS

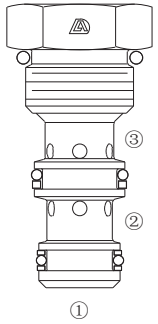


TO ORDER

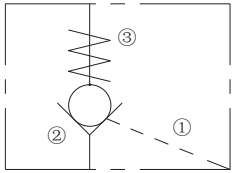
CK ** - ***

Nominal Capacity	Version	Control**	Cracking Pressure	Seal Material
C 60L/min	B Bleed through Pilot D Sealed Pilot	Available for all CK*B, CK*D X Standard Pilot L Manual Load Release E External SAE-4 Pilot, Port 3 blocked P External 1/4" NPTF Pilot, Port 3 blocked CKCB, CKEB, CKGB, CKCD only: B External 1/4" BSPP Pilot Port 3 blocked	A 0.3 bar B 1.0 bar C*2.0bar D 3.5bar E*5.0bar F 7.0bar	N Buna-N V Viton

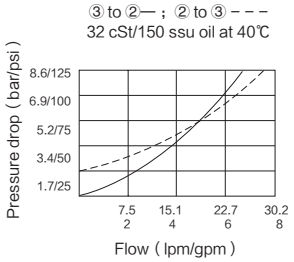
DPC08-30 Check, Pilot-to-Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, hydraulic check valve for use in blocking or load-holding circuits.

OPERATION

The DPC08-30 allows flow passage from ② to ③, while normally blocking flow from ③ to ②. Flow will be allowed from ③ to ② when sufficient pressure is applied at ①.
The cartridge has a 3:1 pilot ratio, meaning that at least one-third of the load pressure held at ③ is required at ① to open the valve.
The check is spring-biased to assure holding in static or no-load conditions. A sealed pilot piston option is available.

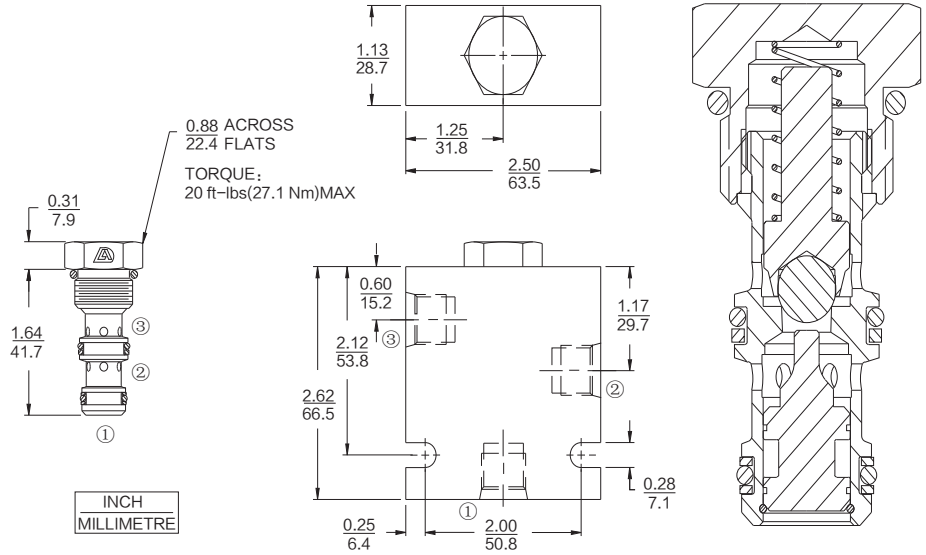
FEATURES

- Hardened seat for long life and low leakage.
- Optional sealed piston.
- Optional spring ranges.
- Compact size.

RATINGS

Operating Pressure:240 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage:at 240 bar (3500 psi):
③ to ② : 0.25 ml/minute (2 drops/minute)
② to ① without sealed piston: 115 ml/minute (7 cu. in./minute)
② to ① with sealed piston: zero leakage
Pilot Ratio:3:1
Check Spring Bias: 1.72 bar (25 psi) standard;
With sealed piston option:6.2 bar (90 psi) minimum
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T08-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight:
0.08kg (0.18 lbs) ;
Steel with hardenedworksurfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.
BODY:Weight:0.27kg (0.60 lbs) ;
Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DPC08-30 - - - -

Options
None (Blank)

Porting

Cartridge Only	0
SAE6	6T
3/8 in. BSP*	3B

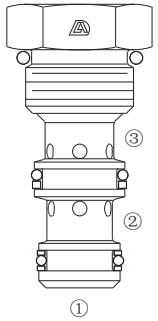
Seals

Buna N (Std.)	N
Buna N with Sealed Piston	NS
Fluorocarbon	V
Fluorocarbon with Sealed Piston	VS

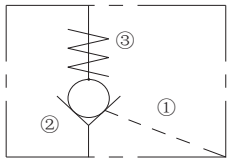
Bias Spring

(Blank)	1.72 bar/25 psi (Std) *
70	4.8 bar/70 psi
90	6.2 bar/90 psi
120	8.2 bar/120 psi
270	18.3 bar/270 psi

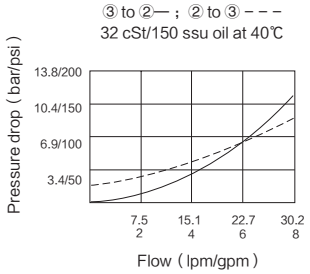
DPC10-32 Check, Pilot-to-Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, hydraulic check valve for use in blocking or load-holding circuits.

OPERATION

The DPC10-32 allows flow passage from ② to ③, while normally blocking flow from ③ to ② .
Flow will be allowed from ③ to ② when pressure is applied at 1.
The cartridge has a 4:1 pilot ratio, meaning that at least one-fourth of the load pressure held at ③ is required at 1 to open the valve.
The check is spring-biased to assure holding in static or no-load conditions.A sealed pilot piston option is available.
Note: Special higher bias spring values available. Consult factory.

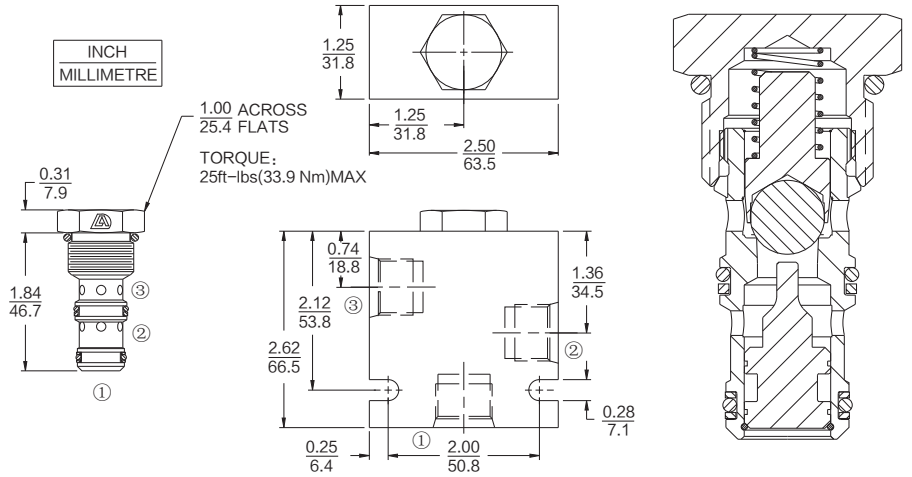
FEATURES

- Hardened seat for long life and low leakage.
- Optional sealed piston.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage: at 240 bar (3500 psi):
③ to ② : 0.25 ml/minute (2 drops/minute)
② to ① without sealed piston: 115 ml/minute (7 cu. in./minute)
② to ① with sealed piston: zero leakage
Pilot Ratio: 2:1
Check Spring Bias: 2.07 bar (30 psi) ;
With sealed piston option: 6.2 bar (90 psi) minimum
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 301.

DIMENSIONS



ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

MATERIALS

Cartridge: Weight:0.09kg (0.18 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.
BODY:Weight:0.36kg (0.80 lbs) ;
Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available;
dimensions maydiffer.

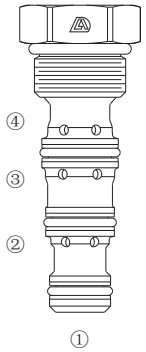
TO ORDER

DPC10-32 - -

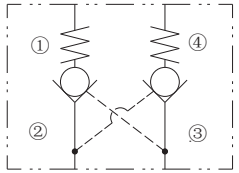
Porting	
Cartridge Only	0
SAE6	6T
SAE8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals	
N	Buna N (Std.)
NS	Buna N with Sealed Piston: 6.2 bar (90 psi) minimum spring
V	Fluorocarbon
VS	Fluorocarbon with Sealed Piston: 6.2 bar (90 psi) minimum spring

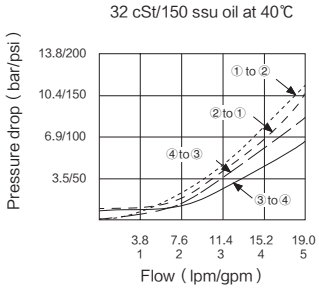
DDC08-40 Pilot Operated Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A dual pilot-operated check valve for use in blocking or load-holding circuits.

OPERATION

DDC08-40 will block flow from ① to ② and from ④ to ③ Flow is allowed in the opposite direction when pressure is applied to port ② and/or port ③ .

The valve has a 3:1 pilot ratio, so at least 1/3 of the load pressure at port ① or ④ is required at the pilot lines (ports ② or ③) to open the flow passage to allow flow from ports ① or ④ .

The check is spring-biased to assure holding in a static or no load condition.

Note: Orifice disc cannot be used with this product..

FEATURES

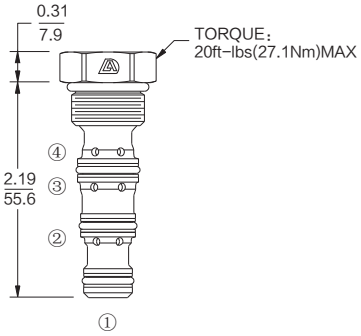
- Hardened seat for long life and low leakage.
- Low pressure drop..

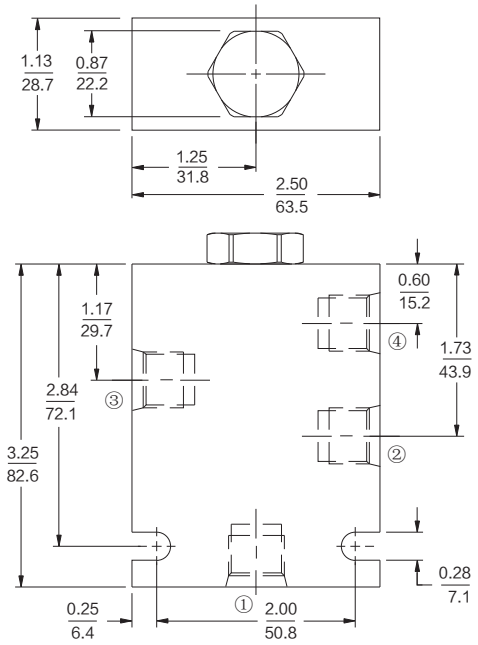
RATINGS

Operating Pressure:Inlet：240 bar (3500 psi)
Flow: Rated Inlet Flow: 19 lpm (5 gpm); see performance chart
Pilot Ratio:：3:1
Check Spring Bias：1.7 bar (25 psi); Optional 9.3 bar (135 psi)
Internal Leakage: 5 drops per minute (0.25 ml per minute) at (210 bar) 3000 psi
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity：T08-4A；See page 299.

DIMENSIONS

INCH
MILLIMETRE





MATERIALS

Cartridge: Weight:
0.13 kg (0.28 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.

Standard Ported Body:Weight:
0.18kg (0.40 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

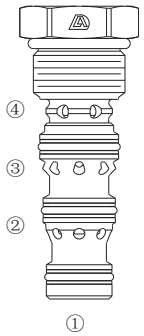
DDC08-40 - - - - -

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

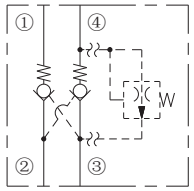
Seals
N Buna N (Std.)
V Fluorocarbon

Bias Spring
25 1.7 bar (25 psi) Standard
135 9.3 bar (135 psi) Optional

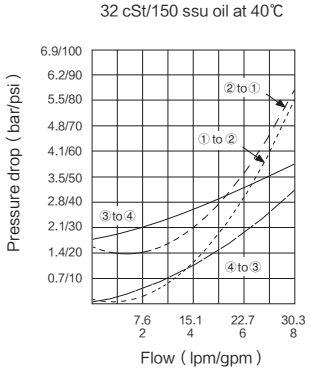
DDC10-40 Pilot Operated Check Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A dual pilot operated check valve for use in blocking or load-holding circuits.
This valve has an optional thermal relief from port ④ to port ③ .

OPERATION

The DDC10-40 will block flow from ① to ② , and from ④ to ③ . Flow is allowed in the opposite direction when pressure is applied to port ② and/or port ③ .
The valve has a 3:1 pilot ratio, so at least 1/3 of the load pressure at port ① or ④ is required at the pilot lines (ports ② or ③) to open the flow passage to allow flow from ports ① or ④ .
The check is spring-biased at 25 psi to assure holding in a static or no load condition.
Note: Orifice disc cannot be used with this product.

FEATURES

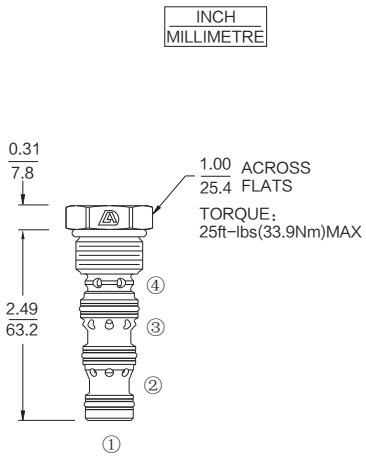
- Hardened seat for long life and low leakage.
- Low pressure drop.
- Optional thermal relief.

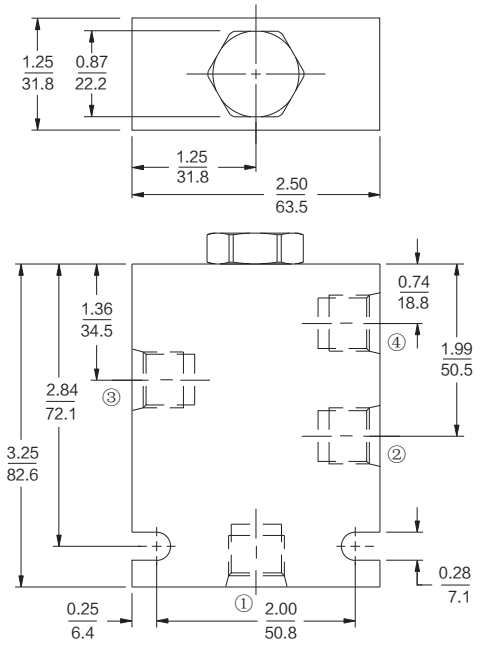
RATINGS

Operating Pressure: Inlet：240 bar (3500 psi)
Flow: Rated Inlet Flow: 30.3 lpm (8 gpm); See performance chart.
Pilot Ratio: 3:1
Check Spring Bias： 1.7 bar (25 psi)
Thermal Relief Crack Pressure Range:
310 to 386 bar (4500 to 5600 psi)
Thermal Relief Valve Leakage:
5 drops per minute (0.25 ml per minute) at up to 85% of crack pressure.
Maximum Check Valve Leakage:
5 drops per minute (0.25 ml per minute)at 240 bar (3500 psi).
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T10-4A；See page 303.

DIMENSIONS

INCH
MILLIMETRE





MATERIALS

Cartridge: Weight:
0.13 kg (0.28 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-up standard.
Standard Ported Body:Weight:
0.34kg (0.40 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

TO ORDER

DDC10-40 - - - -

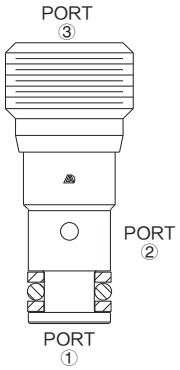
Option
None (Blank)
T

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
N Buna N (Std.)
V Fluorocarbon

Bias Spring
25 1.7 bar (25 psi) Standard

DLS04-B30 Load Shuttle, Ball-Type, "Down-Hole" Mount



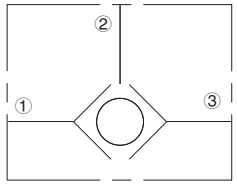
DESCRIPTION

A load-shuttling, screw-in, cartridge-style hydraulic check valve, for use in blocking circuits where a priority of flow/direction is given to a higher pressure circuit over a lower one.

OPERATION

The DLS04-B30 will allow flow from the higher pressure of 1 or 3 port to the 2 port.The valve is commonly used to direct oil from the pressure side of a bidirectional hydraulic motor to a pressure-released hydraulic brake. It can also be used as a load-sense signaling valve.

ISO SYMBOL



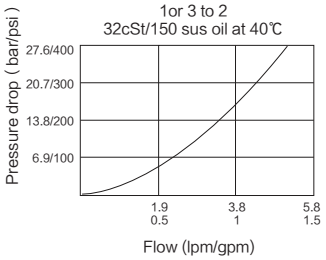
FEATURES

- Rapid response to load direction changes.
- Miniature size.

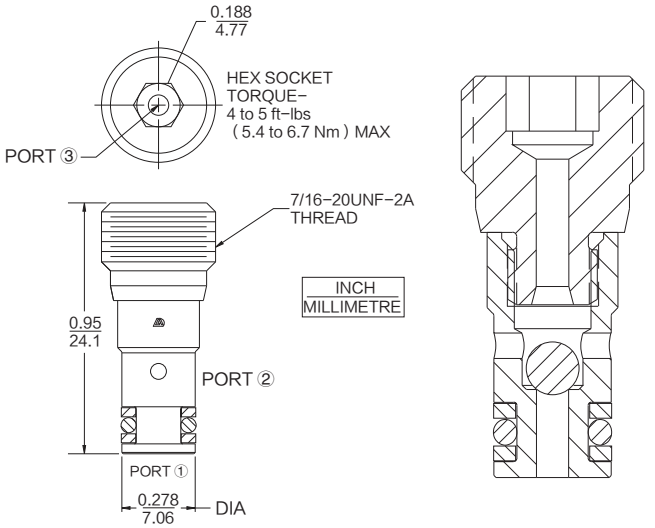
RATINGS

Operating Pressure: 240 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. at 207 bar(3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of7.4 to 420 cSt (50 to 2000 sus);
Cavity: ; T04-2D,See page 294.

PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.08 kg. (0.17 lbs.)
Steel with Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

TO ORDER

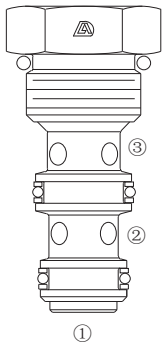
DLS04-B30-0-

Mounting
Below the Surface B

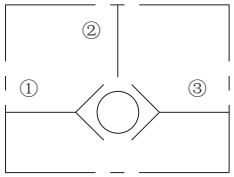
Porting
Cartridge Only 0

Seals
N Buna N (Std.)
V Fluorocarbon

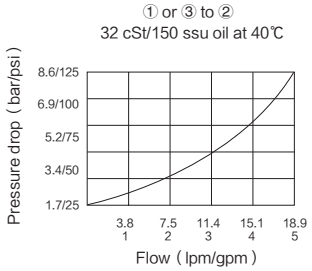
DLS08-30 Load Shuttle, Ball-Type



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A load-shuttling, screw-in, cartridge-style hydraulic check valve, for use in blocking circuits where a priority of fl ow/direction is given to a higher pressure circuit over a lower one.

OPERATION

The DLS08-30 will allow flow from the higher pressure of ① or ③ port to the ② port.
The valve is commonly used to direct oil from the pressure side of a bidirectional hydraulic motor to a pressure-released hydraulic brake.

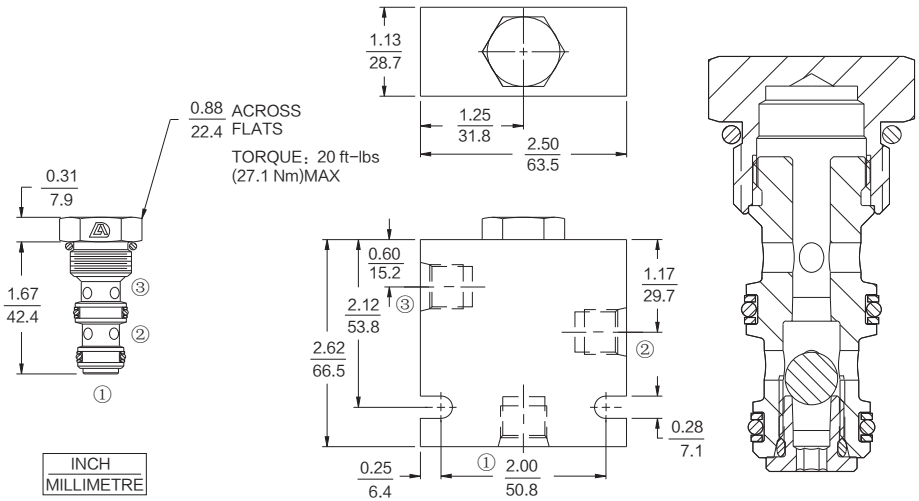
FEATURES

- Rapid response to load direction changes.
- Compact size.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage:
0.25 cc/minute (5 drops/minute) max. at 207 bar(3000 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-3A; See page 297.

DIMENSIONS



ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

MATERIALS

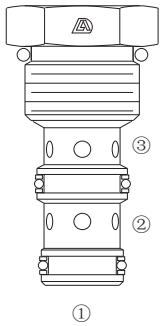
Cartridge: Weight:
0.08 kg (0.17 lbs) ;
Steel with Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.27 kg (0.60 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

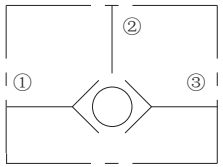
DLS08-30 - - -

Porting		Seals	
Cartridge Only	0	N	Buna N (Std.)
SAE 4	4T	V	Fluorocarbon
SAE 6	6T		
1/4 in. BSP*	2B		
3/8 in. BSP*	3B		

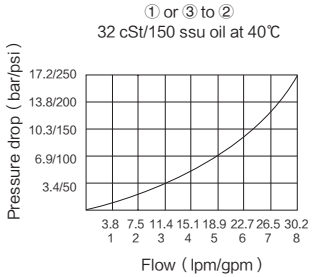
DLS10-30 Load Shuttle, Ball-Type



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A load-shuttling, screw-in, cartridge-style hydraulic check valve, for use in blocking
circuits where a priority of fl ow/direction is given to a higher pressure circuit over a lower one.

OPERATION

The DLS10-30 will allow flow from the higher pressure of ① or ③ port to the ② port.
The valve is commonly used to direct oil from the pressure side of a bidirectional hydraulic motor to a pressure-released hydraulic brake.

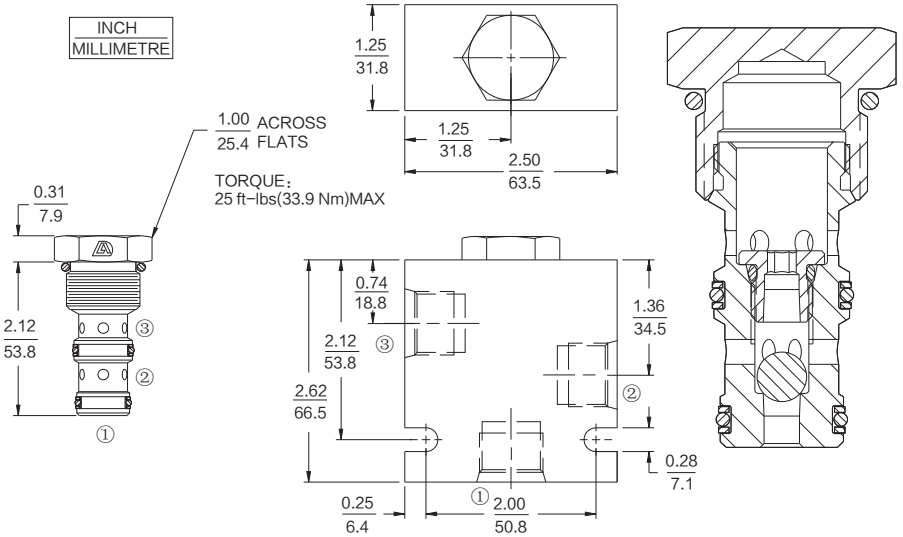
FEATURES

- Rapid response to load direction changes.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage:
0.25 cc/minute (5 drops/minute) max. at 207 bar(3000 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 297.

DIMENSIONS



ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

MATERIALS

Cartridge: Weight:
0.08 kg (0.17 lbs) ;
Steel with Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.36 kg (0.80 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductileiron bodies available; dimensions may differ.

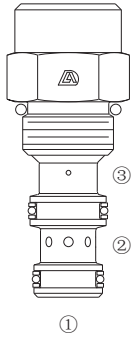
TO ORDER

DLS10-30 _ _ _ _

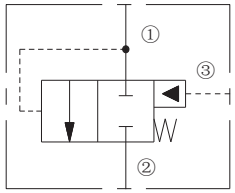
Porting	
Cartridge Only	0
SAE6	6T
SAE8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals	
N	Buna N (Std.)
V	Fluorocarbon

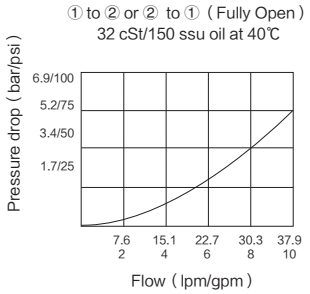
DEP08-35 Piloted Directional Element



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A spool-type, screw-in, cartridge-style, hydraulic directional element, with multifunction potential when used with other directional, pressure, or flow control devices.

OPERATION

The DEP08-35 is a spring-biased blocking valve which will shift to allow full flow from ① to ② only when pressure at ① exceeds the cumulative pressure of ③ , plus the bias spring pressure value.DEP08-35 is a pilot-to-close directional valve.
With no pressure at ③ , flow will be allowed from ① to ② once the bias spring force isovercome with pressure at ① .

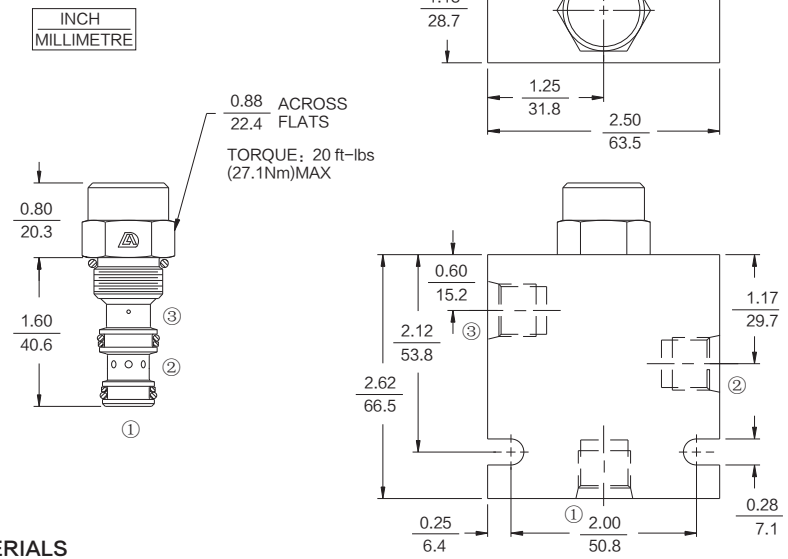
FEATURES

- Multiple function/application potential.
- Low pressure drop.
- Industry common cavity.
- Compact size.

RATINGS

Maximum Operating Pressure:
345 bar (5000 psi) with steel or ductile housing;
207 bar (3000 psi) with aluminum housing
Flow: See Performance Chart
Internal Leakage:
115 ml per minute (7 cu. in. per minute)at 345 bar (5000 psi)
Bias Spring:
0.7 bar (10 psi)
2.8 bar (40 psi)
5.5 bar (80 psi)
7.6 bar (110 psi)
10.3 bar (150 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-3A; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:
0.11 kg (0.25 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.64 kg (1.4 lbs) ;
Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi).
rated to 345 bar (5000 psi) ;
Standard Ported Body:Weight:
0.36 kg (0.80 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi).
Ductile iron bodies available; dimensions may differ

TO ORDER

DEP08-35 - - -

Porting

Cartridge Only	0
SAE 6 (Ductile)	6TD
SAE 6 (Steel)	6TS
SAE 6 (Alum.)	6T

Note: Aluminum body rated for 207 bar(3000 psi) max.

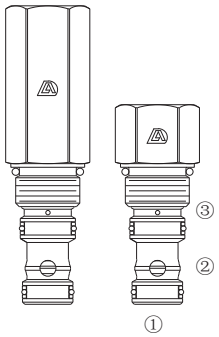
Seals

Buna N (Std.)	N
Fluorocarbon	V
Polyurethane	P

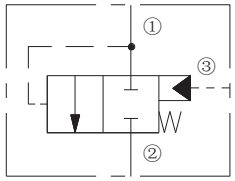
Bias Spring

10	0.7 bar (10 psi)
40	2.8 bar (40 psi)
80	5.5 bar (80 psi)
110	7.6 bar (110 psi)
150	10.3 bar (150 psi)

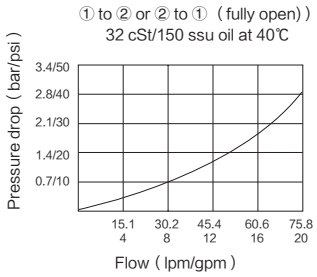
DEP10-S35 Piloted Spool-Type Logic Element



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A spool-type, screw-in, cartridge-style, hydraulic directional element, with multi-function potential when used with other directional, pressure, or flow control devices.

OPERATION

DEP10-S35 is a spring-biased blocking valve which will shift to allow full flow from ① to ② only when pressure at ① exceeds the cumulative pressure of ③, plus the bias spring pressure value.

DEP10-S35 is a pilot-to-close directional valve.
With no pressure at ③, flow will be allowed from ① to ② once the bias spring force is overcome with pressure at ①.

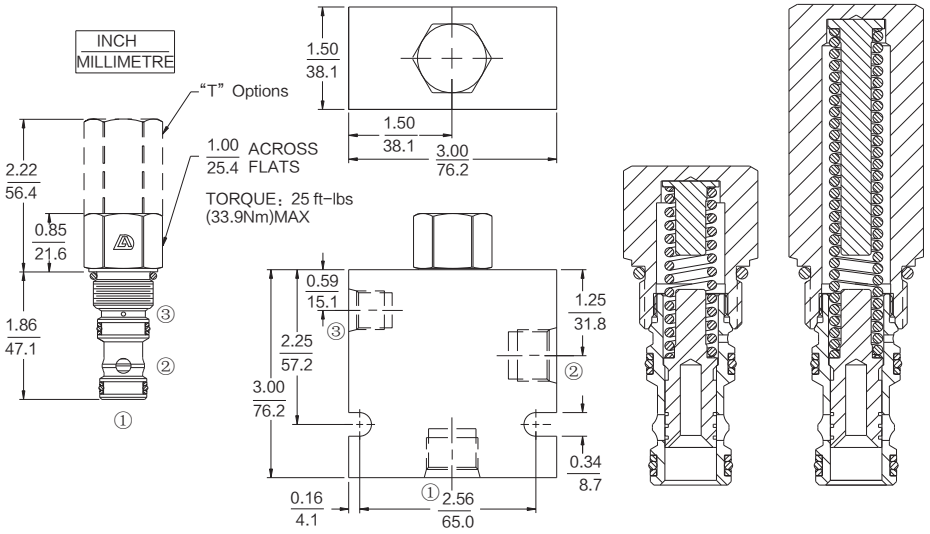
FEATURES

- Multiple function/application potential.
- Low pressure drop.
- Industry common cavity.

RATINGS

Operating Pressure:
350 bar (5000 psi) cartridge; 240 bar (3500 psi) standard aluminum housing;350 bar (5000psi) ductile iron housing.
Flow: See Performance Chart
Internal Leakage:
164 ml per minute (10 cu. in. per minute)at 207 bar (3000 psi)
Bias Spring:
0.7 bar (10 psi)
2.8 bar (40 psi)
5.5 bar (80 psi)
7.6 bar (110 psi)
11.0 bar (160 psi)
note: Tall Cap Options available with 11.0 bar (160 psi) spring
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-3AS; See page 302.

DIMENSIONS



ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

MATERIALS

Cartridge: Weight:: 0.15 kg (0.32 lbs);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard
Standard Ported Body:Weight:
0.32 kg (0.70 lbs);
Anodized highstrength aluminum alloy, rated to 240 bar (3500 psi). Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi);
Weight and dimensions may differ.

TO ORDER

DEP10-S35 - - - -

Options
None (Blank)
Tall Cap T

Porting

Cartridge Only	0
SAE 8*	8T
SAE 8*	8TS
SAE 8*	8TD
SAE 10*	10T
SAE 12*	12T

Bias Spring

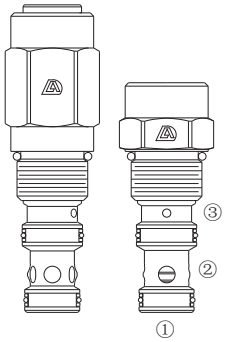
10	0.7 bar (10 psi)
40	2.8 bar (40 psi)
80	5.52 bar (80 psi)
110	7.6 bar (110 psi)
‡160	11.0 bar (160 psi)
‡230	15.9 bar (230 psi)

‡ T Option required

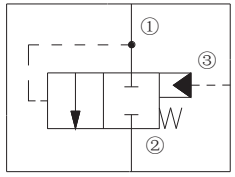
Seals

N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane (required for pressures over 240 bar/3500 psi)

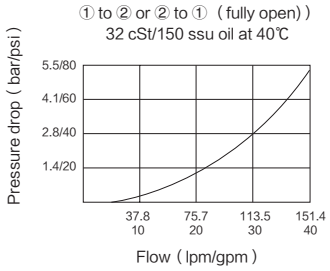
DEP12-S35 Piloted Spool-Type Logic Element



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A spool-type, screw-in, cartridge-style, hydraulic directional element, with multi-function potential when used with other directional, pressure, or flow control devices.

OPERATION

DEP12-S35 is a spring-biased blocking valve which will shift to allow full flow from ① to ② only when pressure at ① exceeds the cumulative pressure of ③, plus the bias spring pressure value.
DEP12-S35 is a pilot-to-close directional valve.
With no pressure at ③, flow will be allowed from ① to ② once the bias spring force is overcome with pressure at 1.

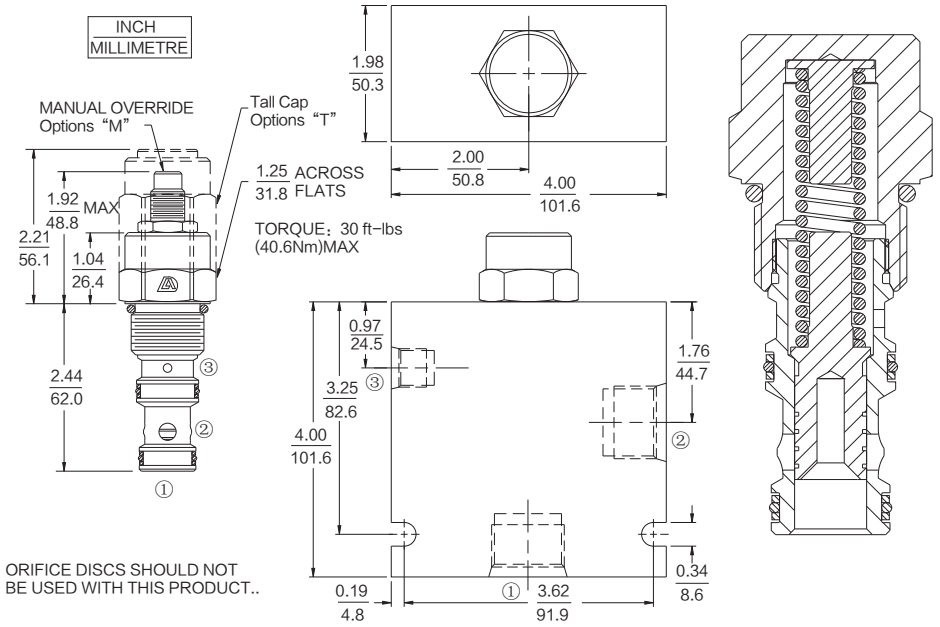
FEATURES

- Multiple function/application potential.
- Low pressure drop.
- Industry common cavity.
- Manual override option available with 80 psi spring only.

RATINGS

Operating Pressure:
350 bar (5000 psi) cartridge;
standard aluminum housing 240 bar (3500psi)
Flow: See Performance Chart
Internal Leakage:
131 ml per minute (8 cu. in. per minute)at 350 bar (5000 psi)
Bias Spring:
7.0 bar (100 psi)
11.0 bar (160 psi), Tall Cap Required
16.5 bar (240 psi), Tall Cap Required
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T12-3AS; See page 306.

DIMENSIONS



MATERIALS

Cartridge: Weight:
0.23 kg (0.5 lbs);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard
Standard Ported Body:Weight:
1.13 kg (2.50 lbs);
Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ.

TO ORDER

DEP12-S35 - - - -

Options
None (Blank)
Tall Cap T
Manual Override M

Manual Override available with 80 psi spring only.

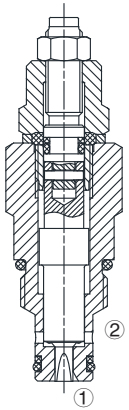
Porting
Cartridge Only 0
SAE 12* 12T
*SAE 6 pilot port

Seals
N Buna N (Std.)
V Fluorocarbon
P Polyurethane (Required for pressures over 240 bar/3500 psi)

Bias Spring
10 0.7 bar (10 psi)
80 5.5 bar (80 psi)
100 7 bar (100 psi)
‡160 11 bar (160 psi)
‡240 16.5 bar (240 psi)

‡ T Option required

DNV-08 Needle Valve



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve.

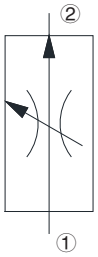
OPERATION

The DNV-08 increases its orifice value from fully closed to fully open with counterclockwise adjustment rotation.

FEATURES

- Long life.
- Zero leakage can be realized when closing.
- Large adjustment range.
- Desired settings may be locked down.
- Can be completely shut down.
- Compact structure.
- Industry common cavity.

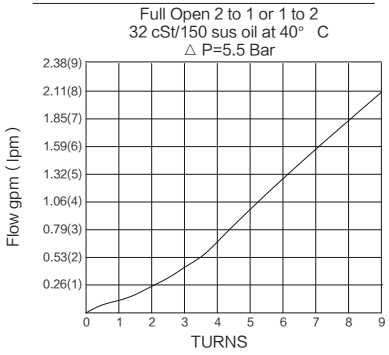
ISO SYMBOL



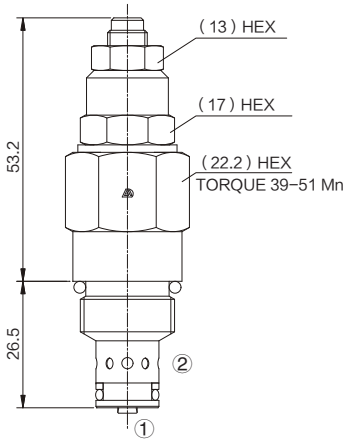
RATINGS

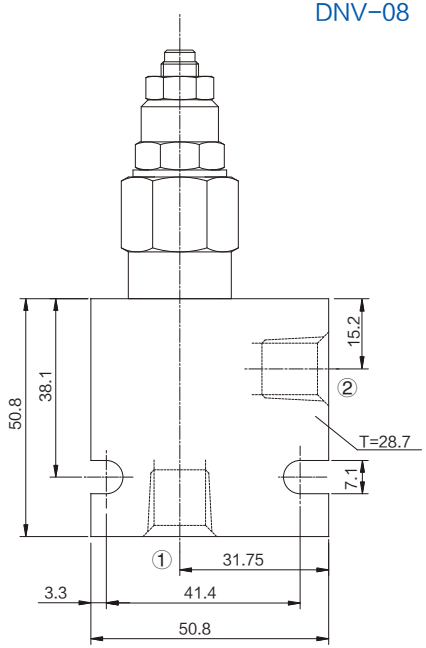
Operating Pressure: Cartridge:250 bar (3650 psi)
Flow: See performance chart Temperature: -30 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T08-2E; see page 297 .

PERFORMANCE (Cartridge Only)



DIMENSIONS





MATERIALS

Cartridge: Weight: 0.23 kg. (0.50 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-up standard;
Anodized aluminum knobs.
Special Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ.

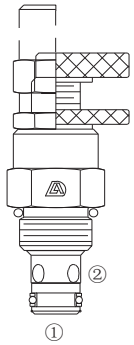
TO ORDER

DNV-08 -

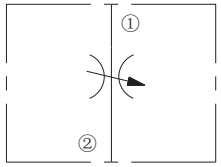
Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
G1/4	2G
G3/8	3G

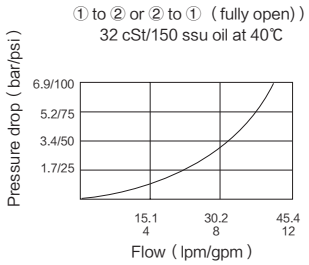
DNV08-20 Needle Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve.

OPERATION

The DNV08-20, increases its orifice value from fully closed to fully open with counter clockwise adjustment rotation.

FEATURES

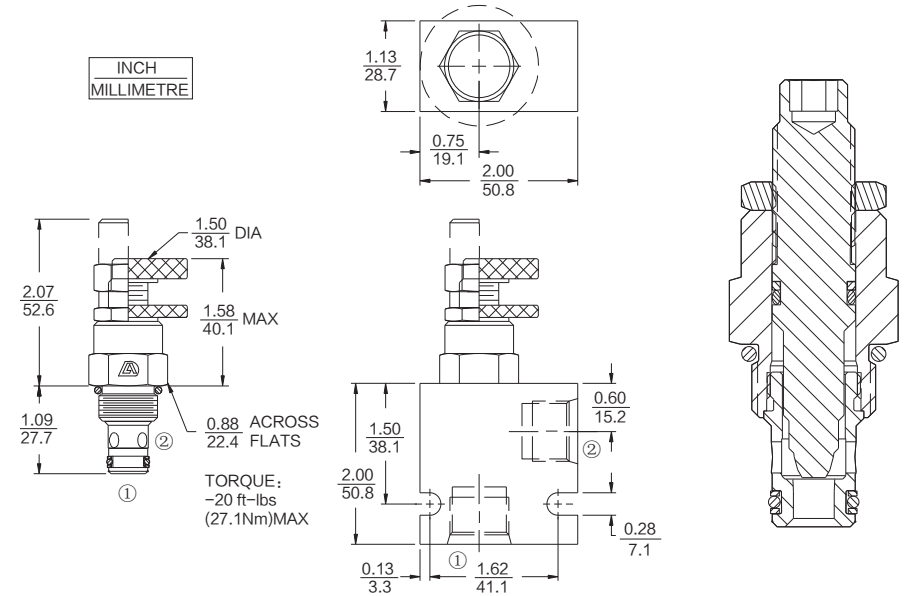
- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Aluminum knob option.
- Positive shut-off.
- Linear adjustment.
- Compact size.

RATINGS

Operating Pressure:240 bar (3500 psi)
Flow:42 lpm (11 gpm) nominal at 7 bar (100 psi) differential at full open 3.5 turns
Internal Leakage:0.25 cc/minute (5 drop/minute) max. at shut-off
Adjustment Torque Required:
0.56 Nm (5 inch-pounds) at 7 bar (100 psi);
5.41 Nm (48 inch-pounds) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E; See page 297.

DNV08-20

DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.10kg (0.23 lbs);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Standard Ported Body:Weight:
0.16kg (0.35 lbs);
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi).
Ductileiron bodies available; dimensions may differ.

TO ORDER

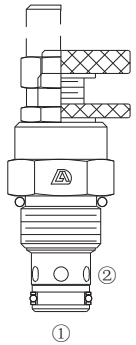
DNV08-20 - - -

Adjustment Option	
1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Top Knob with Lock Nut	D
Top Knob Only	E
Lockwire Holes (with Option C)	L

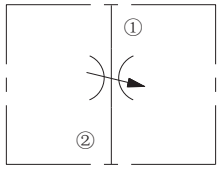
Seals	
N	Buna N (Std.)
V	Fluorocarbon

Porting	
0	Cartridge Only
4T	SAE 4
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

DNV10-20 Needle Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)

DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve.

OPERATION

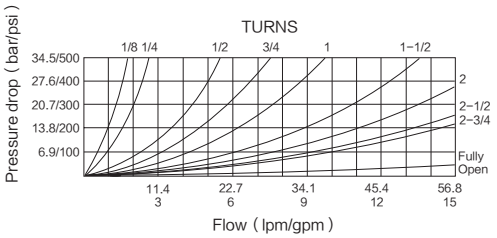
The DNV10-20 increases its orifi ce value from fully closed to fully open with counter clockwise adjustment rotation.

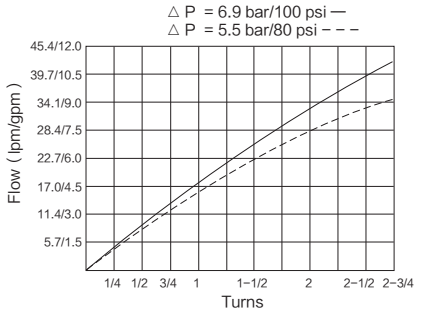
FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Aluminum knob option.
- Positive shut-off..
- Linear adjustment.

RATINGS

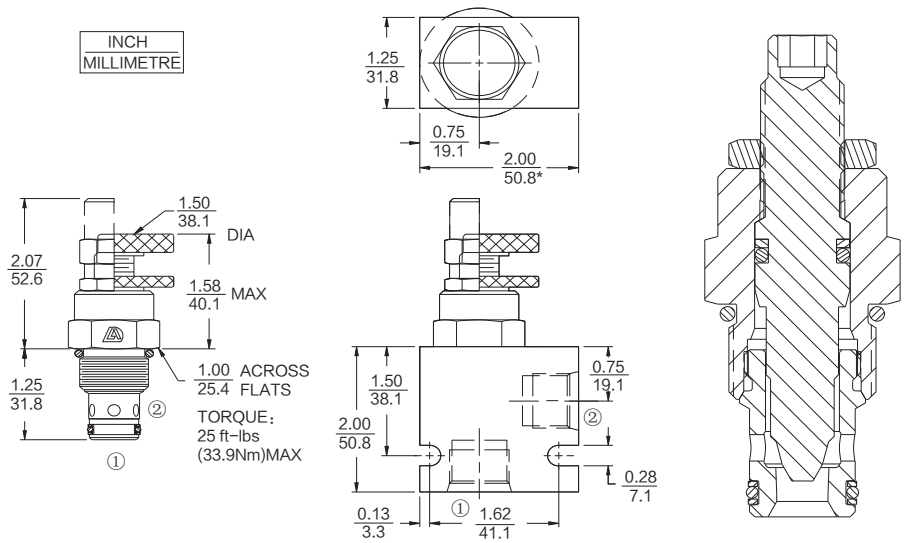
Operating Pressure:240 bar （3500 psi）
Flow:
45 lpm (12 gpm) nominal at 7 bar (100 psi) at full open 3.5 turns
Internal Leakage:0.25 cc/minute (5 drop/minute) max. at shut-off
Adjustment Torque Required:
0.56 Nm (5 inch-pounds) at 7 bar (100 psi);
5.41Nm (48 inch-pounds) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B；See page 300.





DIMENSIONS

INCH
MILLIMETRE



BSP BODY-55.9

MATERIALS

Cartridge: Weight:
0.15kg（0.33 lbs）;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.

BODY:Weight:
0.16kg（0.35 lbs）;
Anodized high-strength aluminum alloy, rated to 240 bar (3500 psi).
Ductile ironbodies available; dimensions may differ.

TO ORDER

DNV10-20 - - -

Adjustment Option

1/4 in. Hex Allen	A
Head1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover	C
CapTop Knob with Lock	D
NutTop Knob OnlyLockwire Holes (with Option C)	E
	L

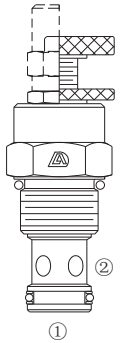
Seals

N	Buna N (Std.)
V	Fluorocarbon

Porting

0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

DNV12-20 Needle Valve



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve.

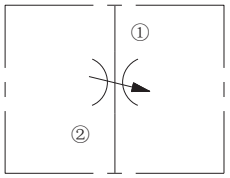
OPERATION

The DNV12-20 increases the size of its orifice from fully closed to fully open with counter clockwise adjustment rotation.

FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Aluminum knob option.
- Positive shut-off..
- Linear adjustment.

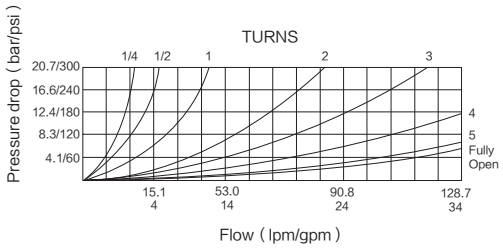
ISO SYMBOL

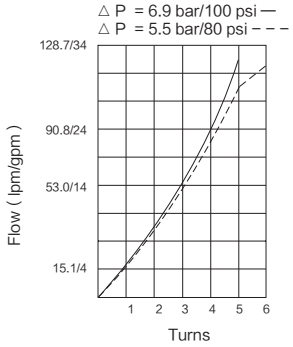


RATINGS

Operating Pressure:240 bar （3500 psi）
Flow:
113.6 lpm (30 gpm) nominal at 7 bar (100 psi) at full open 4.5 turns
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at shut-off
Adjustment Torque Required:0.
17 Nm (1.5 lb.-in.) at 7 bar (100 psi);
16.9 Nm (150 lb.-in.) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity：T12-2A；See page 304.

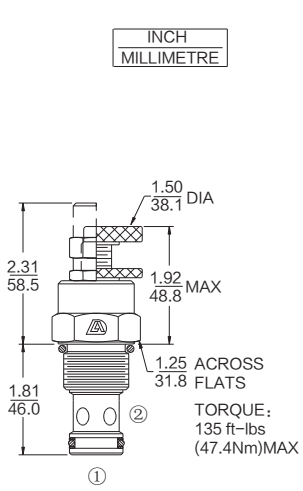
PERFORMANCE (Cartridge Only)

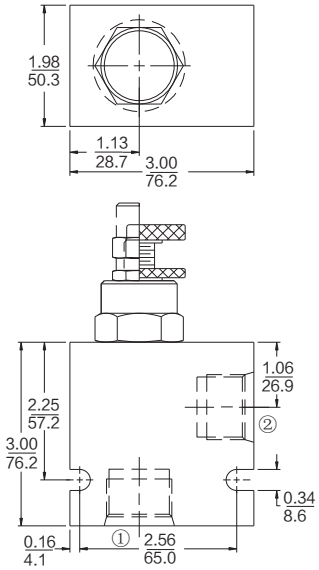


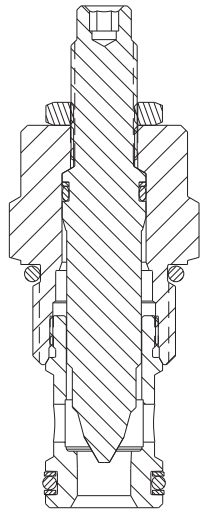


DIMENSIONS

INCH
MILLIMETRE







MATERIALS

Cartridge: Weight:0.20kg（0.45 lbs）；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
BODY:Weight:
0.57kg（1.25 lbs）；
Anodized high-strength aluminum alloy, rated to 240 bar (3500 psi).
Ductile ironbodies available; dimensions may differ.

TO ORDER

DNV12-20 - - -

Adjustment Option

1/4 in. Hex Allen	A
Head1-1/2 in. Dia. Alum.	B
KnobsOption A with Cover	C
CapTop Knob with Lock	D
NutTop Knob Only	E

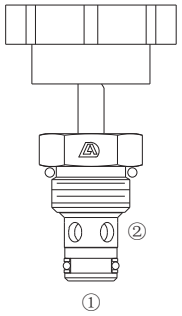
Seals

N	Buna N (Std.)
V	Fluorocarbon

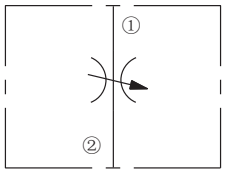
Porting

0	Cartridge Only
10T	SAE10
12T	SAE 12
16T	SAE 16
4B	1/2 in. BSP*
6B	3/4 in. BSP*
8B	1 in. BSP*

DNV08-21 Needle Valve



ISO SYMBOL



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve. It is intended for applications requiring fine adjustment over multiple turns.

OPERATION

The DNV08-21 increases its orifi ce value from fully closed to fully open with adjustment rotation in the counterclockwise direction. Effective adjustment is linear to eight turns.

Note: This is intended as a low-effort adjustment suitable for operation through linkage. It may be unsuitable in environments where vibration is present.

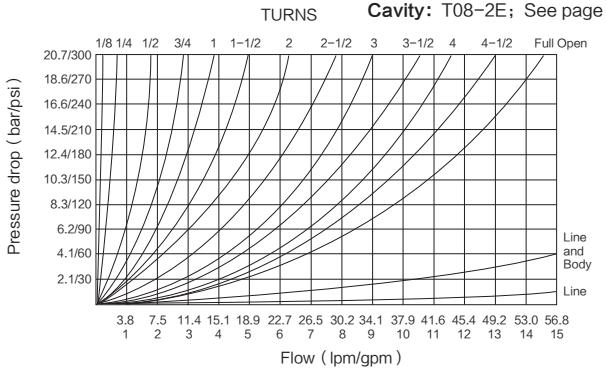
FEATURES

- Adjustments cannot be backed out of the valve.
- Hardened parts for long life.
- Industry common cavity.
- Fine/low effort adjustment.
- Positive shut-off..
- Linear adjustment.

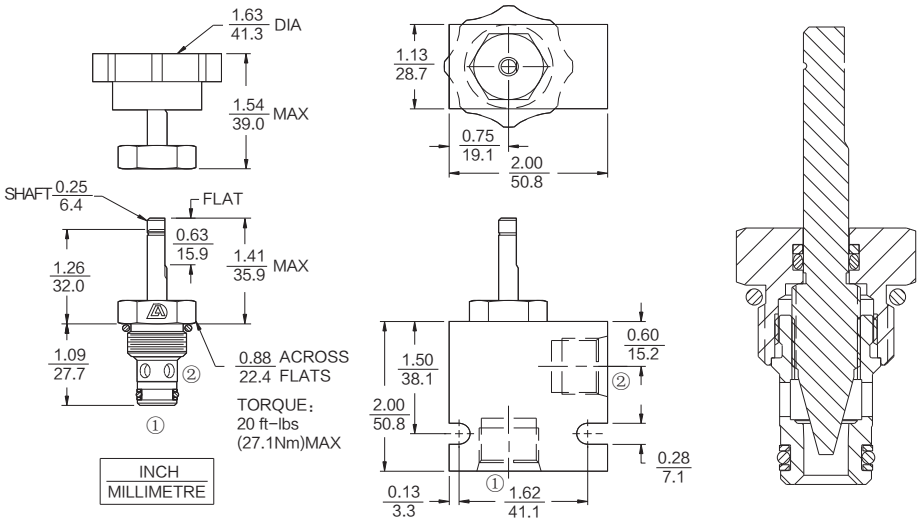
RATINGS

Operating Pressure:240 bar （3500 psi）
Flow: See Performance Chart
Internal Leakage:0.25 cc/minute (5 drop/minute) max. at shut-off
Adjustment Torque Required:
0.34 Nm (3 inch-pounds) at 7 bar (100 psi);
0.68 Nm(6 inch-pounds) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E；See page 297.

PERFORMANCE (Cartridge Only)



DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.14kg（0.23 lbs）;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Plastic knob with metal insert.

Standard Ported Body:Weight:
0.16kg（0.35 lbs）;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar（3500 psi）;
Ductile iron bodies available; dimensions may differ.

TO ORDER

DNV08-21 - - -

Adjustment Option

Extended Shaft Only	T
Plastic Knob	E

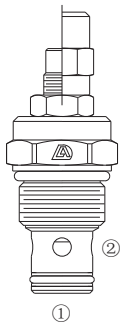
Seals

N	Buna N (Std.)
V	Fluorocarbon

Porting

0	Cartridge Only
4T	SAE 4
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

DNV10-22 Needle Valve



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow restrictor valve that requires only 5-1/2 turns for full adjustment.

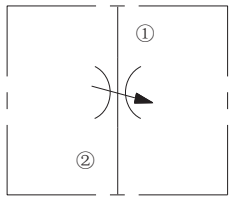
OPERATION

The DNV10-22 increases its orifi ce value from fully closed to fully open with counterclockwise adjustment rotation.
Effective adjustment is linear over the 5-1/2 turn adjustment range. Settings are lockable in any position.

FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Positive shut-off..
- Linear adjustment.

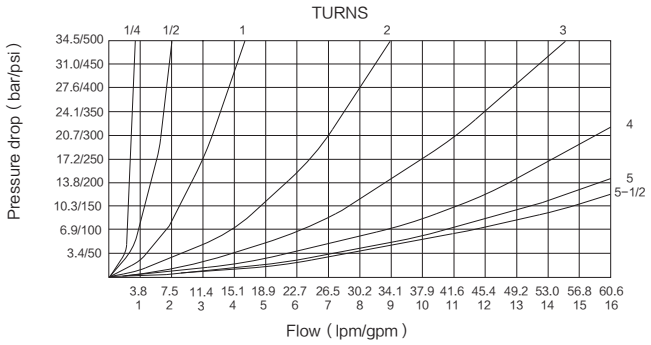
ISO SYMBOL



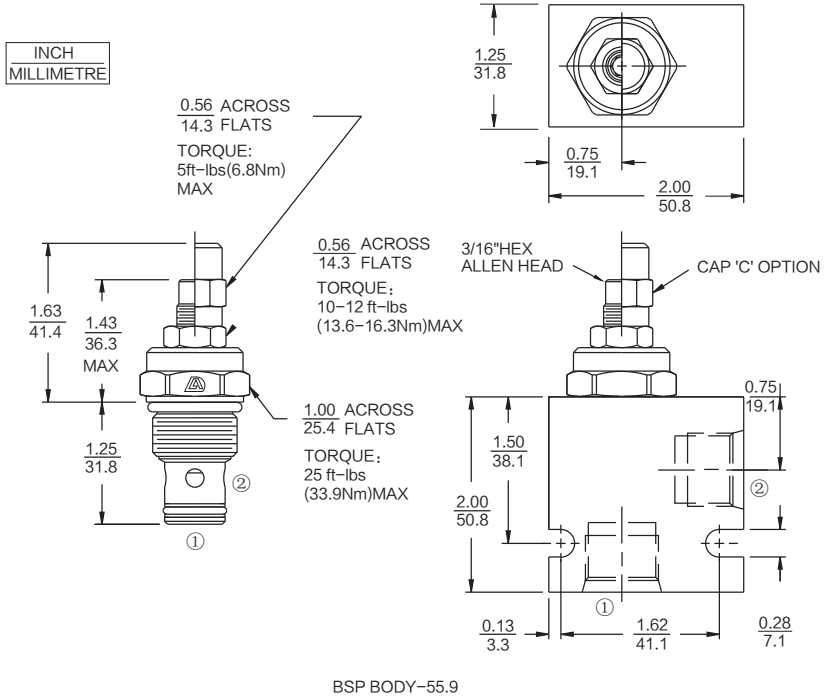
RATINGS

Operating Pressure: Inlet：240 bar （3500 psi）
Flow:
57 lpm (15 gpm) nominal at 11 bar (160 psi) at full open 5.5 turns
Internal Leakage:0.05 cc/minute (1 drop/minute) max. at shut-off
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B；See page 300.

PERFORMANCE (Cartridge Only)



DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.15kg（0.33 lbs）；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
BODY:Weight:0.16kg（0.35 lbs）；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar（3500 psi）；
Ductile iron bodies available; dimensions may differ

TO ORDER

DNV10-22 - -

Adjustment Option

3/16 寸 HEX ALLEN HEAD	A
OptionsA，with Cover Cap	C

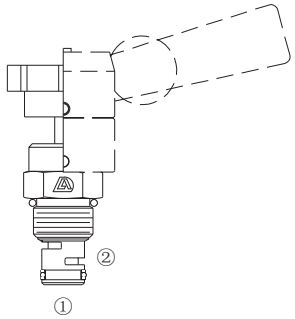
Seals

N	Buna N (Std.)
V	Fluorocarbon

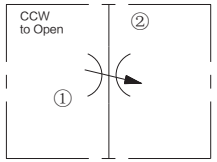
Porting

0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*

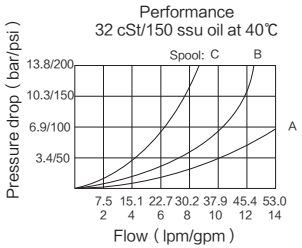
DMR10-20 Needle Valve (Manual Rotary Flow Control)

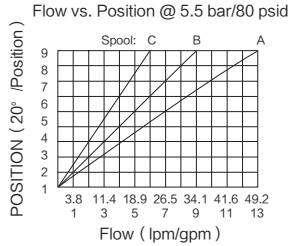


ISO SYMBOL



PERFORMANCE (Cartridge Only)





DESCRIPTION

A manually-adjustable variable orifice, offering linear control with adaptability to a variety of adjustment operators (ordered separately).

OPERATION

The DMR10-20，In extreme clockwise position, valve is fully closed (normally closed). Counterclockwise rotation of 180° gradually increases flow. The first 10° (approx.) of rotation is deadband. The last 15° of rotation increases flow very little.
For a normally-open version with counterclockwise rotation gradually decreasing flow, consult factory.
NOTE: Use of the valve in the ① to ② direction is not recommended if the plastic knob operator is used. Because of the low effort (internal bearing used) adjustment, flow forces may cause setting change.
The valve will operate ① to ② well with handle-type operator kits.

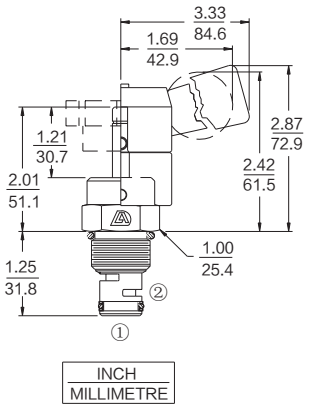
FEATURES

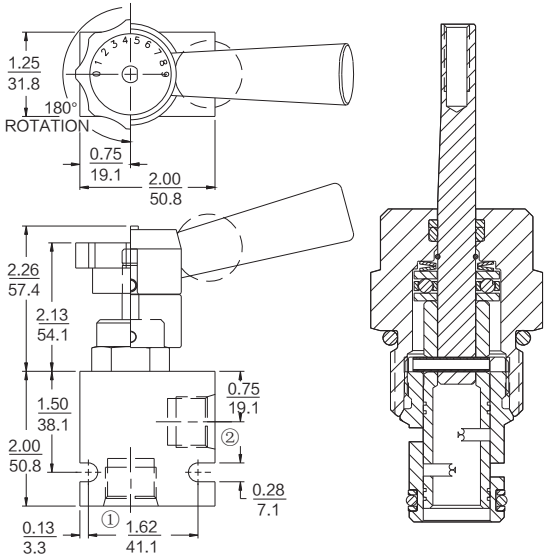
- Ten-position detent or infi nite friction lock options.
- Good linearity in three fl ow range options.
- Adaptable to a variety of operators.
- Optional lock-down bracket.
- Heavy-duty construction.
- Low effort adjustment.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
MAX.Flow: See Performance Chart
Flow Rate Delivered at 5.5 bar (80 psi) Differential:
Model Code Flow
A 49 lpm (13 gpm)
B 34 lpm (9 gpm)
C 22 lpm (6 gpm)
Internal Leakage:164 cc/min. (10 cu. in.)
Adjustment Torque Required:
7 bar (100 psi): 3.9 Nm (35 lb.-in.)
240 bar (3500 psi): 5.1 Nm (45 lb.-in.)
Temperature:-40℃ ~ 120℃ (with standard Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B；See page 300.

DIMENSIONS





BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.12kg (0.26 lbs)；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and Fluorocarbon back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35 lbs)；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi)；
Ductile iron bodies available; dimensions may differ.
Lever-Type Handle: Weight:
0.18kg (0.38lbs)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Plastic lever arm.

TO ORDER

DMR10-20 _ _ _ _

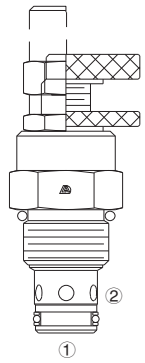
Options
None (Blank)

FLOW
49 lpm (13 gpm) A
34 lpm (9 gpm) B
22 lpm (6 gpm) C

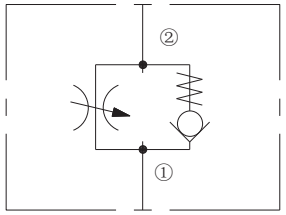
Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
SAE 8 8TL
(Lock-Down Bracket)
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B

Seals
N Buna N (Std.)
V Fluorocarbon

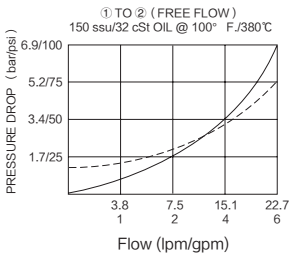
DFC08-20 Flow Control



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow control valve with reverse flow check.

OPERATION

The DFC08-20 increases its orifice value from fully closed to fully open with counterclockwise adjustment rotation.

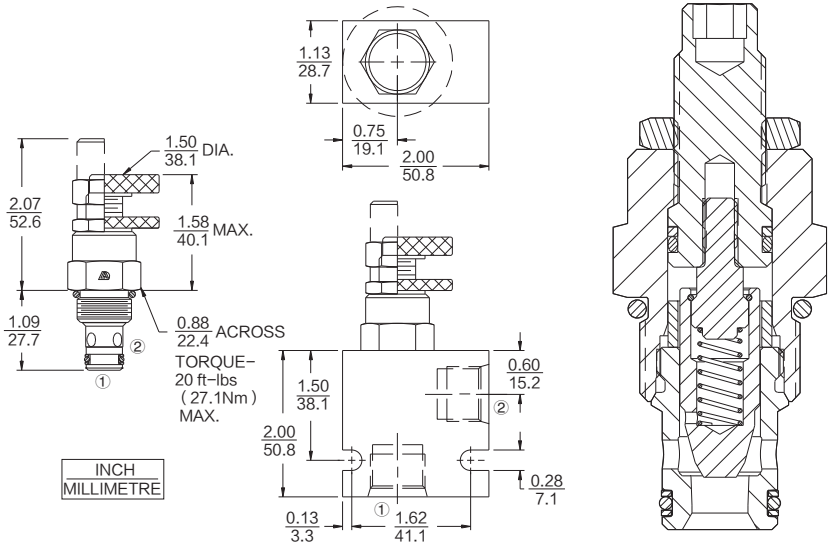
FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Aluminum knob option.
- Positive shut-off.
- Linear adjustment.

RATINGS

Operating Pressure: 240 bar (3500 psi)
Flow: 22.7 lpm (6gpm) nominal at 7 bar (100 psi) at full open 3.0 turns
Internal Leakage: 0.50 cc/minute (10 drops/minute) max. at shut-off
Adjustment Torque Required: 0.34 Nm (3 inch-pounds) at 7 bar (100 psi); 4.50 Nm (40 inch-pounds) at 207 bar (3000 psi)
Temperature: -40 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.17 kg. (0.37 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Standard Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DFC08-20 ___ - ___ ___ ___ - ___

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knob	B
Option A with Cover Cap	C
Top Knob with Lock Nut	D
Top Knob Only	E

Seals

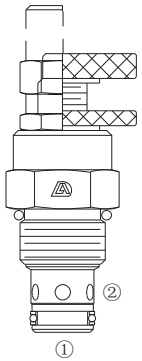
N	Buna N (Std.)
V	Fluorocarbon

Porting

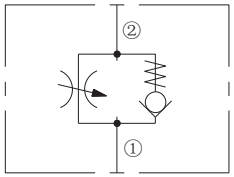
0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

*BSP Body; U.K. Mfr. Only

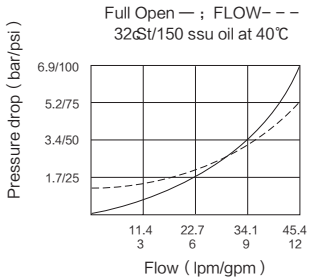
DFC10-20 Flow Control



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow control valve with reverse fl ow check.

OPERATION

The DFC10-20 ncreases its orifice value from fully closed to fully open with counter clockwise adjustment rotation.

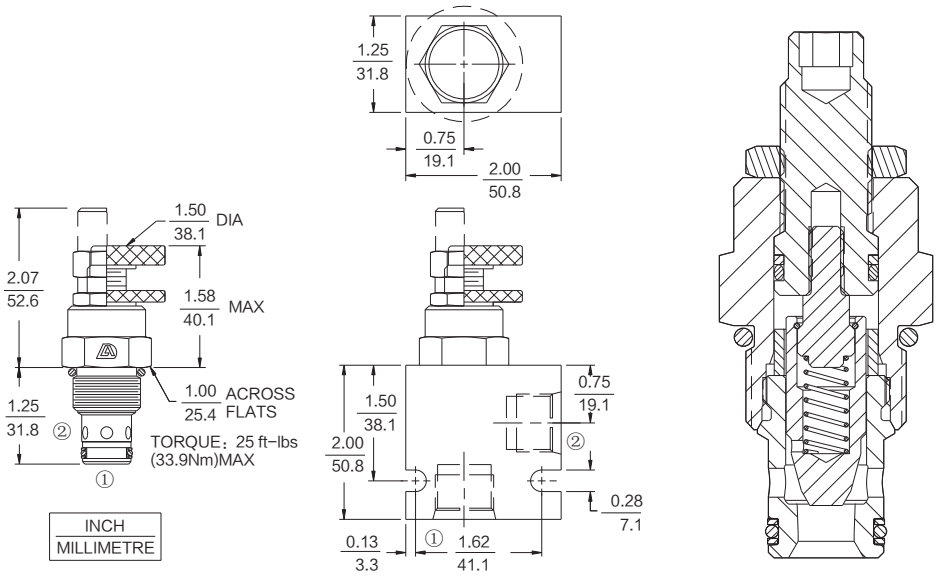
FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Aluminum knob option.
- Positive shut-off..
- Linear adjustment.

RATINGS

Operating Pressure:240 bar （3500 psi）
Flow:
45 lpm (12 gpm) nominal at 7 bar (100 psi) at full open 3.0 turns
Internal Leakage:
0.50 cc/minute (10 drops/minute) max. at shut-off
Adjustment Torque Required:
0.34 Nm (3 inch-pounds) at 7 bar (100 psi);
4.50 Nm (40 inch-pounds) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B；See page 300.

DIMENSIONS



BSP BODY-55.9

MATERIALS

Cartridge: Weight:0.17kg（0.37lbs）;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Standard Ported Body:Weight:
0.16kg（0.35 lbs）;
Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ.

TO ORDER

DFC10-20 - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Top Knob with Lock Nut	D
Top Knob Only	E

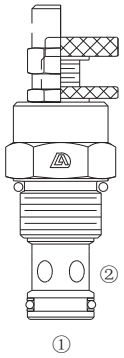
Seals

N	Buna N (Std.)
V	Fluorocarbon

Porting

0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

DFC12-20 Flow Control



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow control valve with reverse flow check.

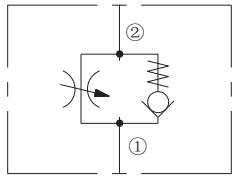
OPERATION

The DFC12-20 adjusts flow passage from ② to ① to full open with counterclockwise rotation.
The cartridge has a fully guided check which is spring-biased closed until sufficient pressure is applied at ① to open to ② .

FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Aluminum knob option.
- Positive shut-off..
- Linear adjustment.

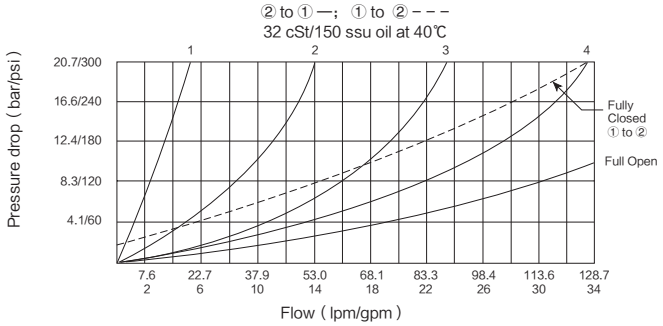
ISO SYMBOL



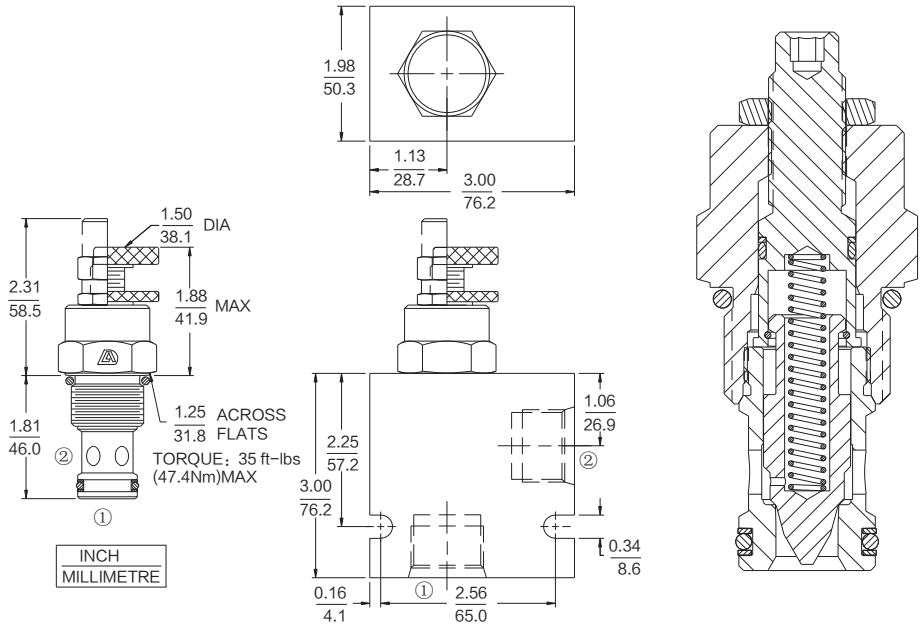
RATINGS

Operating Pressure:240 bar (3500 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 ml/minute (3 drops/minute) max. at 240 bar (3500 psi)
Adjustment Torque Required:
7.0 bar (100 psi): 0.17 Nm (1.5 lb.-in.)
207 bar (3000 psi): 16.9 Nm (150 lb.-in.)
Bias Spring: 1.4 bar (20 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T12-2A; See page 304.

PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight:0.20kg (0.45lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body:Weight:
0.57kg (1.25 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ.

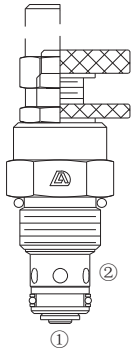
TO ORDER

DFC12-20 - - -

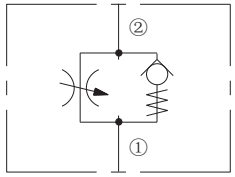
Adjustment Option		Seals	
1/4 in. Hex Allen Head	A	N	Buna N (Std.)
1-1/2 in. Dia. Alum. Knobs	B	V	Fluorocarbon
Option A with Cover Cap	C		
Top Knob with Lock Nut	D		
Top Knob Only	E		

Porting	
0	Cartridge Only
10T	SAE 10
12T	SAE 12
16T	SAE 16
4B	1/2 in. BSP*
6B	3/4 in. BSP*
8B	1 in. BSP*

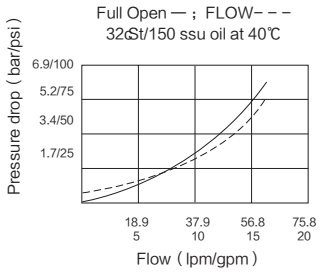
DFC10-21 Flow Control



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, variable orifice, hydraulic flow control valve with reverse flow check.

OPERATION

The DFC10-21 increases its orifice value from fully closed to fully open with clockwise adjustment rotation.

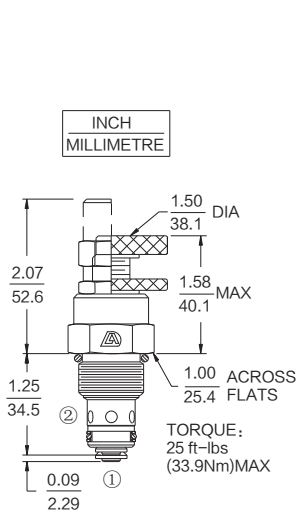
FEATURES

- Adjustments cannot be backed out of the valve.
- Desired settings may be locked down.
- Hardened parts for long life.
- Industry common cavity.
- Aluminum knob option.
- Positive shut-off..
- Linear adjustment.

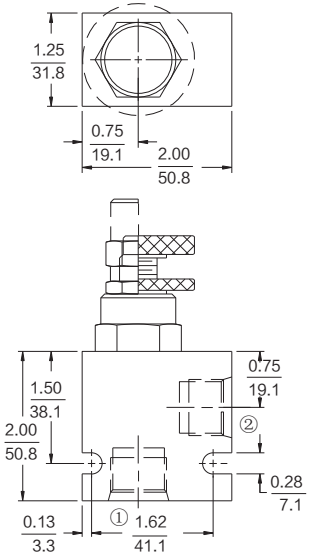
RATINGS

Operating Pressure:240 bar （3500 psi）
Flow:57 lpm (15 gpm) nominal at 5.5 bar (80 psi) at full open 2.0 turns
Internal Leakage:
0.50 cc/minute (10 drops/minute) max. at shut-off
Adjustment Torque Required:
0.34 Nm (3 inch-pounds) at 7 bar (100 psi);
4.50 Nm (40 inch-pounds) at 207 bar (3000 psi)
Free Reverse Flow Check Bias Spring: See ordering information
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity：T10-2B；See page 300.

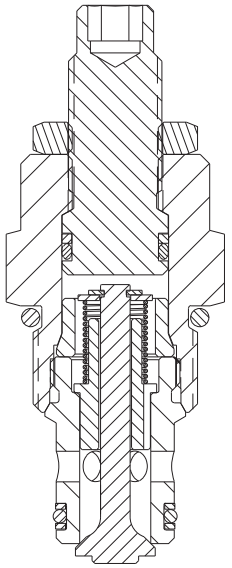
DIMENSIONS



ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT



BSP BODY-55.9



MATERIALS

Cartridge: Weight:0.17kg（0.37lbs）；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body:Weight:
0.16kg（0.35 lbs）；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar（3500 psi）；
Ductile iron bodies available; dimensions may differ

TO ORDER

DFC10-21 - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Top Knob with Lock Nut	D
Top Knob Only	E

Spring Setting

05	0.34 bar (5 psid)
25	1.72 bar (25 psid)
55	3.78 bar (55 psid)

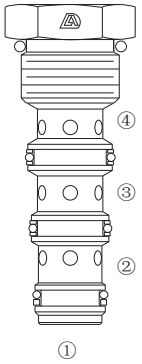
Seals

N	Buna N (Std.)
V	Fluorocarbon

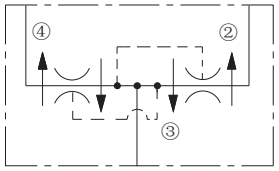
Porting

0	Cartridge Only
8T	SAE 8

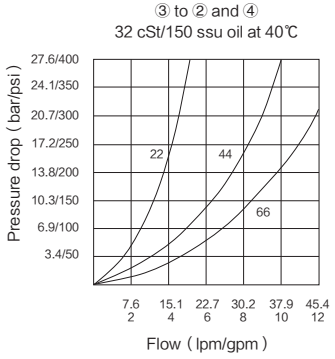
DFD50-45 Flow Divider/Combiner . . . Heavy Duty,



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A heavy duty, multifunction, screw-in, cartridge-style, spool-type flow divider/combiner.

OPERATION

In the dividing mode, the DFD50-45 , will divert input flow from port ③ to ports ② and ④ , based on the ratio specified, regardless of operating pressure.

When the flow direction is reversed the valve will combine flows from ② and ④ to port ③ . Synchronizing flow is provided in both the dividing and combining modes at "bottomed" conditions in cylinder applications and at "stalled" conditions in motor applications.

FEATURES

- Hardened parts for long life.
- Quiet, modulated response.
- Wide operating flow range.
- Synchronizing in dividing and combining modes.
- Floating cage — high installation torque.
- Industry common cavity.

RATINGS

Operating Pressure:345 bar (5000 psi)

Flow Options:

Input Flow:15.1 lpm (4 gpm) ; Ratio: 50:50; Model Code: 22

Input Flow:22.7 lpm (6 gpm) ; Ratio: 50:50; Model Code: 33

Input Flow:34.1 lpm (9 gpm) ; Ratio: 50:50; Model Code: 44

Input Flow:45.4 lpm (12 gpm) ; Ratio: 50:50; Model Code: 66

Synchronizing Flow: Approximately 10% of maximum inlet flow

Temperature:-40℃ ~ 120℃

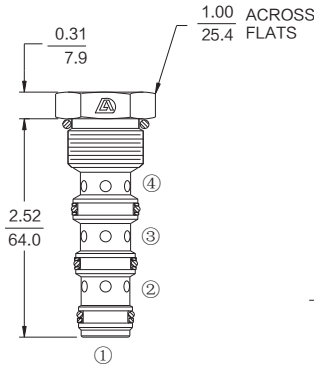
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity: T10-4A ; See page 303.

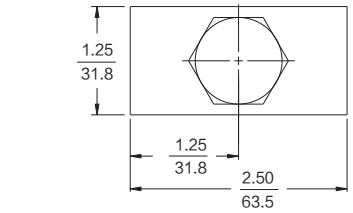
DIMENSIONS

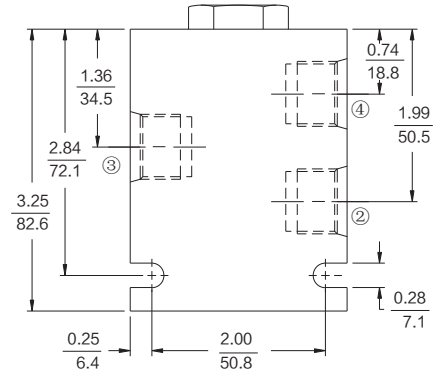
INCH
MILLIMETRE

TORQUE:
48-52 ft-lbs (65-71Nm)



Port 1 is not used.





MATERIALS

Cartridge: Weight:0.10kg (0.23 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.

Standard Ported Body: Weight:
0.34kg (0.75lbs) ;
Anodized highstrength
6061 T6 aluminum alloy,
rated to 240 bar (3500 psi) ;
Required for operation
over 240 bar (3500 psi);
Ductile iron bodies available;
dimensions may differ.

TO ORDER

DFD50-45 - - -

Ported Bodies

Cartridge Only	0
SAE 6 (all ports)	6T
SAE 8 ③	
SAE 6 ② and ④	8D
1/4 in. BSP* ((all ports)	2B
3/8 in. BSP* ((all ports)	3B
1/2 in. BSP* ③	
3/8 in. BSP* ② and ④	5B

Dividing/Combining Ratio

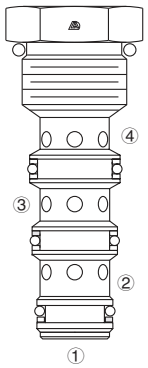
22	50:50 (15.1 lpm) (4 gpm) Input
33	50:50 (22.7 lpm) (6 gpm) Input
44	50:50 (34.1 lpm) (9 gpm) Input
66	50:50 (45.4 lpm) (12 gpm) Input

Required for operation over 240 bar (3500 psi); FD50 option.

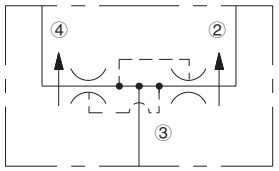
Seals

N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane*

DFD52-45 Flow Divider/Combiner . . . Heavy Duty,



ISO SYMBOL



DESCRIPTION

A heavy duty, multifunction, screw-in, cartridge-style, spool-type flow divider/combiner.

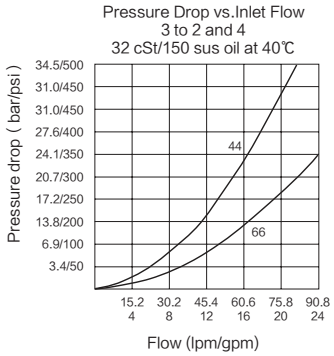
OPERATION

In the dividing mode, the DFD52-45 will divert input flow from port 3 to ports 2 and 4, based on the ratio specified, regardless of operating pressure. When the flow direction is reversed, the valve will combine flows from 2 and 4 to port 3.Synchronizing flow is provided in both the dividing and combining modes at "bottomed" conditions in cylinder applications and at "stalled" conditions in motor applications.

FEATURES

- Hardened parts for long life.
- Quiet, modulated response.
- Wide operating flow range.
- Synchronizing in dividing and combining modes.
- Floating cage — High installation torque.
- In dustry-common cavity.

PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure: 345 bar (5000 psi)

Flow Options:

Input Flow: 60.6 lpm (16 gpm); Ratio: 50:50; Model Code: 44

Input Flow: 90.8 lpm (24 gpm); Ratio: 50:50; Model Code: 66

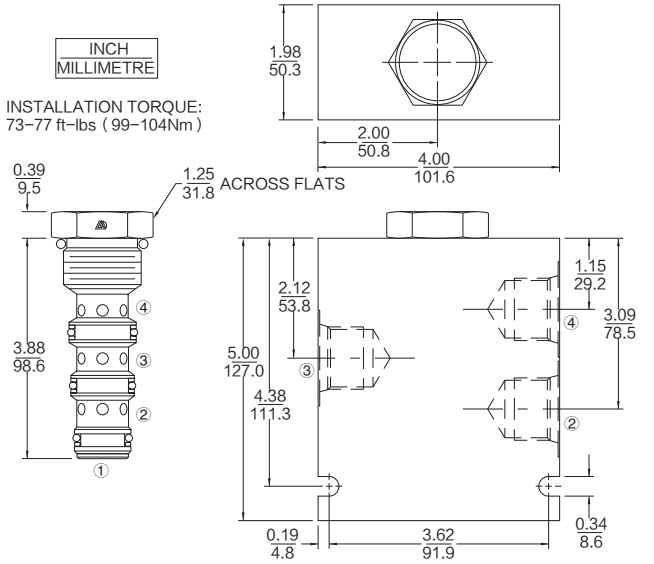
Flow Accuracy: 10% from 25 - 100% of rated flow

Temperature: -40 to 120° C

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);

Cavity: T12-4A; See page 306.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.28 kg. (0.61 lbs.)
Steel with hardened work surfaces; Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Ductile iron body required for operation over 207 bar (3000 psi). Aluminum bodies are available for lower pressure operation.

TO ORDER

DFD52-45 - ___ ___ ___ - ___ - ___

Special FD-Type Ductile Iron Ported Bodies

Cartridge Only	0
SAE 8	8TD
SAE 10	10TD
SAE 12	12TD
1/2 in. BSP*	4BD
3/4 in. BSP*	6BD

Flow Options(50/50Ratio)

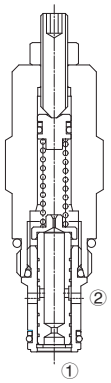
44	16 gpm (60 lpm)
66	24 gpm (90 lpm)

Consult factory for other flow options.

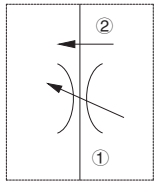
Seals

N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane (Required for operation over 240 bar/3500 psi)

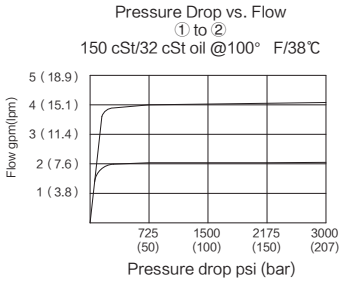
DFRA10 Regulator， Pressure-Compensated Restrictive style,Adjustable Flow Control Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in,cartridge-style, Regulator, Pressure-Compensated Restrictive style, Adjustable Flow Conteol Valve

OPERATION

The valve 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. Reverse flow is not regulated.

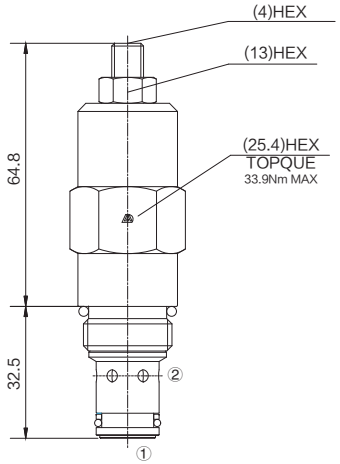
FEATURES

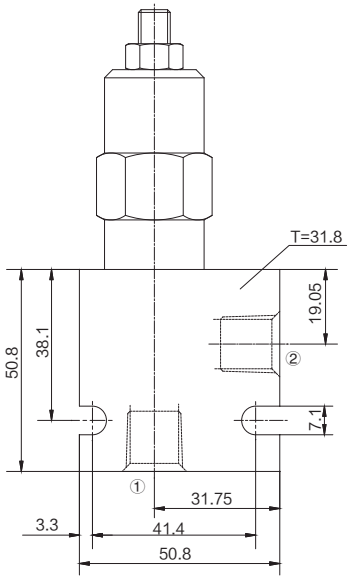
- Hardened parts for long life.
- Quiet, modulated response.
- Adjustment may be locked in place
- In dustry-common cavity.

RATINGS

Operating Pressure: 240 bar
Regulated:3-26l/min
Flow Tolerances: ± 15%
Temperature： -22° F to+250° F (-30℃ to+120℃)
Filtration： Critical Application - ISO 16/12
Non-Critical Application - ISO 19/15
Fluids： Mineral-based fluids
For other fluid compatibility， consult factory.
Cavity： T10-2B；See page 300.
Body Material： Anodized 6061T6 aluminum alloy rated at 207 Bar.

DIMENSIONS





TO ORDER

DFRA 10 - ** - **

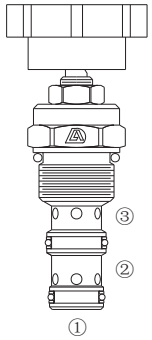
REGULATOR,PRESSURE COMPENSATED FLOW CONTROL VALVE

CAVITY

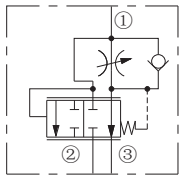
BODY PORTING
6T=SAE6
8T=SAE8
3G=G 3/8
4G=G 1/2
Other porting is avaiable
(Omit for Cartridge only)

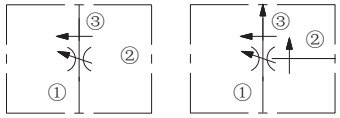
Setting Flow Range (L/min)
M4.6 3-10Lpm
M16 11-26Lpm

DFR10-39 Flow Regulator, Pressure Compensated



ISO SYMBOL





DESCRIPTION

A screw-in, cartridge-style, adjustable orifice, pressure-compensated, manuallyoperated,bypass-type hydraulic flow regulating valve. It can be used as a priority-type flow regulator or a restrictive-type 2-way flow regulator when the bypass port (port ②)is blocked.

OPERATION

The DFR10-39 maintains a constant flow rate from 3 regardless of load pressure changes in the system downstream of 3, or in the bypass leg at ② . Reverse flow (③ to ①) bypasses the control orifice.

The regulated flow increases from closed to fully open, with counter-clockwise rotation of the knob.

Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small amount of leakage is provided for the priority port. Consult factory.

FEATURES

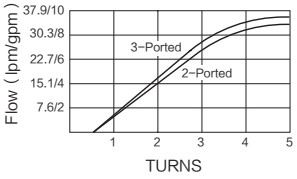
- Bypass port ② may be fully pressurized.
- Fine low-torque adjustment.
- Hardened parts for long life.
- Quiet, modulated response.
- Industry common cavity.

RATINGS

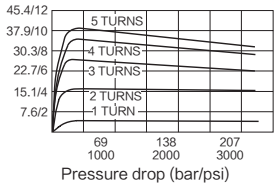
Operating Pressure:240 bar （3500 psi）
Flow Rate:
3-ported regulated flow: 0 - 38 lpm (0 - 10 gpm)
2-ported regulated flow: 0 - 34 lpm (0 - 9 gpm)
Input Flow:
3-ported: 0 - 38 lpm (0 - 10 gpm) nominal;
0 - 57 lpm (0 - 15 gpm) max.
Internal Leakage:
207 bar (3000 psi) ： 33cc/minute (2 cu.in./minute)
Adjustment Torque Required:
1.7 Nm (15 inch-pounds) at 207 bar (3000 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-3A；See page 301.

PERFORMANCE (Cartridge Only)

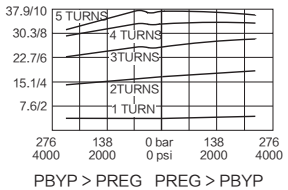
Regulated Flow vs. Turns
103 bar/1500 psi at Port 3
2-Ported: at 123 bar/1800 psi
3-Ported: at 38 lpm/10 gpm inlet flow
32 cSt/150 ssu oil at 40℃



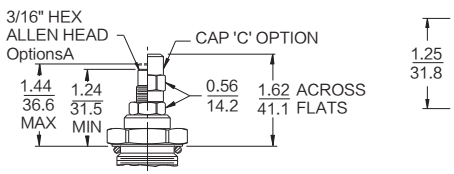
2-Ported
Regulated Flow vs. Pressure Drop
at 240 bar/3500 psi Inlet
32 cST/150 ssu oil at 40C

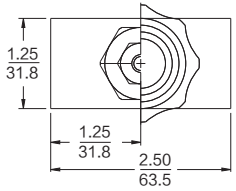


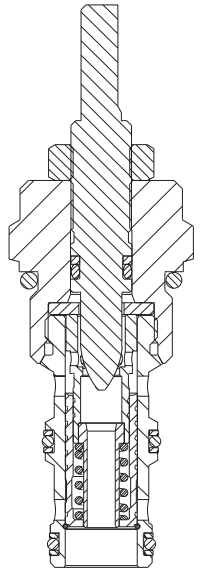
3-Ported
Regulated Flow vs. Load
at 38 lpm/10 gpm Inlet
32 cSt/150 ssu oil at 40℃

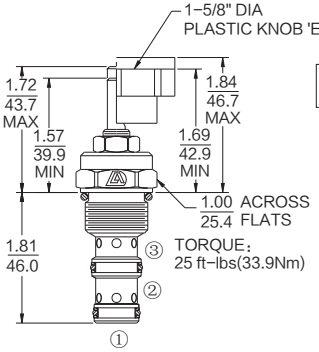


DIMENSIONS

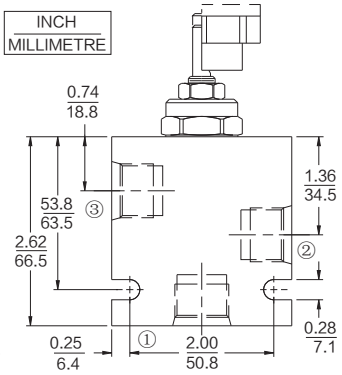




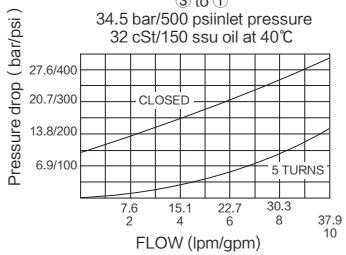




INCH
MILLIMETRE



PERFORMANCE (Cont' d.)
③ to ①
34.5 bar/500 psiinlet pressure
32 cSt/150 ssu oil at 40℃



MATERIALS

Cartridge: Weight:.30kg (0.68 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body:Weight:
0.36kg (0.80 lbs) ;
Anodized high-strength aluminum alloy, rated to 240 bar (3500 psi).
Ductile ironbodies available; dimensions may differ.

TO ORDER

DFR10-39 - - -

Adjustment Option

Extended Shaft Only	Blank
3/16 Hex Allen Head	A
Option A with Cover Cap	C
Plastic Knob	E

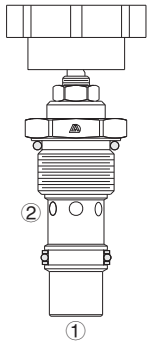
Seals

N	Buna N (Std.)
V	Fluorocarbon

Porting

0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*

DFR12-23 Regulator,Pressure-compensated



DESCRIPTION

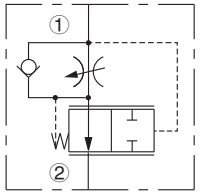
A screw-in, cartridge-style, adjustable orifice, pressure-compensated, manually-operated hydraulic flow regulating valve (restrictive type).

OPERATION

The DFR12-23 maintains a constant flow rate out of 2 regardless of load pressure changes in the circuit downstream of 2 or upstream of 1.
The regulated flow increases from closed to fully open with counter-clockwise rotation of the adjustment screw. The valve will maintain the set flow regardless of pressure variations on the regulated or inlet port. Reverse flow (2 to 1) bypasses the control orifice.

ISO SYMBOL

USASI/ISO:



FEATURES

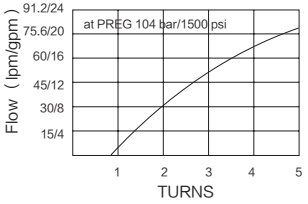
- Hardened parts for long life.
- Quiet, modulated response.
- Cost-effective cavity.

RATINGS

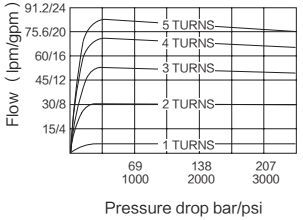
Operating Pressure: 240 bar (3500 psi)
Flow Settings: 0-77 lpm (0-20 gpm)
Internal Leakage (1 to 2): 0.12 lpm (0.03 gpm) max., fully closed
Adjustment Torque Required: 1.7 Nm (15 in.-lbs.) at 207 bar (3000 psi)
Temperature: -40 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T12-3A ; See page 305.

PERFORMANCE (Cartridge Only)

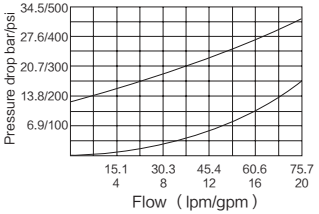
Flow vs. Turns
240 bar/3500 psi Input Pressure
32 cST/150 sus oil at 40° C



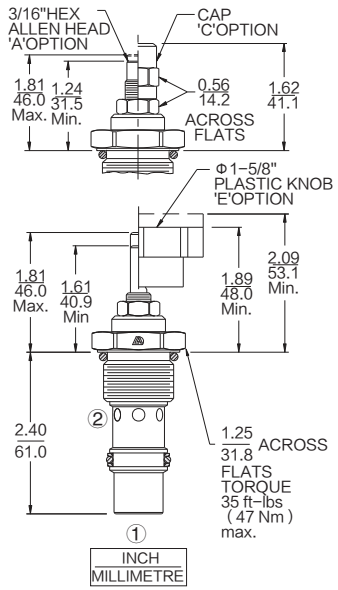
Regulated Flow vs. Pressure Drop
240 bar/3500 psi Input Pressure
32 cST/150 sus oil at 40° C

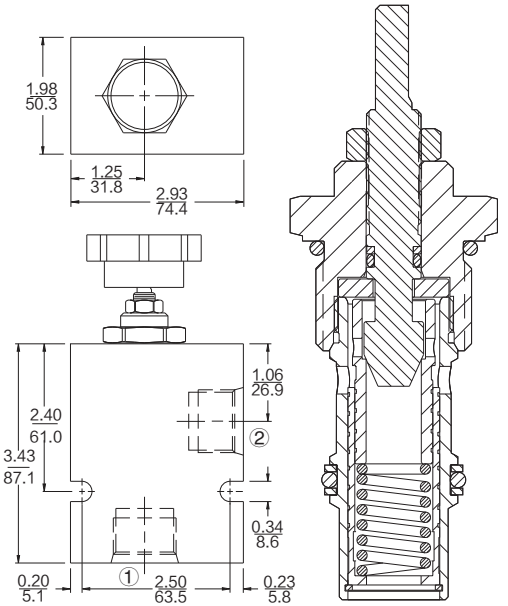


Pressure Drop vs. Reverse Flow
from 2 to 1
240 bar/3500 psi Inlet Pressure
32 cST/150 sus oil at 40° C



DIMENSIONS





MATERIALS

Cartridge: Weight: 0.08 kg. (0.18 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Special Ported Body: Weight:
0.52 kg. (1.15 lbs.) Anodized highstrength
6061 T6 aluminum alloy,
rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DFR12-23 - - - /

Adjustment Option

Extended Shaft Only	Blank
3/16" Hex Allen Head Option 'A' w/Cover Cap Plastic Knob	A C E

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T

Special ported body required. Consult factory.

Seals

N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane

FLOW Setting

(Blank)	Factory Set at 4-6 gpm

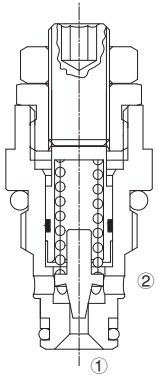
Setting in gpm
Specify; For example:

5.0	5.0 gpm
10.0	10 gpm
	etc.

Setting in gpm
Specify; For example:

M4.0	4.0 gpm
M20.0	20.0 gpm
	etc.

DRV08 Aadjustable，Direct Avting Cartridge Relief Valve



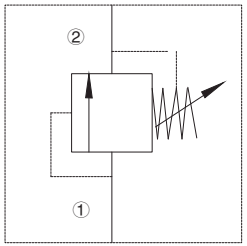
DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-typle

OPERATION

The valve prevents flow 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.

ISO SYMBOL



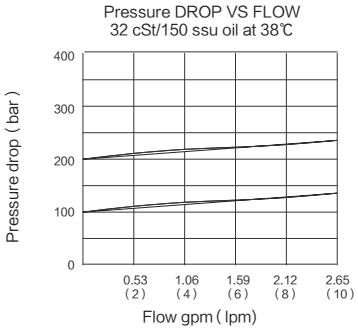
FEATURES

- Fast response to pressure surges.
- Hardened poppet and seat for long life.
- Adjustment prevents spring from going solid.
- Industry common cavity.
- Compact size.

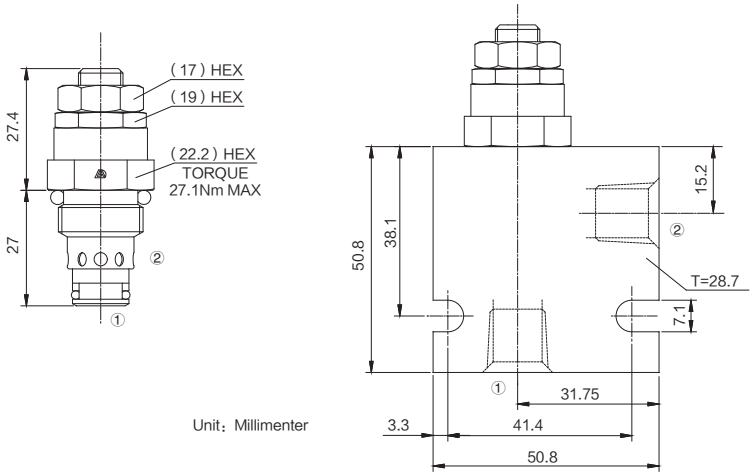
RATINGS

Operating Pressure: 250 bar
Max. Flow: See Performance DROP VS FLOW graph
Internal Leakage: 5 drops/min.MAX.to 80% of norminal setting
Reseat Pressure: Nominal 80% of crack pressure
[crack(set)pressure at 0.95lpm/0.25gpm]
Spring Ranges:40 to 270 bar;preset:160bar
Temperature: -22° F to+250° F (-30℃ to+120℃)
Rocommended Filtration:ISO 19/15
Fluids: Mineral-based fluids.
For other fluid compatibility consult factory
Cavity: T08-2E; See page 297.
Body Material: Anodized 6061T6 aluminum alloy rated at 207 Bar.

PERFORMANCE (Cartridge Only)



DIMENSIONS



Unit：Millimenter

MATERIALS

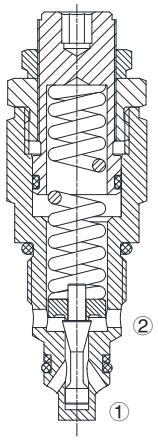
Cartridge: Weight: 0.23kg (0.50lbs)；
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester standard. Anodized aluminum knobs and caps.
BODY:Weight:
0.16 kg (0.35lbs)；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi)；
Ductile iron bodies available; dimensions may differ

TO ORDER

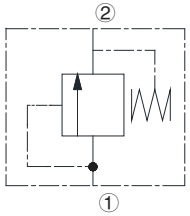
DRV 08 - ** / **** - *

- ADJUSTABLE CARTRIDGE RELIEF VALVE
- CAVITY
- SRING RANGE
  - 6=210-610PSI(15-42BAR) PRESET:430PSI(30BAR)
  - 10=290-1000PSI(20-69BAR) PRESET:720PSI(50BAR)
  - 23=582-2300PSI(40-160BAR) PRESET:1600PSI(110BAR)
  - 36=1150-3600PSI(80-250BAR) PRESET:2300PSI(160BAR)
- **BODY PORTING**
  - 4T=SAE4
  - 6T=SAE6
  - 2G=G 1/4
  - 3G=G 3/8
  - Other Porting is Available (Omit for Cartridge only)
- **Seals**
  - EXAMPLE:0160=160BAR
  - (OMIT FOR STANDARD)

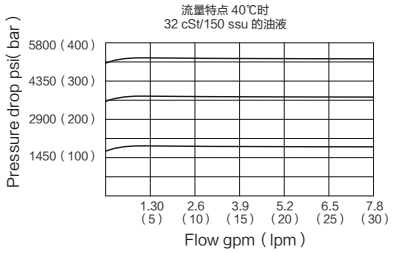
DYF08-09H Relief,Direct-Acting Poppet



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for use as a pressure limiting device for common hydraulic circuit protection.

OPERATION

The DYF08-09H blocks flow from 1 to 2 until sufficient pressure is present at 2 to force the poppet from its seat.

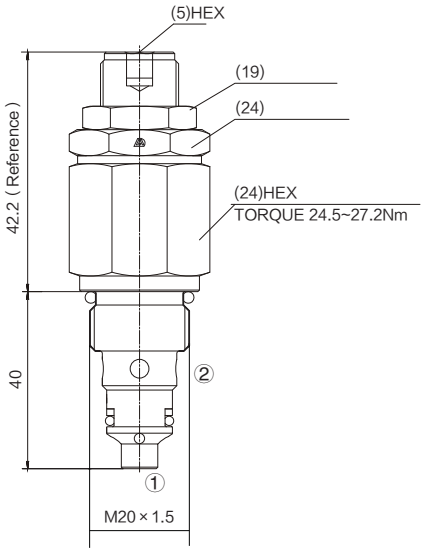
FEATURES

- Adjustments cannot be backed out of the valve.
- When adjusting, the spring will not be pressed.
- Optional spring ranges to 350bar (5000 psi).
- Rapid response to pressure surges.
- Compact structure.
- Noise free response.

RATINGS

Operating Pressure: 350 bar (5000 psi)Proof Pressure: 350 bar (
Flow: See performance chart
Internal Leakage: 30 cc/minute max. to75% ~ 80% of nominal setting
Spring Ranges:
40-123bar （Pre setting 120bar）
97-210 bar （Pre setting 200bar）
180-350bar （Pre setting 250bar）
Temperature: -40 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T12-2G；see page 304.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.23 kg. (0.50 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-up standard;
Anodized aluminum knobs.
Standard Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available;
dimensions may differ.

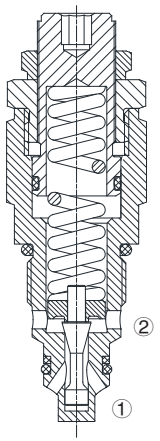
TO ORDER

DYF08-09H -

Maximum Relief Pressure
1/4 in. Hex Allen Head 03
Preset,hidden 05

Spring Range
40-123bar 05
97-210bar 10
178-350bar 15

DNRV-08 Relief,Direct-Acting Poppet



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for use as a pressure limiting device for common hydraulic circuit protection.

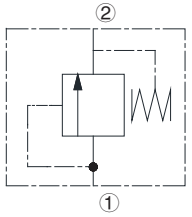
OPERATION

The DNRV-08 blocks flow from 1 to 2 until sufficient pressure is present at 2 to force the poppet from its seat.

FEATURES

- Adjustments cannot be backed out of the valve.
- When adjusting, the spring will not be pressed.
- Optional spring ranges to 350bar (5000 psi).
- Rapid response to pressure surges.
- Compact structure.
- Noise free response.

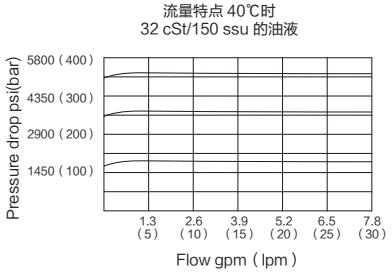
ISO SYMBOL



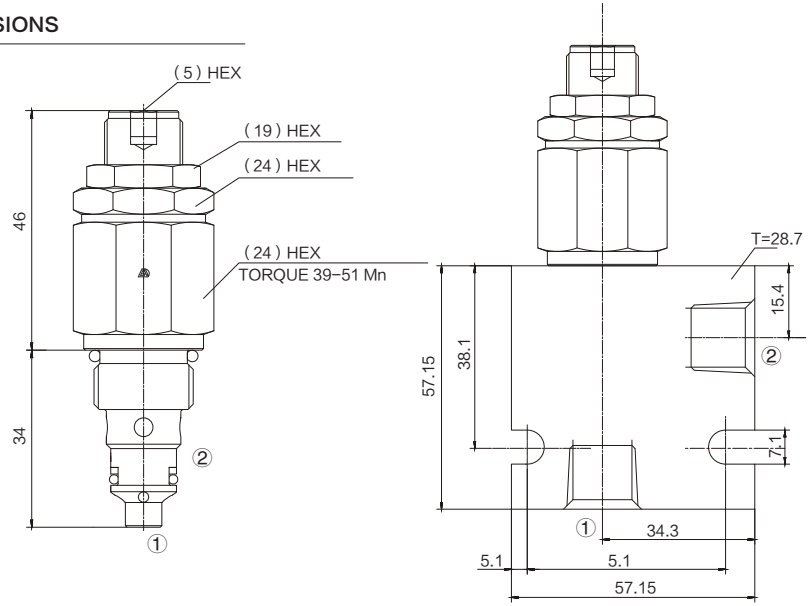
RATINGS

Operating Pressure: 350 bar (5000 psi)
Flow: See performance chart
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. to 80% of nominal setting
Spring Ranges:
20-125bar（Pre setting 69bar）
40-180 bar（Pre setting 138bar）
180-350bar（Pre setting 207bar）
Temperature: -40 to 120° C
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T08-2E；see page 297.

PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.23 kg. (0.50 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-up standard;
Anodized aluminum knobs.
Special Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available;
dimensions may differ.

TO ORDER

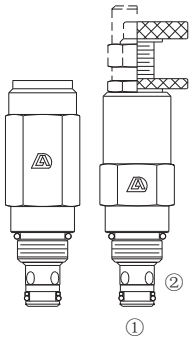
DNRV-08 - - -

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
G1/4 2G
G3/8 3G

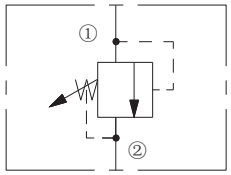
Seals
Buna N N
Fluorocarbon V

Spring Range
10 25-70bar (360-1000PSI)
18 50-125bar (720-1800PSI)
26 60-180bar (860-2600PSI)
50 120-350bar (1700-5000PSI)

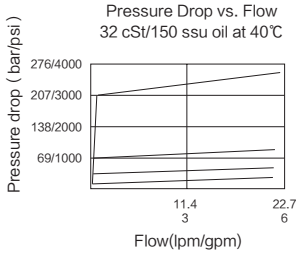
DRV08-20 Relief, Direct-Acting Poppet



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for lower flow circuits requiring low internal leakage..

OPERATION

The DRV08-20 , blocks flow from ① to ② until sufficient pressure is present at ① to force the spring-opposed poppet from its seat.
Note: The DRV08-20 may be used in cross-over relief applications (back pressure on ②) with the use of the "C" double back-up ring seal option. See Ordering Table.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Optional spring ranges to 248 bar (3600 psi)
- Rapid response to pressure changes.
- Compact size.

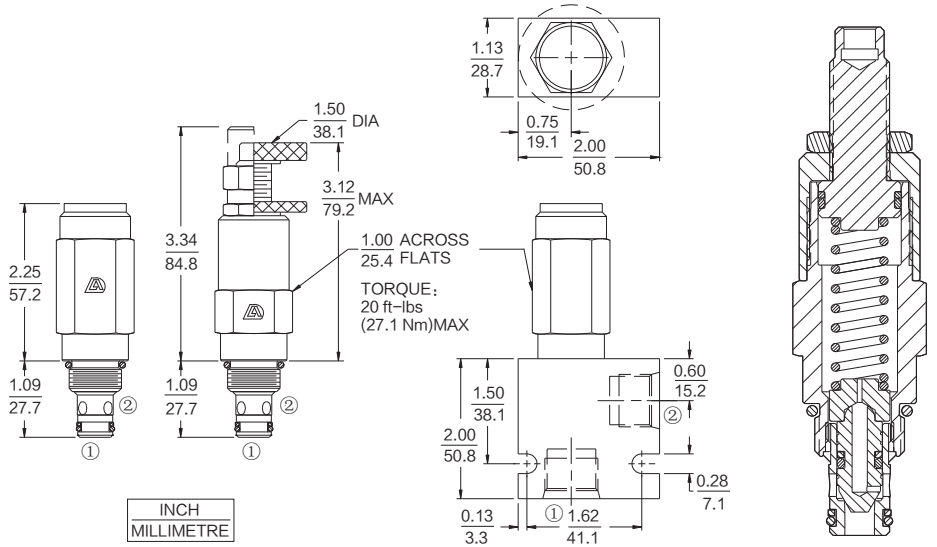
RATINGS

Operating Pressure:248 bar (3600 psi)
Flow: The Performance Chart illustrates fl ow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to fl ow forces. Consult factory for specific flow characteristic values.
Internal Leakage:
0.25 ml/minute (5 drops/minute) max. to 75% of nominal setting
Crack Pressure Defined:
Bar (psi) evident at 0.95 lpm (0.25 gpm)
Standard Spring Ranges:
Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.
Reseat Pressure: Nominal 80% of crack pressure

Spring Model Code	Nominal Factory Rating	Max Solid Adjustment
5	3.35-34.48 bar (50-500 psi)	48.28 bar (700 psi)
9	6.90-75.86 bar (100-1100 psi)	103.45 bar (1500 psi)
18	17.24-158.62 bar (250-2300 psi)	200 bar (2900 psi)
33	17.24-248.28 bar (250-3600 psi)	303.45 bar (4400 psi)

Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T08-2A ; See page 295.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.23kg (0.50 lbs) ;
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester standard. Anodized aluminum knobs and caps.
BODY:Weight:
0.16 kg (0.35lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ

TO ORDER

DRV08-20 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Pressure on Port Only:	
Buna	N
Fluorocarbon	V
Bidirectional Pressure	
Buna	NC
Fluorocarbon	VC

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

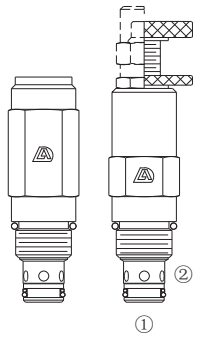
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

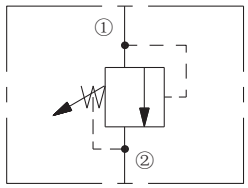
5	3.45 ~ 34.48 bar (50 ~ 500 psi)
9	6.90 ~ 75.86 bar (100 ~ 1100 psi)
18	17.24 ~ 158.62 bar (250 ~ 2300 psi)
33	17.24 ~ 248.28 bar (250 ~ 3600 psi)

†Adjustable valves will be preset to approx. 50%

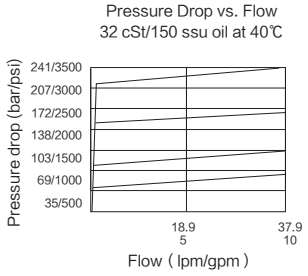
DRV10-20 Relief, Direct-Acting Poppet



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for use as a pressure limiting device for common hydraulic circuit protection.

OPERATION

The DRV10-20, blocks flow from ① to ② until sufficient pressure is present at ① to force the poppet from its seat.

The cartridge offers fast response to load changes in typical hydraulic circuits requiring low internal leakage.

NOTE: The DRV10-20 may be used in cross-over relief applications (back pressure on ② with the use of the "C" double back-up ring seal option. See Ordering Table.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Optional spring ranges to 248 bar (3600 psi) .
- Rapid response to pressure changes.
- Compact size.

RATINGS

Operating Pressure:228 bar (3300 psi)

Flow: The Performance Chart illustrates flow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.

Internal Leakage:

0.25 cc/minute (5 drops/minute) max. to 80% of nominal setting

Crack Pressure Defined:

bar (psi) evident at 0.95 lpm (0.25 gpm) attained

Reseat Pressure: Nominal 90% of crack pressure

Standard Spring Ranges: Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

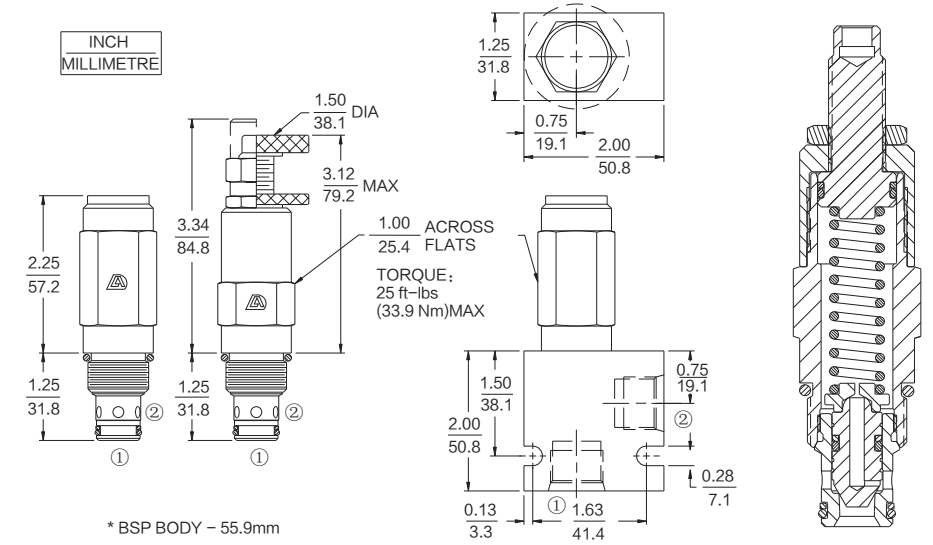
Spring Model Code	Nominal Factory Rating	Max Solid Adjustment
6	3.35-41.4 bar (50-600 psi)	55.17 bar (800 psi)
12	10.3-82.7 bar (150-1200 psi)	110.34 bar (1600 psi)
23	17.24-158.62 bar (250-2300 psi)	200 bar (2900 psi)
33	17.24-227.5 bar (250-3300 psi)	255.17 bar (3700 psi)

Temperature:-40℃ ~ 120℃

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity: T08-2A ; See page 295.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight:0.23kg (0.50 lbs) ;
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester standard. Anodized aluminum knobs and caps.

BODY:Weight:0.16 kg (0.35lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV10-20 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Pressure on Port Only:

Buna	N
Fluorocarbon	V

Bidirectional Pressure

Buna	NC
Fluorocarbon	VC

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

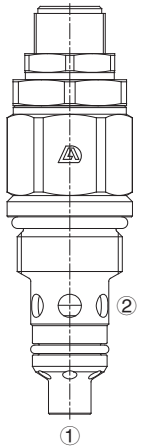
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

6	3.45 to 41.38 bar (50 to 600 psi)
12	10.34 to 82.76 bar (150 to 1200 psi)
23	17.24 to 158.6 bar (250 to 2300 psi)
33	17.24 to 248.2 bar (250 to 3300 psi)

†Adjustable valves will be preset to approx. 50%

DRV10-D20 Relief,Direct-Acting Poppet



DESCRIPTION

A screw-in, cartridge-style, direct-acting, poppet-type, hydraulic relief valve intended for use as a pressure limiting device for common hydraulic circuit protection.

OPERATION

The valve 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

- Adjustments cannot be backed out of the valve.
- Optional spring ranges to 350 bar.
- Fast response to pressure changes.
- Compact size.
- Quiet response.

RATINGS

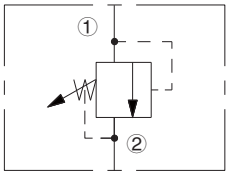
Operating Pressure: 350 bar (5000 psi)
Flow: see performance chart
Temperature: -40 to 120° C with standard Buna seals
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. to 80% of nominal setting
Standard Spring Ranges:

Spring Model Code	Nominal Model Code Factory Rating
N	5-75bar
B	76-125bar
G	126-220bar
W	221-350bar

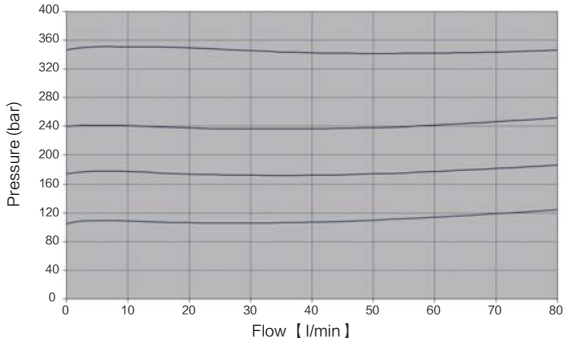
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Installation: No restrictions;
Cavity: T10-2B;See Page 300.

ISO SYMBOL

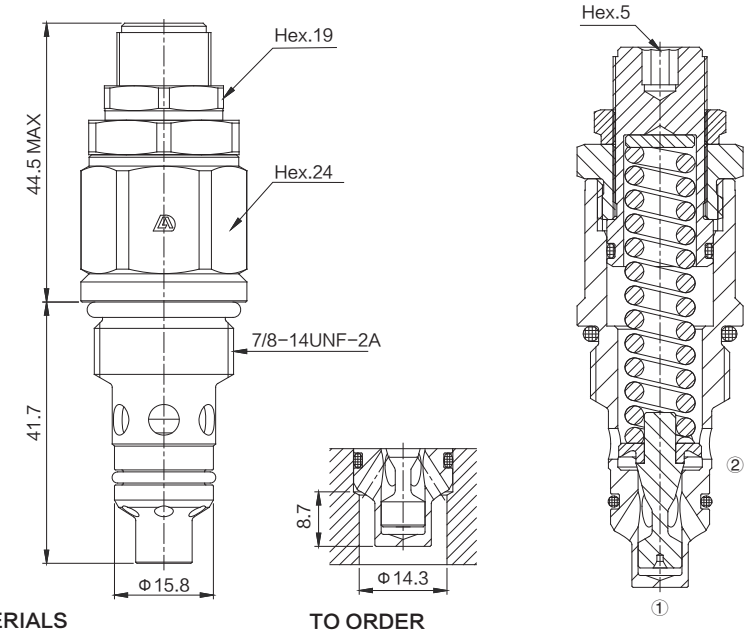
ISO:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.153kg. (0.50 lbs.)Steel with hardened work surfaces.Zinc-plated exposed surfaces.Buna N O-rings and polyester elastomer back-up standard;
Standard Ported Body: Weight: 0.16 kg. (for reference only) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV10-D20 - - - -

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 英寸 BSP*	2B
3/8 英寸 BSP*	3B
1/2 英寸 BSP*	4B

Seals Pressure on P Only:

Buna N (Std.)	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

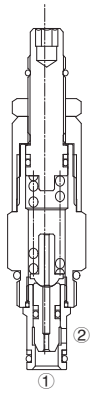
Setting in psi†

	for Adjustable, or Specify, for example:
9.0	9.0 900 psi
23.5	23.5 2350 psi

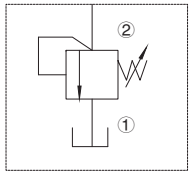
Spring Range(bar)

N	5-75
B	76-125
G	126-220
W	221-350

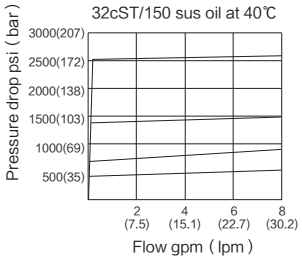
DDRV08 Adjustable，Direct-Acting，Differential Area，Cartidge Relief Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device.

OPERATION

The valve blocks flow from ② to ① until sufficent pressure is present at ② to force the poppet from its seat.

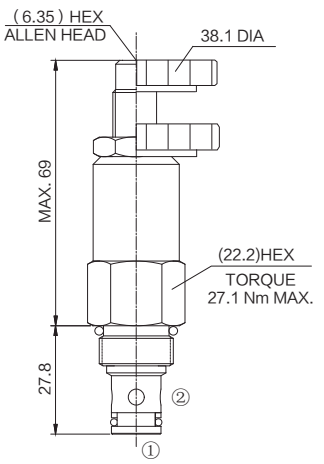
FEATURES

- Hardened poppet and cage for long life.
- Optional spring ranges to 250 bar.
- Smooth response to pressure suges.
- Industry common cavity.
- Compact siza.

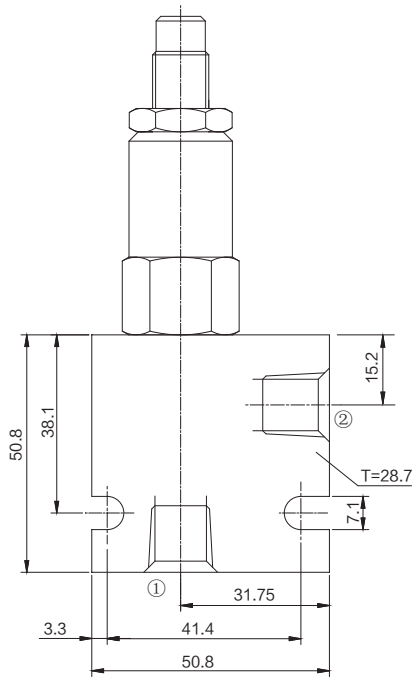
RATINGS

Operating Pressure: 250 bar
Flow:See Flow:Characteristic.
Internal Leakage:5 drops/min.MAX.to 80% of noeminal serring
Reseat Pressure:Nominal 80% of crack pressure
[crack(set) pressure at 0.95lpm/0.25gpm]
Spring Range:
3.45 to 27.59 bar,preset 14Bar;
6.90 to 62.07 bar,preset 31Bar;
6.90 to 117.24 bar,preset 58 Bar;
17.24 to 250 bar,preset 110 Bar;
Temperature:-30℃ to+120℃
Filtration：Critical Application -ISO 16/12
Non-Critical Application-ISO 19/15
Fluids：Mineral-based fluids.
For other fluid compatibilty consult factoy.
Cavity：T08-2E;See Page 297.
Body Material：Anodized 6061T6 aluminum alloy rated at 207Bar.

DIMENSIONS



Unit=Millimeters

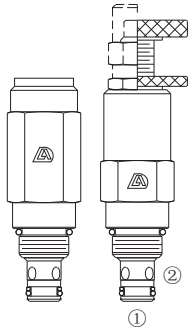


TO ORDER

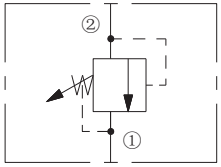
DDRV 08 - ** _ * / **** _ **

- Adjustable，Direct-acting，Differential Area，Cartridge Relief Valve
- CAVITY
- Spring Range
  - 4=50-400PSI(3.45-27.59BAR) PRESET:200PSI(14BAR)
  - 9=100-900PSI(6.90-62.07BAR) PRESET:450PSI(31BAR)
  - 17=100-1700PSI(6.90-117.24BAR) PRESET:840PSI(58BAR)
  - 36=250-3600PSI(17.24-250BAR) PRESET:1600PSI(110BAR)
- K 1-1/2' Dia. Knob (Omit for 1/4' Hex Allen head)
- SETTING IN BAR (BAR) EXAMPLE:0160=160BAR (Omit for standard)
- BODY PORTING
  - 6T=SAE6
  - 8T=SAE8
  - 2G=G 1/4
  - 3G=G 3/8
  - Other Porting is Available (Omit for Cartidge only)

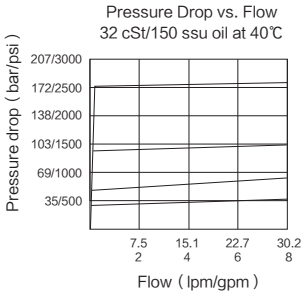
DRV08-22 Relief, Differential Area Poppet



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, differential area, poppet-type hydraulic relief valve for use as a pressure limiting device in more demanding hydraulic circuits, requiring low hysteresis and low internal leakage.

OPERATION

The DRV08-22 blocks flow from ② to ① until sufficient pressure is present at ② to force the poppet from its seat.

The cartridge offers smooth transition in response to load changes in common hydraulic circuits.

NOTE：DRV08-22 may be used in cross-over relief applications (back pressure on ①) with the use of the “C” double back-up ring seal option. See Ordering Table.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustment options A, B, and C: positive stops prevent springs from going solid..
- Hardened spool and cage for long life.
- Optional spring ranges to 221 bar (3200 psi) .
- Smooth response to pressure surges.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure: 221 bar (3200 psi)

Flow: The Performance Chart illustrates flow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.

Internal Leakage:

0.25 cc/minute (5 drops/minute) max. to 85% of nominal setting

Crack Pressure Defined:

bar (psi) evident at 0.95 lpm (0.25 gpm) attained

Reseat Pressure： Nominal 90% of crack pressure

Standard Spring Ranges：

Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

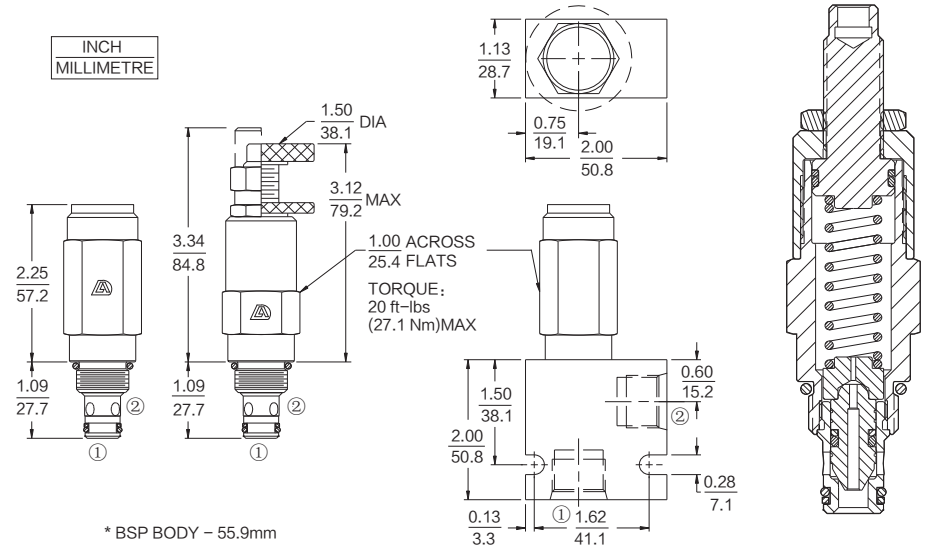
Spring Model Code	Nominal Factory Rating	Max Solid Adjustment
4	3.45-27.59 bar (50-400 psi)	41.38 bar (600 psi)
7	6.90-48.3 bar (100-700 psi)	89.66 bar (1300 psi)
13	10.3-89.6 bar (150-1300 psi)	158.62 bar (2300 psi)
26	17.24-248.2 bar (250-3600 psi)	275.86 bar (4000 psi)

Temperature:-40℃ ~ 120℃

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity:T08-2E ； See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.23kg (0.50 lbs) ；
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings andpolyester standard. Anodized aluminum knobs and caps.

BODY:Weight:0.16 kg (0.35lbs) ；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV08-22 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Pressure on Port Only:	
Buna	N
Fluorocarbon	V

Bidirectional Pressure

Buna	NC
Fluorocarbon	VC

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

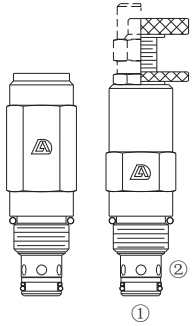
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

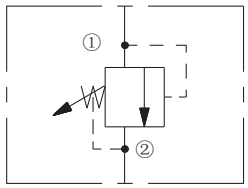
4	3.45 to 27.59 bar (50 to 400 psi)
7	6.9 to 48.3 bar (100 to 700 psi)
13	10.3 to 89.6 bar (150 to 1300 psi)
26	17.24 to 248.2 bar (250 to 3600 psi)

†Adjustable valves will be preset to approx. 50%

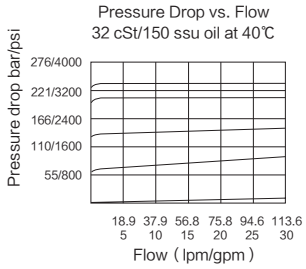
DRV10-22 Relief, Differential Area Poppet



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, differential area, poppet-type hydraulic relief valve for use as a pressure limiting device in more demanding hydraulic circuits, requiring low hysteresis and low internal leakage.

OPERATION

The DRV10-22 Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.
NOTE：DRV10-22 may be used in cross-over relief applications (back pressure on ①) with the use of the “C” double back-up ring seal option. See Ordering Table.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustment options A, B, and C: positive stops prevent springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 241 bar (3500 psi) .
- Smooth response to pressure surges.
- Industry common cavity.

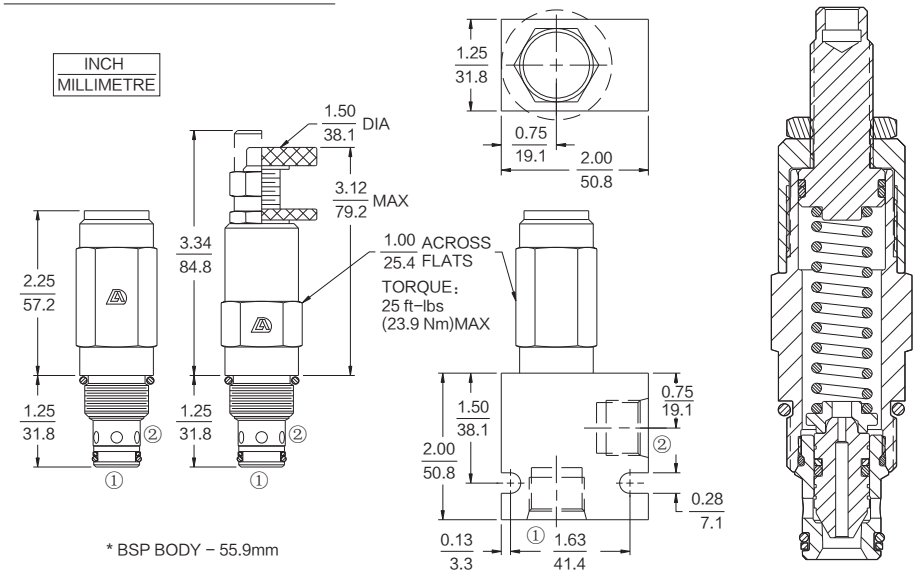
RATINGS

Operating Pressure:241 bar (3500 psi)
Flow: The Performance Chart illustrates flow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.
Pressure Rise: 0.34 bar/lpm (5 psi/gpm)
Internal Leakage:
0.25 cc/minute (5 drops/minute) max. to 85% of nominal setting
Crack Pressure Defined:
bar (psi) evident at 0.95 lpm (0.25 gpm) attained
Standard Spring Ranges： Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown below.

Spring Model Code	Nominal Factory Rating	Max Solid Adjustment
6	10.34-41.38 bar (150-600 psi)	55.17 bar (800 psi)
13	10.34-89.66 bar (150-1300 psi)	117.24 bar (1700 psi)
25	17.24-165.52 bar (250-2400 psi)	206.9 bar (3000 psi)
35	17.24-241.38 bar (250-3500 psi)	296.55 bar (4300 psi)

Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B ； See page 300.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight:0.23kg (0.50 lbs) ；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).
BODY:Weight:0.15 kg (0.35lbs) ；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ；
Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV10-22 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Pressure on Port Only:

Buna	N
Fluorocarbon	V

Bidirectional Pressure

Buna	NC
Fluorocarbon	VC

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

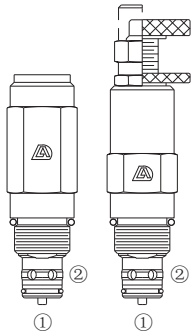
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

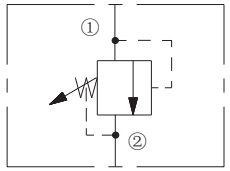
6	10.34 to 41.38 bar (150 to 600 psi)
13	10.34 to 89.66 bar (150 to 1300 psi)
25	17.24 to 165.52 bar (250 to 2400 psi)
35	17.24 to 241.38 bar (250 to 3500 psi)

†Adjustable valves will be preset to approx. 50%

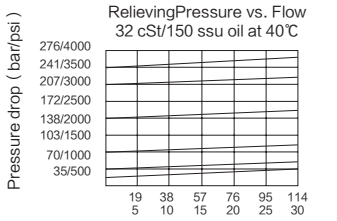
DRV10-23 Relief, Pilot-Operated Spool

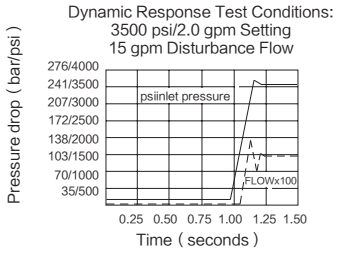


ISO SYMBOL



PERFORMANCE (Cartridge Only)





DESCRIPTION

A screw-in, cartridge-style, pilot-operated (two-stage), spool-type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.low leakage and low pressure overshoot.

OPERATION

The DRV10-23 blocks flow from ① to ② until sufficient pressure is present at ① to force the piloting relief off its seat, allowing the main spool to shift, opening ① to ② .

NOTE:

The DRV10-23may be used in cross-over relief applications, however, it is not recommended for use as in parallel cross-over relief or anti-cavitation applications.Consult factory for proper flow path connections.

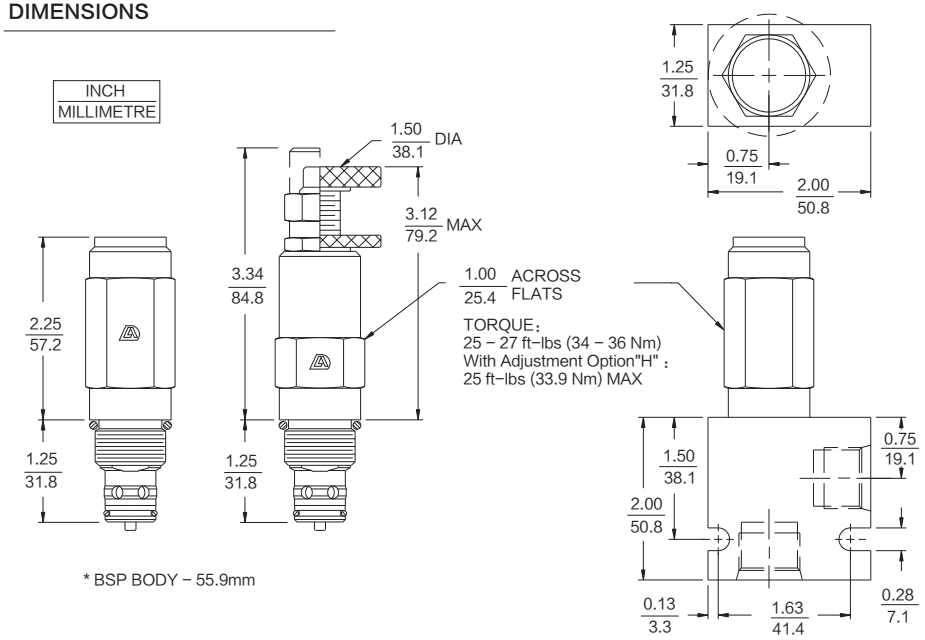
FEATURES

- Adjustments cannot be backed out of the valve.
- Hardened spool and cage for long life.
- Fast, smooth response to pressure surges.
- Industry common cavity.

RATINGS

Operating Pressure:20.7 ~ 240 bar (300 ~ 3500 psi)
Flow:7.6 ~ 113.6 lpm (2 ~ 30 gpm)
Internal Leakage:
0.5 ml/minute (5 drops/minute) max. to 80% of nominal setting
Crack Pressure Defined:
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Reseat Pressure: Nominal 90% of crack pressure
Pressure Rise: 0.15 bar/lpm (8 psi/gpm),at 240 bar (3500 psi)
Temperature:
-54℃~ 135℃ (-65 ~ 275° F) (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B ; See page 300.

DIMENSIONS



* BSP BODY – 55.9mm

MATERIALS

Cartridge: Weight:0.25kg (0.55 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).
BODY:Weight:0.16 kg (0.35lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ;
Ductile iron bodies available; dimensions may differ

TO ORDER

DRV10-23 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory PresetHidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals Pressure on Port Only:

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M21	21 bar
M100	100 bar

Setting in psi†

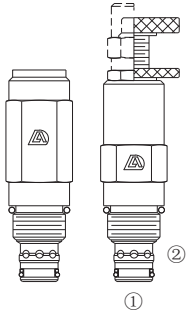
(Blank)	for Adjustable, or Specify, for example:
3.0	300 psi
23.5	2350 psi

Spring Range

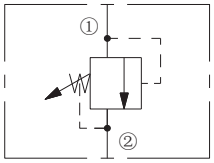
35	20.7 to 241.4 bar (300 to 3500 psi)

†Adjustable valves will be preset to approx. 50%

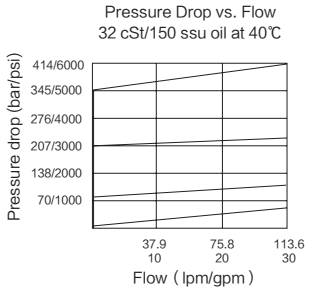
DRV10-26 Relief, Pilot-Operated Spool



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated (two-stage), spool-type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

OPERATION

The DRV10-26 , blocks flow from ① to ② until sufficient pressure is present at ① to force the piloting relief off its seat, allowing the main (second stage) spool to shift, opening ① to ② .

The cartridge offers smooth transition in response to load changes in demanding hydraulic circuits.

NOTE：DRV10-26 cannot be used in crossover relief applications.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 210 bar (3000 psi) .
- Fast, smooth response to pressure surges.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)

Flow: The Performance Chart illustrates flow handling capacity at maximum setting for each spring range option. Pressure rise will vary with spring (range) and with setting within range due to flow forces. Consult factory for specific flow characteristic values.

Internal Leakage:

115 cc/minute (7 cu. in./minute) max. to 85% of nominal setting

Crack Pressure Defined:

Setting Pressure Defined: bar (psi) evident at 7.6 lpm (2.0 gpm) attained

Reseat Pressure： Nominal 90% of crack pressure

Standard Spring Ranges：

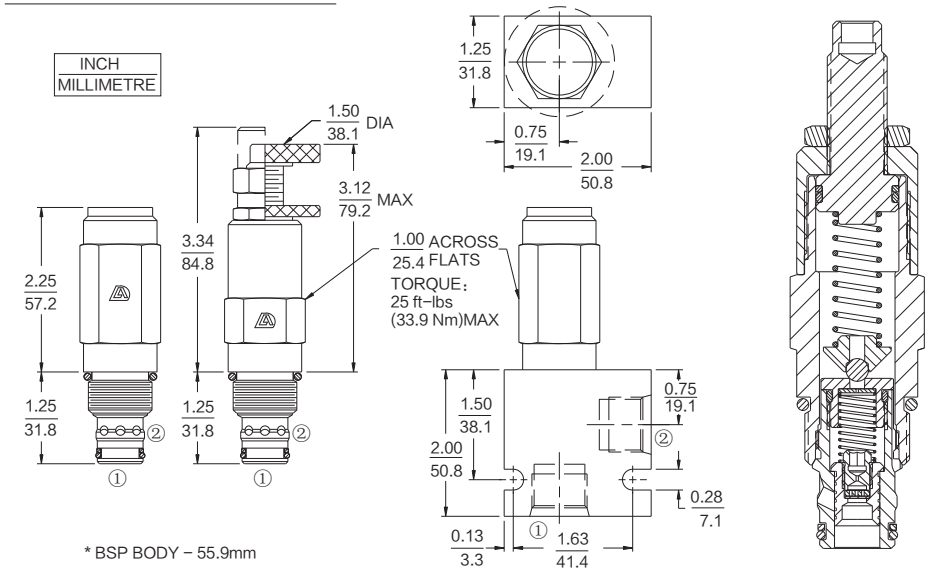
6.9 ~ 27.6 bar (100 ~ 400 psi) 10.3 ~ 103.4 bar (150 ~ 1500 psi) 27.6 ~ 206.9 bar (400 ~ 3000 psi)

Temperature:-40℃ ~ 120℃

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity:T10-2B ； See page 300.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight:0.25kg (0.55 lbs) ；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).

BODY:Weight:0.16 kg (0.35lbs) ；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ；
Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV10-26 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals
Pressure on Port Only:

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

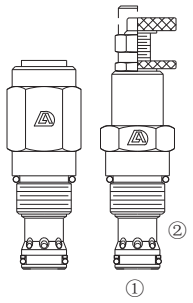
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

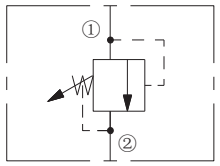
4	6.9 to 27.6 bar (100 to 400 psi)
15	10.3 to 103.4 bar (150 to 1500 psi)
30	27.6 to 206.9 bar (400 to 3000 psi)

†Adjustable valves will be preset to approx. 50%

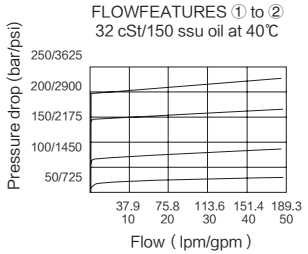
DRV12-26 Relief, Pilot-Operated Spool



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated (two-stage), spool-type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

OPERATION

The DRV12-26 blocks flow from ① to ② until sufficient pressure is present at ① to force the piloting relief off its seat, allowing the main (second stage) spool to shift, opening ① to ② .
The cartridge offers smooth transition in response to load changes in demanding hydraulic circuits.
NOTE:
The DRV12-26 cannot be used in crossover relief applications.

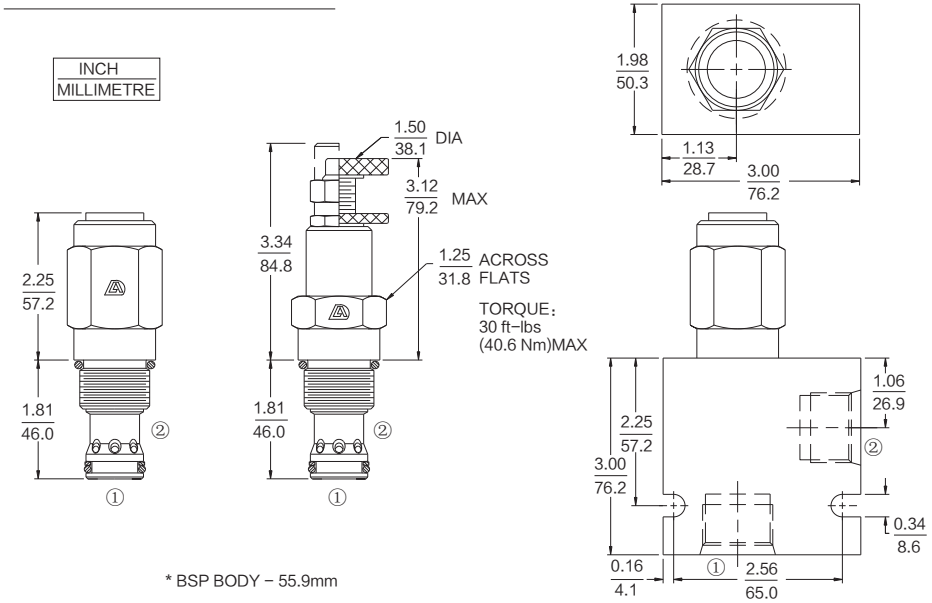
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 241 bar (3500 psi) .
- Fast, smooth response to pressure surges.
- Ductile iron bodies available; dimensions may differ.

RATINGS

Operating Pressure:241 bar (3500 psi)
Proof Pressure: 420 bar (6090 psi)
Flow: See Performance Chart
Internal Leakage:
115 cc/minute (7 cu. in./minute) max. to 85% of nominal setting
Crack Pressure Defined:
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Reseat Pressure: Nominal 90% of crack pressure
Standard Spring Ranges:
6.9 ~ 27.6 bar (100 ~ 400 psi) 10.3 ~ 103.4 bar
(150 ~ 1500 psi) 20.7 ~ 241 bar (300 ~ 3500 psi)
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T12-2A ; See page 304.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight:0.34kg (0.75 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).
BODY:Weight:0.57 kg (1.25lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV12-26 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T
1/2 in. BSP*	4B
3/4 in. BSP*	6B
1in. BSP*	8B

Seals
Pressure on Port Only:

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

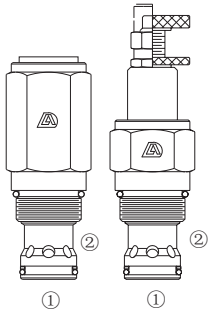
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

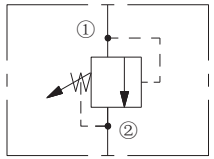
4	6.9 to 27.6 bar (100 to 400 psi)
15	10.3 to 103.4 bar (150 to 1500 psi)
35	20.7 to 241 bar (300 to 3500 psi)

†Adjustable valves will be preset to approx. 50%

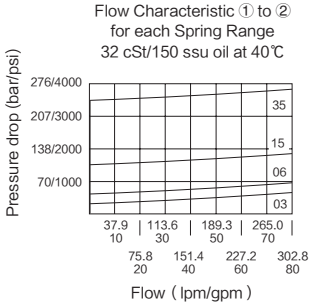
DRV16-26 Relief, Pilot-Operated Spool



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated (two-stage), spool-type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

OPERATION

The DRV16-26 blocks flow from ① to ② until sufficient pressure is present at ① to force the piloting relief off its seat, allowing the main (second stage) spool to shift, opening ① to ② .

The cartridge offers smooth transition in response to load changes in demanding hydraulic circuits.

NOTE:

The DRV16-26 cannot be used in cross-over relief applications.

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 240 bar (3500 psi) .
- Fast, smooth response to pressure surges.

RATINGS

Operating Pressure:240 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage:

115 cc/minute (7 cu. in./minute) max. for pressure settings below 138bar (2000 psi); 197 cc/minute (30 cu. in./minute) for pressure settings of138 bar (2000 psi) or higher.

Crack Pressure Defined:

bar (psi) evident at 0.95 lpm (0.25 gpm) attained

Reseat Pressure: Nominal 90% of crack pressure

Standard Spring Ranges:

03：9.66 ~ 20.70 bar (140 ~ 300 psi)

06：15.87 ~ 41.41 bar (230 ~ 600 psi)

15：36.63 ~ 103.52 bar (530 ~ 1500 psi)

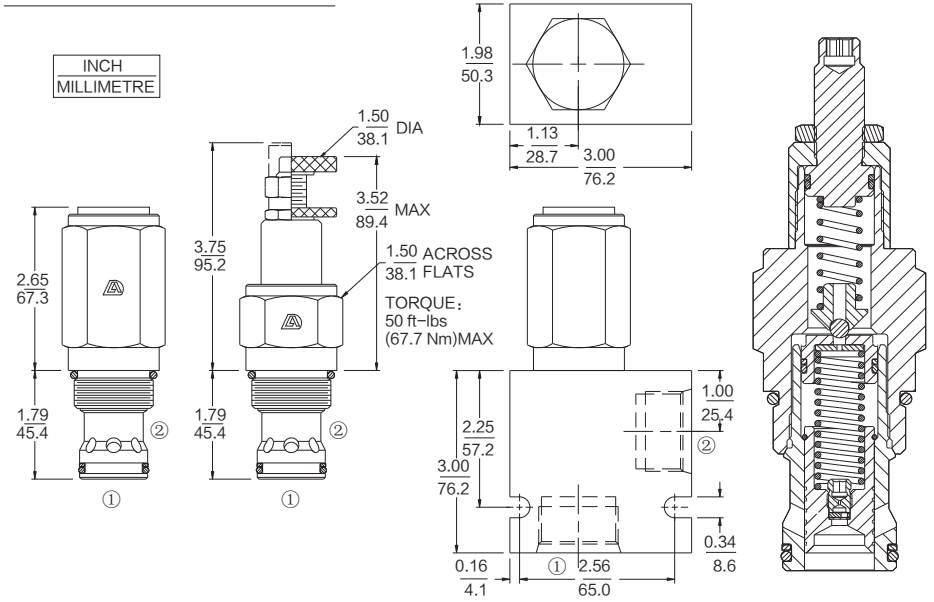
35：82.82 ~ 241.55 bar (1200 ~ 3500 psi)

Temperature:-40℃ ~ 120℃

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity: T16-2A ; See page 307.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.73kg (1.60 lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard. Anodized aluminum knobs.

BODY:Weight:0.57 kg (1.25lbs) ; Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DRV16-26 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H

Porting

Cartridge Only	0
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1in. BSP*	8B

Seals

Pressure on Port Only:

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

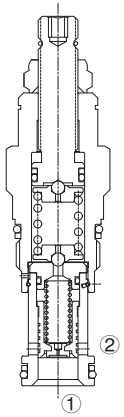
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

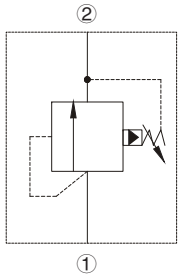
3	9.7 to 20.7 bar (140 to 300 psi)
6	15.9 to 41.4 bar (230 to 600 psi)
15	36.6 to 103.5 bar (530 to 1500 psi)
35	82.8 to 241.6 bar (1200 to 3500 psi)

†Adjustable valves will be preset to approx. 50%

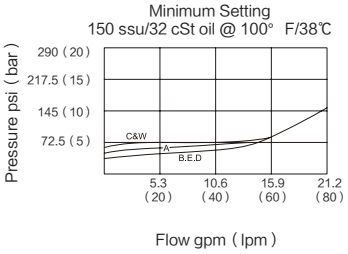
DRPEE Relief, Pilot-Operated Spool



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

The valve are normally closed,pressure-limiting valves used to protect hydraulics components from pressure transients.

OPERATION

The valve are normally closed,pressure-limiting valves used to protect hydraulics components from pressure transients.Fast opening and closing is gained at the expense of smoothness. when the pressure at inlet(port ①)reaches the valvs setting. the valve starts to open to tank (port ②),throtting flow to limit the pressure rise.These valves have low pressure rise vs.flow and are vary fast.

FEATURES

- Suitable for use in cross port relief circuits.if used in cross port relief circuits,consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- Back pressure on the tank port (port2)is directly additive to the valve setting at a 1:1 ratio.
- Hardened poppet and seat for long life.
- Compact size.

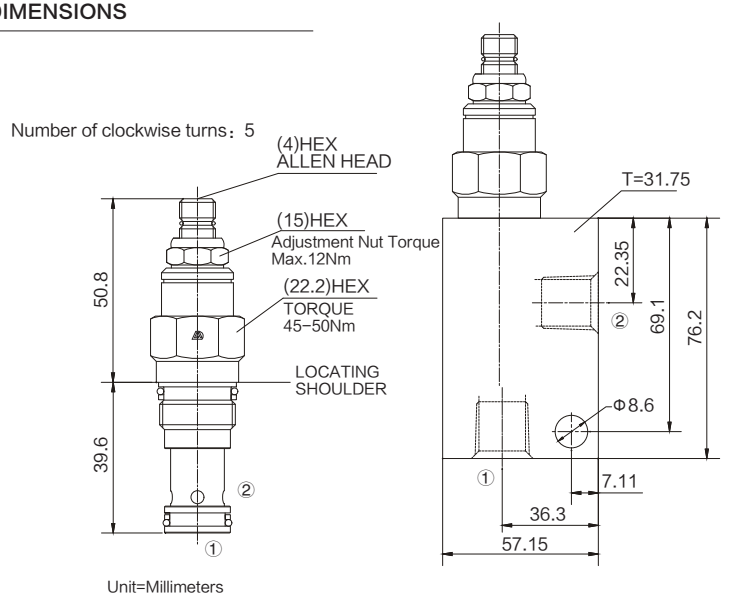
RATINGS

Max. Operating Pressure: 350 bar (5100 psi)
Flow: See Performance Chart
Internal Leakage:30cc/min.at 70 Bar.
Factory Pressure Setting Established at 4 gpm(15L/min).
Response Time - Typical:2 ms
Standard Spring Ranges:

A 7 ~ 210 bar	Preset=70 bar
B 3.5 ~ 105 bar	Preset=70 bar
C 10.5 ~ 420 bar	P reset=70 bar
D 1.7 ~ 55 bar	Preset=30 bar
E 1.7 ~ 28 bar	Preset=14 bar
W 10.5 ~ 315 bar	Preset=70 bar

Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T10-2D;See Page 301.

DIMENSIONS



Unit=Millimeters

TO ORDER

DRP * E - * ** - * *

FAST-ACTING,PILOT OPERATED
BALANCED PISTON RELIEF VALVE

FLOW
95 L/min E

BODY PORTING
6T=SAE 6 8T=SAE 8
2G=G 1/4 3G=G 3/8
Other porting is available.
(Omit for Cartridge only)

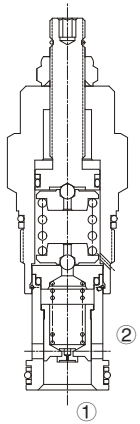
Seal Kits
N Buna N
V Viton

SPRING RANGE

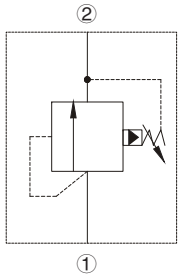
A=100-3000psi (7-210bar)	Preset：1000psi (70bar)
B=50-1500PSI(3.5-105bar)	Preset：1000psi (70bar)
C=150-6000psi (10.5-420bar)	Preset：1000psi (70bar)
D=25-800psi (1.7-55bar)	Preset：400psi (30bar)
E=25-400psi (1.7-28bar)	Preset：200psi (14bar)
W=150-4500psi (10.5-315bar)	Preset：1000psi (70bar)

CONTROL
Standard Screw Adjustment L
Hand Knob K

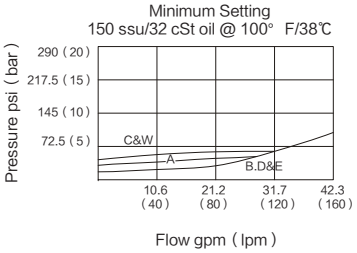
DRPGE Relief, Pilot-Operated Spool



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

The valve are normally closed,pressure-limiting valves used to protect hydraulics components from pressure transients.

OPERATION

The valve are normally closed,pressure-limiting valves used to protect hydraulics components from pressure transients.Fast opening and closing is gained at the expense of smoothness. when the pressure at inlet(port ①)reaches the valvs setting. the valve starts to open to tank (port ②),throtting flow to limit the pressure rise.These valves have low pressure rise vs.flow and are vary fast.

FEATURES

- Suitable for use in cross port relief circuits.if used in cross port relief circuits,consider spool leakage.
- Not suitable for use in load holding applications due to spool leakage.
- Back pressure on the tank port (port2)is directly additive to the valve setting at a 1:1 ratio.
- Hardened poppet and seat for long life.
- Compact size.

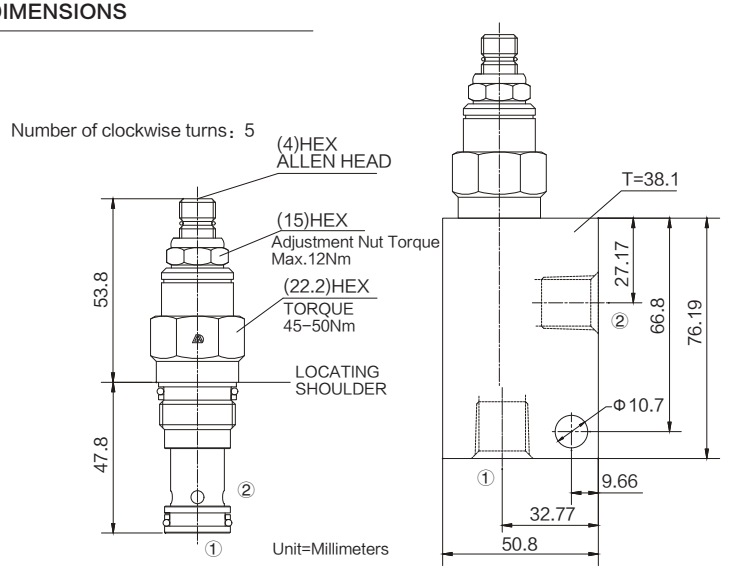
RATINGS

Max. Operating Pressure: 350 bar (5100 psi)
Flow: See Performance Chart
Internal Leakage:50cc/min.at 70 Bar.
Factory Pressure Setting Established at 4 gpm(15L/min).
Response Time - Typical:2 ms
Standard Spring Ranges:

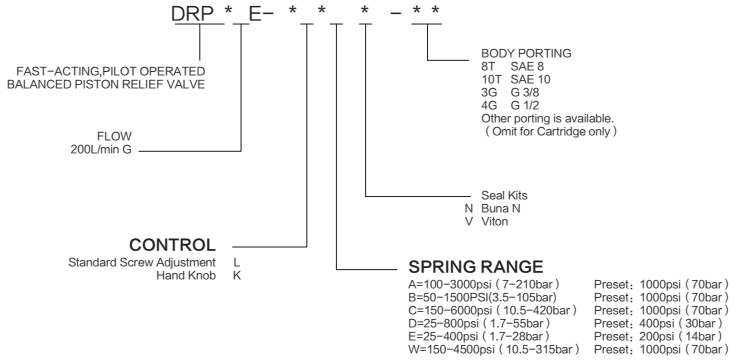
A 7 ~ 210 bar	Preset=70 bar
B 3.5 ~ 105 bar	Preset=70 bar
C 10.5 ~ 420 bar	P reset=70 bar
D 1.7 ~ 55 bar	Preset=30 bar
E 1.7 ~ 28 bar	Preset=14 bar
W 10.5 ~ 315 bar	Preset=70 bar

Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T12-2H,See Page 305.

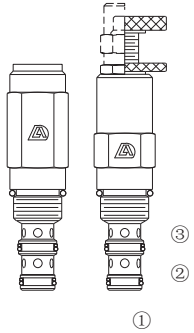
DIMENSIONS



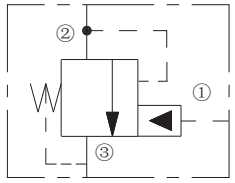
TO ORDER



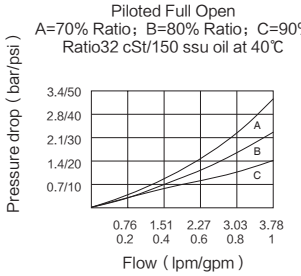
DUP10-30 Unloading Pilot, Internal Drain



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, remote sequence, pilot unloading valve, with optional fixed "unload/reload" pressure ratios for use in accumulator-type hydraulic systems.

OPERATION

In its steady state,the DUP10-30 blocks flow from ② to ③ . On attainment of a pre-determined pressure at ① , the spool shifts to allow flow from ② to ③ .Since the spring chamber is vented at ③ , back pressure at ③ will directly (1:1) affect the valve's setting. If pressure at ① drops to a level below the ratio-established reload value, the valve will close, blocking flow from ② to ③ .

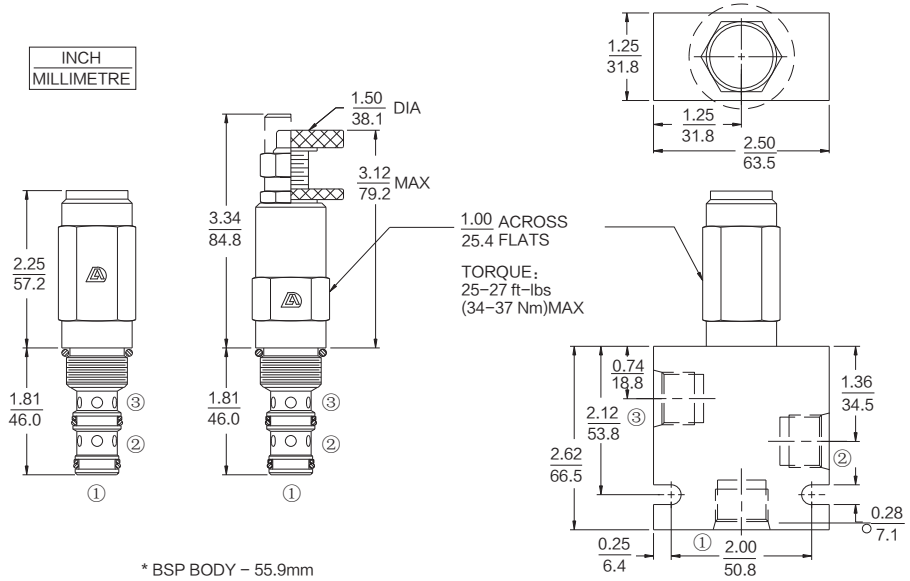
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 240 bar (3500 psi) .
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow:4 lpm (1 gpm)
Ratio Between Unloading & Reloading Pressure:
70% ±4%; 80% ±4%; 90% ±4%
Standard Spring Ranges: 69 ~ 207 bar (1000 ~ 3000 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-3A; See page 301.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight:0.27kg (0.60 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Optional polyurethane seals with Fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).

BODY:Weight:0.36 kg (0.80lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DUP10-30 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/ Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M69	69 bar
M207	207 bar

Setting in psi†

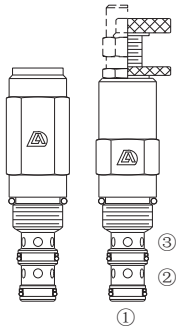
(Blank)	for Adjustable, or Specify, for example:
10.0	1000 psi
23.5	2350 psi

Spring Ratio

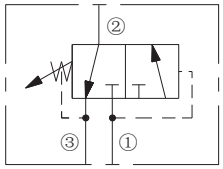
60	60% Ratio
70	70% Ratio
80	80% Ratio

†Adjustable valves will be preset to approx. 50%

DPS10-30 Sequence, Internal Pilot & Drain



ISO SYMBOL



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic sequence valve with internal pilot and spring chamber drain, designed to direct oil to a secondary circuit once a pre-determined pressure level is attained in the primary circuit.

OPERATION

In its steady state, the DPS10-30 blocks flow at ①, while allowing flow to pass from ② to ③ .On attainment of a pre-determined pressure at ①, the cartridge shifts to open ① to ② .

FEATURES

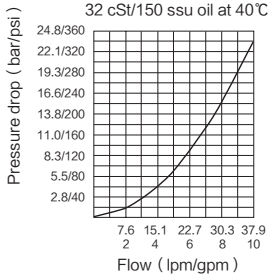
- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 144.8 bar (2100 psi) .
- Industry common cavity.

RATINGS

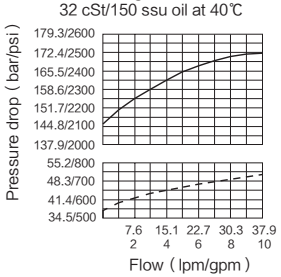
Operating Pressure:207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage: ① to ②:
82 cc/minute (5 cu. in./minute) max. to 85% of nominal setting
Standard Spring Ranges:
2.8 ~ 27.6 bar (40 ~ 400 psi)
14.5 ~ 144.8 bar (210 ~ 2100 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 301.

PERFORMANCE (Cartridge Only)

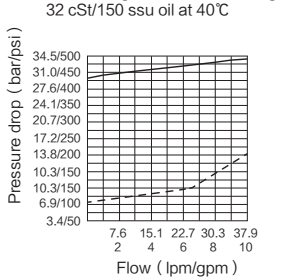
Pressure Drop vs. Flow
② to ③
32 cSt/150 ssu oil at 40℃



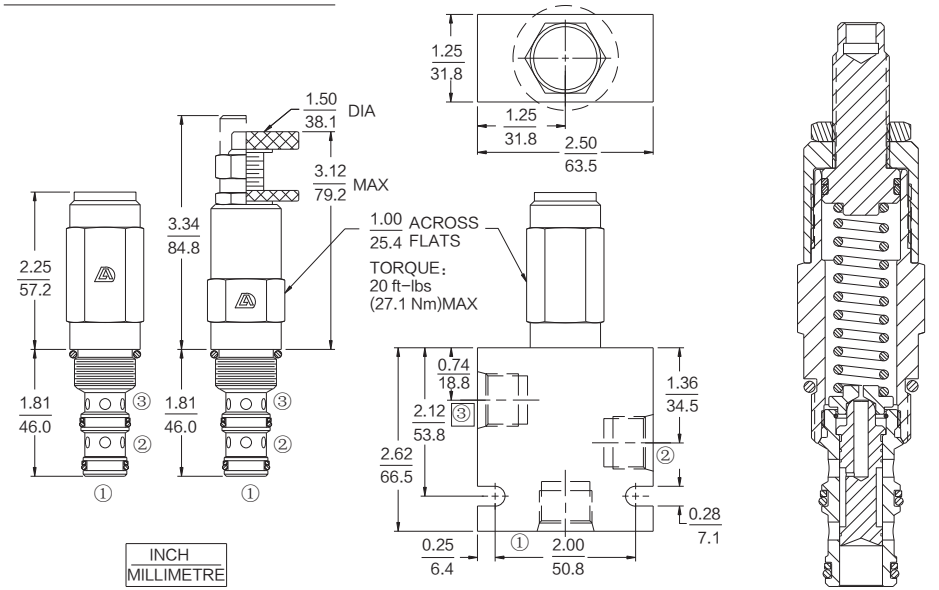
Pressure Drop vs. Flow ① to ②;
210 to 2100 psi Spring
MaxSetting- - - - - MinSetting
32 cSt/150 ssu oil at 40℃



Pressure Drop vs. Flow ① to ② ;
40 to 400 psi Spring
MaxSetting- - - - - MinSetting
32 cSt/150 ssu oil at 40℃



DIMENSIONS



MATERIALS

Cartridge: Weight:0.27 kg (0.60 lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester standard. Anodized aluminum knobs and caps.

BODY:Weight:0.36 kg (0.80lbs) ; Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DPS10-30 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

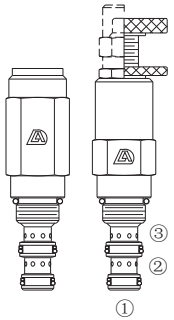
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

Spring Range

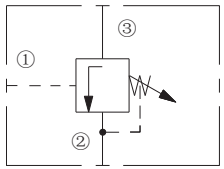
4	2.8 to 27.6 bar (40 to 400 psi)
21	14.5 to 144.8 bar (210 to 2100 psi)

†Adjustable valves will be preset to approx. 50%

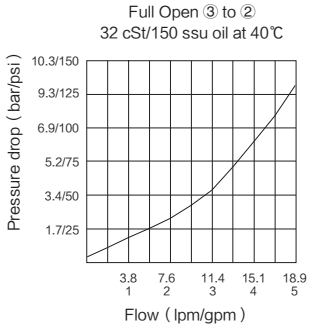
DPS08-32 Sequence, External Pilot, Internal Drain



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic sequence valve with external pilot and internal spring chamber drain.

OPERATION

In its steady state, DPS08-32 blocks flow from ③ to ② .
On attainment of a pre-determined pressure at ① , the valve shifts to open ③ to ② .Back pressure at ② will have a direct (1:1) effect on the valve's setting because the spring chamber is vented ou ② .

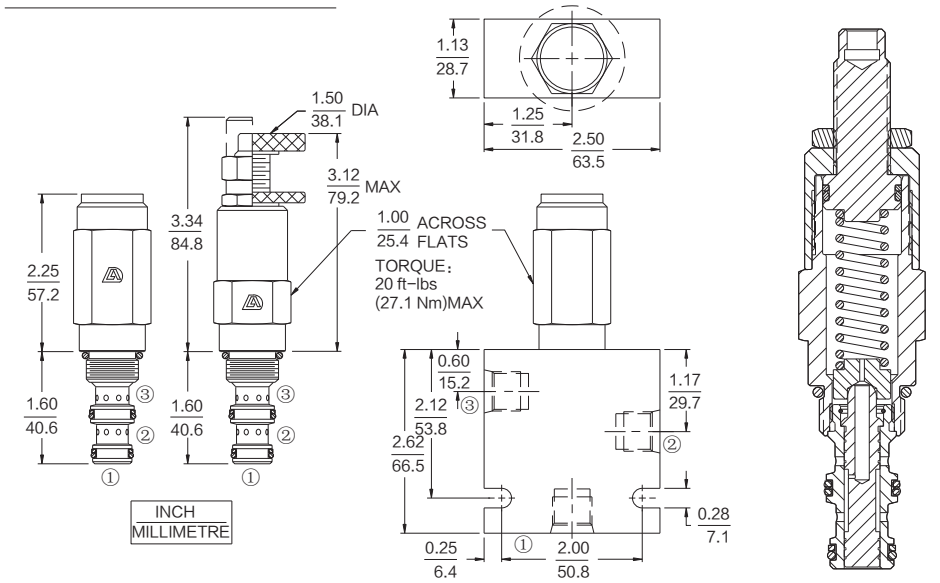
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 165.5 bar (2400 psi) .
- Compact size.

RATINGS

Operating Pressure:240 bar (3500 psi)
FLOW: See Performance Chart
Internal Leakage:
在 82 cc/minute (5 cu. in./minute) max. to 90% of nominal setting
Standard Spring Ranges:
3.4 ~ 20.7 bar (50 ~ 300 psi)
6.9 ~ 41.4 bar (100 ~ 600 psi)
10.3 ~ 89.7 bar (150 ~ 1300 psi)
20.7 ~ 165.5 bar (300 ~ 2400 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T08-3A；See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.25 kg (0.55 lbs) ;
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-ups standard. Anodized aluminum knobs.
BODY:Weight:0.26 kg (0.60lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DPS08-32 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

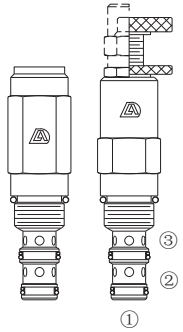
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
23.5	2350 psi

Spring Range

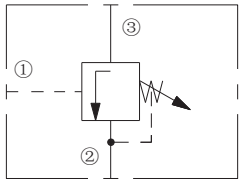
3	3.5 to 20.7 bar (50 to 300 psi)
6	6.9 to 41.1 bar (100 to 600 psi)
13	10.3 to 89.7 bar (150 to 1300 psi)
24	20.7 to 165.5 bar (300 to 2400 psi)

†Adjustable valves will be preset to approx. 50%

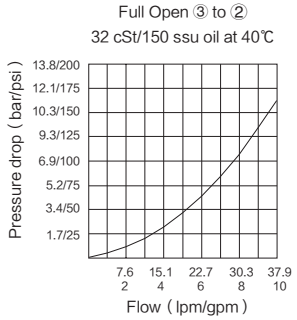
DPS10-32 Sequence, External Pilot, Internal Drain



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic sequence valve with external pilot and internal spring chamber drain.

OPERATION

DPS10-32 , blocks fl ow from ③ to ② .
On attainment of a pre-determined pressure at ① , the cartridge shifts to open ③ to ② .Since the spring chamber is vented at ② , back pressure at ② will directly (1:1) affect the valve’ s setting.

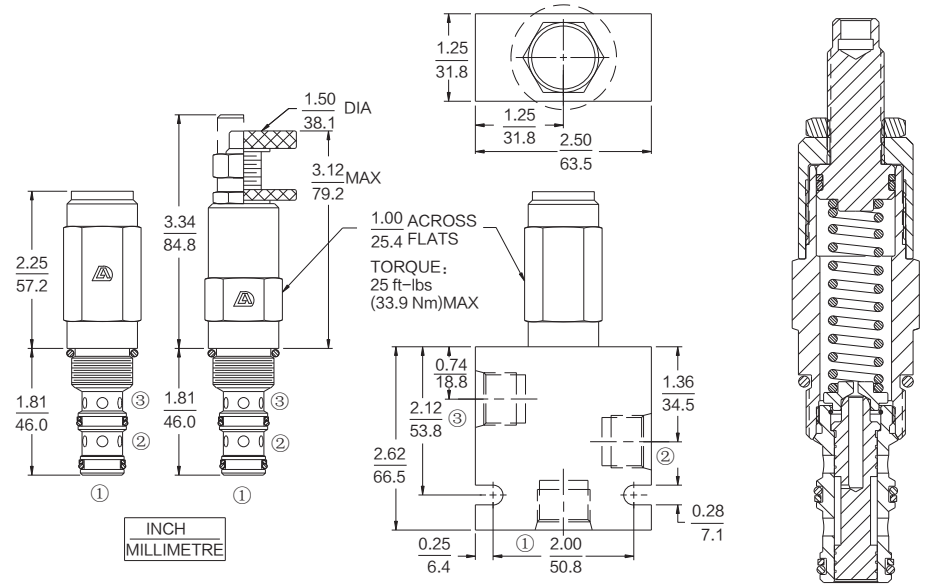
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 145 bar (2100 psi) .
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage:
在 82 cc/minute (5 cu. in./minute) max. to 90% of nominal setting
Standard Spring Ranges:
5.5 ~ 27.6 bar (80 ~ 400 psi)
13.8 ~ 55.2 bar (200 ~ 800 psi)
20.7 ~ 103.4 bar (300 ~ 1500 psi)
27.6 ~ 144.8 bar (400 ~ 2100 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.27 kg (0.60 lbs) ;
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester standard. Anodizedaluminum knobs and caps.
BODY:Weight:0.36 kg (0.80lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi) ; Ductile iron bodies available; dimensions may differ.

TO ORDER

DPS10-32 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover	C
CapFactory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

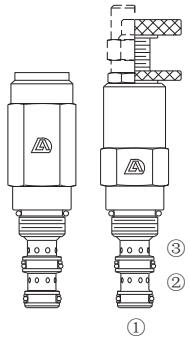
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

Spring Range

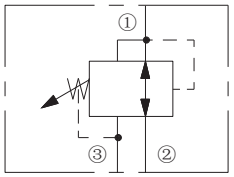
4	5.5 to 27.6 bar (80 to 400 psi)
8	13.8 to 55.2 bar (200 to 800 psi)
15	20.7 to 103.4 bar (300 to 1500 psi)
21	27.6 to 144.8 bar (400 to 2100 psi)

†Adjustable valves will be preset to approx. 50%

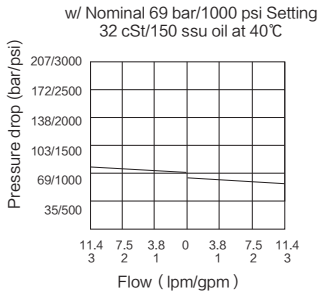
DPR08-32 Pressure Reducing/Relieving



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic pressure reducing/relieving valve with internal pilot and internal spring chamber drain, designed to act as a pressure-regulating device for secondary circuits.
It is intended for use in stable input fl ow circuits.

OPERATION

In its steady state, the DPR08-32 allows flow to pass bidirectionally from ② to ①, with the spring chamber constantly drained at ③.
On attainment of a pre-determined pressure at ①, the cartridge shifts to block flow at ②, thereby regulating pressure at ①.
In this mode, the valve also will relieve ① to ③ at a variable value over the set reducing pressure.
Note: Direct-acting PR series valves may not be suitable for some static load applications. Consult factory.

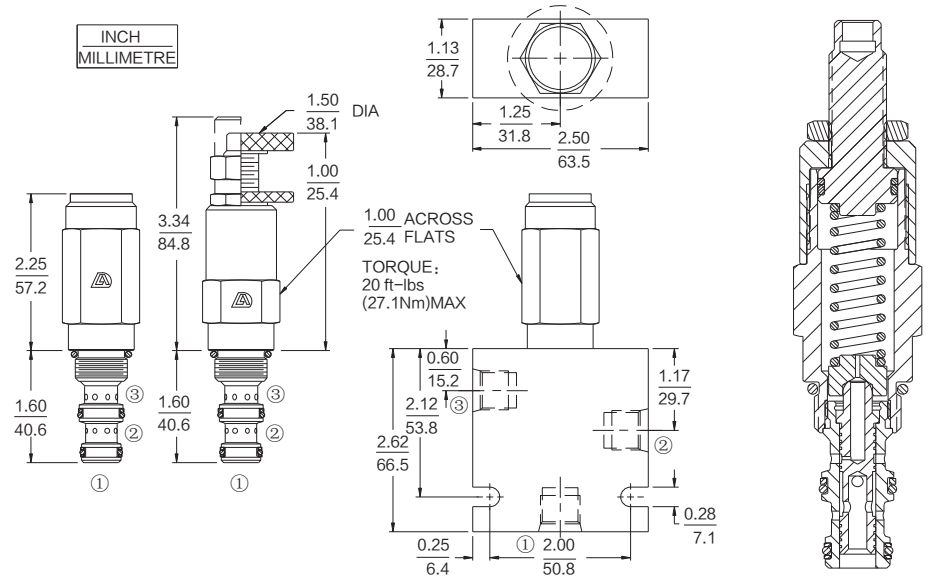
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 152 bar (2200 psi).
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 390 bar (5700 psi)
Flow:MAX 11.4 lpm (3 gpm)
Internal Leakage: ② to ③: 82 cc/minute (5 cu. in/minute) max. at 207 bar (3000 psi) to 90% of nominal setting
Standard Spring Ranges (Reducing Function):
3.4 ~ 20.7 bar (50 ~ 300 psi)
6.9 ~ 41.4 bar (100 ~ 600 psi)
20.7 ~ 82.8 bar (300 ~ 1200 psi)
34.5 ~ 151.7 bar (500 ~ 2200 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-3A; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.25kg (0.55 lbs);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.
Anodized aluminum knob.
BODY:Weight:0.27kg (0.60 lbs);
Anodized high-strength aluminum alloy,
rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ.

TO ORDER

DPR08-32 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N	
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

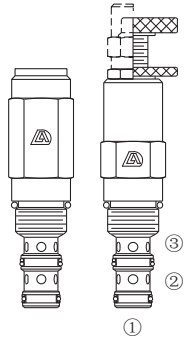
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

Spring Range

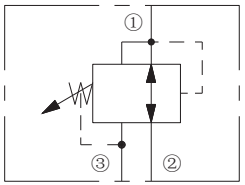
3	3.4 to 20.7 bar (50 to 300 psi)
6	6.9 to 41.4 bar (100 to 600 psi)
12	20.7 to 82.8 bar (300 to 1200 psi)
22	34.5 to 151.7 bar (500 to 2200 psi)

†Adjustable valves will be preset to approx. 50%

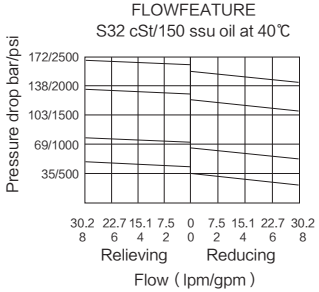
DPR10-32 Pressure Reducing/Relieving



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type, hydraulic pressure reducing/relieving valve with internal pilot and internal spring chamber drain, designed to act as a pressure-regulating device for secondary circuits. It is intended for use in stable input flow circuits.

OPERATION

DPR10-32 allows fl ow to pass bidirectionally from ② to ①, with the spring chamber constantly drained at ③.
On attainment of a pre-determined pressure at ①, the cartridge shifts to restrict input flow at ②, thereby regulating pressure at ①.
In this mode, the valve will also relieve ① to ③ at approximately 10 bar(150 psi) over the reducing setting.
Note: Direct-acting PR series valves may not be suitable for some static load applications. Consult factory.

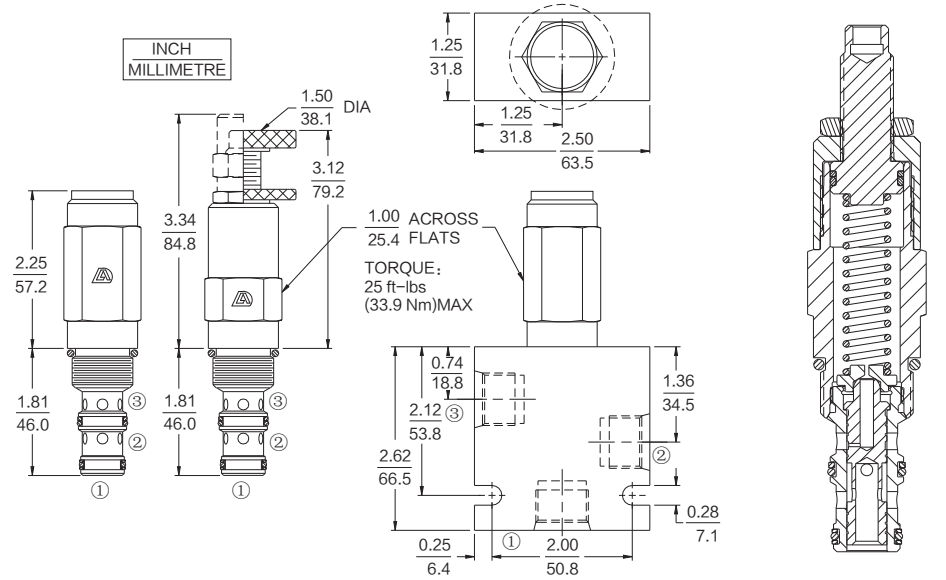
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 145 bar (2100 psi) .
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage: ② to ③: 82 cc/minute (5 cu. in/minute) max. at ΔP 207 bar (3000 psi)
Standard Spring Ranges (Reducing Function) :
5.5 ~ 27.6 bar (80 ~ 400 psi)
13.8 ~ 55.2 bar (200 ~ 800 psi)
20.7 ~ 103 bar (300 ~ 1500 psi)
27.6 ~ 145 bar (400 ~ 2100 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.27kg (0.60 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs and caps.
BODY:Weight:0.36kg (0.80 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ

TO ORDER

DPR10-32 - - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

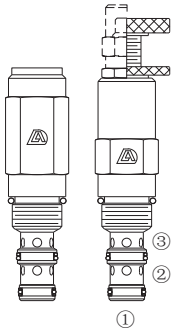
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

Spring Range

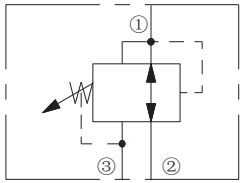
4	5.5 to 27.6 bar (80 to 400 psi)
8	13.8 to 55.2 bar (200 to800 psi)
15	20.7 to 103 bar (300 to 1500 psi)
21	27.6 to 145 bar (400 to 2100 psi)

†Adjustable valves will be preset to approx. 50%

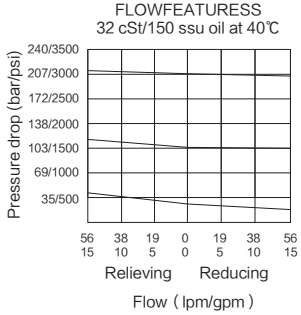
DPR10-36 Pressure Reducing/Relieving (Pilot-Operated)



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic pressure reducing/relieving valve with internal pilot and internal spring chamber drain, designed to act as a pressure-regulating device for secondary circuits.

OPERATION

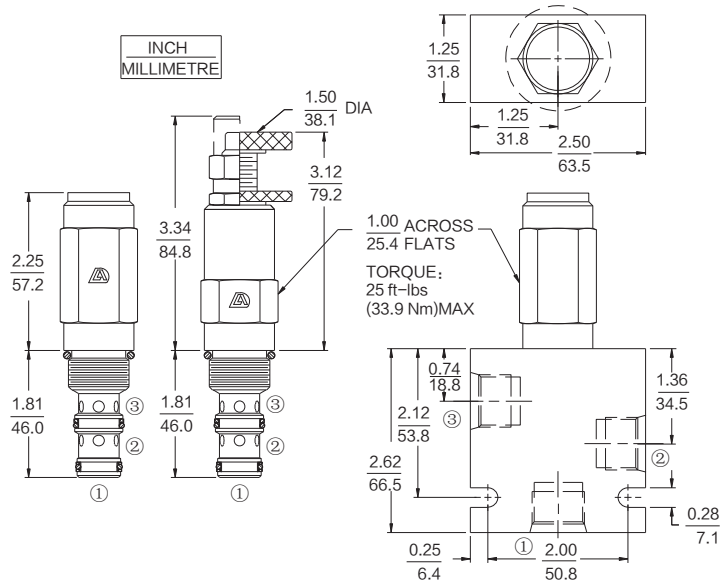
In its steady state, the DPR10-36 allows flow to pass bidirectionally from ② to ① , with the spring chamber constantly drained at ③ .
On attainment of a pre-determined pressure at ① , the cartridge shifts to restrict input flow at ② , thereby regulating pressure at ① .
In this mode, the valve will also relieve ① to ③ .
Deadband (from reducing to relieving) pressure rise over reduced pressure setting:Non-flow condition: approximately 0.55 bar (8 psi); with flow: approximately 2.1 bar(30 psi).

FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Optional spring ranges to 207 bar (3000 psi) .
- Industry common cavity.

RATINGS

Operating Pressure:210 bar (3000 psi)
Proof Pressure: 390 bar 5700 psi)
Flow: See Performance Chart
Pilot Orifice: 0.51 mm (0.020 in)
Standard Spring Ranges (Reducing Function) :
6.9 ~ 27.6 bar (100 ~ 400 psi)
10.3 ~ 103 bar (150 ~ 1500 psi)
27.6 ~ 207 bar (400 ~ 3000 psi)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-3A; See page 301.



MATERIALS

Cartridge: Weight:0.27kg (0.60 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs and caps.
BODY:Weight:0.36kg (0.80 lbs) ;
Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ.

TO ORDER

DPR10-36 - - - -

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum. Knobs	B
Option A with Cover Cap	C
Factory Preset Non-Adj.	F
Factory Preset Hidden Adj.	H
Option C w/Lockwire Holes	L

Porting

Cartridge Only	0
SAE 6	6T
SAE8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna	N
Fluorocarbon	V

Setting in bar†

(Blank)	for Adjustable, or Specify, for example:
M25	25 bar
M100	100 bar

Setting in psi†

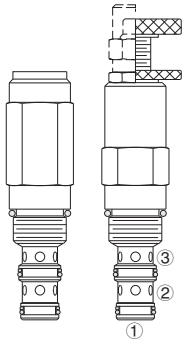
(Blank)	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

Spring Range

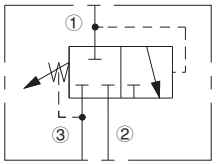
4	6.9 to 27.6 bar (10 0 to 400 psi)
15	10.3 to 103 bar (150 to 1500 psi)
30	27.6 to 207 bar (400 to 3000 psi)

†Adjustable valves will be preset to approx. 50%

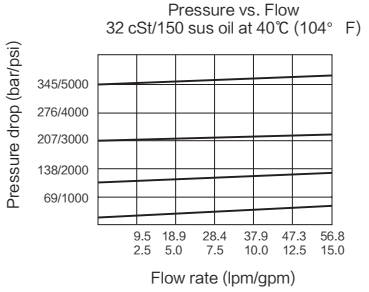
DPS10-36 Pilot-Operated Sequence, Internal Pilot



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic sequence valve with internal pilot and external spring chamber drain.

OPERATION

In its steady state, the DPS10-36 blocks flow from 1 to 2, with the spring chamberdrained at 3.
On attainment of a predetermined pressure at 1, the cartridge shifts to open 1 to 2.Note that back-pressure on 3 adds to the spring setting value.

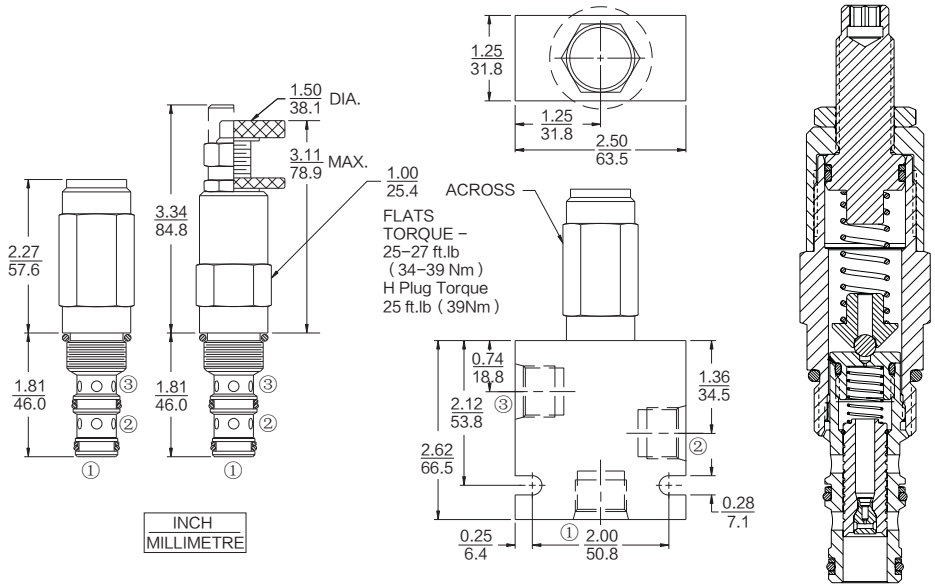
FEATURES

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Optional spring ranges to 207 bar (3000 psi).
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure: up to 241 bar (3500 psi)
Sequence Pressure: up to 207 bar (3000 psi)
Flow: to 56.8 lpm (15 gpm)
Standard Spring Ranges: 5.5 to 207 bar (80 to 3000 psi) shown in To Order section.
Due to manufacturing tolerances, it may be possible to adjust the valve either lower
or higher than the nominal ratings shown. If the valve is adjusted beyond the
recommended maximum pressure range for F and H style adjuster options,the valve may not open to relieve pressure.
Temperature: -40 to 100° C (-40 to 212° F) with standard Buna seals
Filtration: 10 microns nominal or better;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of
7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity,
Cavity: T10-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight: With manual override options A & F: 0.24 kg (0.54 lb); with manual override option B: 0.27 kg (0.59 lb); with manual override option C & L: 0.29 kg (0.63 lb.); with manual override option H: 0.24 kg (0.53 lb); Steel with hardened work surfaces. Zincplated exposed surfaces. Buna NO-rings and elastomer back-ups standard. Anodized aluminum knobs and caps.
Standard Ported Body: Weight: 0.36 kg (0.80 lb); Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi) Ductile iron bodies available; dimensions may differ.

TO ORDER

DPS10-36 – – – – /

Adjustment Option

1/4 in. Hex Allen Head	A
1-1/2 in. Dia. Alum KnobOption	B
A w/Cover Cap	C
Factory Preset Non-Adjst.	F*
Factory Preset Hidden Adjustment Option C w/Lockwire Holes	H*
	L

* If the valve is adjusted beyond the recommended maximum pressure range for the F and H style adjuster options, the valve may not open to relieve system pressure.

Adjustment Option

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Spring Range

(Blank)†	for Adjustable, or Specify, for example:
M25	M25 25 bar
M100	M100 100 bar

Setting in psi

(Blank)†	for Adjustable, or Specify, for example:
9.0	900 psi
21.0	2100 psi

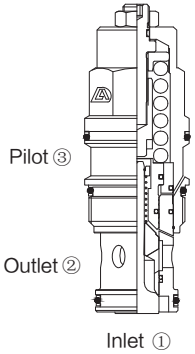
†Adjustable valves will be preset to approx. 50% of spring max. potential.

Spring Range

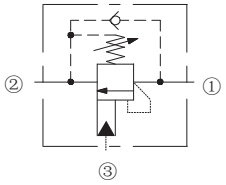
04	4.1 to 27.6 bar (60 to 400 psi)
15	16.5 to 103.4 bar (240 to 1500 psi)
30	31.7 to 206.7 bar (460 to 3000 psi)

NOTE: Due to manufacturing tolerances, it may be possible to adjust the valve either lower or higher than the nominal ratings shown above.

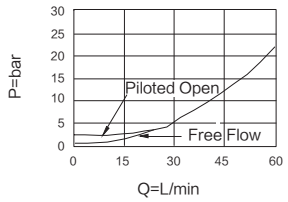
DCBCA-LHN Counter Balance Valve (STANDARD)



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

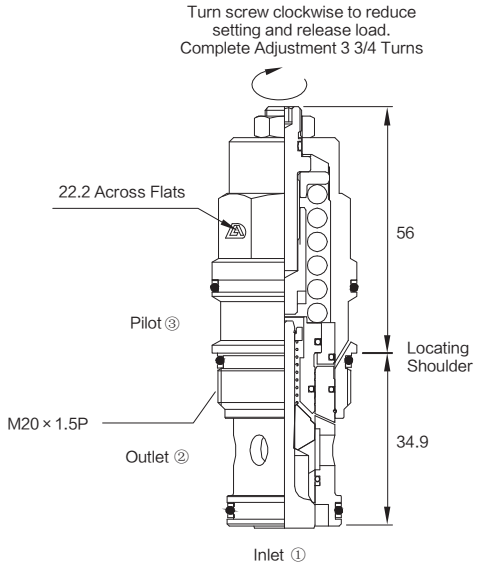
FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

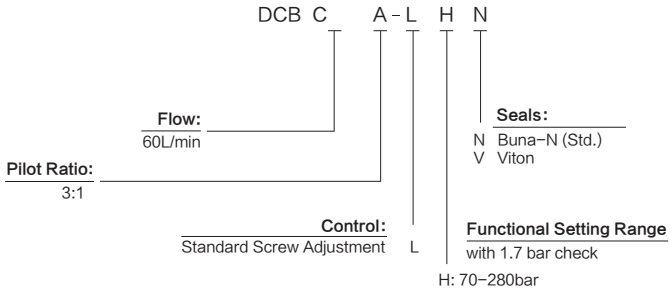
RATINGS

Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 3：1
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity:T08-3B，See page 298.
Standard Ported Body: Steel rated at 420 bar (6090 psi) .

DIMENSIONS

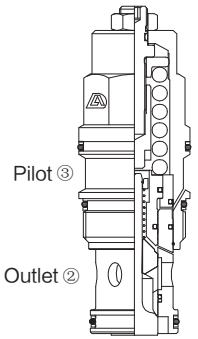


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBBA-LHN Counter Balance Valve (RESTRICTIVE，MAXIMUM SETTING 280bar)



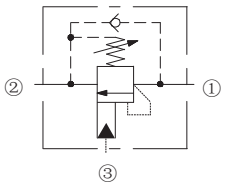
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

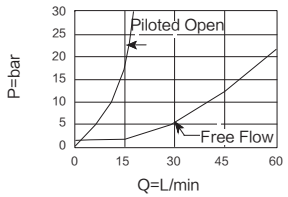
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

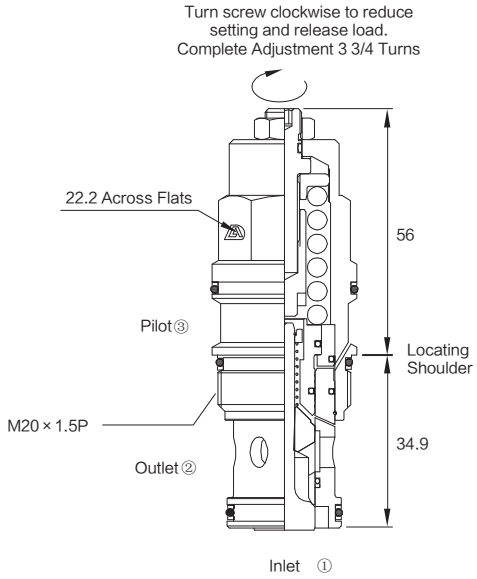
PERFORMANCE (Cartridge Only)



RATINGS

Restrictive valves have no relief capacity other than as a thermal relief.Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio:3：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity:T08-3B，See page 298.
Standard Ported Body: Steel rated at 420 bar (6090 psi) .

DIMENSIONS



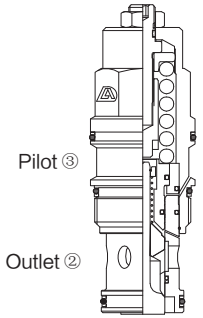
TO ORDER

DCB B A Ł H N

- **Flow:** 15L/min
- **Pilot Ratio:** 3:1
- **Control:** Standard Screw Adjustment — L
- **Functional Setting Range** with 1.7 bar check — H: 70-280bar
- **Seals:** N Buna-N (Std.) V Viton

NOTE：Customer specifie special setting stamped on hex.

DCBGA-LHN Counter Balance Valve (STANDARD)



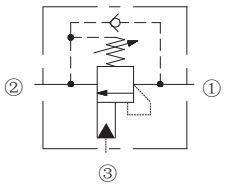
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

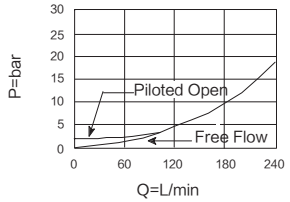
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

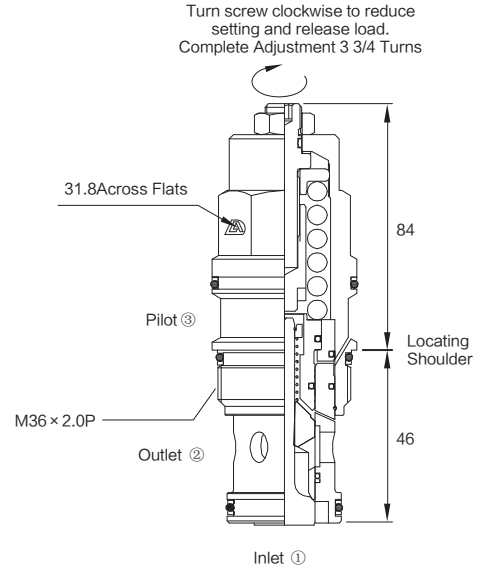
PERFORMANCE (Cartridge Only)



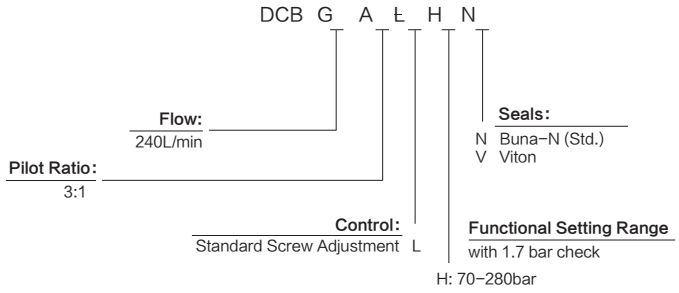
RATINGS

Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio:3：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T16-3A，See page 307.
Standard Ported Body: Steel rated at 420 bar (6090 psi) .

DIMENSIONS

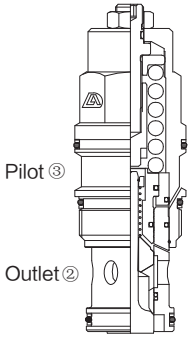


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBEA-LHN Counter Balance Valve (STANDARD)



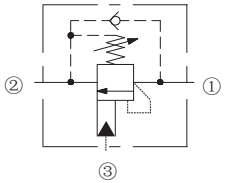
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

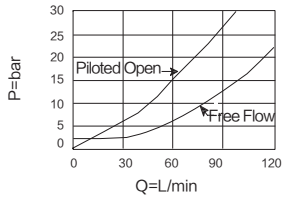
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

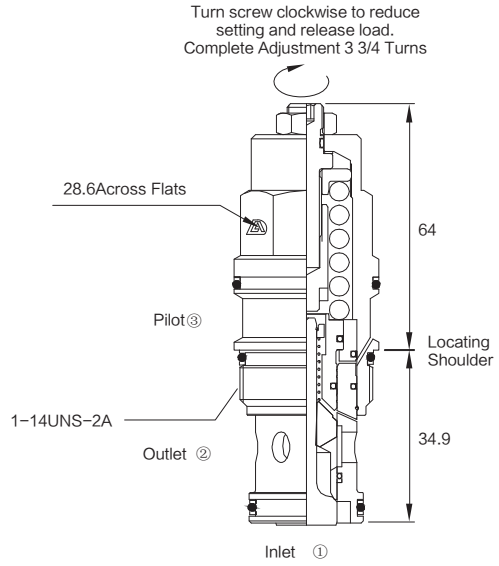
PERFORMANCE (Cartridge Only)



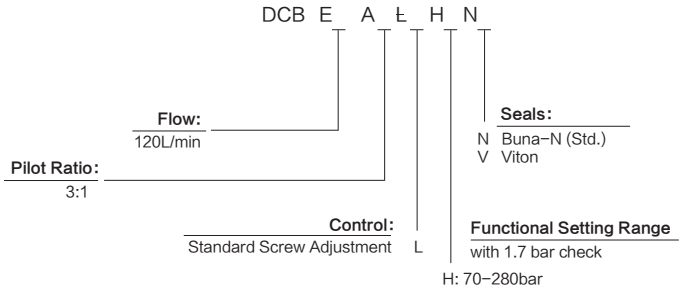
RATINGS

Restrictive valves have no relief capacity other than as a thermal relief.Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio:3：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity:T10-3B，See page 302.
Standard Ported Body: Steel rated at 420 bar (6090 psi) .

DIMENSIONS

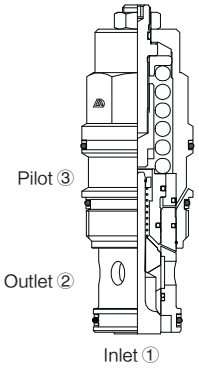


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCCCA-LHN Counter Balance Valve（RESTRICTIVE，MAXIMUM SETTING 280bar）



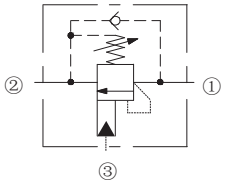
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .

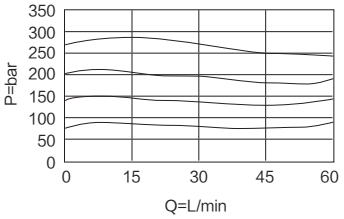
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

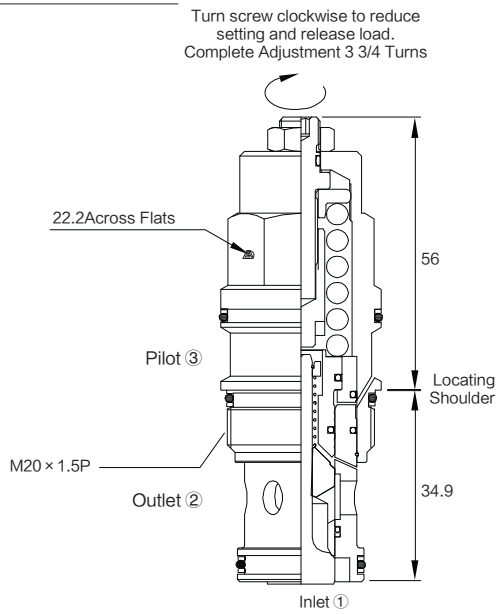
PERFORMANCE (Cartridge Only)



RATINGS

Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage: 0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 3：1
Temperature: -40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity: T08-3B，See page 298.
Standard Ported Body: Steel rated at 420 bar（6090）.

DIMENSIONS



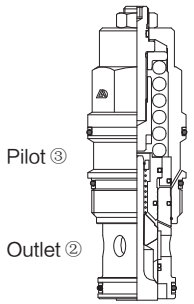
TO ORDER

DCC C A - L H N

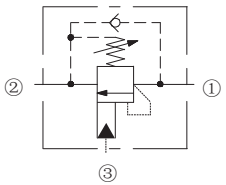
- **Flow:** 60L/min
- **Pilot Ratio:** 3:1
- **Control:** Standard Screw Adjustment
- **Functional Setting Range** with 1.7 bar check
  - H: 70-280bar
- **Seals:**
  - N Buna-N (Std.)
  - V Viton

NOTE：Customer specifie special setting stamped on hex.

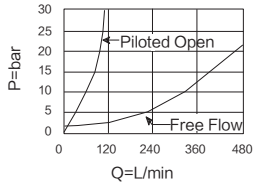
DCBHA-LHN Counter Balance Valve (STANDARD)



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

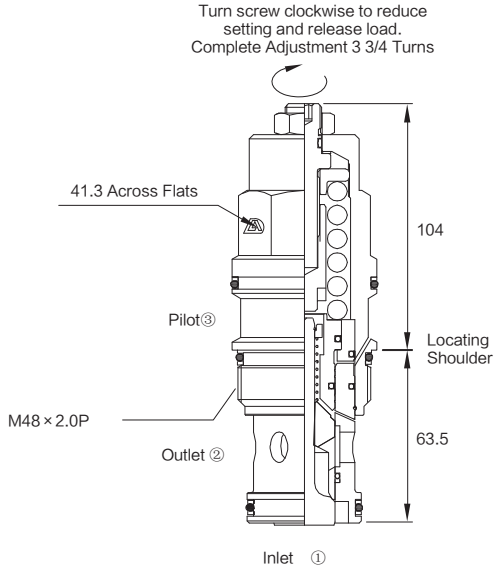
FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

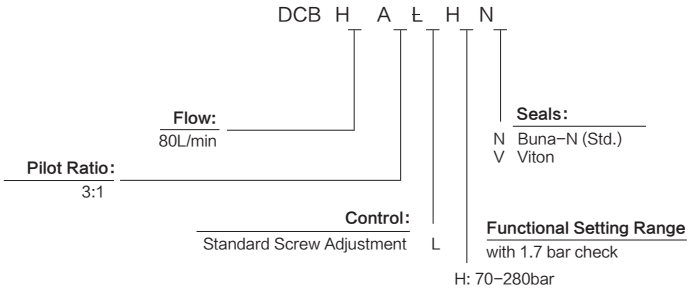
RATINGS

Restrictive valves have no relief capacity other than as a thermal relief.Maximum setting = 280 bar.280bar Maximum recommended load pressure at maximum setting = 215 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 3：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T20-3A，See page 309.
Standard Ported Body: Steel rated at 420 bar (6090psi) .

DIMENSIONS

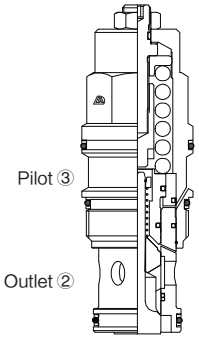


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBBG-LJN Counter Balance Valve（RESTRICTIVE，MAXIMUM SETTING 350bar）



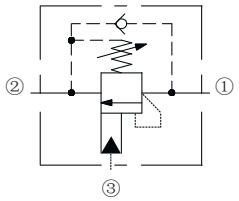
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

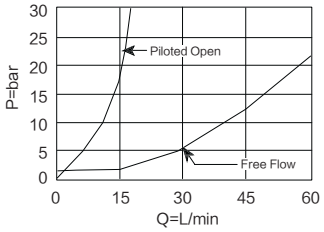
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set.Settings lower than the standard pressure may result in lowerreseat percentage.

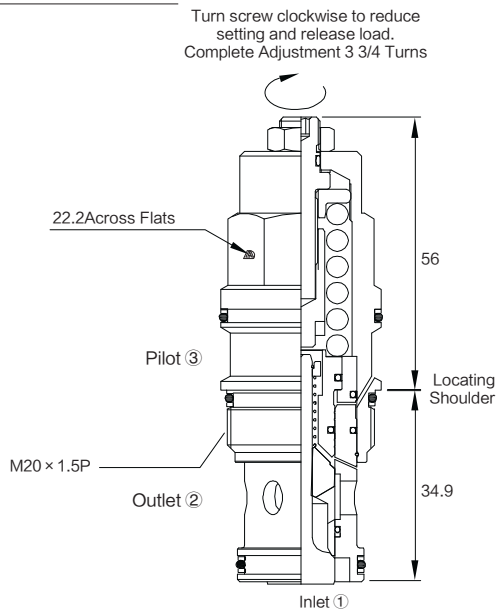
PERFORMANCE (Cartridge Only)



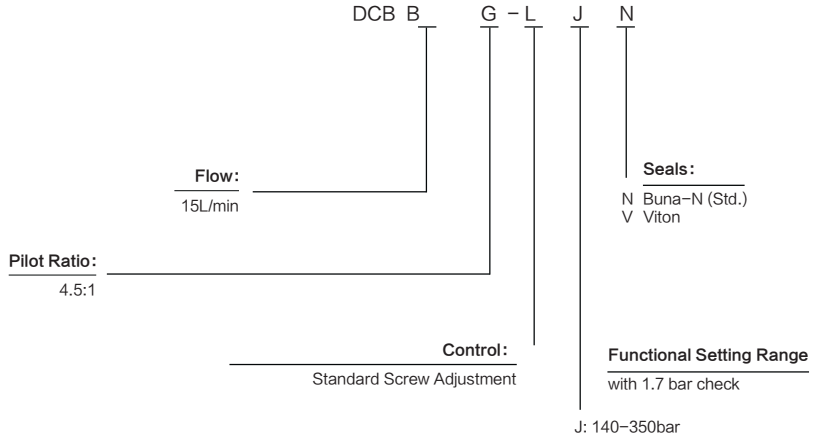
RATINGS

Restrictive valves have no relief capacity other than as a thermal relief.Maximum setting = 350 bar.350bar Maximum recommended load pressure at maximum setting = 270 bar
Flow Rating: See Performance Chart
Internal Leakage: 0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 4.5：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature: -40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity: T08-3B，See page 298.
Standard Ported Body: Steel rated at 420 bar（6090）.

DIMENSIONS

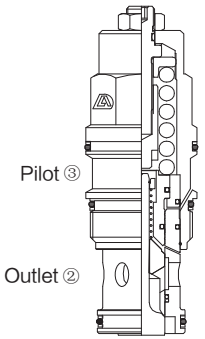


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBCG-LJN Counter Balance Valve (STANDARD MAXIMUM SETTING 350BAR)



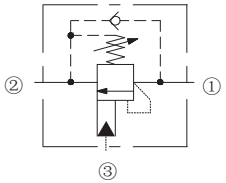
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

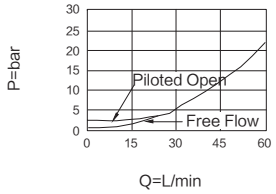
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

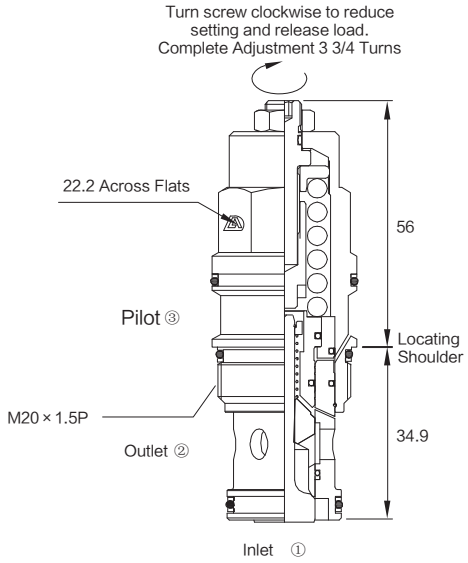
PERFORMANCE (Cartridge Only)



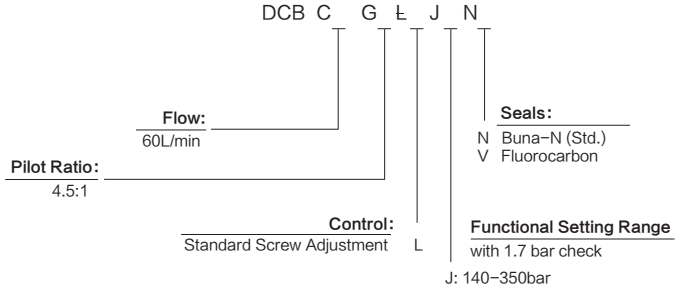
RATINGS

Maximum setting = 350 bar. Maximum recommended load pressure at maximum setting = 270 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio:4.5：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T08-3B，See page 298.
Standard Ported Body: Steel rated at 420 bar (6090psi) .

DIMENSIONS

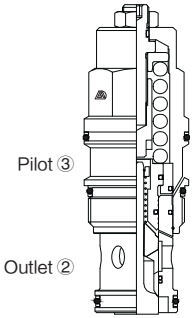


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBGG-LJN Counter Balance Valve（Restrctive，Maximum Setting 350bar）



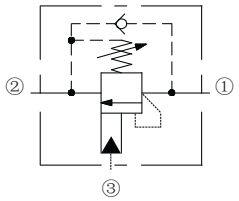
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

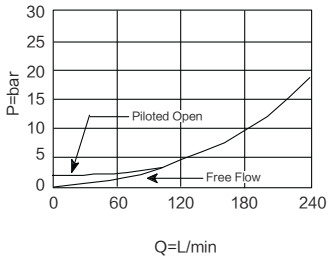
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set.Settings lower than the standard pressure may result in lower reseat percentage.

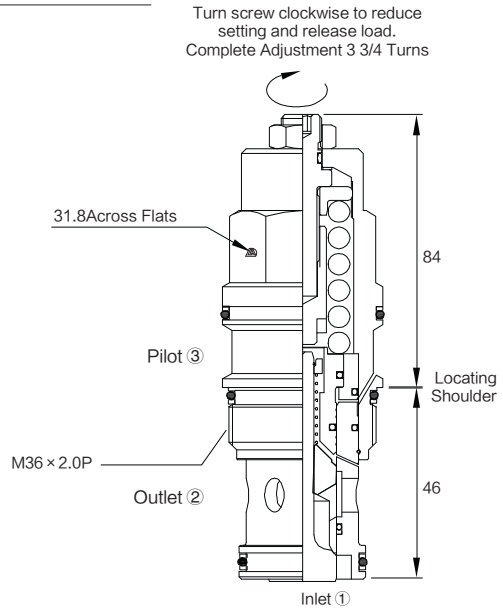
PERFORMANCE (Cartridge Only)



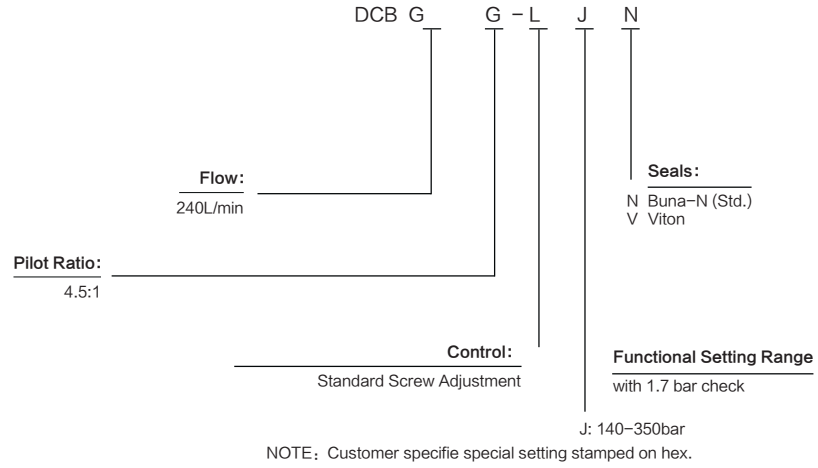
RATINGS

Maximum setting = 350 bar.350bar Maximum recommended load pressure at maximum setting = 270bar
Flow Rating: See Performance Chart
Internal Leakage: 0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 4.5：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature: -40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity: T16-3A，See page 307.
Standard Ported Body: Steel rated at 420 bar（6090）.

DIMENSIONS

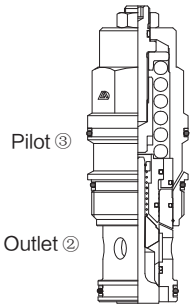


TO ORDER



NOTE：Customer specifie special setting stamped on hex.

DCBEG-LJN Counter Balance Valve（STANDARD MAXIMUM SETTING 350BAR）



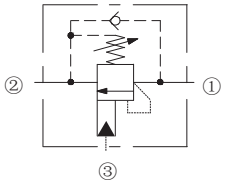
DESCRIPTION

Fixed-setting, 3-port Counter Balance Valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value.

OPERATION

The check valve allows free flow from the directional valve (port ②) to the load (port ①) while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ② .
Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pil ot ratio.

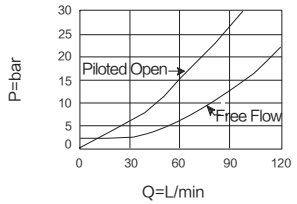
ISO SYMBOL



FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the back pressure.
- Reseat exceeds 85% of set pressure when valve is standard set. Settings lower than the standard pressure may result in lower reseat percentage.

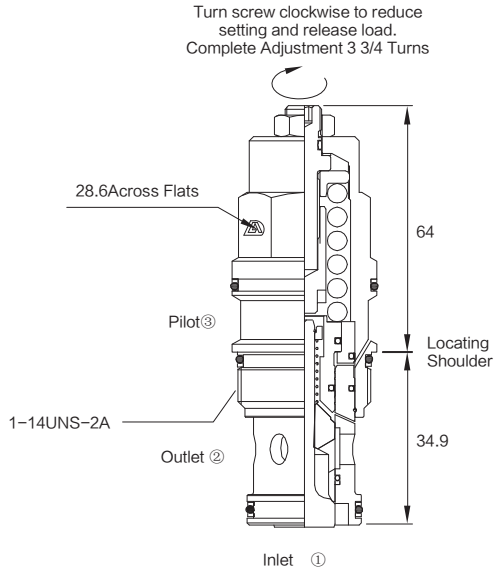
PERFORMANCE (Cartridge Only)



RATINGS

Maximum setting = 350 bar. Maximum recommended load pressure at maximum setting = 270 bar
Flow Rating: See Performance Chart
Internal Leakage:0.4ml/min max. to 85% of nominal setting.
Setting Pressure Defined:
bar (psi) evident at 7.6 lpm (2.0 gpm) attained
Pilot Ratio: 4.5：1
Maximum setting pressure should be 1.3 times the maximum load induced pressure.
Temperature:-40℃ to 120℃，with standard Buna seals;
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T10-3B，See page 302.
Standard Ported Body: Steel rated at 420 bar（6090psi）.

DIMENSIONS



TO ORDER

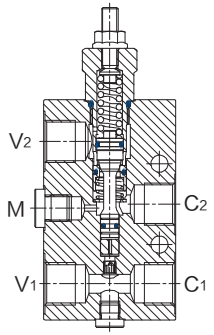
DCB E G Ł J N

- **Flow:** 120L/min
- **Pilot Ratio:** 4.5:1
- **Control:** Standard Screw Adjustment — L
- **Functional Setting Range** with 1.7 bar check — H 140-350bar
- **Seals:** N Buna-N (Std.) / V Viton

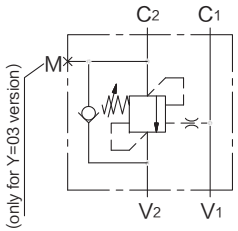
NOTE：Customer specifie special setting stamped on hex.

D08.39.59XYZ Single Counterbalance

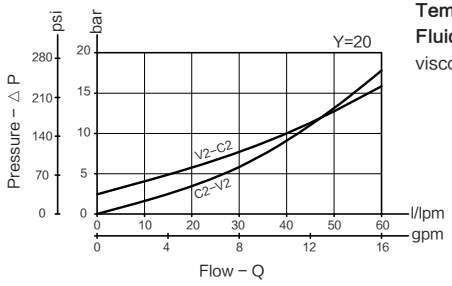
D08.39.59XYZ



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Valve block structure，Pipe installation .

OPERATION

When pressure at V2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from V2 to C2. When load pressure at C2 rises above the pressure setting, the direct operated, differential area, relief function is activated and flow is relieved from C2 to V2. With pilot pressure at V1–C1, the pressure setting is reduced in proportion to the stated ratio of the valve, until opening and allowing flow from C2 to V2. The spring chamber is drained to V2, and any back–pressure at V2 is additive to the pressure setting in all functions.
Note: port identified with M are not protected with calibrated orifice but in direct connection with pressure channels.

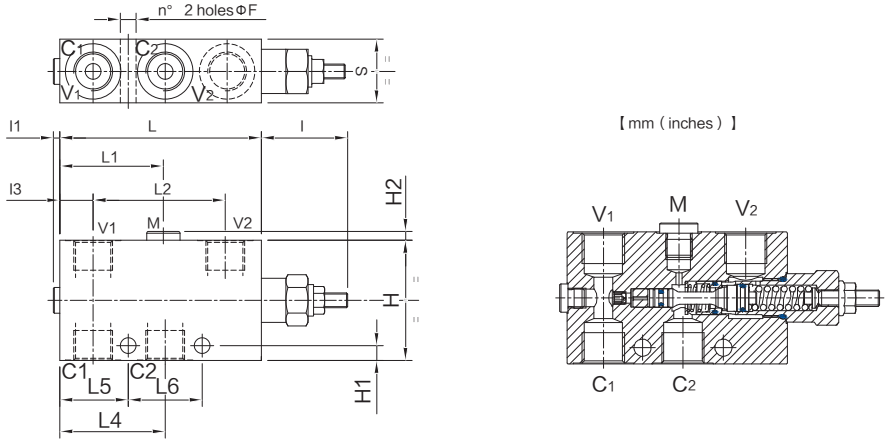
FEATURES

- Single Counterbalance
- Pipe installation

RATINGS

Max. Operating Pressure: 350bar。
Maximum setting = 350 bar.350bar Maximum recommended load pressure at maximum setting = 270bar
Relief setting: at least 1.3 times the highest expected load.
Pilot ratio: 4.2 : 1
Flow: see performance chart
Internal Leakage: 15drops/min max. to 80% of nominal setting.
Temperature: –40 to 120° C with standard Buna seals
Fluids: Mineral–based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);

DIMENSIONS

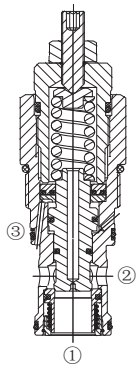


35 (1.38)	40 (1.58)	37.3 (2.26)	57.3 (2.26)	18 (0.71)	71 (2.8)	55.3 (2.18)	109 (4.29)	3.5 (0.14)	47 (1.85)	5 (0.2)	8 (0.32)	65 (2.56)	8.5 (0.34)		G1/2	1.81 (3.99)
30 (1.18)	40 (1.58)	37.3 (1.47)	57.3 (2.26)	18 (0.71)	71 (2.8)	– –	109 (4.29)	3.5 (0.14)	47 (1.85)	– –	8 (0.32)	55 (2.17)	8.5 (0.34)		G3/8	1.3 (2.87)
S	L6	L5	L4	L3	L2	L1	L	I1	I	H2	H1	H	F		Y	Weight kg (lbs)

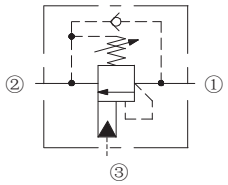
TO ORDER

D08.39.59 — Pilot ratio: 4.2:1 03 — Adj.pressure range (bar) / Pres.increase (bar/turn) / Std.setting Q=5 (l/min): 60–210 / 63 / 200; 100–350 / 138 / 350 (20, 35) — Port sizes : M / C1–C2 / V1–V2: G1/4 / G3/8 / G3/8 02; G1/2 / G1/2 / G1/2 03

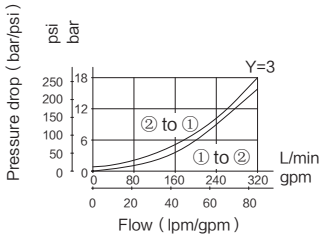
D04.52.25X58Z00* Counter Balance Valve



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Screw in cartridge type

OPERATION

D04.52.25X58Z00* When pressure at 2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 2 to 1.

When load pressure at 1 rises above the pressure setting, the directacting,differential area relief function is activated and flow is relieved from 1 to 2. With pilot pressure at 3, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with freeflow from 1 to 2. The spring chamber is drained to 2, and any backpressure at 2 is additive to the pressure setting in all functions.

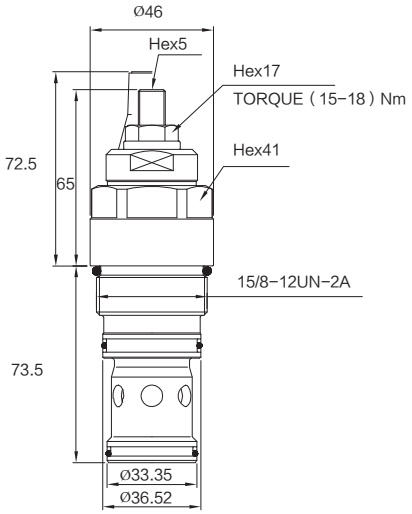
FEATURES

- Counter Balance Valves should be set at least 1.3 times the maximum load induced pressure.

RATINGS

MAX SETTING PRESSURE: 350bar.
350bar Maximum recommended load pressure
at maximum setting = 270bar
Flow Rating: See Performance Chart
Internal Leakage:15drops/min max. to 85% of nominal setting.
Temperature:−40℃ to 120℃, with standard Buna seals;
Fluids: Mineral−based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu);
Cavity:T20−3AS, See page 310.
Standard Ported Body: Steel rated at 420 bar (6090psi) .

DIMENSIONS



TO ORDER

D04.52.25 X 58 Z 00 *

Pilot Ratio:
4:1 03
8:1 10

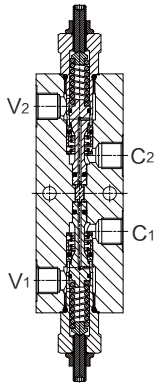
Common cavity, Size :20

Version and options standard

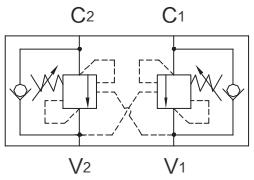
		Adj.pressure range bar	SPRINGS Pres.inerease bar/ turn	Std.setting bar Q=5L/min
For X=10	20	70−210	70	200
	35	140−350	108	350
For X=10	20	70−210	70	200
	40	140−420	135	350

NOTE：Customer specifie special setting stamped on hex.

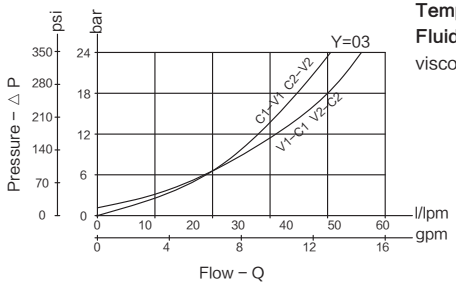
D08.44.07XYZ Daul Counterbalance



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Valve block structure, Pipe installation . This valve module includes 2 sections,each one composed by a check and a relief valve with balanced piston

OPERATION

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston,pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

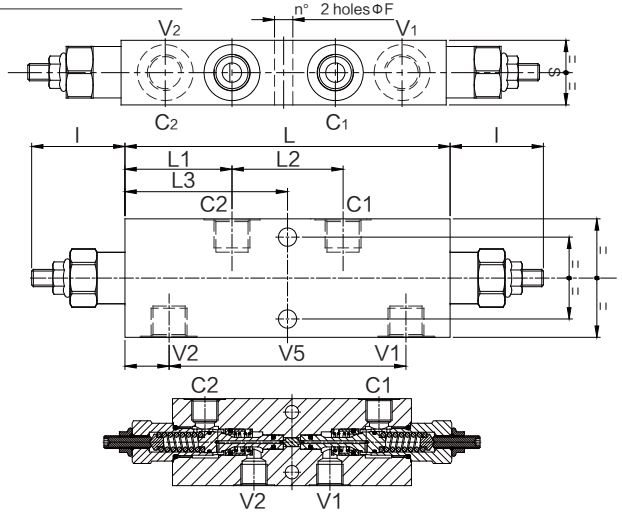
FEATURES

- Dual Counterbalance
- Pipe installation

RATINGS

Max. Operating Pressure: 350bar。
Maximum setting = 350 bar.350bar Maximum recommended load pressure at maximum setting = 270bar
Relief setting: at least 1.3 times the highest expected load.
Pilot ratio: 4.2 : 1
Flow: see performance chart
Internal Leakage: 15drops/min max. to 80% of nominal setting.
Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);

DIMENSIONS



35 (1.38)	112.6	19.2 (2.26)	75.5 (29.7)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	45.5 (1.79)	43 (1.69)	65 (2.56)	:	8.5 (0.34)	:	G1/2	2.9 (6.4)
30 (1.18)	109.6	20.7 (0.82)	75.5 (29.7)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	45.5 (1.79)	38 (1.5)	55 (2.17)	:	8.5 (0.34)	:	G3/8	2.5 (5.5)
S	L5	L4	L3	L2	L1	L	I	H1	H	:	F	:	Y	Weight kg (lbs)

TO ORDER

D08.44.07 X Y Z

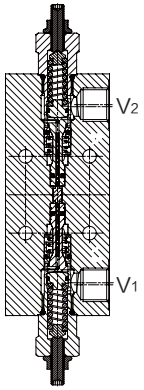
Pilot ratio:
4.2:1 03

Port sizes :

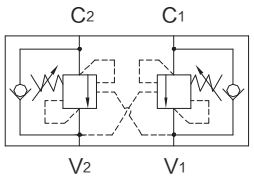
C1-C2	V1-V2	
G3/8	G3/8	02
G1/2	G1/2	03

	Adj.pressure range (bar)	Pres.increase (bar/turn)	Std.setting Q=5 (l/min)
20	60-210	56	200
35	100-350	138	350

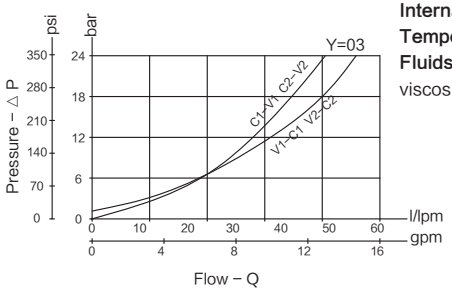
D08.44.11XYZ Daul Counterbalance



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

Valve block structure, Plate installation . This valve module includes 2 sections,each one composed by a check and a relief valve with balanced piston

OPERATION

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston,pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

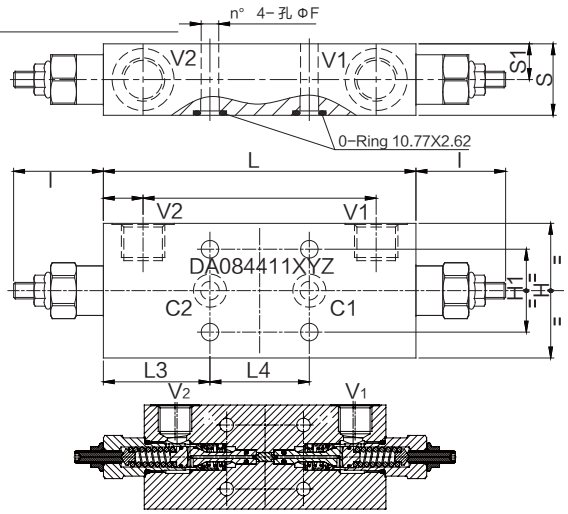
FEATURES

- Dual Counterbalance
- Pipe installation

RATINGS

Max. Operating Pressure: 350bar。
Maximum setting = 350 bar.350bar Maximum recommended load pressure at maximum setting = 270bar
Relief setting: at least 1.3 times the highest expected load.
Pilot ratio: 4.2 : 1
Flow: see performance chart
Internal Leakage: 15drops/min max. to 80% of nominal setting.
Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);

DIMENSIONS



17.5 (0.69)	34.5 (1.36)	48 (1.89)	51.5 (2.03)	112.6 (4.43)	19.2 (0.76)	151 (5.95)	45.5 (1.79)	40 (1.58)	65 (2.56)	:	8.5 (0.34)	:	G1/2	2.30 (5.1)
15 (0.59)	29.5 (1.16)	45 (1.89)	51.5 (2.03)	109.6 (4.32)	20.7 (0.82)	151 (5.95)	45.5 (1.79)	38 (1.58)	55 (2.17)	:	8.5 (0.34)	:	G3/8	1.76 (3.9)
S1	S	L4	L3	L2	L1	L	l	H1	H	:	F	:	Y	Weight kg (lbs)

TO ORDER

D08.44.11 X Y Z

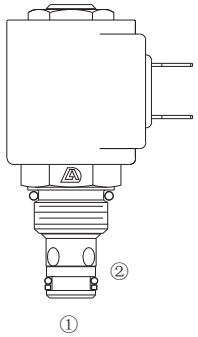
Pilot ratio:
4.2:1 03

Port sizes :

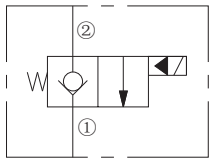
C1-C2	V1-V2
Φ9	G3/8 02
Φ9	G1/2 03

Adj.pressure range (bar)	Pres.increase (bar/turn)	Std.setting Q=5 (l/min)
20	60-210	56	200
35	100-350	138	350

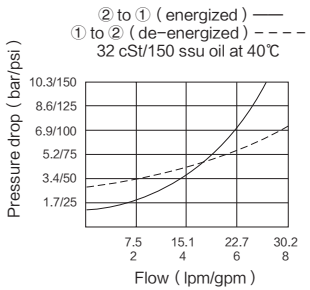
DSV08-20 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, piloted poppet-type, screw-in hydraulic cartridge valve, intended to act as a blocking or load-holding device for low flow circuits.

OPERATION

When de-energized, the DSV08-20 acts as a check valve, allowing flow from ① to ② ,while blocking flow from ② to ① .When energized, the cartridge’s poppet lifts to open the ② to ① flow path. In this mode,flow from ① to ② is severely restricted.If this path is required, see model. DSV08-22,Operation of Manual Override Option:To override, push button in, twist counterclockwise 180° , and release. In this position, the valve will remain open.To return to normal operation, push button in, twist clockwise 180° , and release.
Override will be detented in this position.

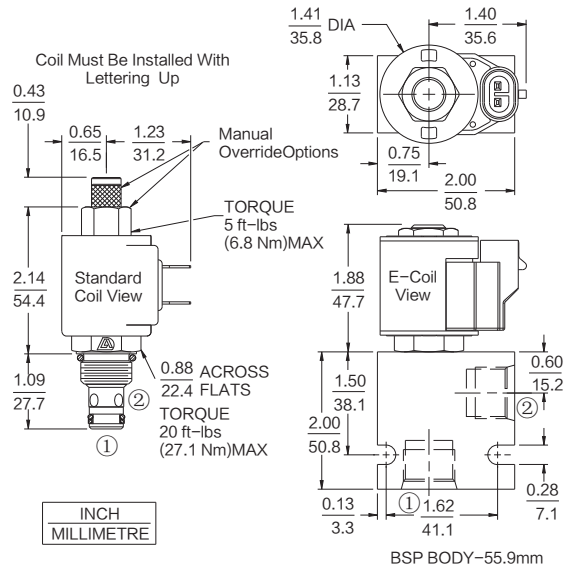
FEATURES

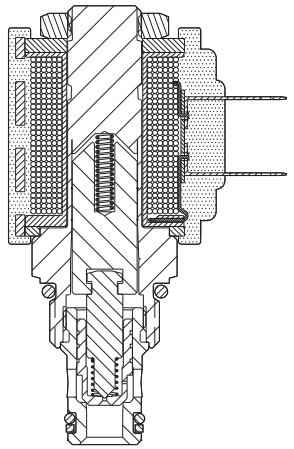
- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 255 bar (3700 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating:
Energized: 40 ms De-energized: 46ms
Initial Coil Current Draw at 20℃ :
Standard Coil: Standard Coil: 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified).
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E; See page 297.

DIMENSIONS





BSP BODY-55.9mm

MATERIALS

Cartridge: Weight:0.09kg (0.20lbs);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces;
Buna N O-rings and
back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs) ;
Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi);Ductile iron bodies available;dimensions may differ.
Standard Coil: Weight:0.11kg (0.25lbs) ;
Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs) ;
Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-20 - - - - -

Options
None (Blank)
150 μ Screen S
Manual Override M

Porting
Cartridge Only 0
SAE 4 12T
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
†DS, DW or DLterminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

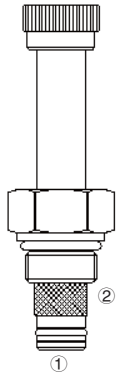
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

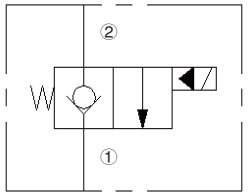
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

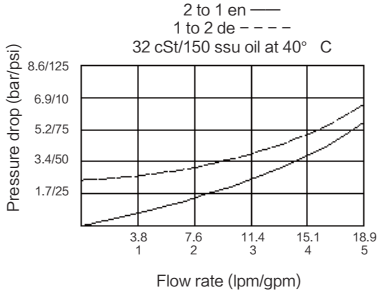
DSV08-B20 Poppet, 2-Way，Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, piloted poppet-type, screw-in hydraulic cartridge valve, intended to act as a blocking or load-holding device for low flow circuits.

OPERATION

When de-energized, the DSV08- B20 acts as a check valve, allowing flow from 1 to 2 . while blocking flow from 2 to 1.When energized, the cartridge’s poppet lifts to open the 2 to 1 flow path. In this mode, flow from 1 to 2 is severely restricted. If this path is required, see model DSV08-22.

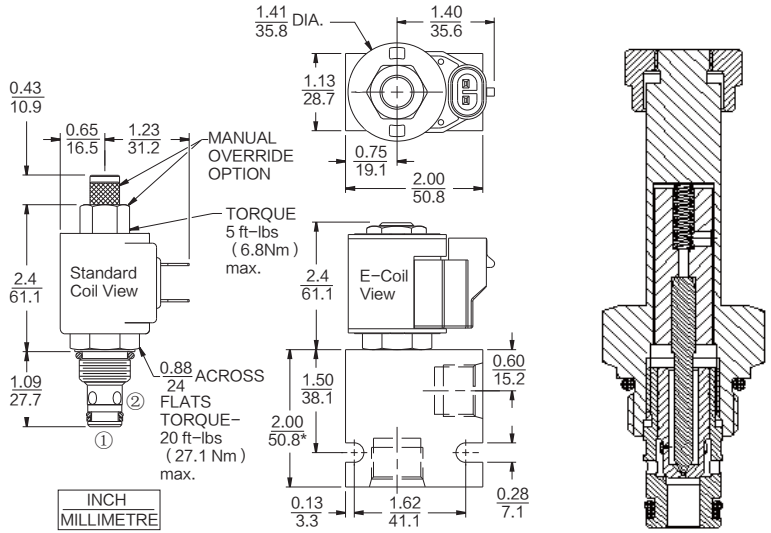
FEATURES

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Proof Pressure: 255 bar (3700 psi)
Flow: See Performance Chart
Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec. De-energized: 46 msec.
Initial Coil Current Draw at 20° C: Standard Coil: 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified).
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T08-2E; See page 297.

DIMENSIONS



* BSP BODY - 55.9mm

MATERIALS

Cartridge: Weight: 0.09 kg. (0.20 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.11 kg. (0.25 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.14 kg. (0.3 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-B20 ___ - ___ ___ - ___ - ___ ___ ___

Options
None (Blank)
150 µ Screen S
Manual Override M

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
*BSP Body; U.K. Mfr. Only

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
†DS, DW or DLterminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

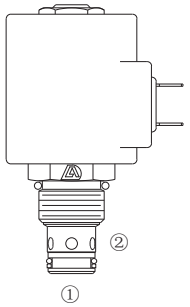
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

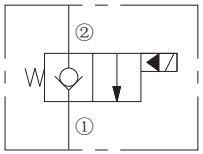
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

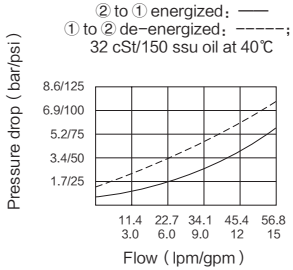
DSV10-20 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized, DSV10-20 acts as a check valve, allowing flow to pass from ① to ② , while blocking flow in the reverse direction. With the sensor option, the neutral sensor will signal ON or HIGH.When energized, the poppet lifts to open the ② to ① flow path. In this mode,flow from ① 1 to ② is severely restricted. (If this path is required, see model DSV10-22,With the sensor option, the neutral sensor will signal LOW or OFF.Operation of Manual Override Option: To override, push button in, twist counterclockwise 180 ° and release. In this position, the valve will remain open.To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

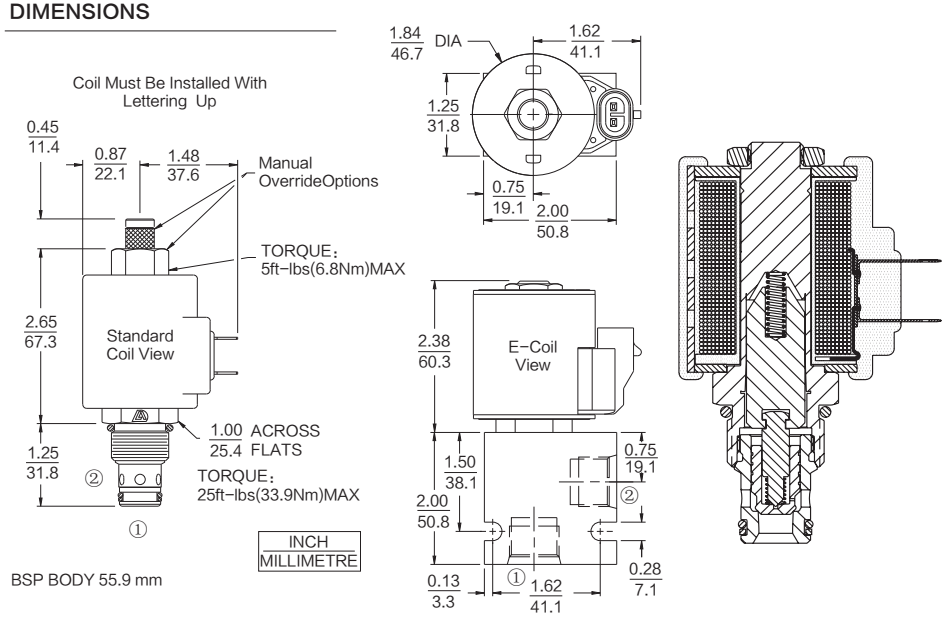
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec.; De-energized: 32 msec.
Response Time with Sensor: 53 ms pull-in, 110 ms drop-out
Initial Coil Current Draw at 20℃ :
Standard Coil:
121.67 amps at 12 VDC;0.18 amps at 115 VAC (full wave rectified)
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B; See page 300.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.16kg (0.35lbs);DSV10-20 Steel with hardened worksurfaces. Zinc-plated exposed surfaces; Buna N O-rings andback-up standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27kg (0.60lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

Options	
None	(Blank)
Screen	S
Manual Override	M
Manual Override	Y
Manual Override	J

Porting	
Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals	
Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil	
0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil	
10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

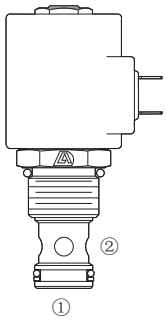
Termination (VDC) Std. Coil	
DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil	
AG	DIN 43650
AP	1/2 in.Conduit

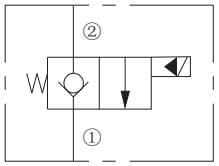
Termination (VDC) E-Coil	
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

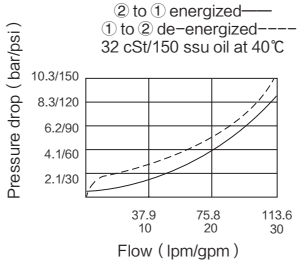
DSV12-20 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized时，DSV12-20acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction.
When energized, the poppet lifts to open the ② to ① flow path.
In this mode,flow from ① to ② is severely restricted.
Operation of Manual Override Option: To override, push button in, twist counterclockwise180° and release. In this position, the will remain open.To return to normal operation, push button in, twist clockwise 180° and release.
Override will be detented in this position.

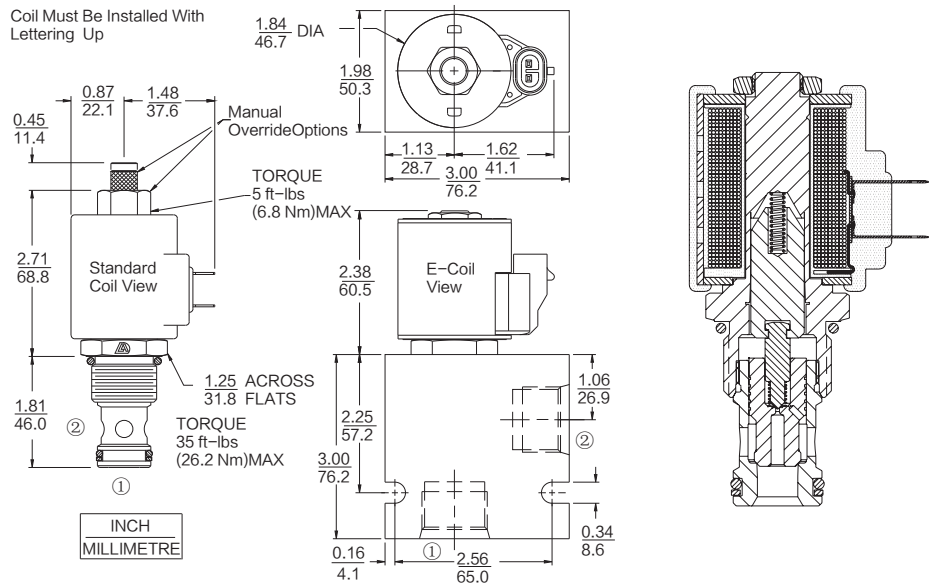
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOption
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Cost effective cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure： 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 240 bar (3500 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating：
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec.; De-energized: 80 msec.
Initial Coil Current Draw at 20℃：
Standard Coil： 1.67 amps at 12 VDC;
0.18 amps at 115 VAC (full wave rectified);
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T12-2A；See page 304.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.25kg (0.55lbs)；
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.57kg (1.25lbs)；
Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.27kg(0.60lbs)；
Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight: 0.41kg (0.9lbs)；
Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV12-20 - - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1in. BSP*	8B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

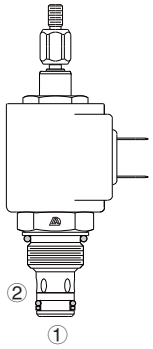
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

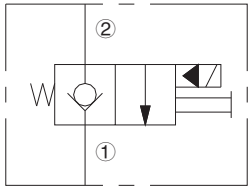
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

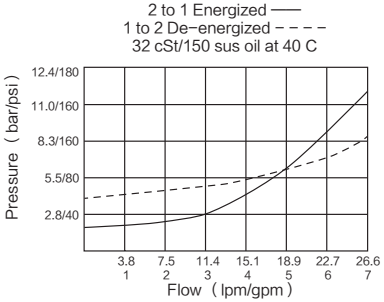
DSV08-20J Poppet , 2-Way , Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, with either "J" or "Y" type manual override standard. This valve is intended as a blocking or load holding device for low flow circuits having pull-only manual override requirements for handles or cable linkage.

OPERATION

When de-energized, the SV08-20J/Y acts as a check valve, allowing flow from 1 to 2, while blocking flow fro m 2 to 1.When energized, the valve's poppet lifts to open the 2 to 1 flow path, while flow from 1 to 2 is severely restricted.Operation of Manual Override Option: To manually override, pull and hold the knurled knob. This override is not detented. The pull force required is approximately 24 lbs. The "J" option includes a male 10-32 thread for a cable attachment. If a cable is used, the internal valve spring may not provide enough force to overcome internal cable friction. An external means of returning the cable must be provided by the user.

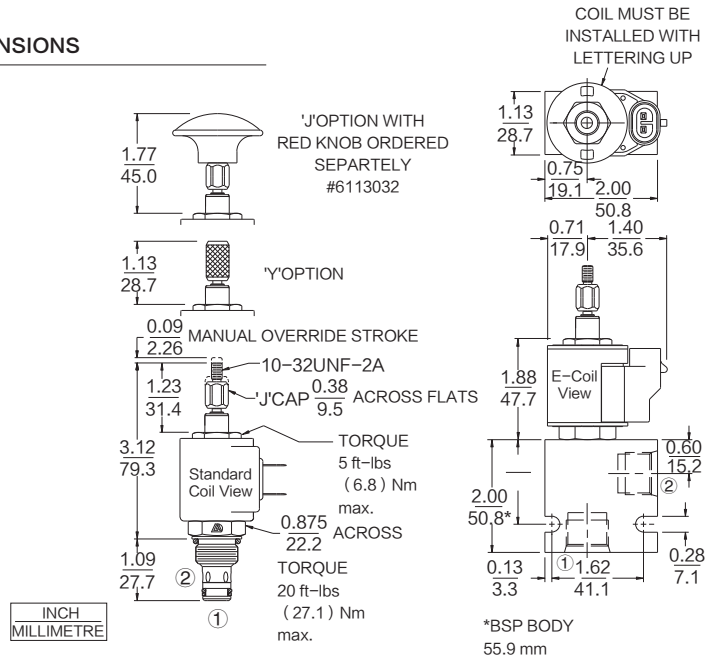
FEATURES

- Continuous-duty rated coil.
- Hardened parts for long life.
- Optional coil voltages and terminations.
- Optional waterproof E-Coils rated up to IP69K.
- Manual override standard.
- Industry common cavity.
- Compact size.

RATINGS

Maximum Operating Pressure: 207 bar (3000 psi)
Proof Pressure: 255 bar (3700 psi)
Flow: See Performance Chart
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20° C: Standard Coil: 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified);
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 40° C; Drop Out 5%
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T08-2E;See Page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.15 kg. (0.33 lbs.); Steel with hardened work surfaces.Zinc-plated exposed surfaces;Buna N O-rings and back-ups standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized highstrength 6061 T6 aluminum alloy,rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.11 kg. (0.25 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.14 kg. (0.3 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-20 J__ - ___ - __ - ___

Option
Cable Adapter J
Knurled Knob Y

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
*BSP Body; U.K. Mfr. Only

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

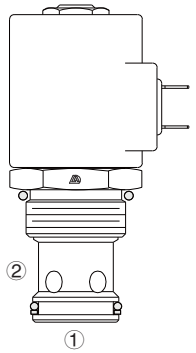
Termination (VDC) Std.Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in. Conduit

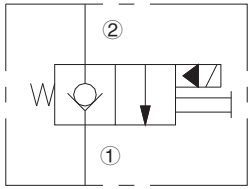
Termination (VDC) E-Coil
EG Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

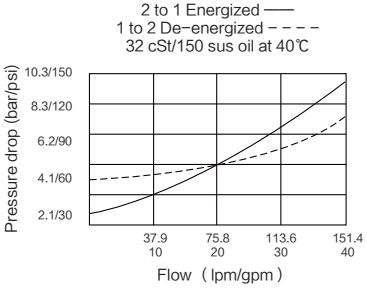
DSV16-20 Poppet,2 -Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized, the DSV16-20 acts as a check valve, allowing flow to pass from 1 to 2, while blocking flow in the reverse direction.

When energized, the poppet lifts to open the 2 to 1 flow path. In this mode, flow from 1 to 2 is severely restricted. If this path is required, see model DSV16-22,

Operation of Manual Override Option: To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open. To return to normal operation, push button in, twist clockwise 180° and release.Override will be detented in this position.

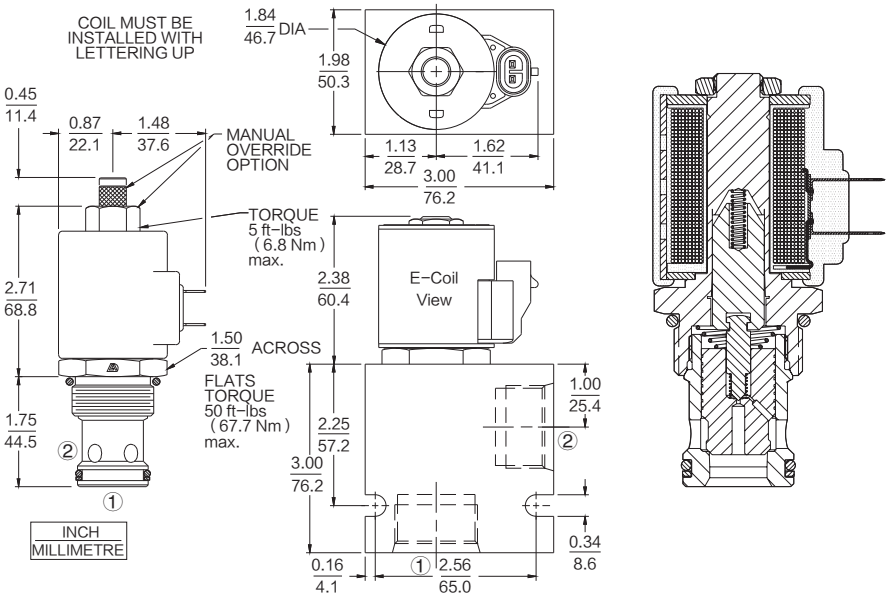
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Proof Pressure: 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage Initial
Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC;0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T16-2A,See Page 307.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.31 kg. (0.69 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV16-20 - - - - -

Option
None (Blank)
Manual Override M
Manual Override Y
Manual Override J

Porting
Cartridge Only 0
SAE 12 12T
SAE 16 16T
3/4 in. BSP* 6B
1 in. BSP* 8B
*BSP Body;U.K. Mfr. Only

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

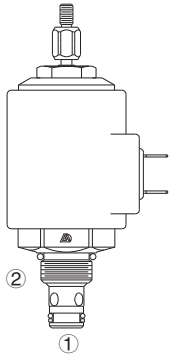
Termination (VDC) Std.Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in. Conduit

Termination (VDC) E-Coil
EG Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)

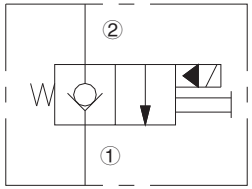
Coils with internal diode are available. Consult factory.

DSV38-20J Poppet，2-Way, Normally Closed

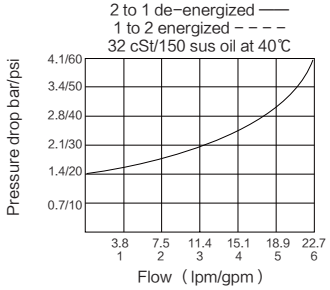


ISO SYMBOL

ISO:



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, with either "J" or "Y" type manual override standard. This valve is intended as a blocking or load holding device for low flow circuits having pull-only manual override requirements for handles or cable linkage.

OPERATION

When de-energized, the DSV38-20J acts as a check valve, allowing flow from 1 to 2,while blocking flow from 2 to 1.
When energized, the valve's poppet lifts to open the 2 to 1 flow path, while flow from 1 to 2 is severely restricted.
Operation of Manual Override Option: To manually override, pull and hold the knurled knob. This override is not detented. The pull force required is approximately 20 lbs. The "J" option includes a male 10-32 thread for a cable attachment. If a cable is used, the internal valve spring may not provide enough force to overcome internal cable friction. An external means of returning the cable must be provided by the user.

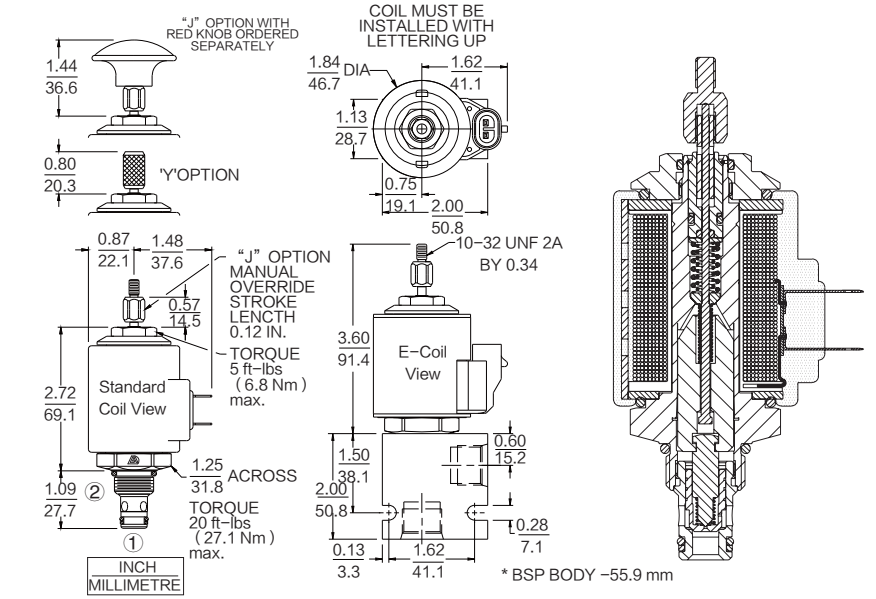
FEATURES

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Flow: see performance chart
Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at
80% of nominal flow rating: Energized: 40 msec.; De-energized: 32 msec.
Response Time with Sensor: 53 ms pull-in, 110 ms drop-out
Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC;
0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Installation: No restrictions;
Cavity: T08-2E;See Page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.09 kg. (0.20 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV38-20 J - ___ - ___ - ___

选件
*Standard J
150 μ Screen S
Cable Release Y

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
*BSP Body;U.K. Mfr. Only

Seals
Buna N (Std.) N
Fluorocarbon V

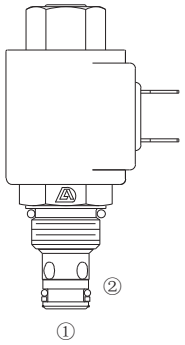
Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

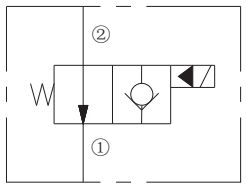
Termination (VDC) Std.Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in. Conduit
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)
Coils with internal diode are available. Consult factory.

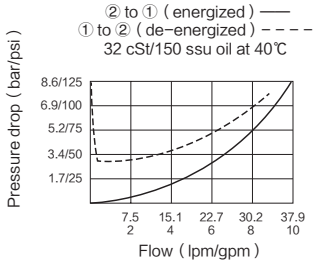
DSV08-21 Poppet, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, piloted, poppet-type, normally open, screw-in, hydraulic cartridge valve designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV08-21 allows flow from ② to ① .Flow from ① to ② is severely restricted in this mode. If the ② to ① path is required see model DSV08-23,
When energized, the valve’ s poppet closes on its seat, blocking flow from ② to ① .In this mode the cartridge will allow ① to ② flow after overcoming the solenoid force(requires 3.4 to 10.3 bar / 50 to 150 psi).
Operation of Manual Override Option: To override, push and hold override button.

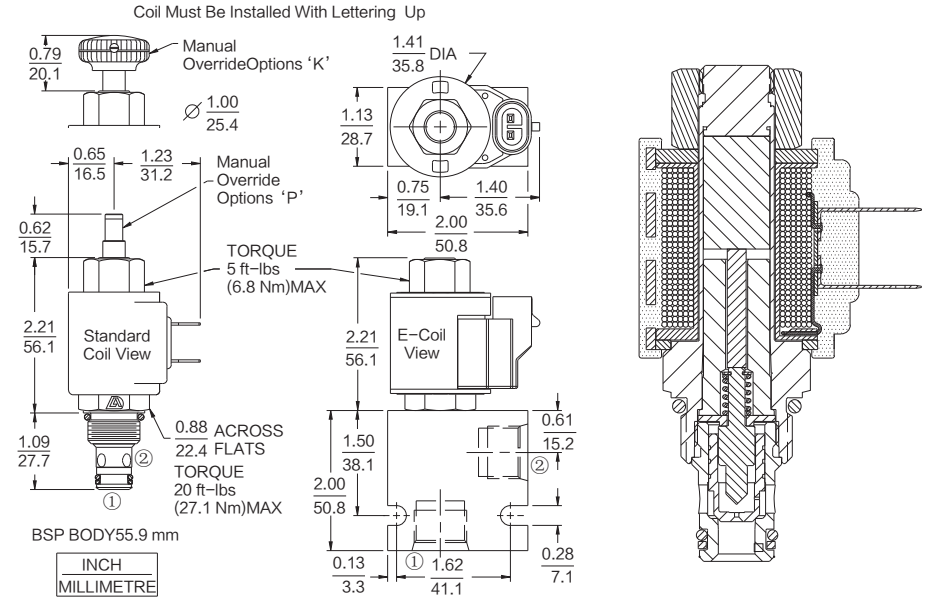
FEATURES

- Continuous-duty rated coil.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40 to 120℃，with Buna N seals
Coil Duty Rating： Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating:
energized： 50 msec.;de-energized：16 msec.
Initial Coil Current Draw at 20℃ :
Standard Coil： 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified).
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage:: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T08-2E；See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.09kg (0.20lbs) ; DSV08-21
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight:
0.11kg (0.25lbs) ; Unitized thermoplastic encapsulated, Class H high、temperature magnet wire.
E-Coil：Weight:0.14kg (0.3lbs) ;
Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-21 - - - - - -

Options
None (Blank)
Manual Override Without Knob P
Manual Override with Knob K

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 3 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

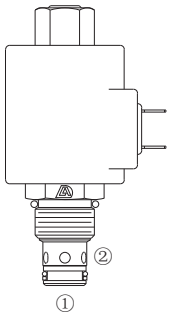
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

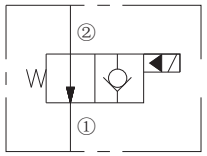
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

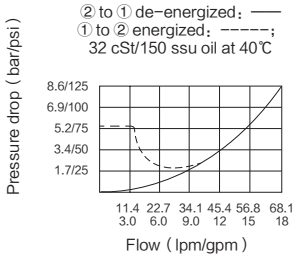
DSV10-21 Poppet, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, piloted, poppet-type, normally open, screw-in, hydraulic cartridge valve designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV10-21 allows flow from ② to ①. Flow from ① to ② is severely restricted in this mode. If the ① to ② path is required, see model DSV10-23,When energized, the valve’s poppet closes on its seat, blocking flow in the ② to ① direction. In this mode the cartridge will allow ① to ② flow after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi).
Operation of Manual Override Option: To override, push and hold override button.

FEATURES

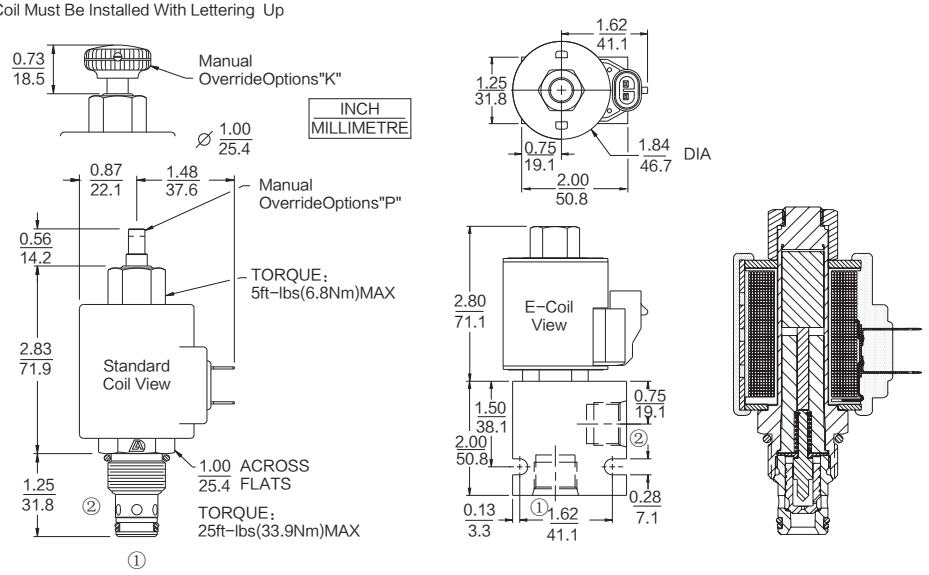
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure： 345 bar (5000 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 80 msec.; De-energized: 30 msec.
Initial Coil Current Draw at 20℃ :
Standard Coil： 1.67 amps at 12 VDC;0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T10-2B；See page 300.

DIMENSIONS

Coil Must Be Installed With Lettering Up



BSP BODY55 MILLIMETRE

MATERIALS

Cartridge: Weight:0.16kg (0.35lbs);DSV10-21 Steel with hardened worksurfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs)； Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight: 0.27kg (0.60lbs)； Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight:0.41kg (0.9lbs)； Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

– – –

Options	
None	(Blank)
ScreenManual Override	S
Without Knob	P
Manual Override Without Knob	K

Porting	
Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals	
Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil	
0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil	
10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

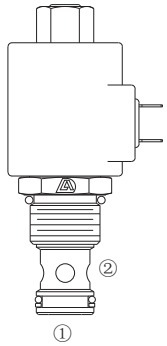
Termination (VDC) Std. Coil	
DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil	
AG	DIN 43650
AP	1/2 in.Conduit

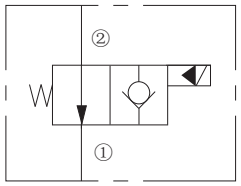
Termination (VDC) E-Coil	
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

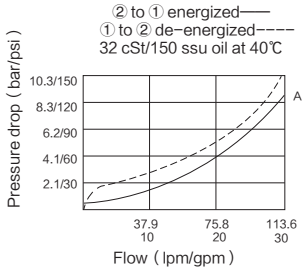
DSV12-21 Poppet, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When energized，DSV12-21acts as a check valve, allowing flow to pass from ① to ② , while blocking flow in the reverse direction. When de-energized, the poppet lifts to open the ② to ① flow path after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi). In this mode, flow from ① to ② is severely restricted. If this path is required, see model DSV12-23,

Operation of Manual Override Option: To override, push and hold override button.

FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Cost effective cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)

Flow: See Performance Chart

Internal Leakage:

0.15 cc/minute (3 drops/minute) max. at 240 bar (3500 psi)

Temperature:-40℃ to 120℃，with Buna N seals

Coil Duty Rating:

Continuous from 85% to 115% of nominal voltage

Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 110 msec.; De-energized: 40 msec.

Initial Coil Current Draw at 20℃:

Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).

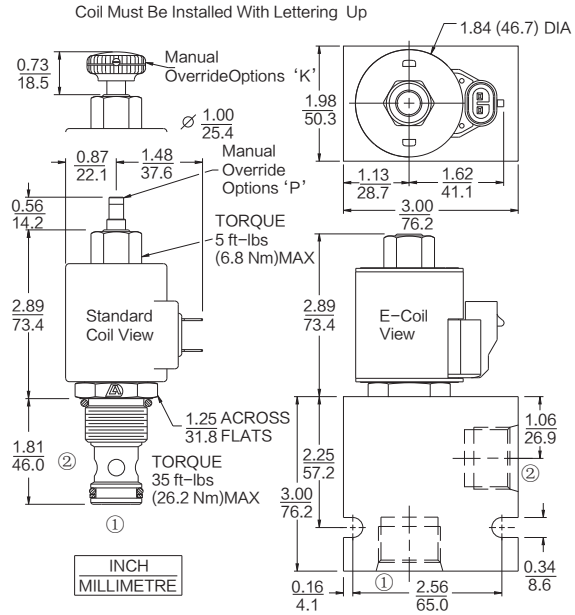
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC;

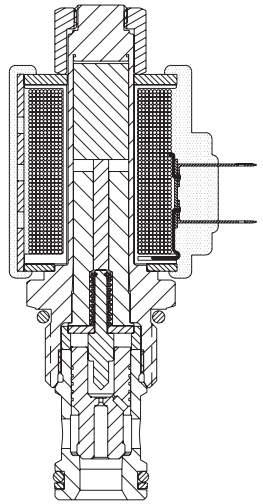
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity:T12-2A; See page 304.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.25kg (0.55lbs) ; DSV12-21

Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight:

0.57kg (1.25lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight:

0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight:0.41kg (0.9lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV12-21 - - - - -

Options

None (Blank) Without Knob	P
Manual Override With Knob	K

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VA
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

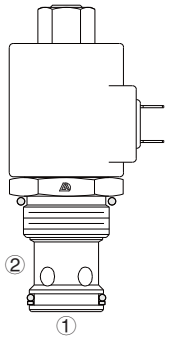
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

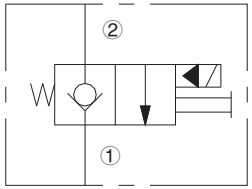
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

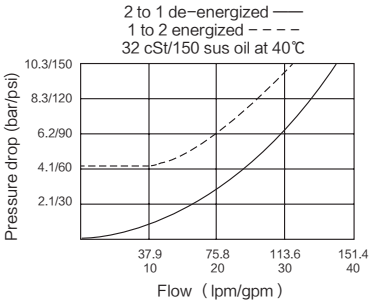
DSV16-21 Poppet,2-Way,NORMALLY OPEN



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load-holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized, the DSV16-21 poppet lifts to open the 2 to 1 fl ow path. In this mode, fl ow from 1 to 2 is severely restricted. If this path is required, see model DSV16-23

When energized, the 2 to 1 fl ow path is closed. In this mode, the valve acts as a check valve, allowing fl ow to pass from 1 to 2 after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 500 psi).

Operation of Manual Override Option: To override, push and hold override button.

FEATURES

- Continuous duty-rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Effi cient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.

RATINGS

Operating Pressure: 207 bar (3000 psi); Under certain operating conditions,this valve may be used at higher pressures; consult factory.

Proof Pressure: 345 bar (5000 psi)

Flow: See Performance Chart

Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)

Temperature: -40 to 120° C with standard Buna seals

Coil Duty Rating: Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectifi ed).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

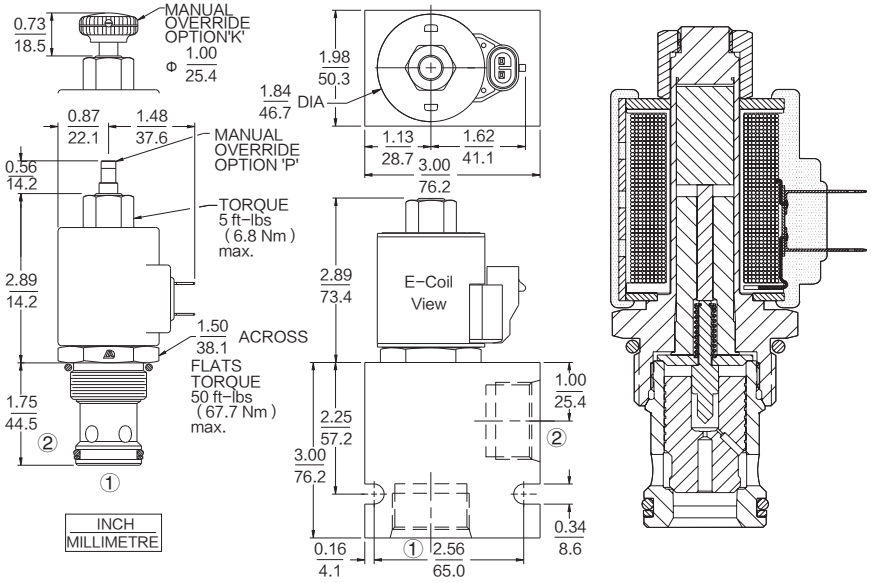
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)

Installation: No restrictions

Cavity: T16-2A;See Page 307.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.31 kg. (0.69 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire.

E-Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV16-21 - ___ ___ - ___ - ___ ___

Option

None (Blank)	
Manual Override without knob	P
Manual Override with knob	K

Porting

Cartridge Only	0
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

*BSP Body;U.K. Mfr. Only

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

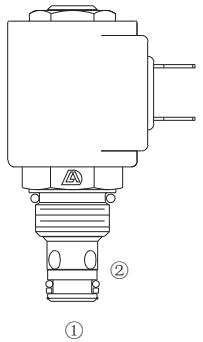
DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

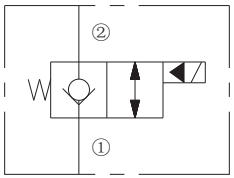
AG	DIN 43650
AP	1/2 in. Conduit Termination (VDC) E-Coil
EG	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

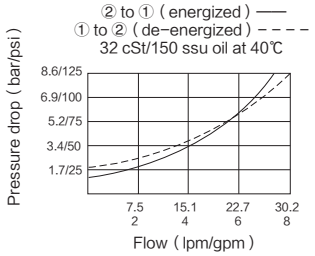
DSV08-22 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed for low leakage blocking and load holding applications.

OPERATION

When de-energized，DSV08-22acts 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. In this mode,bidirectional flow is allowed.

Operation of Manual Override Option:

To override, push button in, twist counter clockwise 180° and release. In this position, the valve will remain open.To return to normal operation, push button in, twist clockwise 180 ° and release.Override will be detented in this position.

FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)

Flow: See Performance Chart

Internal Leakage:

0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)

Temperature:-40℃ to 120℃，with Buna N seals

Coil Duty Rating： Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20℃：

Standard Coil：

1.2 amps at 12 VDC;0.13 amps at 115 VAC (full wave rectified).

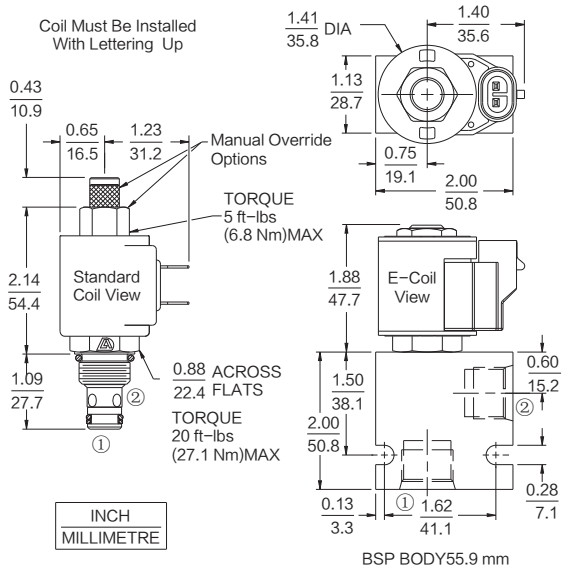
E-Coil： 1.4 amps at 12 VDC; 0.7 amps at 24 VDC

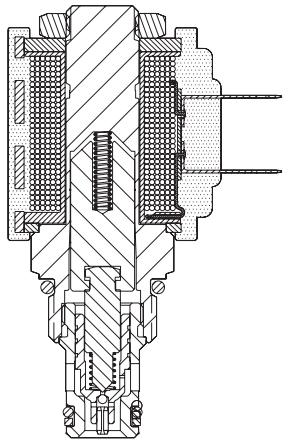
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity： T08-2E；See page 297.

DIMENSIONS





BSP BODY55.9 mm

MATERIALS

Cartridge: Weight:0.09kg (0.20lbs)； DSV08-22

Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight:

0.16kg (0.35lbs)； Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil：Weight:

0.11kg (0.25lbs)； Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil：Weight:0.14kg (0.3lbs)； Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-22 - - - - -

Options

None	(Blank)
Manual Override	M
Screen	S

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

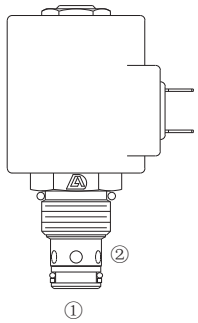
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

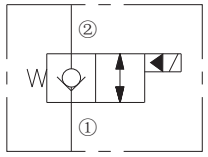
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

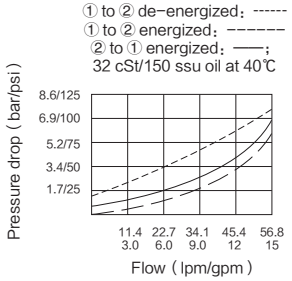
DSV10-22 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed for low leakage blocking and load holding applications.

OPERATION

When de-energized, DSV10-22 acts as a check valve, allowing flow to pass from ① to ②, while blocking flow from ② to ①. With the sensor option, the neutral sensor will signal ON or HIGH.

When energized, the ② to ① flow path opens. In this mode, flow is also allowed from ① to ②. With the sensor option, the neutral sensor will signal LOW or OFF.

Operation of Manual Override Option: To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open.To return to normal operation, push button in, twist clockwise 180° and release.Override will be detented in this position.

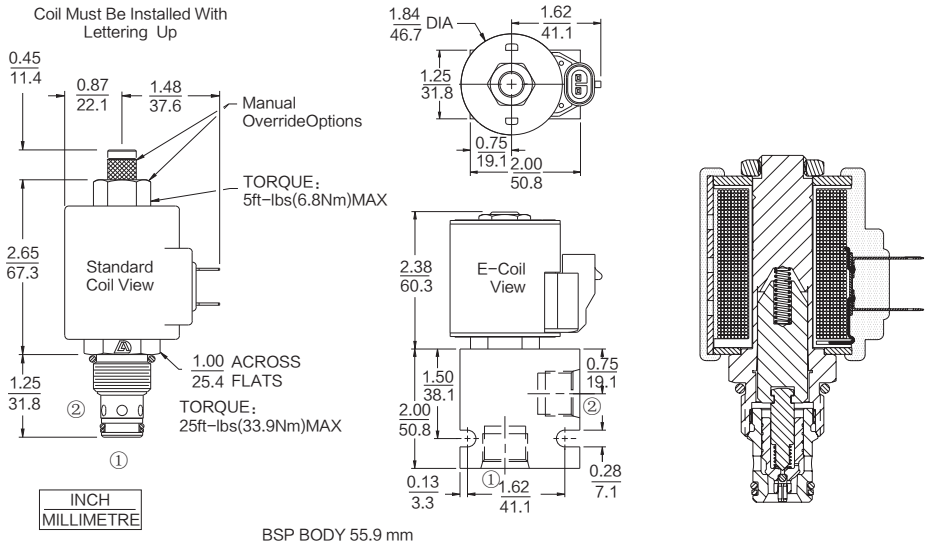
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec; De-energized: 32 msec.Response Time with Sensor: 68 ms pull-in, 50 ms drop-out
Initial Coil Current Draw at 20℃:
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDCMinimum Pull-in Voltage:: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B; See page 300.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.16kg (0.35lbs); DSV10-22
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:
0.27kg (0.60lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-22 - - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

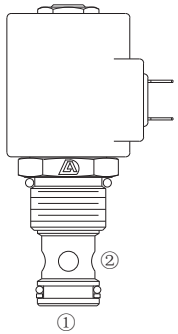
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

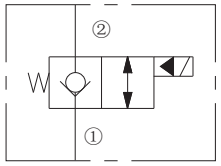
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

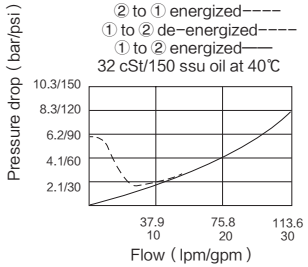
DSV12-22 Poppet, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internalleakage.

OPERATION

When de-energized，DSV12-22 acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction.
When energized, the poppet lifts to open the ② to ① flow path.
In this mode, flow is also allowed from ① to ② .
Operation of Manual Override Option: To override, push button in, twist counter clockwise 180° and release. In this position, the valve will remain open.To return to normal operation, push button in, twist clockwise 180° and release.Override will be detented in this position.

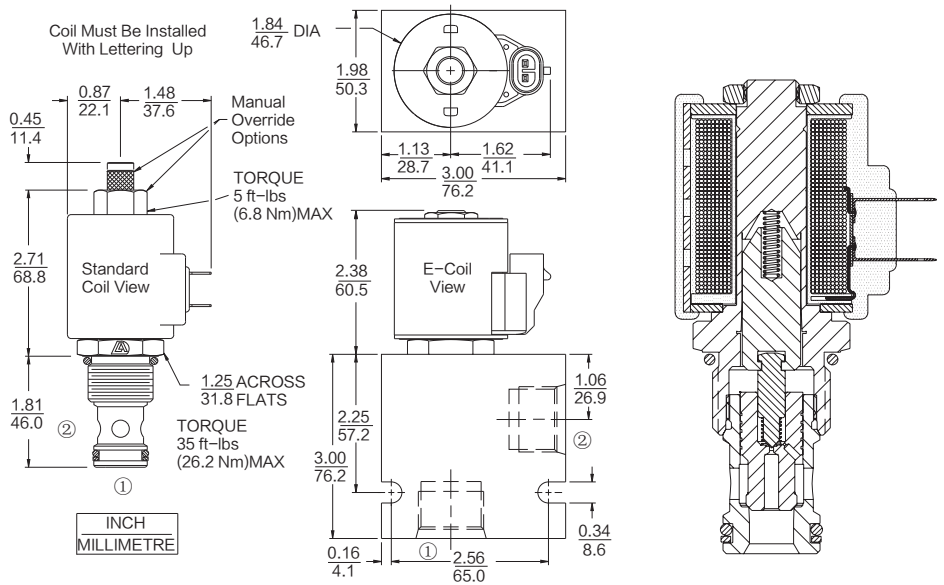
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Cost effective cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure： 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 240 bar (3500 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 ms; De-energized: 80 ms
Initial Coil Current Draw at 20℃ :
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDCMinimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu).
Cavity:T12-2A；See page 304.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.25kg (0.55lbs);Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.57kg (1.25lbs) ; Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV12-22 - - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

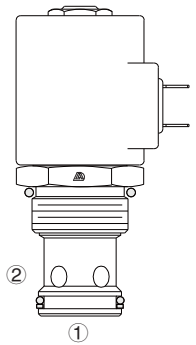
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

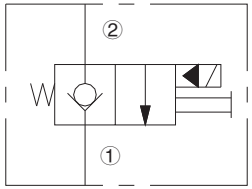
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

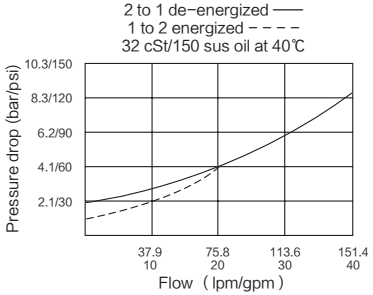
DSV16-22 Poppet,2-Way,Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load-holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized, the DSV16-22 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. In this mode, flow is also allowed from 1 to 2.
Operation of Manual Override Option: To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open.
To return to normal operation, push button in, twist clockwise 180° and release.
Override will be detented in this position.

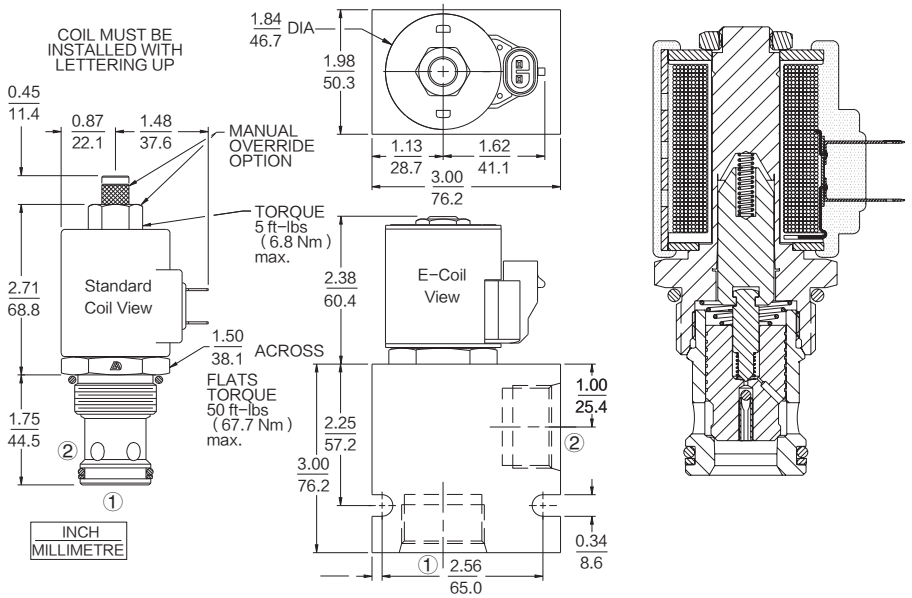
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi); Under certain operating conditions, this valve may be used at higher pressures; consult factory.
Proof Pressure: 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of
7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T16-2A;See Page 307.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.31 kg. (0.69 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DRV16-22 - - - -

Option

None (Blank)	
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

*BSP Body;U.K. Mfr. Only

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

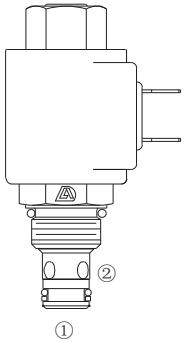
AG	DIN 43650
AP	1/2 in. Conduit

Termination (VDC) E-Coil

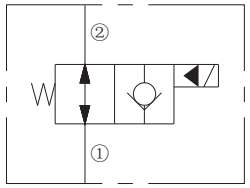
ER	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

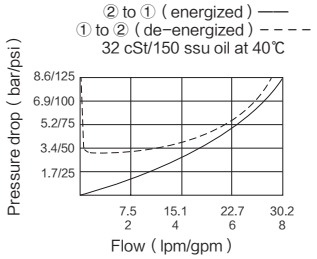
DSV08-23 Poppet, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, poppet-type, normally open, screw-in, hydraulic cartridge valve designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV08-23 poppet lifts to open flow from ② to ①. Flow is also open from ① to ②.

When energized, the cartridge acts as a check valve, allowing flow from ① to ②,while blocking flow from ② to ① after overcoming the solenoid force (requires 3.4 to 10.3 bar / 50 to 150 psi).

Operation of Manual Override Option:

To override, push and hold override button.

FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)

Flow: See Performance Chart

Internal Leakage:

0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)

Temperature:-40℃ to 120℃，with Buna N seals

Coil Duty Rating： Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20℃ :

Standard Coil： 1.2 amps at 12 VDC; 0.13 amps at 115 VAC (full wave rectified)

E-Coil： 1.4 amps at 12 VDC; 0.7 amps at 24 VDC

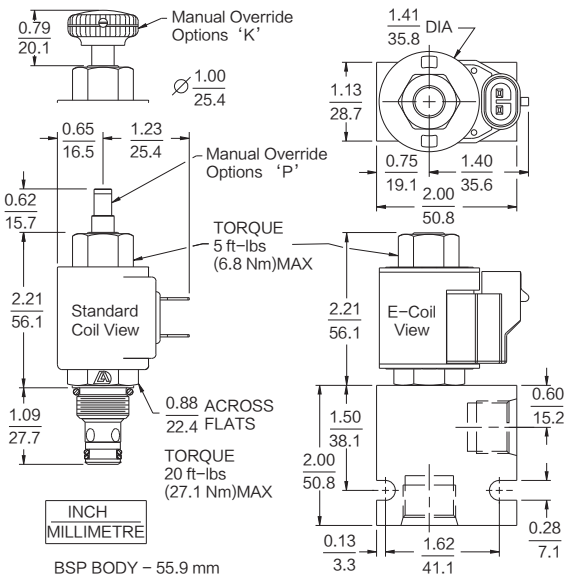
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

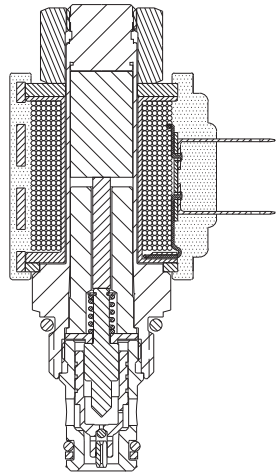
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity： T08-2E；See page 297.

DIMENSIONS

Coil Must Be Installed With Lettering Up





MATERIALS

Cartridge: Weight:0.09kg (0.20lbs)； Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight: 0.16kg (0.35lbs)； Anodized highstrength 6061 T6 aluminum alloy,ratedto 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil：Weight: 0.11kg (0.25lbs)； Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil：Weight:0.14kg (0.3lbs)； Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-23 - - - - - -

Options

None	(Blank)
Screen	S
Manual Override Without Knob	P
Manual Override with Knob	K

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

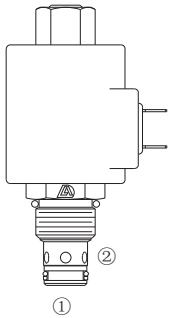
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

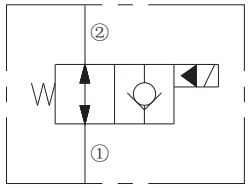
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

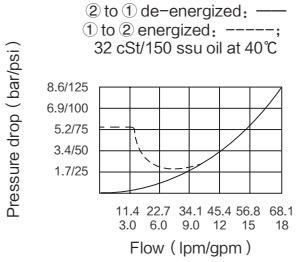
DSV10-23 Poppet, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, poppet-type, normally open, screw-in, hydraulic cartridge valve.

OPERATION

When de-energized，DSV10-23 allows bidirectional flow from ② to ①.With the sensor option, the neutral sensor will signal OFF or LOW.When energized, the valve’s poppet closes to block flow from ② to ①. In this mode,the cartridge allows free reverse flow from ① to ② after overcoming the solenoid force(requires 3.4 to 10.3 bar / 50 to 150 psi). With the sensor option, the neutral sensor will signal ON or HIGH.

Operation of Manual Override Option: To override, push and hold override button.

FEATURES

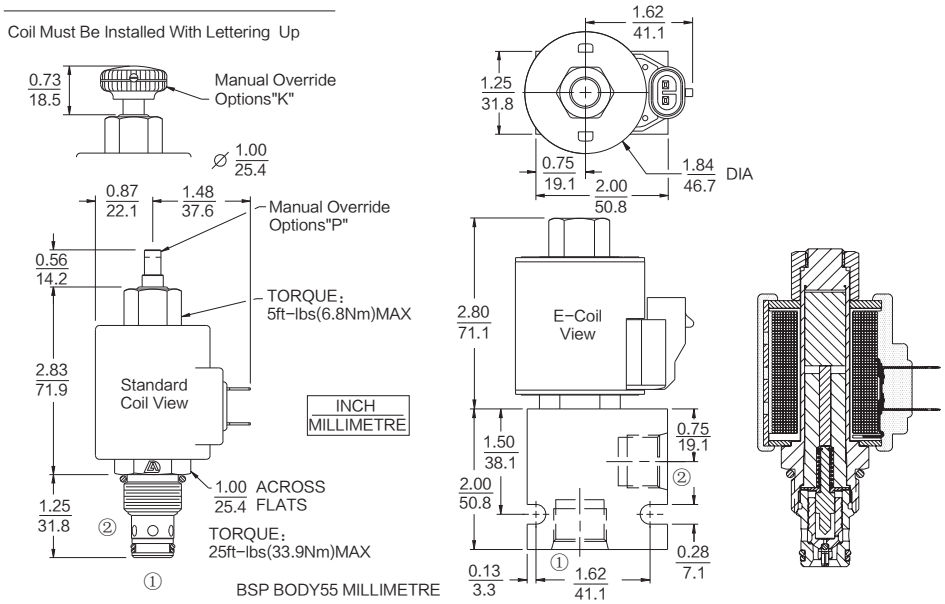
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure： 345 bar (5000 psi)
Flow: See Performance Chart
Internal Leakage:
0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 80msec.; De-energized: 30 msec.
Response Time with Sensor: 158 ms pull-in, 57 ms drop-out
Initial Coil Current Draw at 20℃ :
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T10-2B；See page 300.

DIMENSIONS

Coil Must Be Installed With Lettering Up



MATERIALS

Cartridge: Weight:0.16kg (0.35lbs)；DSV10-23
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs)； Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight:
0.27kg (0.60lbs)； Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight:0.41kg (0.9lbs)；
Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-23 - - - - -

Options

None (Blank)	
Screen	S
Manual Override Without Knob	P
Manual Override Without Knob	K

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

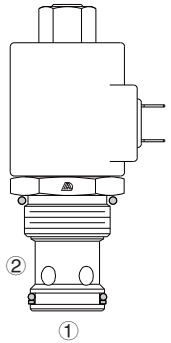
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

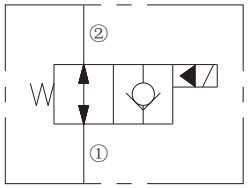
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

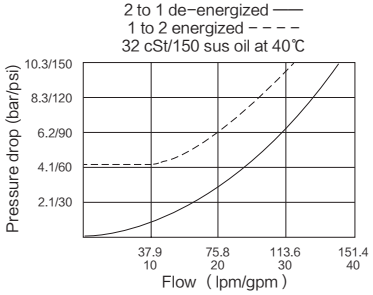
DSV16-23 Poppet,2-Way,Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, normally open, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

OPERATION

When de-energized, the DSV16-23 poppet lifts to open the 2 to 1 fl ow path. In thismode, fl ow from 1 to 2 is also allowed.
When energized, the cartridge acts as a check valve, allowing fl ow to pass from 1 to 2, while blocking fl ow in the reverse direction after overcoming the solenoid force
(requires 3.4 to 10.3 bar / 50 to 150 psi).
Operation of Manual Override Option: To override, push and hold override button.

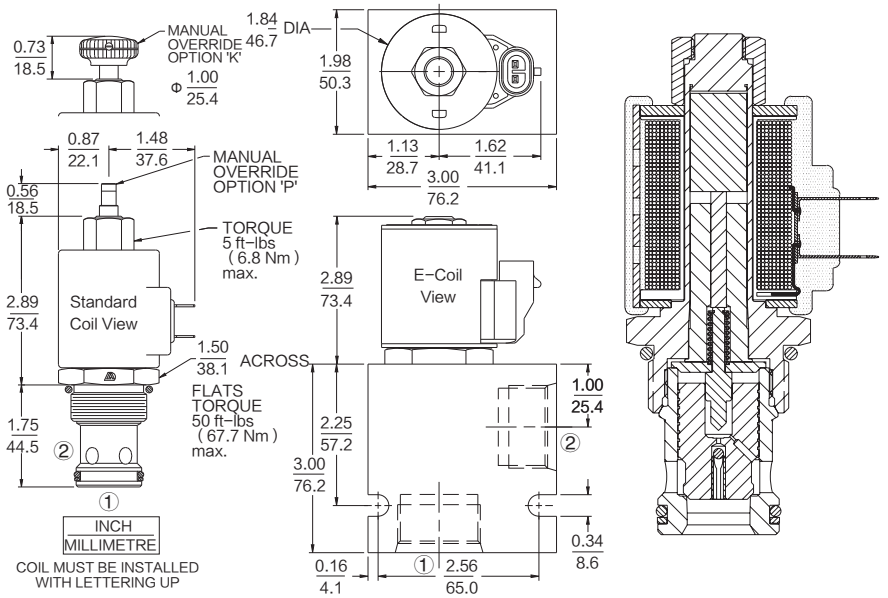
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi); Under certain operating conditions, this valve may be used at higher pressures; consult factory.
Proof Pressure: 390 bar (5700 psi)
Flow: See Performance Chart
Internal Leakage: 0.15 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC;
0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum P ull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T16-2A;See Page 307.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.31 kg. (0.69 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.57 kg. (1.25 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DRV16-23 - - - -

Option

None (Blank)	
Manual Override without knob	P
Manual Override with knob	K

Porting

Cartridge Only	0
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

*BSP Body;U.K. Mfr. Only

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

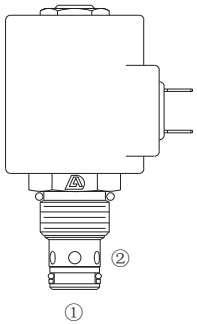
AG	DIN 43650
AP	1/2 in. Conduit

Termination (VDC) E-Coil

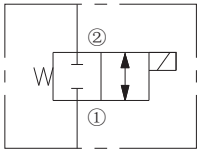
ER	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

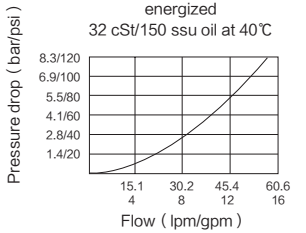
DSV10-24 Spool, 2-Way, Normally Closed

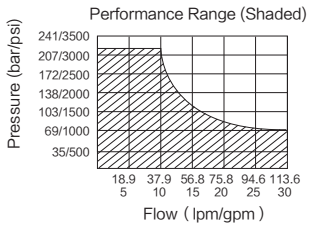


ISO SYMBOL



PERFORMANCE (Cartridge Only)





DESCRIPTION

A solenoid-operated, two-port, normally closed, direct-acting, spool-type, screw-in hydraulic cartridge valve, designed to operate as a bidirectional blocking valve.

OPERATION

When de-energized，DSV10-24 blocks flow in both directions.
When energized, the cartridge's spool shifts to open the bidirectional flow path.
Operation of Manual Override Option: To override, push button in and twist counterclockwise 180° . The internal spring will push the button out. In this position, the valve may be only partially shifted.
To assure full override shift, pull the button out to its fullest extension and hold it in this position.To return to normal valve function, push button in, twist clockwise 180° , and release.
Override will be detented in this position.

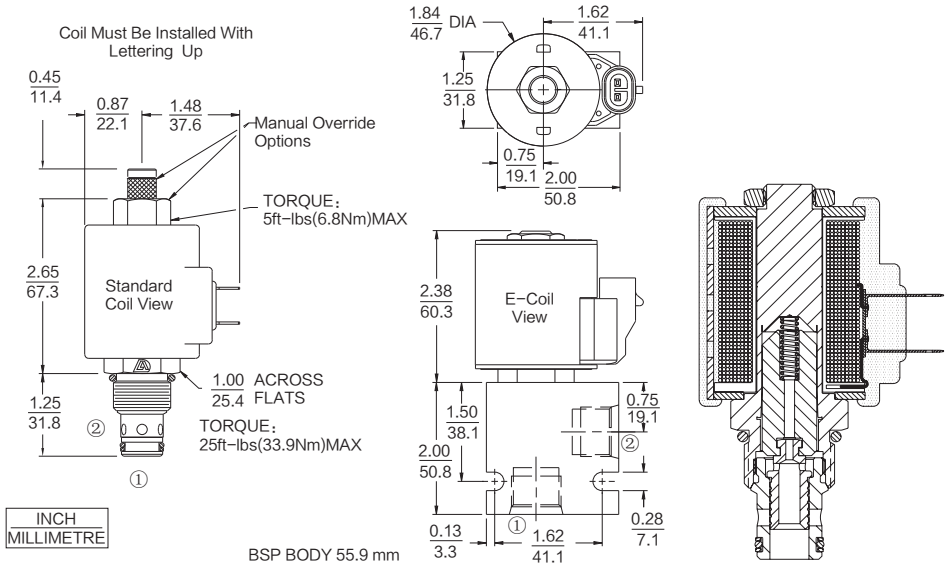
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Both ports may be fully pressurized.
- Efficient wet-armature construction.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure： 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage:
82 ml/minute (5 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 30msec.; De-energized: 25 msec.
Initial Coil Current Draw at 20℃ :
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-2B；See page 300.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.16kg (0.35lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight: 0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight:0.41kg (0.9lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-24 - - - - -

Options
None (Blank)
Manual Override M
Manual Override Y
Manual Override J

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

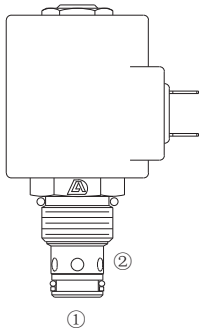
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

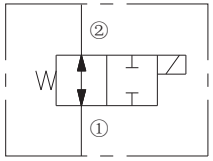
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

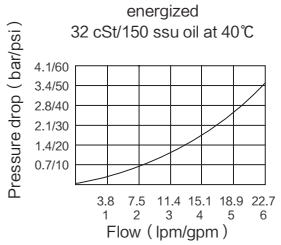
DSV10-25 Spool, 2-Way, Normally Open



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, normally open, direct-acting, spool-type, screw-in hydraulic cartridge valve, designed to function as a bidirectional blocking valve.

OPERATION

When de-energized，DSV10-25 allows flow in both directions. When energized, the cartridge’s spool shifts to close the bidirectional flow path.

Operation of Manual Override Option: The manual override feature is intended for emergency use, not continuous duty operation. To override, push button in and twist counterclockwise 180° .

The internal spring will push the button out. In this position,the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position.To return to normal valve function, push button in, twist clockwise 180 ° and release.Override will be detented in this position..

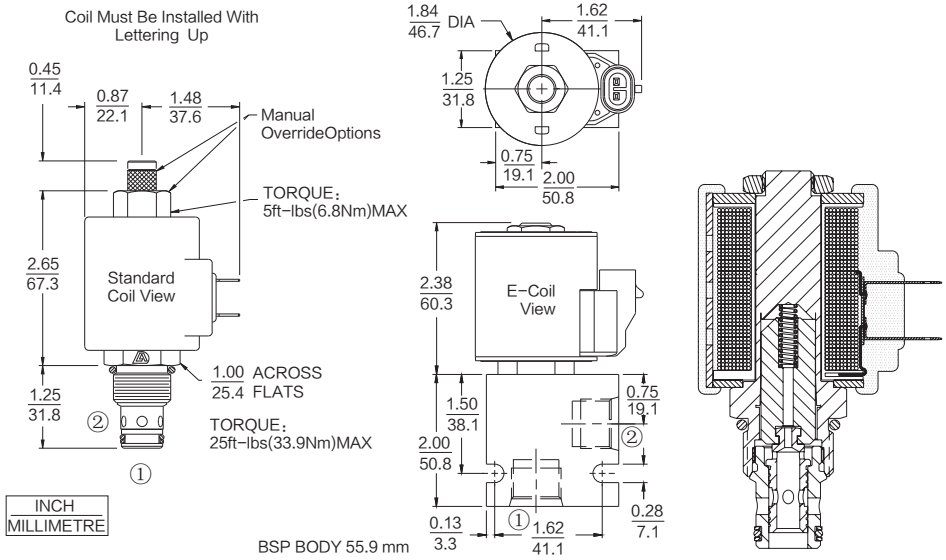
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Both ports may be fully pressurized.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure： 350 bar (5075 psi)
Flow: Inlet at port 2: 18.9 lpm (5 gpm) max;
Inlet at port 1: 22.7 lpm (6 gpm) max.
Internal Leakage:
82 cm³/minute (5 in³/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating：
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 60 ms; De-energized: 60 ms
Initial Coil Current Draw at 20℃：
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T10-2B；See page 300.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.16kg (0.35lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensionsmay differ.
Standard Coil：Weight: 0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight:0.41kg (0.9lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-25 - - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

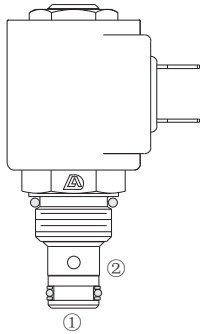
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

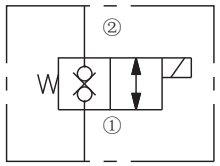
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

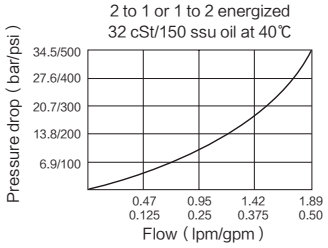
DSV08-26 Blocking/Low Flow, 2-Way, Normally Closed



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, normally closed, direct-acting, needle-type, screw-in hydraulic cartridge valve, designed to function as a blocking or load-holding device for low flow circuits.

OPERATION

When de-energized, the SV08-26 blocks flow in both directions, to pressure rating.If pressure on 1 exceeds the rating, flow may pass from 1 to 2.

When energized, the needle point lifts to open the valve bidirectionally. Port 2 is the recommended load-holding port.

Operation of Manual Override Option: To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open.

To return to normal operation, push button in, twist clockwise 180° and release.Override will be detented in this position.

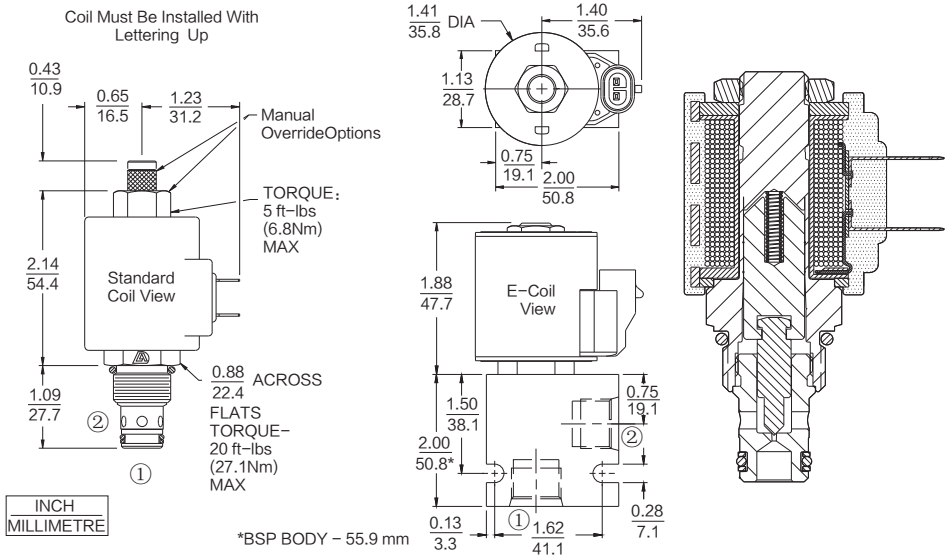
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)
Effective Orifice Size: 0.81 mm (0.032 in.)
Internal Leakage: 0.10 cc/minute (3 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at
80% of nominal flow rating (2 to 1 direction):
Energized: 16 msec.; De-energized: 10 msec.
Initial Coil Current Draw at 20° C: Standard Coil: 1.2 amps at 12 VDC; 0.13 amps at 115 VAC (full wave rectified).
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.09 kg. (0.20 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.11 kg. (0.25 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.14 kg. (0.3 lbs.); Perfect wound, fully encapsulated with rugged external metal shell;*BSP Body; U.K. Mfr. Only Rated up to IP69K with integral connectors.

TO ORDER

DSV08-26 - - - - -

Options
None (Blank)
Screen S
Manual Override M

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

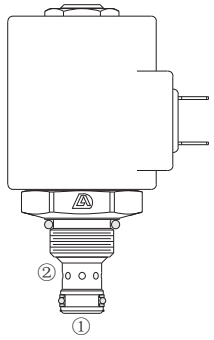
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

DSV38-26 Blocking/Low Flow, 2-Way, Normally Closed



DESCRIPTION

A solenoid-operated, 2-way, normally closed, direct-acting, needle-type, screw-in hydraulic cartridge valve, designed to function as a blocking or load-holding device for low flow circuits.

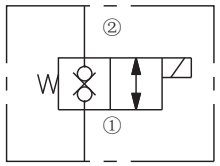
OPERATION

When de-energized, the DSV38-26 blocks flow in both directions, to pressure rating.If pressure on 1 exceeds the rating, flow may pass from 1 to 2.When energized, the needle point lifts to open the valve bidirectionally. Port 2 is the recommended load-holding port.

Operation of Manual Override Option: To override, push button in, twist counterclockwise 180° and release. In ths position, the valve will remain open.

To return to normal operation, push button in, twist clockwise 180° and release.Override will be detented in this position

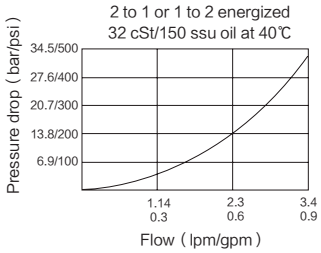
ISO SYMBOL



FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.

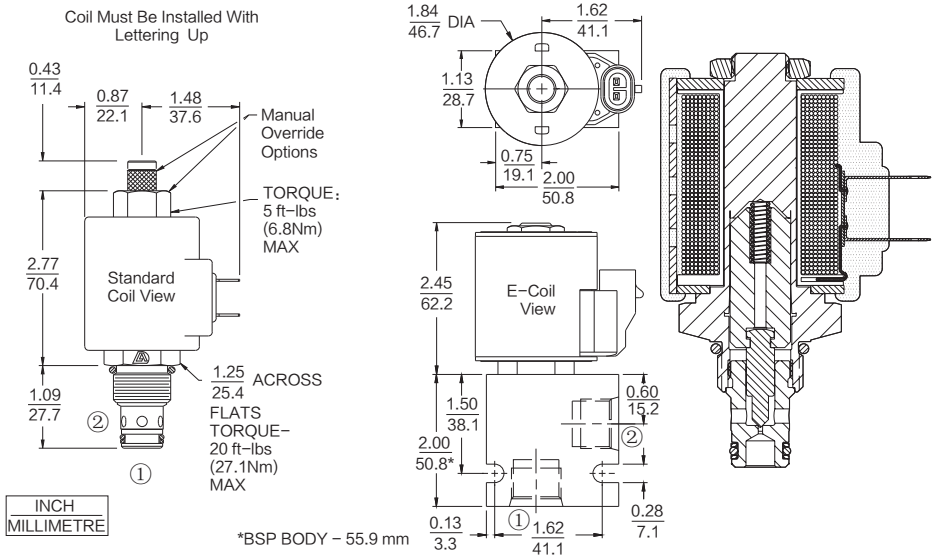
PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 520 bar (7540 psi)
Internal Leakage: 0.10 cc/minute (2 drops/minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at
80% of nominal flow rating: Energized: 22 msec.; De-energized: 5 msec.
Initial Coil Current Draw at 20° C: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of
7.4 to 420 cSt (50 to 2000 sus);
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.15kg. (0.33 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV38-26 - - -

Options
None (Blank) (Blank)
152 µ Screen S
Manual Override M
Manual Override
Manual Override
For Manual Override options see page 1.001.1

Porting
Cartridge Only 0
SAE 4 4T
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B
*BSP Body; U.K. Mfr. Only

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
†DS, DW or DL terminations only.

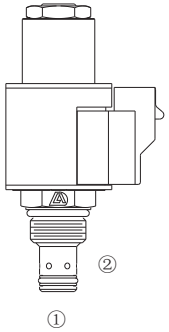
E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

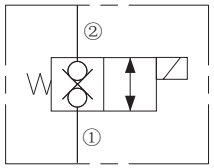
Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)
Coils with internal diode are available. Consult factory.

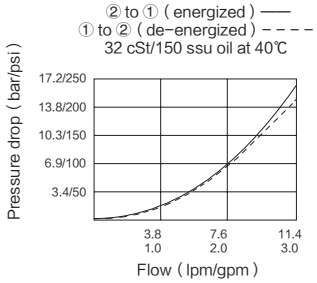
DSV08-28 Poppet, 2-Way, N.C., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, direct-acting, poppet-type, bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV08-28 blocks flow in both directions. When energized, the valve’s poppet opens the valve bi-directionally, allowing flow from ② to ① or ① to ② .

FEATURES

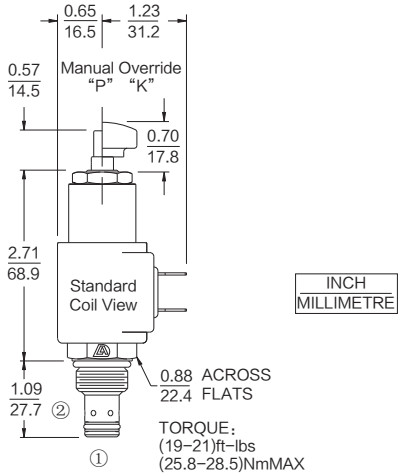
- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Manual OverrideOptions.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow:11.4 lpm (3.0 gpm)
Internal Leakage:
5 drops/minute maximum at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 50 ms.; De-energized: 16 ms.
Initial Coil Current Draw at 20℃ :
Standard Coil: 1.2 amps at 12 VDC;
0.13 A at 115 VAC (full wave rectified).
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E；See page 297.

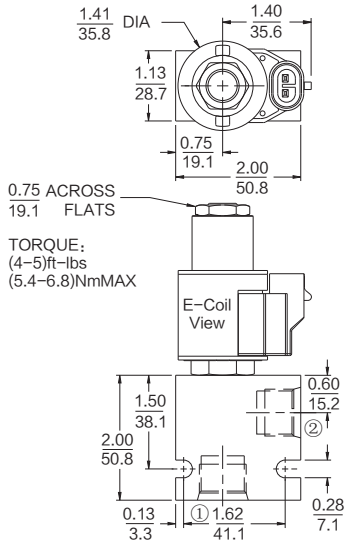
DIMENSIONS

Coil Must Be Installed With Lettering Up



INCH
MILLIMETRE

BSP BODY-55.9 mm



MATERIALS

Cartridge: Weight:0.18kg (0.40lbs) ;
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings andback-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs) ; Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:
0.11kg (0.25lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.90lb) ;
Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-28 - - - -

Options

None	(Blank)
Manual Override	P
Manual Override	K

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N (Std.)	N
Polyurethane	P
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

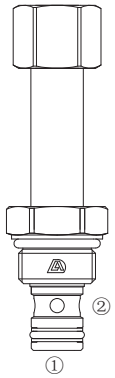
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

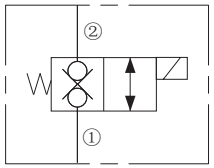
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

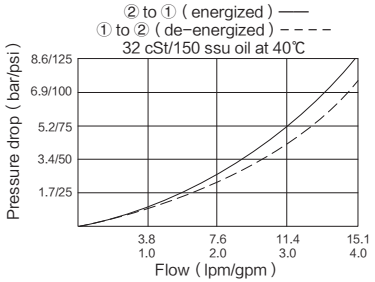
DSV08-C28 Poppet, 2-Way, N.C., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, direct-acting, poppet-type, bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized, DSV08-C28 blocks flow in both directions. When energized, the valve's poppet opens the valve bi-directionally, allowing flow from ② to ① or ① to ② .

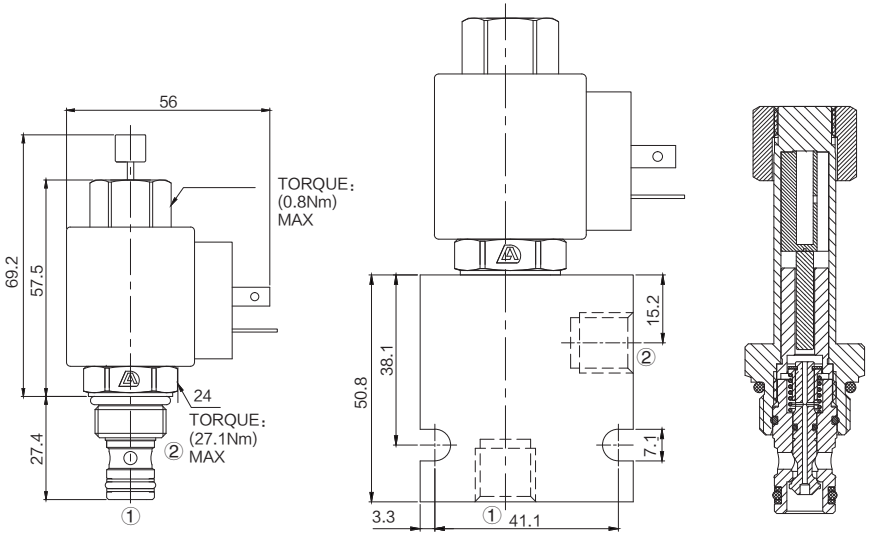
FEATURES

- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Manual OverrideOptions.
- Industry common cavity.

RATINGS

Operating Pressure:250 bar (3625 psi)
Flow:11.4 lpm (3.0 gpm)
Internal Leakage:
5 drops/minute maximum at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 50 ms.; De-energized: 16 ms.
Initial Coil Current Draw at 20℃ :
Standard Coil: 1.2 amps at 12 VDC;0.13 A at 115 VAC (full wave rectified).
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.18kg (0.40lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings andback-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs) ; Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.11kg (0.25lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.90lb) ; Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-C28 - - - - -

Options

None	(Blank)
Manual Override	P
Manual Override	K

Porting

Cartridge Only	0
SAE 4	4T
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N (Std.)	N
Polyurethane	P
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

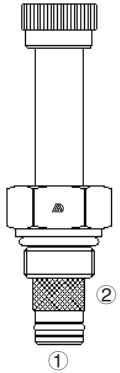
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

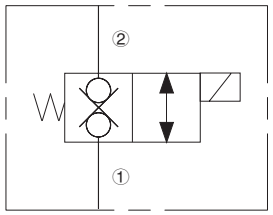
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

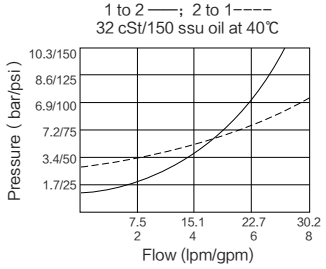
DSV08-D28 Poppet，2-Way，Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, internally piloted, poppet-type,bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized, the DSV08-D28 blocks flow in both directions. When energized, the valve’s poppet opens on its seat, allowing flow from 2 to 1 or 1 to 2.

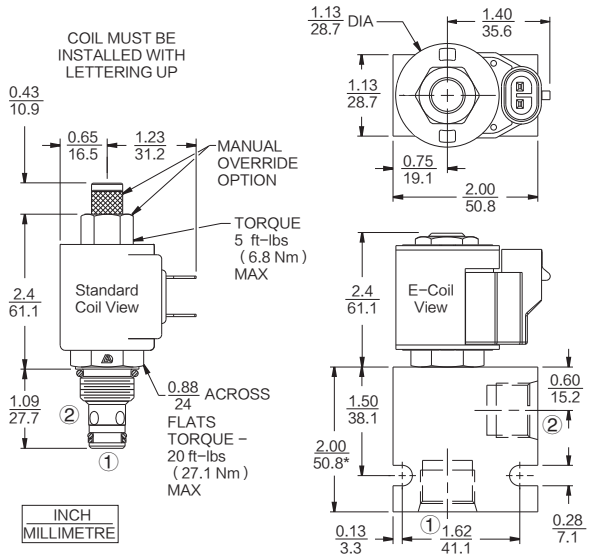
FEATURES

- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Manual override option.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Flow: 30.2 lpm (8 gpm)
Internal Leakage: 0.25 cc/minute (5 drops/minute) max. at 207bar (3000 psi)
Temperature: -40 to 120℃ with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec.; De-energized: 32 msec.
Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T08-2E; See page 297.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.16 kg.
(0.35 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-D28 - - - -

Porting
Manual Override M
Manual Override Y
Manual Override J
For Manual Override options see page 1.001.1

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B
*BSP Body; U.K. Mfr. Only

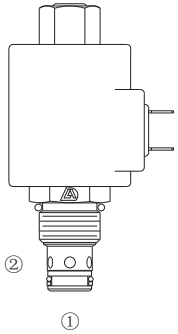
Seals
Buna N (Std.) N
Fluorocarbon V

Seals
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only.

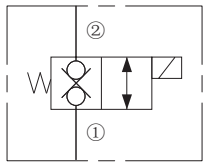
E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Seals
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in. Conduit Termination (VDC) E-Coil
EG Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)
Coils with internal diode are available. Consult factory.

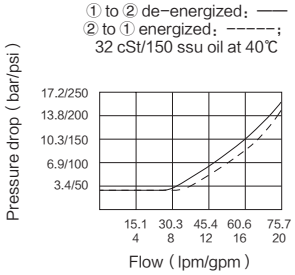
DSV10-28 Poppet, 2-Way, N.C., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally closed, internally piloted, poppet-type,bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized, DSV10-28 blocks flow in both directions. When energized, the valve' s poppet opens on its seat, allowing flow from ② to ① or ① to ② .

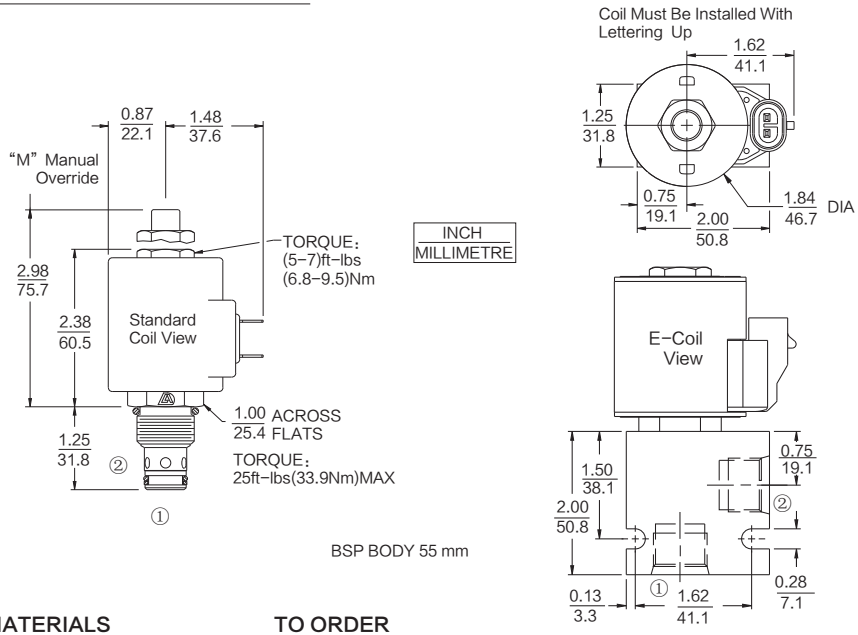
FEATURES

- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Manual OverrideOptions.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Flow:75.7 lpm (20 gpm)
Internal Leakage:
0.25 cc/minute (5 drops/minute) max. at 240 bar (3500 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 ms.; De-energized: 32 ms.
Initial Coil Current Draw at 20℃ :
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 240 bar (3500 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B,See page 300.

DIMENSIONS



BSP BODY 55 mm

MATERIALS

Cartridge: Weight:0.16kg (0.35lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-28 – – – – –

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut †DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

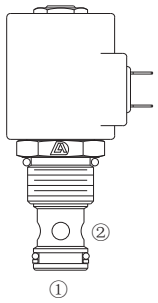
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

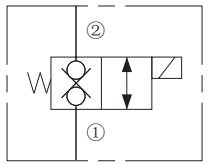
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

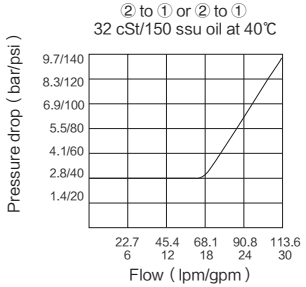
DSV12-28 Poppet, 2-Way, N.C., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, normally closed, internally piloted, poppet-type,bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV12-28 blocks flow in both directions. When energized, the valve’s poppet opens on its seat, allowing flow from ② to ① or ① to ②.

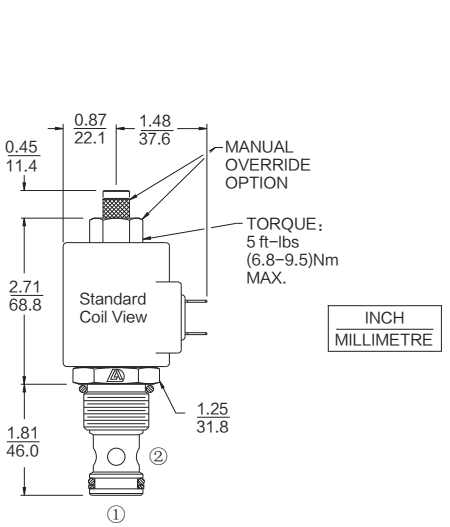
FEATURES

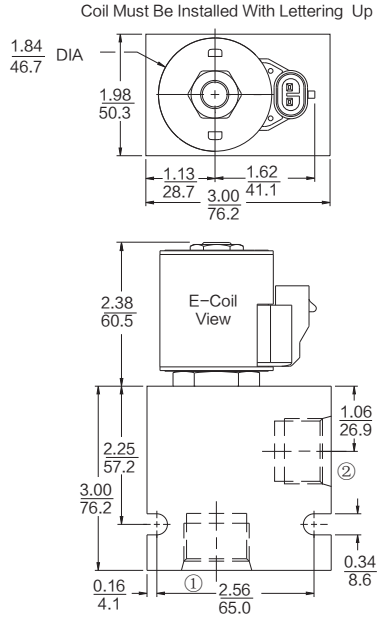
- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Manual OverrideOptions.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Unitized, molded coil design.
- Cost effective cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Flow:113.6 lpm (30 gpm)
Internal Leakage:
7 drops per minute maximum at 240 bar (3500 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec.; De-energized: 32 msec.
Initial Coil Current Draw at 20℃:
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC.
Minimum Pull-in Voltage:85% of nominal at 240 bar (3500 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T12-2A; See page 304.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.25kg (0.55lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.57kg (1.25lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.27kg(0.60lbs); Unitized thermoplastic encapsulated,Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV12-28 - - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 10	10T
SAE 12	12T
SAE 16	16T
3/4 in. BSP*	6B
1 in. BSP*	8B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

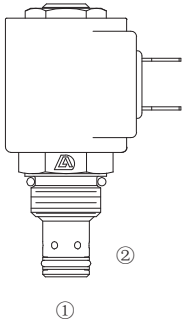
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

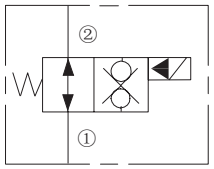
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

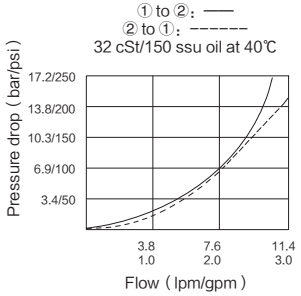
DSV08-29 Poppet, 2-Way, N.O., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-way, normally closed, internally piloted, poppet-type,bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV08-29 allows flow in both directions. When energized, the valve's poppet closes on its seat, blocking flow from ② to ① or ① to ② .

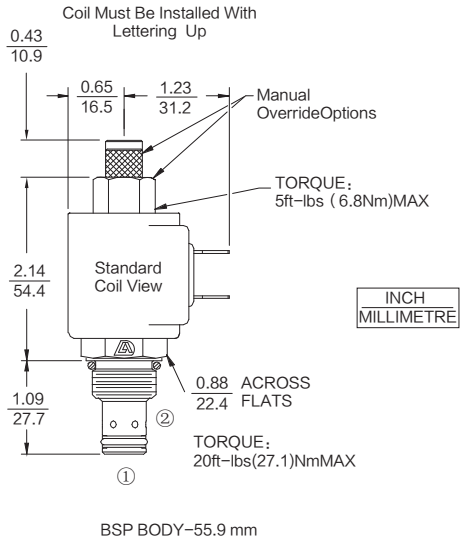
FEATURES

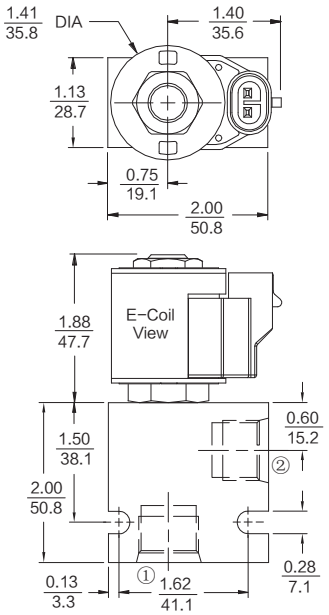
- Continuous-duty rated solenoid.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Manual OverrideOptions.
- Unitized, molded coil design.
- Cost effective cavity.

RATINGS

Operating Pressure:207bar.
Flow Rating: 11.4L/min.
Internal Leakage:
0.25 ml/minute (5 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with standard Buna seals;
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage.
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 50 ms; De-energized: 16 ms
Initial Coil Current Draw at 20℃ :
Standard Coil: 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified).
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3500 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity:T08-2E，See page 297.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.18kg (0.40lbs)；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces;
Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.16kg (0.35lbs)；Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.11kg (0.25lbs)；
Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.90lb)；
Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV08-29 - - - - -

Options

None	(Blank)
Manual Override	U
150 μ Screen	S
Manual Override	M

Porting

Cartridge Only	0
3/8 INCH BSP*	3B
M14×1.5	14
M16×1.5	16

Seals

Buna N (Std.)	N
聚氨酯	P
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

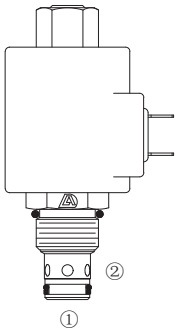
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

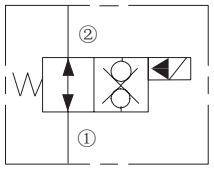
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

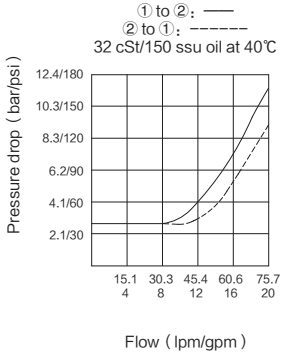
DSV10-29 Poppet, 2-Way, N.O., Bi-Directional Blocking



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 2-way, normally open, internally piloted, poppet-type,bi-directional blocking, screw-in hydraulic cartridge valve, designed for low leakage in load-holding applications.

OPERATION

When de-energized，DSV10-29 allows flow in both directions. When energized, the valve’s poppet closes on its seat, blocking flow from ② to ① or ① to ②.

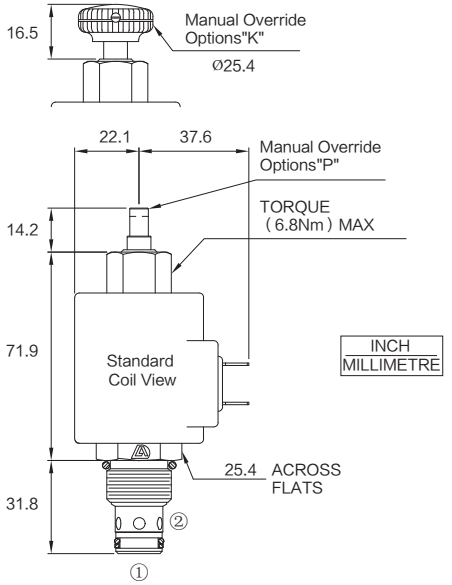
FEATURES

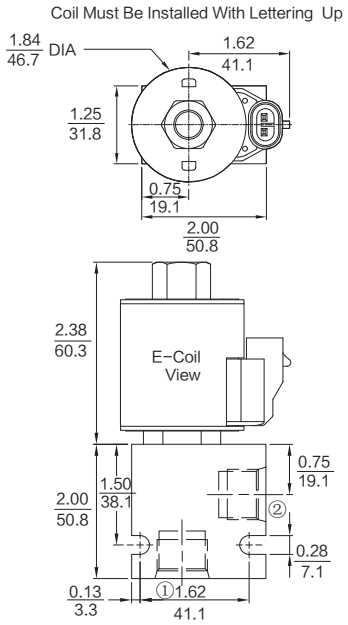
- Continuous-duty rated coil.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Manual OverrideOptions.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Hardened seat for long life and low leakage.
- Unitized, molded coil design.
- Cost effective cavity.

RATINGS

Operating Pressure:240bar.
Proof Pressure: 345bar.
Flow:75.7L/min.
Internal Leakage:
0.25 ml/minute (5 drops/minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with standard Buna seals;
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage.
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 50 ms; Energized: 40 ms; De-energized: 32 ms
Initial Coil Current Draw at 20℃:
Standard Coil:
1.67 amps at 12 VDC;0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 240 bar (3500 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Cavity:T10-2B，See page 300.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.18kg (0.40lbs)；Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.16kg (0.35lbs)；Anodized highstrength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.27kg(0.60lbs)；Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.90lb)；Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV10-29 - - - -

Option
None Manual Override (Blank)
Manual Override without Knob P
Manual Override with Knob K

Porting
Cartridge Only 0
3/8 in. BSP* 3B
M14×1.5 14
M16×1.5 16

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

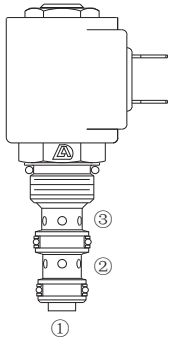
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

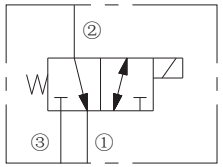
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

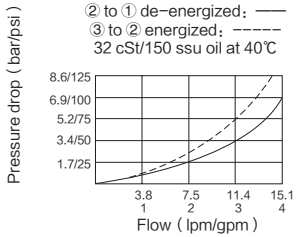
DSV08-30 Spool, 3-Way

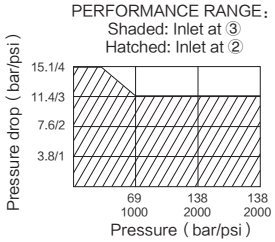


ISO SYMBOL



PERFORMANCE (Cartridge Only)





DESCRIPTION

A solenoid-operated, 3-way, direct-acting, spool-type, screw-in hydraulic directional valve.

OPERATION

When de-energized，DSV08-30 allows flow from ② to ① while blocking flow at ③.

When energized, the cartridge's spool shifts to open from ③ to ②, while blocking flow out ①. While port ① may be fully pressurized, it is not intended to be used as the inlet.

Operation of Manual Override Option: To override, push button in and twist counterclockwise180° . The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position.To return to normal valve function, push button in, twist clockwise 180° , and release.

Override will be detented in this position.

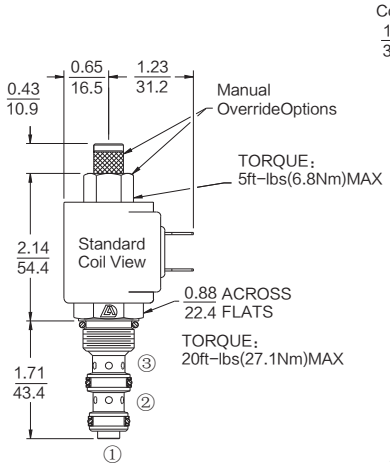
FEATURES

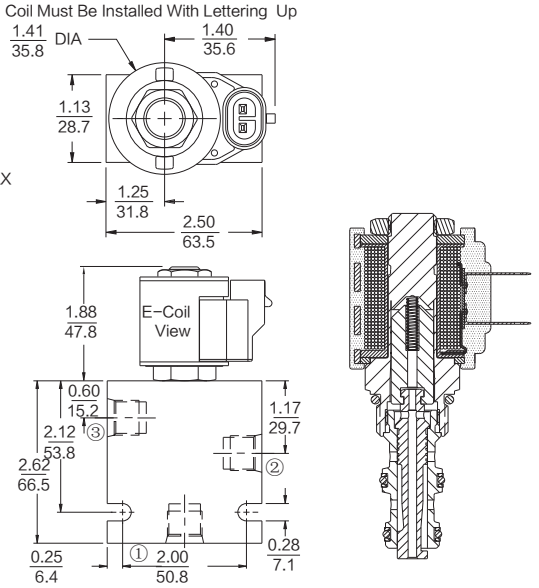
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- All ports may be fully pressurized.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Fully guided spool.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage: Port ③ (De-energized): 82 cc/minute (5 cu. in./minute) max.at 207 bar (3000 psi);Port ①(Energized): 164 cc/minute (10 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 22 ms; De-energized: 12 ms
Initial Coil Current Draw at 20℃ :
Standard Coil: 1.2 amps at 12 VDC;
0.13 amps at 115 VAC (full wave rectified);
E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T08-3A; See page 297.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.13kg (0.28lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.27kg (0.60lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductileiron bodies available; dimensions may differ.
Standard Coil: Weight:0.11kg (0.25lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-30 - - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

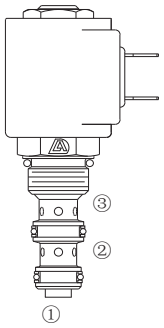
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

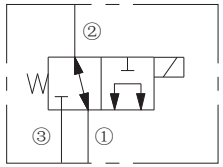
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

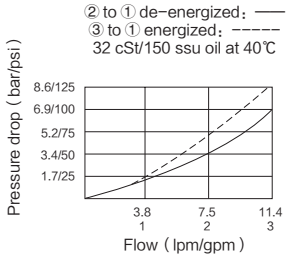
DSV08-31 Spool, 3-Way



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, three-way, direct-acting, spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV08-31 allows flow from ② to ①, while blocking flow at ③.

When energized, the valve’s spool shifts to open from ① to ③ ,while blocking at ②. While port 1 may be fully pressurized, it is not intended to be used as the inlet.

Operation of Manual Override Option: To override, push button in and twist counterclockwise 180° . The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position.To return to normal valve function, push button in, twist clockwise 180° and release.Override will be detented in this position.

FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- All ports may be fully pressurized.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)

Flow: See Performance Chart; Note: Under certain operating conditions this valve may be rated for higher flow. Consult factory.

Internal Leakage:

82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)

Temperature:-40℃ to 120℃，with Buna N seals

Coil Duty Rating:

Continuous from 85% to 115% of nominal voltage

Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 30 ms; De-energized: 25 ms

Initial Coil Current Draw at 20℃:

Standard Coil:

1.2 A at 12 VDC;0.13 A at 115 VAC (full wave rectified).

E-Coil: 1.4 amps at 12 VDC; 0.7 amps at 24 VDC

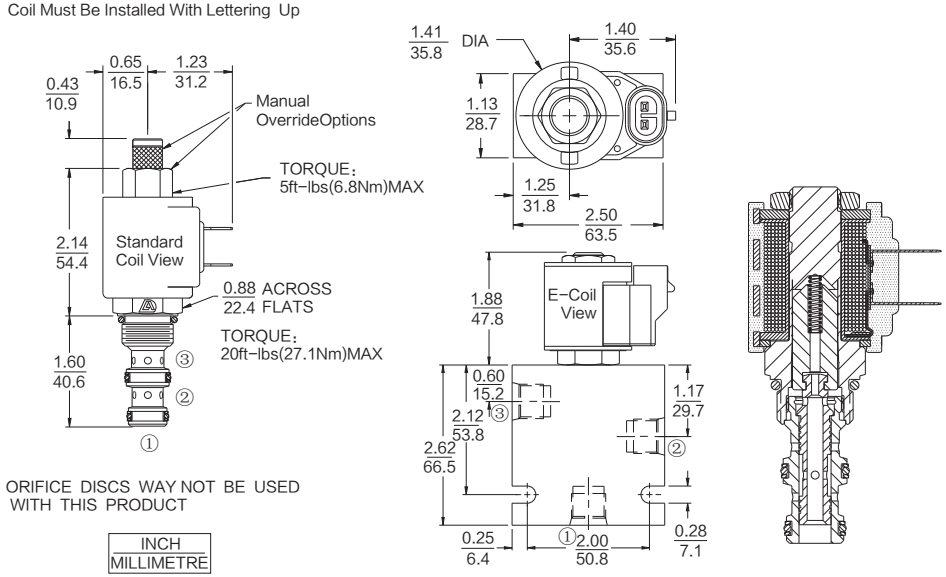
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity: T08-3A; See page 297.

DIMENSIONS

Coil Must Be Installed With Lettering Up



MATERIALS

Cartridge: Weight:0.13kg (0.28lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight:

0.27kg (0.60lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight:0.11kg(0.25lbs) Unitized thermoplastic encapsulated, ClassH high temperature magnet wire.

E-Coil: Weight:0.14kg (0.3lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-31 - - - -

Options

None (Blank)
Manual Override M

Porting

Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B

Seals

Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil

0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Termination (VDC) Std. Coil

DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil

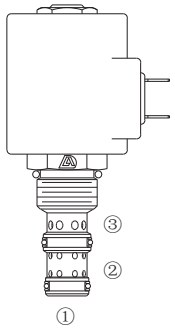
AG DIN 43650
AP 1/2 in.Conduit

Termination (VDC) E-Coil

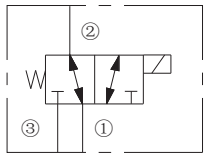
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

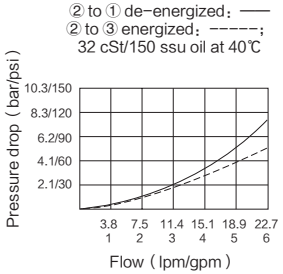
DSV10-34 Spool, 3-Way



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, three-way, direct-acting, spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, DSV10-34allows flow from ② to ①, while blocking flow at ③.When energized, the valve's spool shifts to open from ② to ③, while blocking at ①.

Operation of Manual Override Option: To override, push button in and twist counterclockwise 180°. The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position. To return to normal valve function, push button in, twist clockwise 180°, and release. Override will be detented in this position.

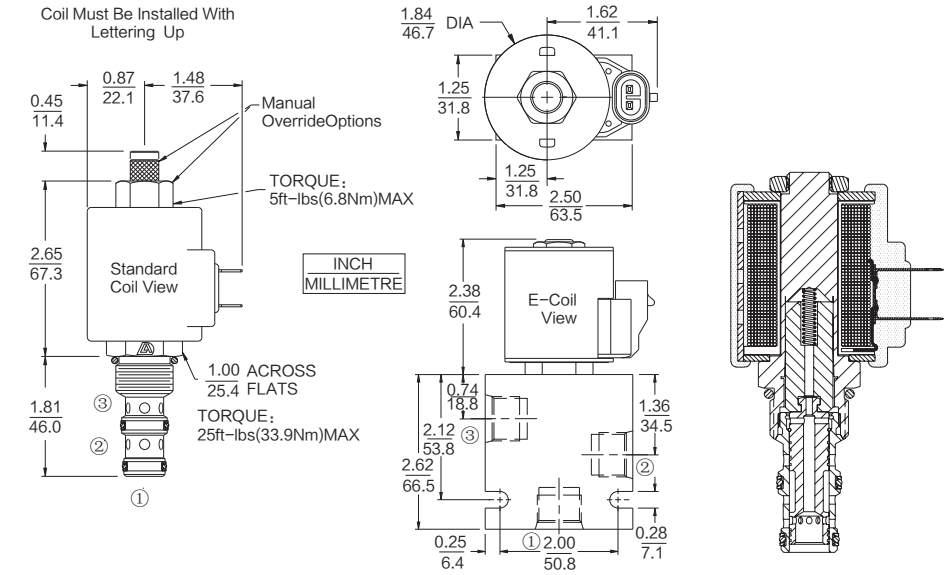
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 350 bar (5075 psi)
Flow:MAX 22.7 lpm (6 gpm);
Note: Under certain operating conditions this valve may be rated for higher flow. Consult factory.
Internal Leakage:
115 cc/minute (7 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 60 ms; De-energized: 10 ms
Initial Coil Current Draw at 20℃:
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDCMinimum Pull-in Voltage:: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.14kg (0.30lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.36kg (0.80lbs); Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27kg (0.60lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-34 - - - - -

Options
None (Blank)
Manual Override M
Manual Override Y
Manual Override J

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut †DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

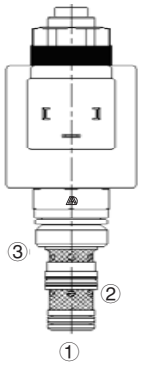
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

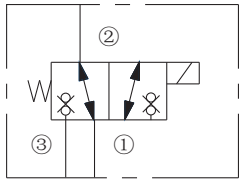
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

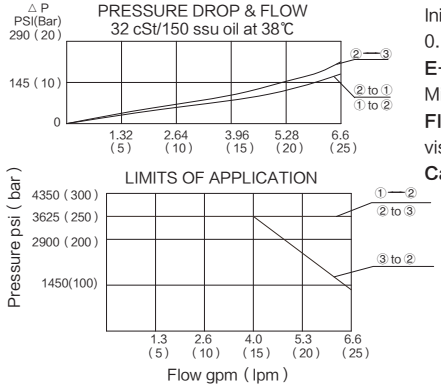
DSV10-38 Double Blocking, 2 Position, 3-Way, N.C.



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, two-position, three-way, bi-directional blocking, screw-in hydraulic cartridge valve. It is designed for low leakage in load-holding applications.

OPERATION

When de-energized, the DSV10-38 blocks flow from 3 to 2 or from 2 to 3.When energized, flow is blocked from 2 to 1 or from 1 to 2.

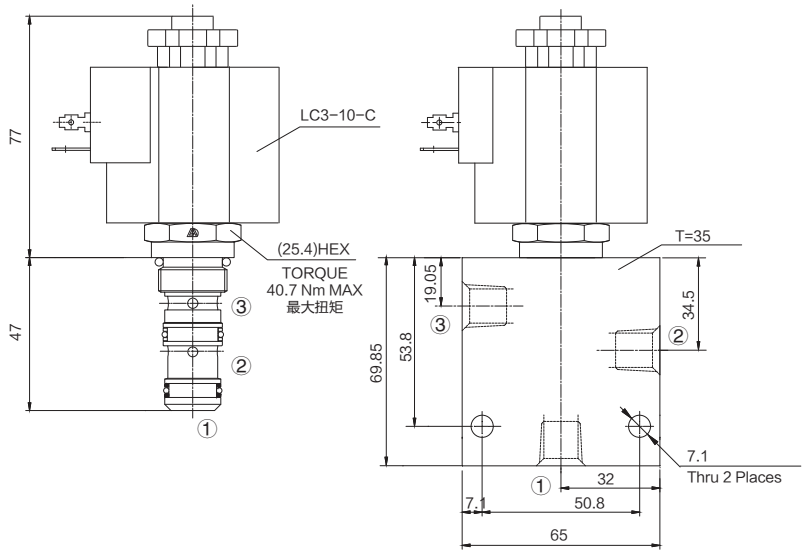
FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry-common cavity.

RATINGS

Operating Pressure: 250 bar (3625psi)
Flow: See Performance Chart
Internal Leakage: 0.05cc/minute (1 drops/minute) at 250 bar (3625 psi)
Temperature: -40 to 100℃ with standard Buna seals;-26 to 204℃ with Fluorocarbon seals; -54 to 107℃ with Polyurethane seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ : Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T10-3A; See page 301.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.22 kg. (0.47 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.27 kg. (0.60 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.3 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-38 P - - -

P=Manual Override (Omit for standard)

Porting

Cartridge Only	0
SAE 6	6T
1/4 in. BSP*	2B

Seals

Buna N (Std.)	N
Fluorocarbon	V
Polyurethane	P

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

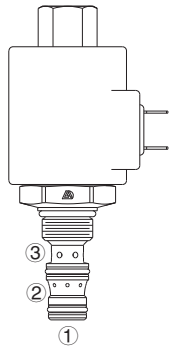
10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

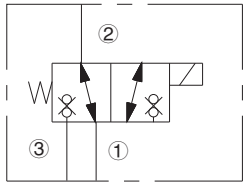
DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P Termination (VAC) Std. Coil
AG	DIN 43650
AP	1/2 in. Conduit Termination (VDC) E-Coil
EG	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

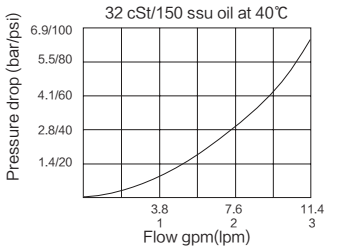
DSV38-38 Double Blocking, 2 Position, 3-Way, N.C.



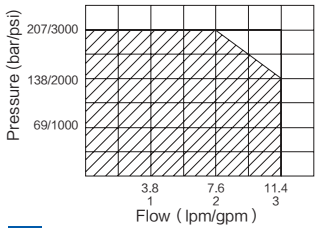
ISO SYMBOL



PERFORMANCE (Cartridge Only)



Performance Range
Shaded: Inlet at 1, Load at 2, Tank At 3
Shaded: Inlet at Selector Valve
Hatched: Inlet at 3, Load at 2, Tank At 1



DESCRIPTION

A solenoid-operated, two-position, three-way, bi-directional blocking, screw-in hydraulic cartridge valve. It is designed for low leakage in load-holding applications.

OPERATION

When de-energized, the DSV38-38 blocks ow from 3 to 2 or from 2 to 3.When energized, ow is blocked from 2 to 1 or from 1 to 2.

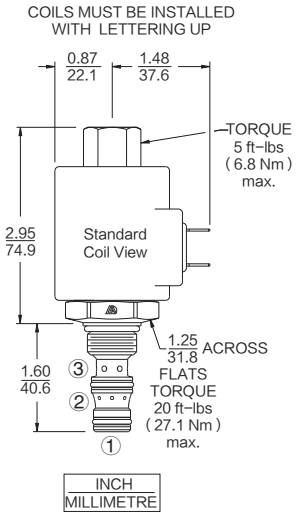
FEATURES

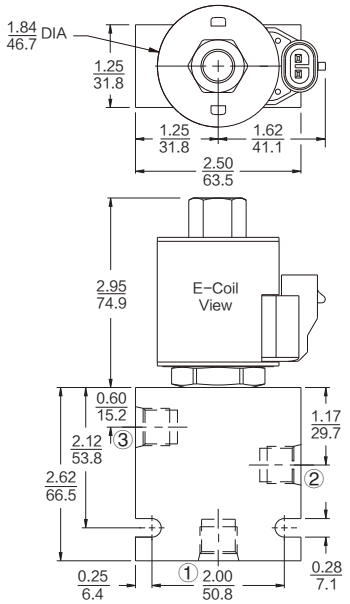
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Ecient wet-armature construction.
- Cartridges are voltage interchangeable.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry-common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Flow: See Performance Chart
Internal Leakage: 0.25 cc/minute (5 drops/minute) at 207 bar (3000 psi)
Temperature: -40 to 100℃ with standard Buna seals;-26 to 204℃ with Fluorocarbon seals; -54 to 107℃ with Polyurethane seals;
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ Standard Coil: 1.67 amps at 12VDC ;0.18 amps at 115 VAC (full wave rectied).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Cavity: T08-3A; See page 297.

DIMENSIONS





MATERIALS

Cartridge: Weight: 0.13 kg. (0.28 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight: 0.27 kg. (0.60 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000psi). Ductile iron bodies available; dimensions may dier.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV38-38 ___ - ___ ___ - ___ ___ ___

Option
None (Blank)

Porting

Cartridge Only	0
SAE 6	6T
1/4 in. BSP*	2B

Seals

Buna N (Std.)	N
Fluorocarbon	V
Polyurethane	P

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

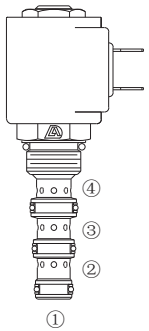
AG	DIN 43650
AP	1/2 in. Conduit

Termination (VDC) E-Coil

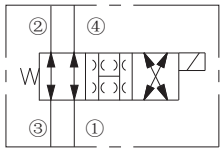
EG	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

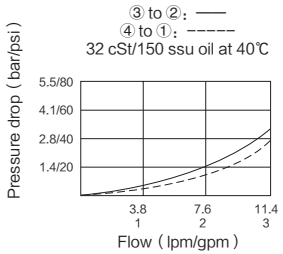
DSV08-40 Spool, 3-Way



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 2-position, direct-acting spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV08-40 flow paths are ③ to ②, and ④ to ① .When energized,the valve’s spool shifts to open ③ to ④, and ② to ① . All ports are open at cross-over.

Operation of Manual Override Option:

To override, push button in and twist counterclockwise180° .

The internal spring will push the button out. In this position, the valve may be only partially shifted. To assure full override shift, pull the button out to its fullest extension and hold it in this position.

To return to normal valve function, push button in, twist clockwise 180° , and release.Override will be detented in this position.

FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Compact size.

RATINGS

Operating Pressure:207 bar (3000 psi)

Flow: See Performance Chart

Internal Leakage:

82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)

Temperature:-40℃ to 120℃，with Buna N seals

Coil Duty Rating:

Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20℃ :

Standard Coil: 1.2 A at 12 VDC

0.13 A at 115 VAC (full wave rectified);

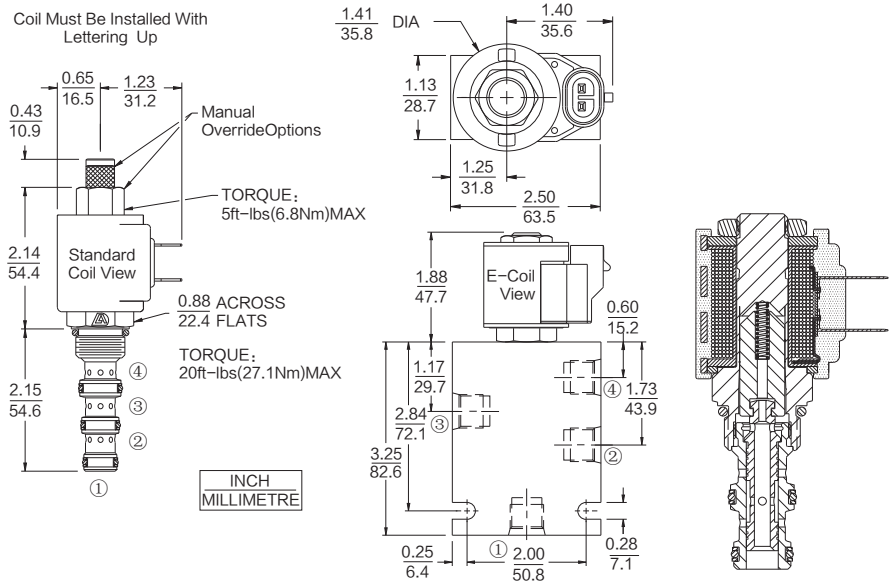
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC

Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu

Cavity:T08-4A；See page 299.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.13kg (0.28lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings andback-ups standard.

Standard Ported Body:Weight: 0.27kg (0.60lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight: 0.11kg (0.25lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight:0.14kg (0.3lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-40 - - - - - -

Options

None (Blank)
Manual Override M

Porting

Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals

Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil

0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

Termination (VDC) Std. Coil

DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil

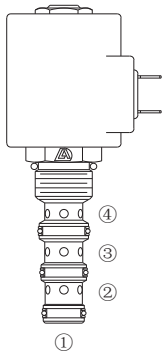
AG DIN 43650
AP 1/2 in.Conduit

Termination (VDC) E-Coil

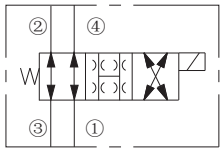
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

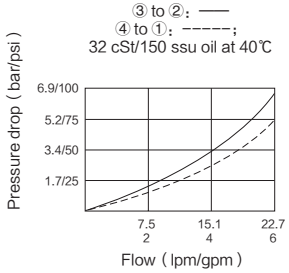
DSV10-40 Spool, 4-Way, 2-Position



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, four-way, two-position, direct-acting, spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV10-40 allows flow from ③ to ②, as well as from ④ to ①.
When energized, the cartridge’s spool shifts to open ③ to ④, and ② to ①.

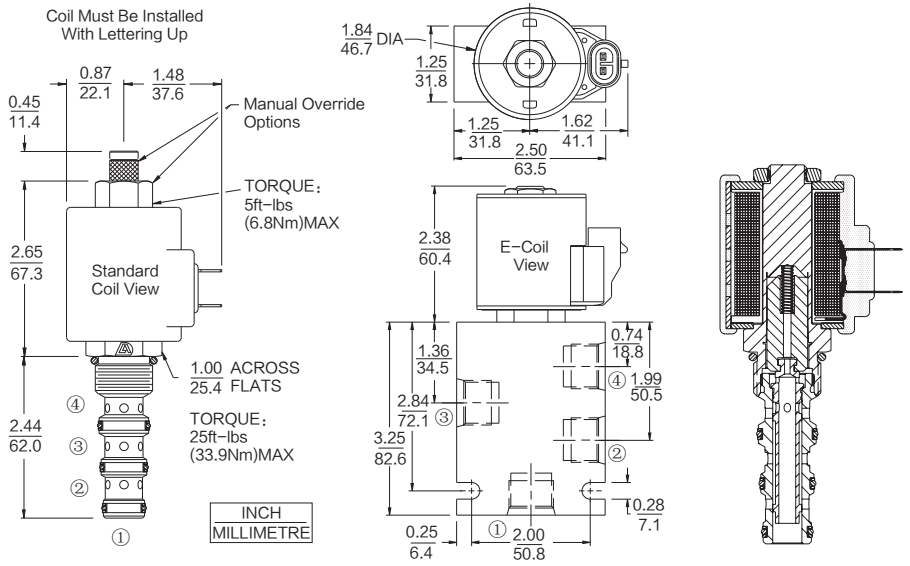
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure： 350 bar (5075 psi)
Flow:MAX 23 lpm (6 gpm)
Internal Leakage:
82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ :
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-4A；See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.20kg (0.45lbs);
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.36kg (0.80lbs)；Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight:
0.27kg (0.60lbs)；Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil：Weight:0.41kg (0.9lbs)；
Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-40 – – – – –

Options

None	(Blank)
Manual Override	M
Manual Override	Y
Manual Override	J

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

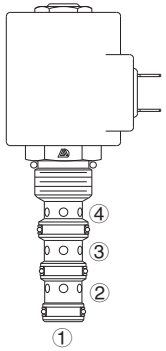
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

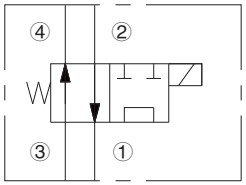
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

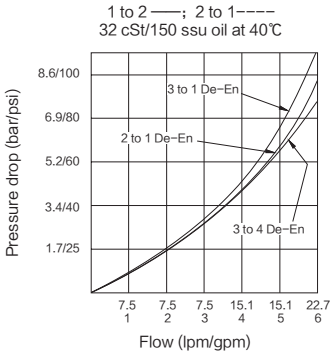
DSV10-44 Spool, 4-Way, 2-Position



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 2-position, direct-acting, spool-type, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, the DSV10-44 allows flow from 3 to 4, as well as from 2 to 1. When energized, the cartridge's spool shifts to open 3 to 1 while blocking 4 and 2 .Operation of Manual Override Option: To override,push button in and twist counterclockwise 180 ° .The internal spring will push the button out.In this position, the valve may be only partially shifted. To assure full override shift,pull the button out to its fullest extension and hold it in this position.To return to normal valve function, push button in, twist clockwise 180 ° and release . Override will be detented in this position.

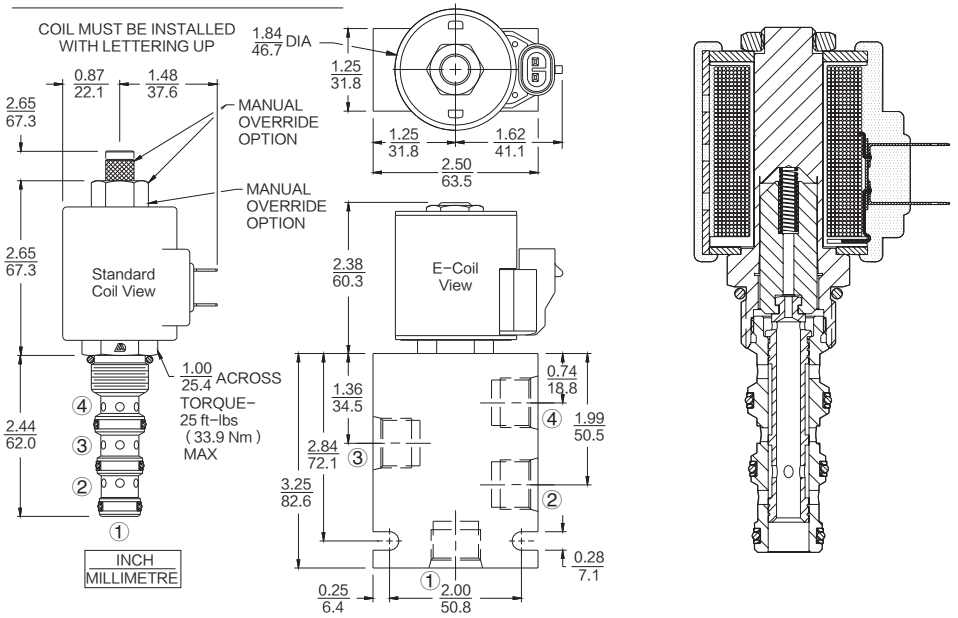
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: 23 lpm (6 gpm) max.
Internal Leakage: 82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20° C: Standard Coil: 1.67 amps at 12 VDC;0.18 amps at 115 VAC (full wave rectified).E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T10-4A; See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.20 kg. (0.45 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.
Standard Ported Body: Weight:0.36 kg. (0.80 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-44 - - -

Porting

None	(Blank)
Manual Override M	M
Manual Override Y	Y
Manual Override	J

For Manual Override options see page 1.001.1

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

*BSP Body; U.K. Mfr. Only

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std.Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

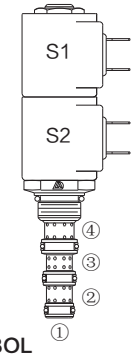
AG	DIN 43650
AP	1/2 in. Conduit

Termination (VDC) E-Coil

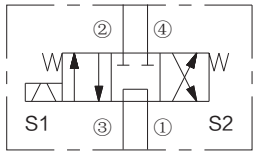
EG	Deutsch DT04-2P (IP69K Rated)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

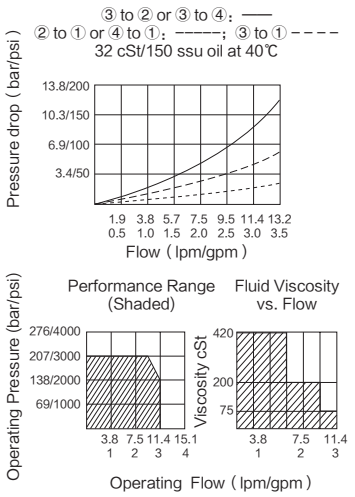
DSV08-47A Spool, 4-Way, 3-Position, Tandem Center



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, four-way, three-position, direct-acting, spool-type, tandem center, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV08-47A blocks cylinder ports, while allowing flow from ③ to ① . When coil S1 is energized, flow is allowed from ③ to ② , and from 4 to ① .

When coil S2 is energized, flow is allowed from ③ to 4, and from ② to ① .In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ② .While ① may be fully pressurized, it is not intended for use as the valve’s inlet.

Operation of Manual Override Option: To override, push the knurled knob to activate the coil (S2) function; pull the knob to activate the coil (S1) function.

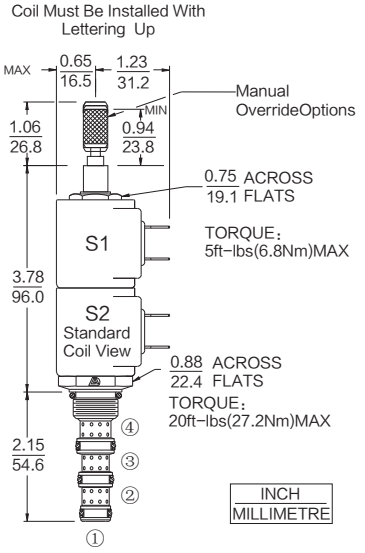
FEATURES

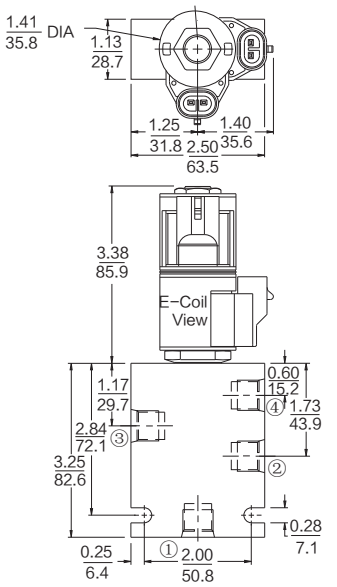
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.

RATINGS

Operating Pressure:210 bar (3000 psi)
Flow:MAX 11.4 lpm (3.0 gpm)
Internal Leakage:
278 cc/minute (17 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ :
Standard Coil: 1.2 A at 12 VDC; 0.13 A at 115 VAC (full wave rectified).
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu).
Cavity:T08-4A；See page 299.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.13kg (0.28lbs) ; DSV08-47A
Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.27kg (0.60lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:0.11kg(0.25lbs) ; Unitized thermoplasti encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs) ; Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-47A - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

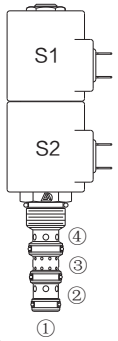
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

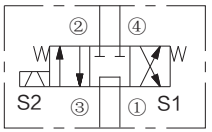
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

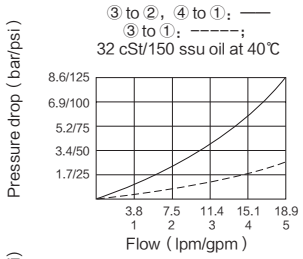
DSV10-47A Spool, 4-Way, 3-Position, Tandem Center

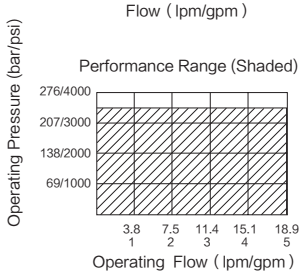


ISO SYMBOL



PERFORMANCE (Cartridge Only)





DESCRIPTION

A solenoid-operated, four-way, three-position, direct-acting, spool-type, tandem center,screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV10-47A blocks cylinder ports, while allowing flow from ③ to ① . When coil S1 is energized, flow is allowed from ③ to ② , and from ④ to ① . When coil S2 is energized, flow is allowed from ③ to ④ , and from ② to ① .In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ② .

NOTE: While ① may be fully pressurized, it is not intended for use as the valve’s inlet.

Operaton of Manual Override Option: To override, push the knurled button to activate the coil (S2) function, or pull the knob to activate the coil (S1) function.

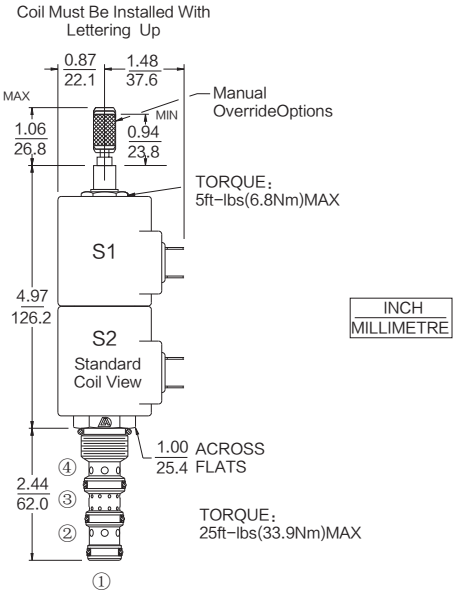
FEATURES

- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Hardened precision spool and cage for long life.
- Continuous-duty rated solenoid.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.

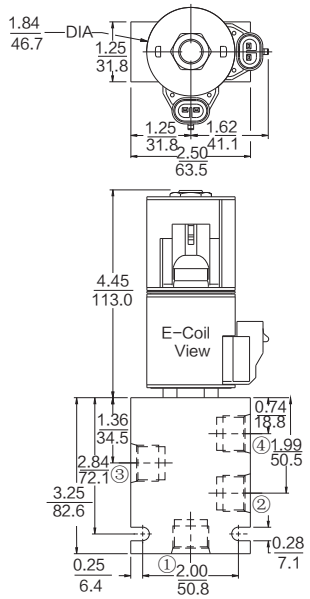
RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure： 390 bar (5700 psi)
Flow:MAX 19 lpm (5 gpm)
Internal Leakage:
328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time： First indication of change of state with 85% voltage supplied at100% of nominal flow rating: Energized: 100 ms; De-energized: 50 ms.
Initial Coil Current Draw at 20℃ :
Standard Coil： Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil： 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity： T10-4A；See page 303.

DIMENSIONS



INCH
MILLIMETRE



MATERIALS

Cartridge: Weight:0.30kg (0.65lbs) ; Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.36kg (0.80lbs) ; Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil：Weight:
0.27kg (0.60lbs) ; Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg(0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-47A - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

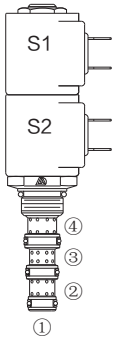
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

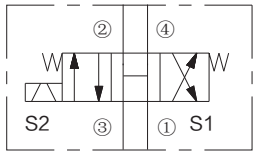
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

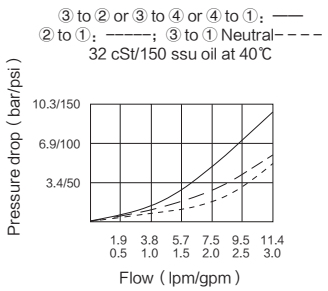
DSV08-47B Spool, 4-Way, 3-Position, Open Center



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, open center, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV08-47B allows flow to all ports. When coil #1 is energized,flow is allowed from ③ to ④, and from ② to ①. When coil #2 is energized, flow is allowed from ③ to ②, and from ④ to ①. In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ②. NOTE: While 1 may be fully pressurized, it is not intended for use as the valve’s inlet.

Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

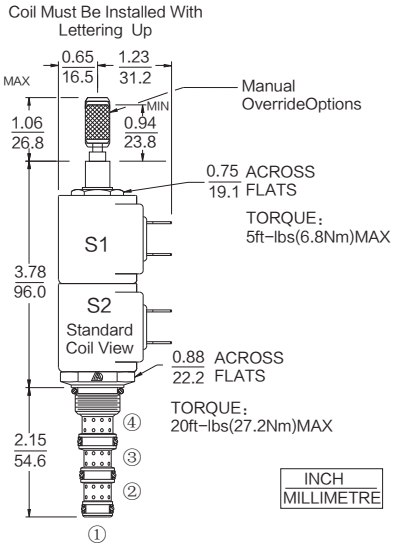
FEATURES

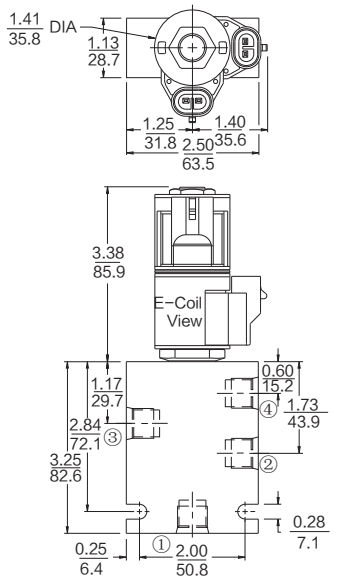
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable
- Unitized, molded coil design.
- Compact size.
- Optional waterproof E-Coils rated up to IP69K.
- Manual OverrideOptions.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow:MAX 11.4 lpm (3 gpm)
Internal Leakage:
328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃:
Standard Coil:
1.2 A at 12 VDC;0.13 A at 115 VAC (full wave rectified).
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-4A; See page 299.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.13kg (0.28lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.27kg (0.60lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:
0.11kg (0.25lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-47B - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

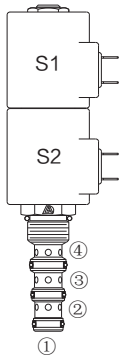
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

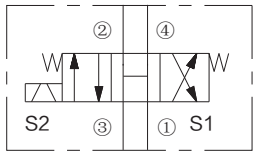
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

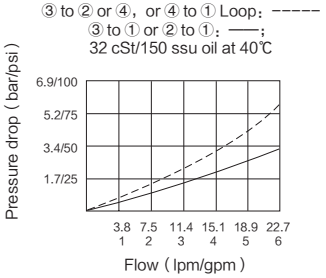
DSV10-47B Spool, 4-Way, 3-Position, Open Center



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, open center, screw-in hydraulic cartridge valve.

OPERATION

When de-energized，DSV10-47B cylinder ports are open and common to 3 and 1. When coil #1 is energized, flow is allowed from 3 to 4, and from 2 to 1. When coil #2 is energized,flow is allowed from 3 to 2, and from 4 to 1. In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port 2.

NOTE: While 1 may be fully pressurized, it is not intended for use as the valve’s inlet.Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

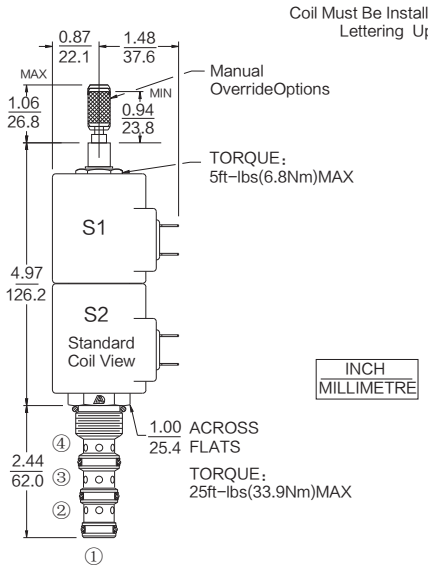
FEATURES

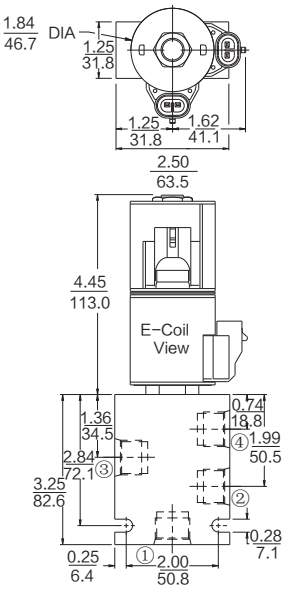
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual Override Options.
- Optional waterproof E-Coils rated up to IP69K.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure: 390 bar (5700 psi)
Flow:MAX 22.7 lpm (6 gpm)
Internal Leakage:
328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Response Time: First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 30 ms; De-energized: 10 ms
Initial Coil Current Draw at 20℃:
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-4A; See page 303.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.30kg (0.65lbs)；Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.36kg (0.80lbs)； Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available dimensions may differ.
Standard Coil: Weight:
0.27kg (0.60lbs)； Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs)；Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-47B - - - -

Options
None (Blank)
Manual Override M
Manual Override T

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut †DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

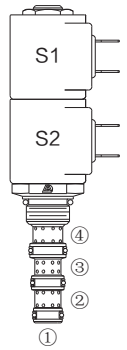
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

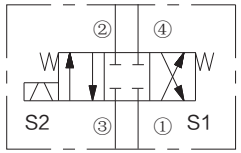
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

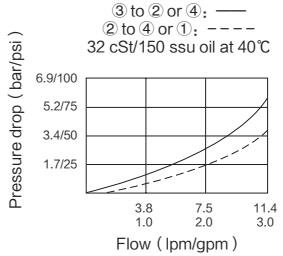
DSV08-47C Spool, 4-Way, 3-Position, Closed Center



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, closed center, screwin hydraulic cartridge valve.

OPERATION

When de-energized,DSV08-47C blocks flow to all ports. When coil #1 is energized,flow is allowed from ③ to ④, and from ② to ①. When coil #2 is energized, flow is allowed from ③ to ②, and from ④ to ①.In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ②.While ① may be fully pressurized, it is not intended for use as the valve's inlet.

Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

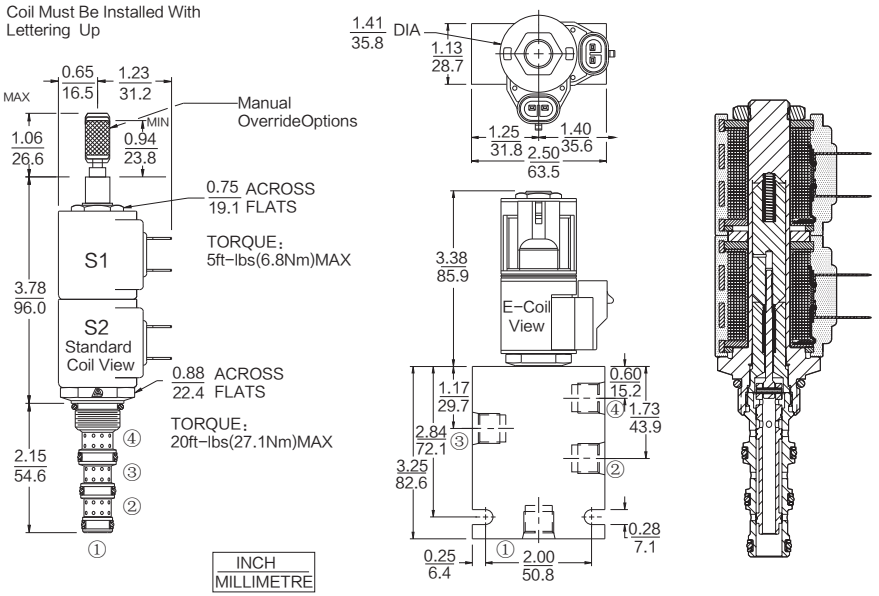
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Compact size.
- Optional waterproof E-Coils rated up to IP69K.
- Manual OverrideOptions.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow:MAX 11.4 lpm (3 gpm)
Internal Leakage:
164 cc/minute (10 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃ :
Standard Coil:
1.2 A at 12 VDC; 0.13 A at 115 VAC
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T08-4A; See page 299.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.13kg (0.28lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.27kg (0.60lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.11kg (0.25lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-47C - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

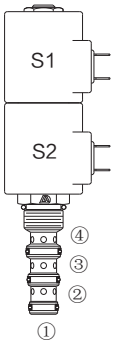
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

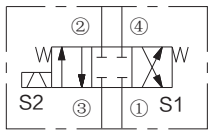
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

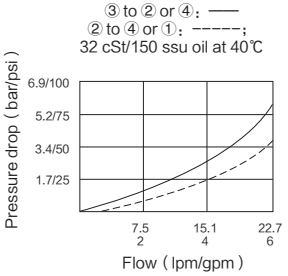
DSV10-47C Spool, 4-Way, 3-Position, Closed Center



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, closed center, screwin hydraulic cartridge valve.

OPERATION

When de-energized，DSV10-47C blocks flow to all ports. When coil #1 is energized,flow is allowed from ③ to ④, and from ② to ①. When coil #2 is energized, flow is allowed from ③ to ②, and from ④ to ①. In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ② . NOTE: While ① may be fully pressurized, it is not intended for use as the valve's inlet.

Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

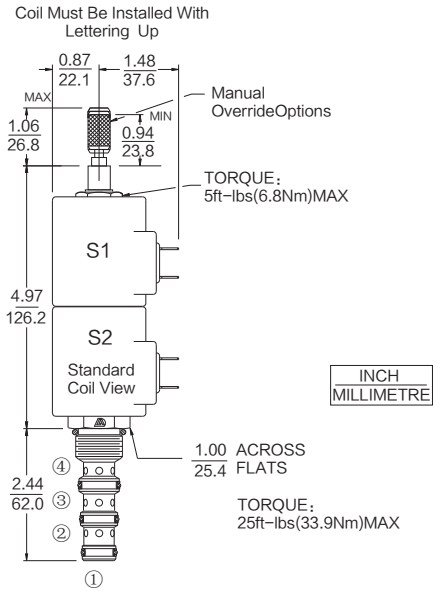
FEATURES

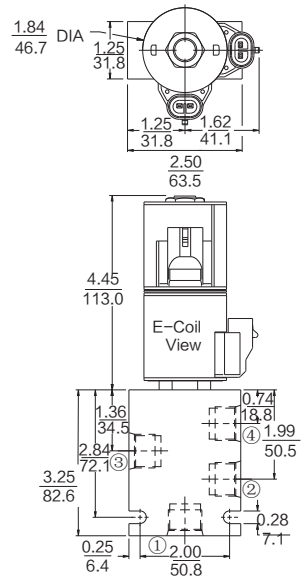
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)
Proof Pressure: 390 bar (5700 psi)
Flow:MAX 23 lpm (6 gpm)
Internal Leakage:
328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃，with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃:
Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-4A; See page 303.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.30kg (0.65lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight: 0.36kg (0.80lbs); Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight: 0.27kg (0.60lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-47C - - - - - -

Options
None (Blank)
Manual Override M
Manual Override T

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut †DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

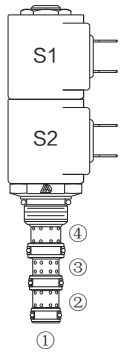
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

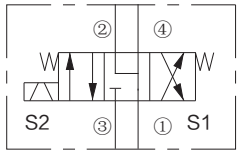
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

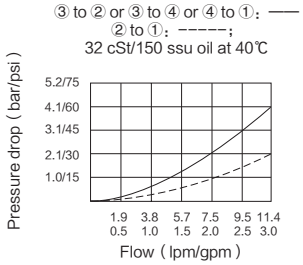
DSV08-47D Spool, 4-Way, 3-Position, "Motor Spool"



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, motor spool, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, DSV08-47D blocks flow to ③, while allowing flow from ② to ①,and from ④ to ①.

When coil #1 is energized, flow is allowed from ③ to ④, and from ② to ①.When coil #2 is energized, flow is allowed from ③ to ②, and from ④ to ①.

In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ②.While ① may be fully pressurized, it is not intended for use as the valve's inlet.

Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

FEATURES

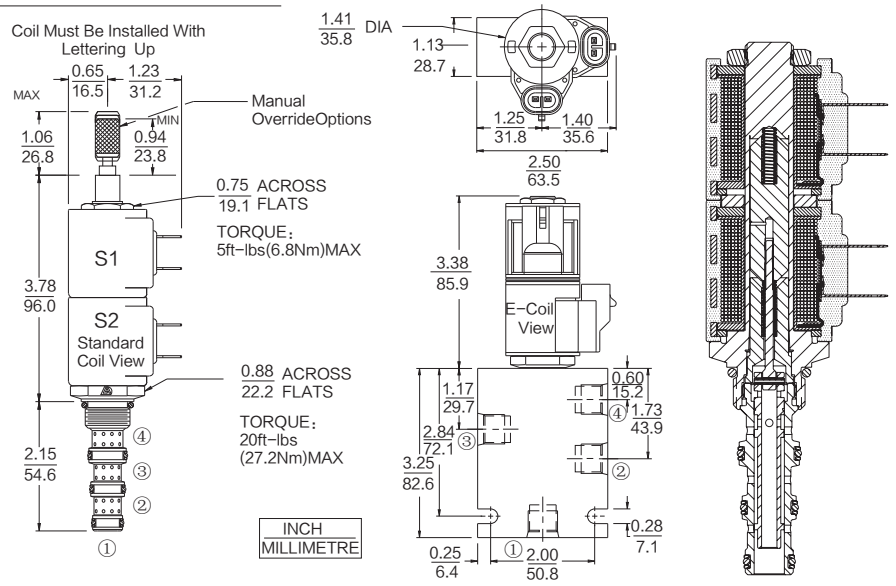
- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Compact size.
- Optional waterproof E-Coils rated up to IP69K.
- Manual OverrideOptions.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow:MAX 11.4 lpm (3 gpm)
Internal Leakage:
164 cc/minute (10 cu. in./minute) max. at 207 bar (3000 psi)
Temperature:-40℃ to 120℃, with Buna N seals
Coil Duty Rating:
Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20℃:
Standard Coil: 1.2 A at 12 Vdc;
0.13 A at 115 Vac (full wave rectified).
E-Coil: 1.4 A at 12 VDC; 0.7 A at 24 VDC
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T08-4A; See page 299.

DSV08-47D

DIMENSIONS



MATERIALS

Cartridge: Weight:0.13kg (0.28lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body:Weight:
0.27kg (0.60lbs); Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight:
0.11kg (0.25lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.
E-Coil: Weight:0.14kg (0.3lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV08-47D - - - - -

Options
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

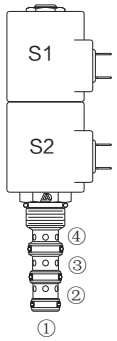
Termination (VDC) Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in.Conduit

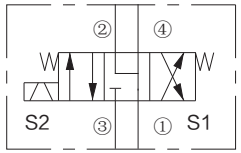
Termination (VDC) E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EL Leadwires (2)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

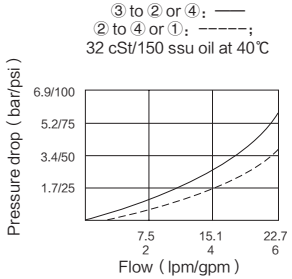
DSV10-47D Spool, 4-Way, 3-Position, "Motor Spool"



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, 4-way, 3-position, direct-acting, spool-type, motor spool, screw-in hydraulic cartridge valve.

OPERATION

When de-energized, DSV10-47D blocks flow to ③, while allowing flow from ② to ①, and from ④ to ①.

When coil #1 is energized, flow is allowed from ③ to ④, and from ② to ①. When coil #2 is energized, flow is allowed from ③ to ②, and from ④ to ①.

In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port ②.

Note: While 1 may be fully pressurized, it is not intended for use as the valve's inlet.

Operation of Manual Override Option: To override, push the knurled button to activate the coil #2 (S2) function, or pull the knob to activate the coil #1 (S1) function.

FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Manual OverrideOptions.
- Optional waterproof E-Coils rated up to IP69K.
- Efficient wet-armature construction.
- All ports may be fully pressurized.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.
- Industry common cavity.

RATINGS

Operating Pressure:207 bar (3000 psi)

Proof Pressure: 390 bar (5700 psi)

Flow:MAX 23 lpm (6 gpm)

Internal Leakage:

328 ml/minute (20 cu. in./minute) max. at 207 bar (3000 psi)

Temperature:-40℃ to 120℃, with Buna N seals

Coil Duty Rating:

Continuous from 85% to 115% of nominal voltage

Initial Coil Current Draw at 20℃:

Standard Coil: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified).

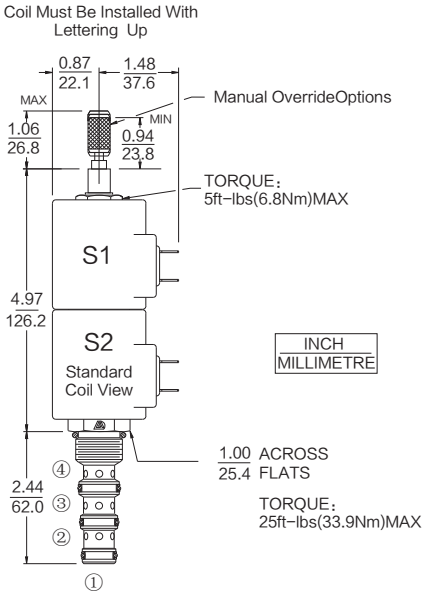
E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

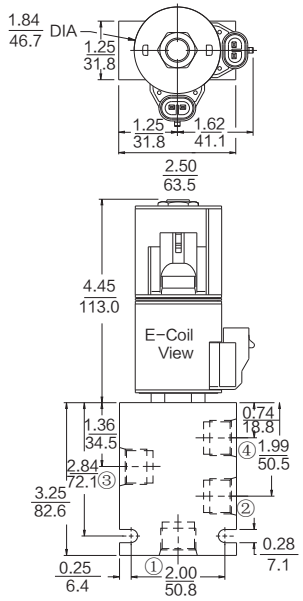
Minimum Pull-in Voltage:85% of nominal at 207 bar (3000 psi)

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity:T10-4A; See page 303.

DIMENSIONS





MATERIALS

Cartridge: Weight:0.30kg (0.65lbs); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.

Standard Ported Body:Weight: 0.36kg (0.80lbs); Anodized、highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight: 0.27kg (0.60lbs); Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight:0.41kg (0.9lbs); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DSV10-47D - - - -

Options

None	(Blank)
Manual Override	M
Manual Override	T

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC†
12	12 VDC
24	24 VDC
36	36 VDC
48	48 VDC
24	24 VAC
115	115 VAC
230	230 VAC

**Includes Std. Coil Nut
†DS, DW or DL terminations only.

E-Coil

10	10 VDC
12	12 VDC
20	20 VDC
24	24 VDC

Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VAC) Std. Coil

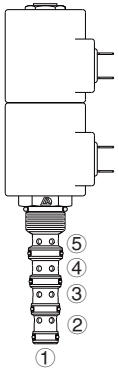
AG	DIN 43650
AP	1/2 in.Conduit

Termination (VDC) E-Coil

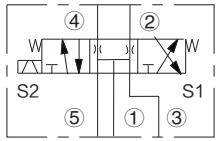
ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

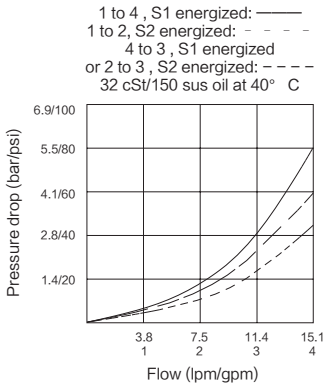
DSV10-5915 Spool，5-Way，3-Position



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A solenoid-operated, five-way, three-position, screw-in hydraulic cartridge valve with integral load-sense port.

OPERATION

When de-energized, the DSV10-5915 allows flow to all ports. When coil #1 is energized, flow is allowed from 2 to 3 and from 1 to 4. When coil #2 is energized ,flow is allowed from 1 to 2, and from 4 to 3.

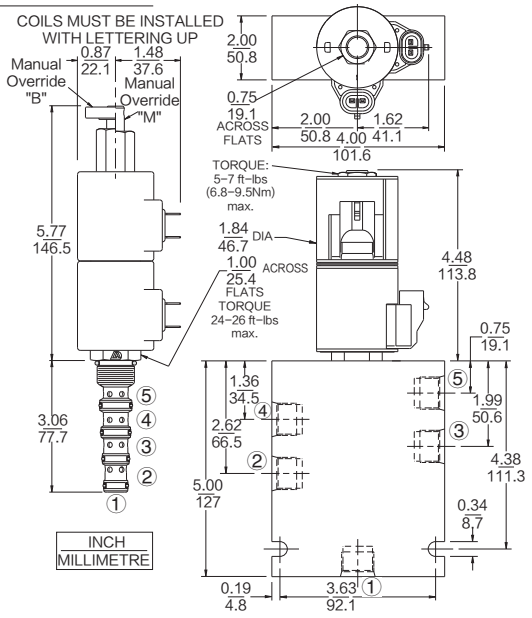
FEATURES

- Continuous-duty rated solenoid.
- Hardened precision spool and cage for long life.
- Optional coil voltages and terminations.
- Optional waterproof E-Coils rated up to IP69K.
- Optional manual override.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Unitized, molded coil design.

RATINGS

Operating Pressure: 247 bar (3625 psi) with standard Buna N seals
Flow: 20 lpm (4 gpm) max. See performance chart
Internal Leakage: 164 cc/minute (10 cu. in./minute) max. at 207 bar (3000 psi)
Temperature: -40 to 120° C with standard Buna seals
Coil Duty Rating: Continuous from 85% to 115% of nominal voltage
Initial Coil Current Draw at 20° C: Standard Coil: 1.67 amps at 12 VDC; 0.18 amps
at 115 VAC (full wave rectified). E-Coil: 1.6 amps at 12 VDC; 0.8 amps at 24 VDC
Minimum Pull-in Voltage: 85% of nominal at 207 bar (3000 psi)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Installation: No restrictions
Cavity: T10-5A; See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.36 kg. (0.80 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and back-ups standard.
Standard Ported Body: Weight: 0.41 kg. (0.85 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi); Ductile iron bodies available; dimensions may differ.
Standard Coil: Weight each: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

TO ORDER

DSV10-5915 - - -

Oprion
None (Blank)
Manual Override B
Manual Override M
For Manual Override options see page 1.001.1

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T

Seals
Buna N (Std.) N
Fluorocarbon V

Voltage Std. Coil
0 Less Coil**
10 10 VDC†
12 12 VDC
24 24 VDC
36 36 VDC
48 48 VDC
24 24 VAC
115 115 VAC
230 230 VAC
**Includes Std. Coil Nut
† DS, DW or DL terminations only.

E-Coil
10 10 VDC
12 12 VDC
20 20 VDC
24 24 VDC

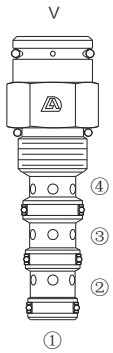
Termination (VDC) Std.Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P

Termination (VAC) Std. Coil
AG DIN 43650
AP 1/2 in. Conduit

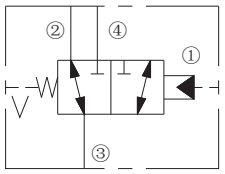
Termination (VDC) E-Coil
EG Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack® 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

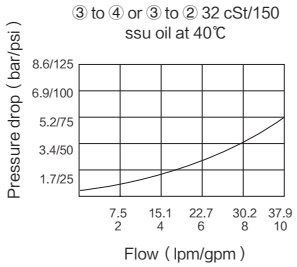
DPD10-40 Piloted 3-Way Spool, External Vent



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for three-way circuits requiring remote pilot actuation.

OPERATION

In neutral (unpiloted), the DPD10-40 allows flow passage from ③ to ② bidirectionally, while fl ow is blocked at .
V is a spring chamber vent-to-atmosphere, which is internally O-ring sealed from the cartridge fl ow paths.
On remote pilot signal at ① , the valve shifts to open from ③ to ④ , while blocking fl ow at ② .
Because of the vented spring chamber, the cartridge may be fully pressurized at any port without affecting required pilot pressure.

FEATURES

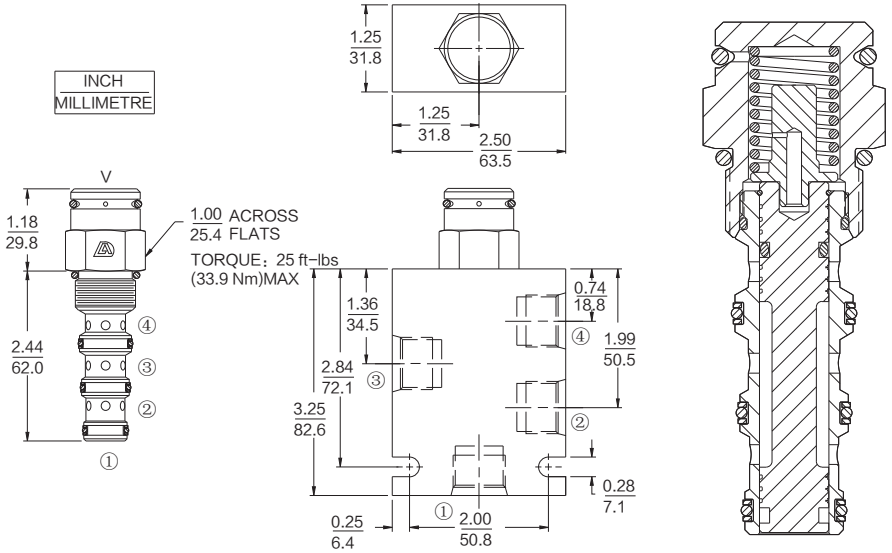
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure:240 bar (3500 psi)
Proof Pressure：350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage:
82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)
Pilot Pressure Required:
To Spool Crossover：7.6 bar (110 psi)
To Full Spool Shift:8.6 bar (125 psi)
Oil Volume Required to Full Shift:0.65 cc/minute (0.04 cu. in)
Temperature:-40℃ ~ 120℃ (with Buna N seals)
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-4A；See page 303.

Note：This valve is designed with a dynamic oil-to-atmosphere seal in the vent section. Ambient conditions will cause this vent seal to degrade which will reduce the valve’s cycle life. If this could cause a problem, we suggest that a non-vented model be selected. Consult factory for assistance.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.16kg (0.35 lbs) ;
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.
BODY:Weight:0.34kg (0.75 lbs) ;
Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi).
Ductile iron bodies available; dimensions may differ

TO ORDER

DPD10-40 - - - -

Options
None (Blank)
Open transition N
Tall Cap T

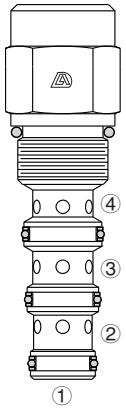
Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

Bias Spring†
40 2.8 bar (40 psi)
60 4.1 bar (60 psi)
110 7.6 bar (110 psi)
130 9.1 bar (130 psi)
170 11.7 bar (170 psi)
M5.0 5.0 bar (73 psi)
‡M14.0 14 bar (203 psi)
‡M15.0 15 bar (217 psi)

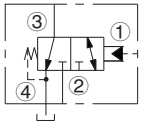
‡ T option required.
Cap Height: 2.21" (56.1 mm)
†Note: 110 psi bias spring is the minimum required for use with sealed spool.

Seals
N Buna N (Std.)
NS Buna N with Sealed Spool (110 psi spring minimum required)
V Fluorocarbon
VS Fluorocarbon with Sealed Spool (110 psi spring minimum required)

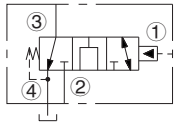
DPD10-41 Piloted 3-Way Spool,Internal Vent



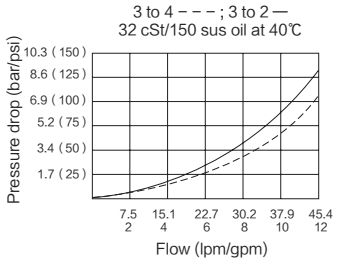
ISO SYMBOL



OPEN TRANSITION:



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for three-way circuits requiring remote pilot actuation.

OPERATION

In neutral (unpiloted), the DPD10-41 allows flow from 3 to 4. 2 is blocked.On remote pilot signal at 1, the valve shifts to open from 3 to 2, while blocking flow to 4.
Since 4 is common to the spring chamber, pressure on 4 will directly (1:1) affect the pilot pressure required, and must always be added to the bias spring value.
Note: Consult factory for applications where bi-directional flow is required when the valve is in the normal or spring-offset position.

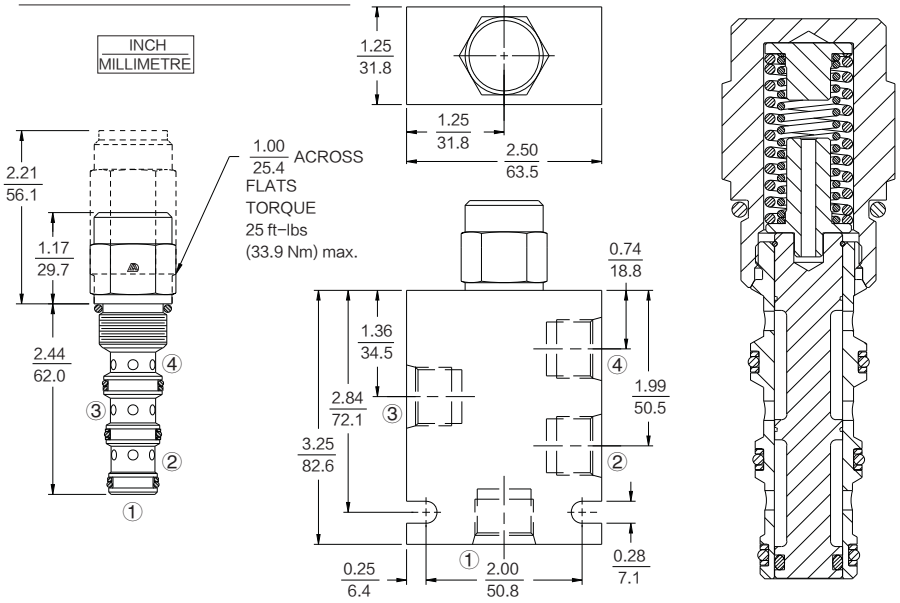
FEATURES

- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)
Proof Pressure: 350 bar (5075 psi)
Flow: See Performance Chart
Internal Leakage: 82 cc/minute (5 cu. in./minute) max. at 207 bar (3000 psi)
Pilot Pressure Required:
To Spool Crossover – 4.1 bar (60 psi) Spring: 4.7 bar (68.2 psi)
7.6 bar (110 psi) Spring: 7.6 bar (110 psi)
To Full Spool Shift – 4.1 bar (60 psi) Spring: 5.2 bar (75 psi)
7.6 bar (110 psi) Spring: 8.6 bar (125 psi)
Oil Volume Required to Full Shift: 0.65 cc (0.04 cu. in.)
Temperature: -40 to 120° C with standard Buna seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity,
Cavity: T10-4A; See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.23 kg. (0.50 lbs.)
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard; Anodized aluminum knobs.
Special Ported Body: Weight:
0.16 kg. (0.35 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.

TO ORDER

DPD10-41 - ___ - ___ - ___

Option
None blank
Open Transition N
Tall Cap T

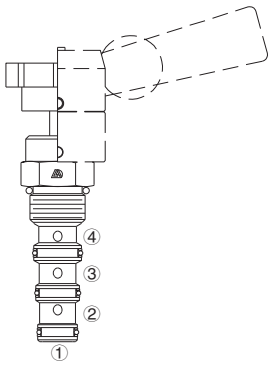
Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in.BSP* 2B
3/8 in.BSP* 3B

Bias Spring†
60 4.1 bar (60 psi)
110 7.6 bar (110 psi)
170 11.7 bar (170 psi)
*200 14 bar (203 psi)

*Note: "T" option required for 203 psi bias spring
†Note: 110 psi bias spring is the minimum required for use with sealed spool.

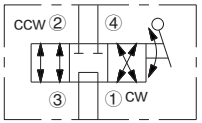
Seals
N Buna N (Std.)
NS Buna N with Sealed Spool
V Fluorocarbon
VS Fuorocarbon with Sealed Spool

DMR10-47A Manual Rotary., 4-Way, 3-Pos. Tandem Center

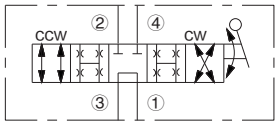


ISO SYMBOL

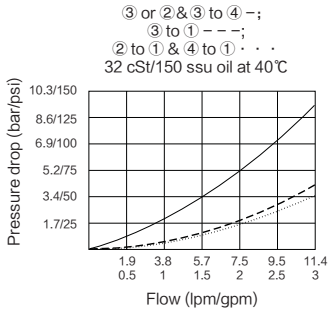
USASI/ISO:



TRANSITION:



PERFORMANCE (Cartridge Only)



DESCRIPTION

Manually-operated four-way, three-position directional valve, with adaptability to a variety of adjustment operators (ordered separately), in a variety of spool configurations.

OPERATION

Three positions: centered, 45 ° counterclockwise, and 45 ° clockwise. In the center position ports ① and ③ are open while ports ② and ④ are closed. In the 45 ° counterclockwise from center position, ports ① and ④ are open while ports ② and ③ are open. In the 45° clockwise from center position, ports ③④ and are open while ports and are open. All ports are partially open in transition.

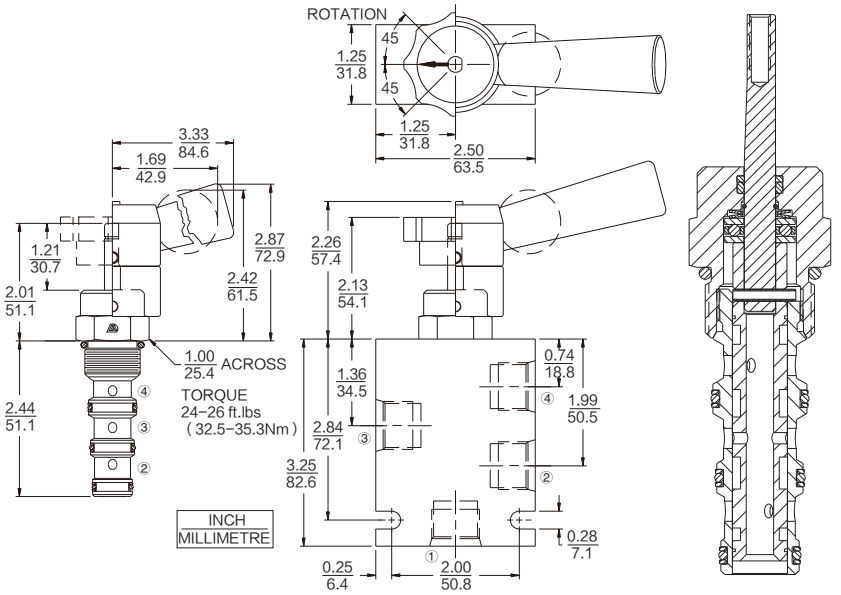
FEATURES

- Three-position detent, friction lock (with detented neutral), or spring return operators may be ordered separately.
- May be fully pressurized at all ports.
- Optional lock-down bracket.
- Heavy-duty construction.
- Industry common cavity SYMBOLS .

RATINGS

Operating Pressure: 240 bar (3500 psi)
Max. Flow: See Performance Chart
Internal Leakage: 164 cc/minute (10 cu. in./minute) at 240 bar (3500 psi)
Temperature: -40 to 120° C with standard Buna N seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page
Installation: No position restrictions; See page
See page for operator handles/knobs installation;
See page for lock-down bracket installation.
Cavity: T10-4A; See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.17 kg. (0.37 lbs.)
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and Fluorocarbon back-ups standard.
Standard Ported Body: Weight: 0.34 kg. (0.75 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page
Lever-Type Handle: (Sold Separately) Weight: 0.18 kg. (0.38 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Plastic lever arm.

TO ORDER

DMR10-47A – – –

Option
None (Blank)

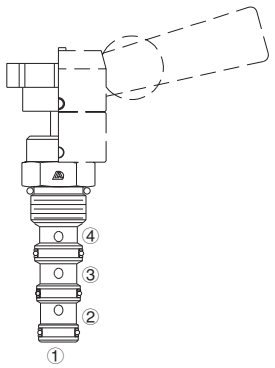
Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
SAE 8 with Lock-Down Bracket	8TL
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

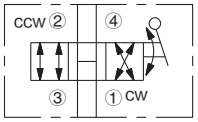
N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane

DMR10-47B Manual Rotary, 4-Way, 3-Pos., Open Center

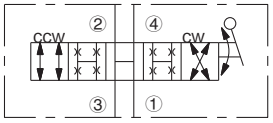


ISO SYMBOL

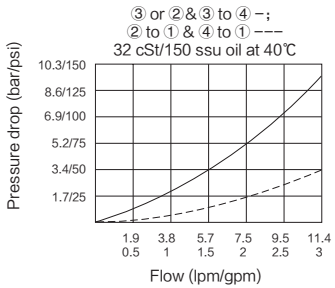
USASI/ISO:



TRANSITION:



PERFORMANCE (Cartridge Only)



DESCRIPTION

Manually-operated four-way, three-position directional valve, with adaptability to a variety of adjustment operators (ordered separately), in a variety of spool confi gurations.

OPERATION

Three positions: centered, 45 ° counterclockwise, and 45 ° clockwise. In the center position all ports are open. In the 45 ° counterclockwise from center position, ports ① and ④ are open while ports ② and ③ are open. In the 45° clockwise from center position, ports ① and ② are open while ports ③ and ④ are open. All ports are partially open in transition.

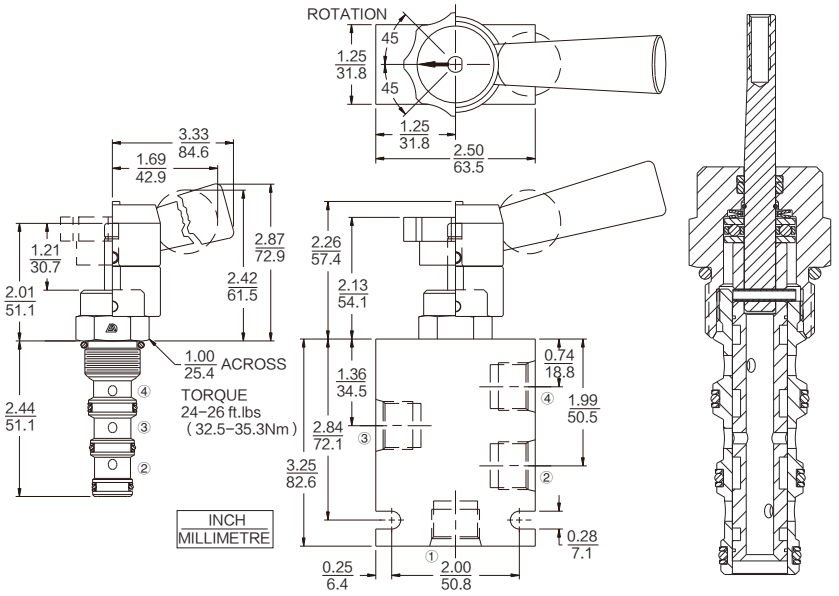
FEATURES

- Three-position detent, friction lock (with detented neutral), or spring return operators may be ordered separately.
- May be fully pressurized at all ports.
- Optional lock-down bracket.
- Heavy-duty construction.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)
Max. Flow: See Performance Chart
Internal Leakage: 164 cc/minute (10 cu. in./minute) at 240 bar (3500 psi)
Temperature: -40 to 120° C with standard Buna N seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of
7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page Installation: No position restrictions; See page
See page for operator handles/knobs installation;
See page for lock-down bracket installation.
Cavity: T10-4A; See page 303.

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.17 kg. (0.37 lbs.)
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and Fluorocarbon back-ups standard.
Standard Ported Body: Weight:
0.34 kg. (0.75 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page
Lever-Type Handle: (Sold Separately)
Weight: 0.18 kg. (0.38 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Plastic lever arm.

TO ORDER

DMR10-47B – – –

Option
None (Blank)

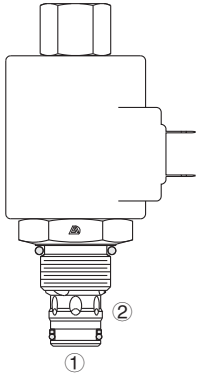
Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
SAE 8 with Lock-Down Bracket	8TL
1/4 in. BSP*	2B
3/8 in. BSP*	3B

Seals

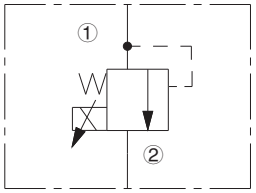
N	Buna N (Std.)
V	Fluorocarbon
P	Polyurethane

DTS10-26 Proportional Electric Relief w/Internally

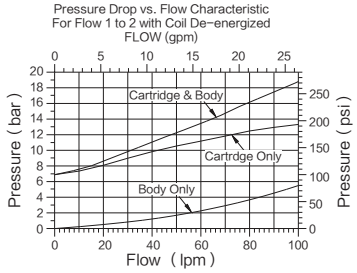


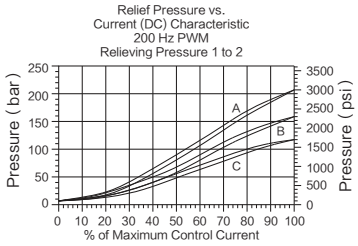
ISO SYMBOL

USASI/ISO:



PERFORMANCE (Cartridge Only)





DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for three-way circuits requiring remote pilot actuation.

OPERATION

The DTS10-26 blocks flow from 1 to 2 until sufficient pressure is present at 1 to open the pilot section by offsetting the electrically induced solenoid force. With no current applied to the solenoid, the valve will relieve at approximately 100 psi.

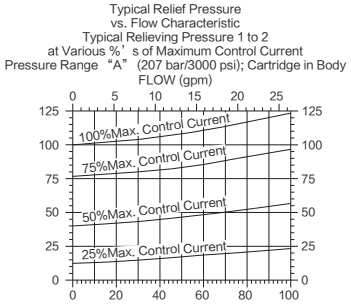
The optional manual override allows the valve to be set when the electric supply is lost. The manual setting is added to the electric setting. To prevent the system from being over pressurized, the manual override should always be disengaged prior to applying power to the coil.

FEATURES

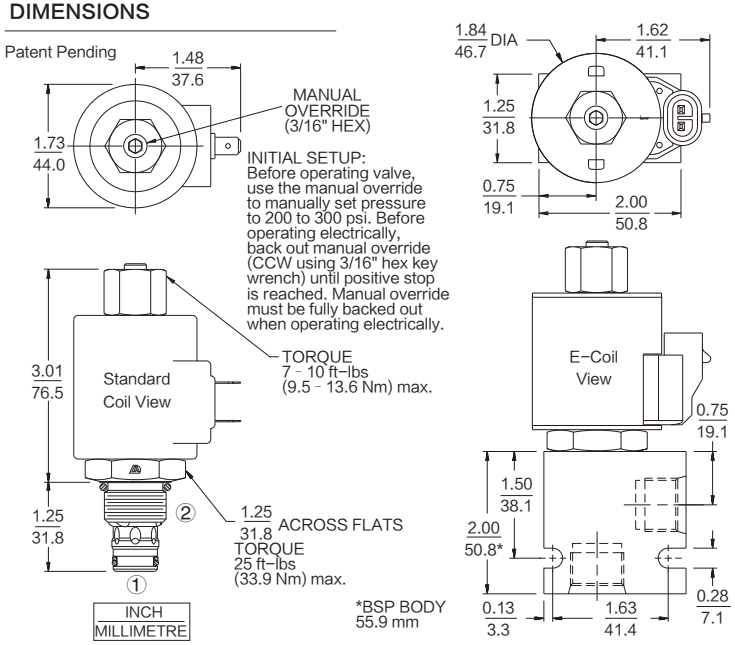
- Hardened spool and cage for long life.
- Industry common cavity.

RATINGS

Maximum Operating Pressure: 241 bar (3500 psi)
Maximum Control Current: 1.10 amps for 12 VDC coil; 0.55 amps for 24 VDC coil
Relief Pressure Range from Zero to Maximum Control Current:
A: 6.9 - 207 bar (100 - 3000 psi) **C:** 6.9 - 117 bar (100 - 1700 psi)
B: 6.9 - 159 bar (100 - 2300 psi)
Rated Flow: 94.6 lpm (25 gpm), DP=13.1 bar (190 psi), Cartridge only, 1 to 2 coil de-energized
Maximum Pilot Flow: 0.76 lpm (0.2 gpm)
Hysteresis: Less than 3%
Flow Path: Free Flow: 1 to 2 coil de-energized; Relieving: 1 to 2 coil energized
Temperature: -40 to 100° C (-40 to 212° F) with standard Buna N seals
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Installation Recommendation: When possible, the valve should be mounted below the reservoir oil level. This will maintain oil in the armature preventing trapped air instability. If this is not feasible, mount the valve horizontally for best results.
Cavity: T10-2B; See page 300.



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.25 kg. (0.55 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna NO-rings and polyester elastomer backups standard. Optional polyurethane seals with fluorocarbon back-up recommended for pressures over 240 bar (3500 psi).
Standard Ported Body: Weight: 0.16 kg. (0.35 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available;
Standard Coil: Weight: 0.32 kg. (0.7 lbs.) Unitized, thermoplastic encapsulated, Class H high temperature magnetwire.
E-Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DTS10-26 ___ - ___ - ___ ___ ___

Maximum Relief Pressure
207 bar (3000 psi) A
159 bar (2300 psi) B
117 bar (1700 psi) C

Option
None (Blank)
Manual Override M

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
3/8 in.BSP* 3B
1/2 in.BSP* 4B

Seals
Buna N (Std.) N
Fluorocarbon V

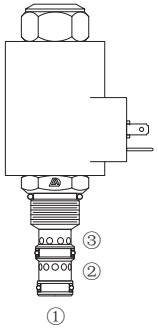
Voltage
0 Less Coil
10 10 VDC (1.30 amps max.)
12 12 VDC (1.10 amps max.)
20 20 VDC (0.65 amps max.)
24 24 VDC (0.55 amps max.)

Termination Std. Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
D DR Deutsch DT04-2P

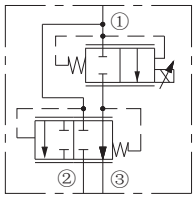
Termination E-Coil
ER Deutsch DT04-2P (IP69K Rated)
EY Metri-Pack 150 (IP69K Rated)

Coils with internal diode are available. Consult factory.

DPV70-30 Proportional Flow Control Cartridge,

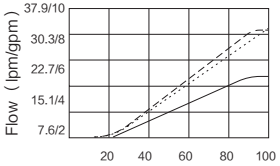


ISO SYMBOL



PERFORMANCE (Cartridge Only)

Flow vs. Current
207 bar/3000 psi；12V Coil；200 Hz PWM
32 cSt/150 ssu oil at 40℃
.....Range A，2-Ported
--------Range A，3-Ported
Range B，2-Ported or Range B，3-Ported



Percent of max.control current

DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spooltype,normally closed when de-energized, proportional flow control valve. It can be used as a priority-type flow regulator with pressure-compensated, regulated and bypass flow. It can also be used as a restrictive-type 2-way, pressure-compensated flow regulator when the bypass line (port 2) is blocked.

OPERATION

DPV70-30 will regulate flow out of port 3 regardless of system working pressure.With an increasing current applied to the solenoid, the DPV70-30 will increase output flow.
Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small
amount of leakage is provided for the priority port. Consult factory.
Operation of Manual Override:
To Engage: Turn clockwise approximately 1 turn to reach start point. Continue another approximately 5 turns to full shift.
To Disengage: Turn counterclockwise approximately 6 turns to positive stop.

FEATURES

- Excellent linearity and hysteresis..
- Hardened spool and cage for long life..
- Optional coil voltages and terminations..
- Efficient wet armature construction.

RATINGS

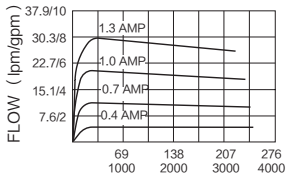
Operating Pressure: Inlet：240 bar (3500 psi)；
Ports ② and ③：207 bar (3000 psi)
Regulated Flow Rate:
Bypass Blocked，Range A：26 lpm (7 gpm)
Bypass Blocked，Range B：17 lpm (4.5 gpm)
Bypass Open，Range A：30 lpm (8 gpm)
Bypass Open，Range B：17 lpm (4.5 gpm)
MAXInputFlow
Bypass Open，Range A：50 lpm (13 gpm)
Bypass Open，Range B：26 lpm (7 gpm)
Internal Leakage:
197 cc/min. (12 cu. in./min.) fully closed at 207 bar (3000 psi),
Electrical：2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	350 ± 70 mA	1500 ± 200 mA
24 VDC	175 ± 35 mA	750 ±100 mA

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity:T10-3A；See page 301.

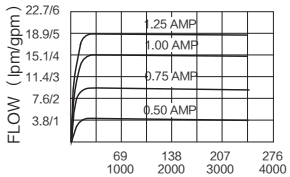
PERFORMANCE (Continued)

Regulated Flow vs. Pressure Drop
2-Ported; Flow Range A
240 bar/3500 psi Inlet
12V Coil; 110 Hz PWM
32 cSt/150 ssu oil at 40℃



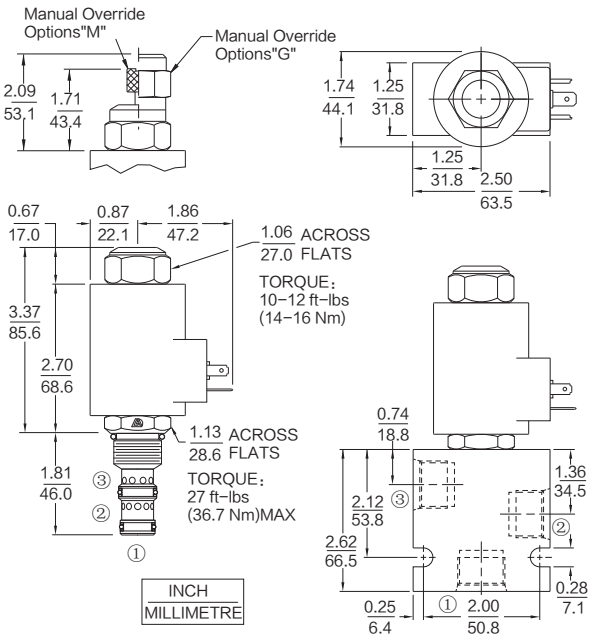
Pressure drop (bar/psi)

Regulated Flow vs. Pressure Drop
2-Ported; Flow Range B
240 bar/3500 psi Inlet
12V Coil; 110 Hz PWM
32 cSt/150 ssu oil at 40℃



Pressure drop (bar/psi)

DIMENSIONS



MATERIALS

Cartridge: Weight:0.19 kg (0.42 lbs)；
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
BODY:Weight:0.36 kg (0.80lbs)；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi)；
Ductile iron bodies available; dimensions may differ.
P70-Size "D" Coil:Weight:
0.32 kg (0.7 lbs)；
Unitized thermoplastic encapsulated, Class H high temperature magnet-wire.

TO ORDER

DPV70-30 - - - - - -

FLOWRANGE
Required. See Performance Curves. A B

Options
None (Blank)
Manual Override M
Manual Override with Guard G

Porting
0 Cartridge Only
6T SAE 6
8T SAE 8
2B 1/4 in. BSP*
3B 3/8 in. BSP*

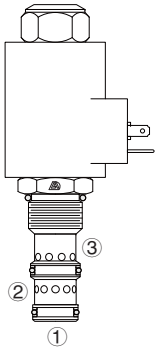
Seals
Buna N (Std.) N
Fluorocarbon V

Voltage
Less Coil 0
12 VDC 12
24 VDC 24

Terminations D-Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/ Weatherpak® Connectors

Terminations E-Coil
EL Leadwires (2)
ER DeutschDT04-2P (IP69K Rate)

DPV72-30 Proportional Flow Contorl Cartridge



DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spooltype,normally closed when de-energized, proportional flow control valve. It can be used as a priority-type flow regulator with pressure-compensated, regulated and bypass flow. It can also be used as a restrictive-type 2-way, pressure-compensated flow regulator when the bypass line (port 2) is blocked.

OPERATION

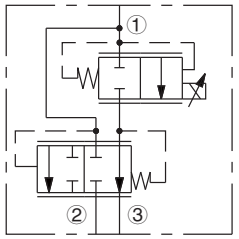
The DPV72-30 will regulate flow out of port 3 regardless of system working pressure.With increasing current applied to the solenoid, the DAPV72-30 will increase output flow.Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small amount of leakage is provided for the priority port. Consult factory.Operation of Manual Override:To Engage: Turn clockwise approximately 1 turn to reach start point. Continue another approximately 5 turns to full shift.To Disengage: Turn counterclockwise approximately 6 turns to positive stop.

FEATURES

- Excellent linearity and hysteresis .
- Hardened spool and cage for long life.
- Efficient wet armature construction.
- Optional coil voltages and terminations.
- Cartridges voltage interchangeable.
- Unitized, molded coil design.
- Coil waterproofing standard.
- Manual override option.

ISO SYMBOL

USASI/ISO:



RATINGS

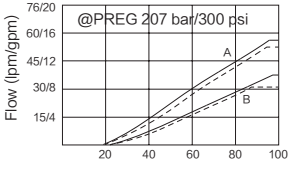
Operating Pressure: Port 1: 240 bar (3500 psi); Ports 2 and 3: 207 bar (3000 psi)
Regulated Flow Rate in 3-Port Mode: Range A: 57 lpm (15 gpm)
Range B: 38 lpm (10 gpm)
Maximum Input Flow in 3-Port Mode: Range A and B: 114 lpm (30 gpm)
Maximum Flow Rate in 2-Port Mode: Range A: 53 lpm (14 gpm)
Range B: 31 lpm (8 gpm)
Note: For increased flow capacity in a 2-port flow control, see model DAPV72-20
Internal Leakage: .38 lpm (0.1 gpm) fully closed at 207 bar (3000 psi)
Electrical: 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	350 ± 100 mA	1600 ± 200 mA
24 VDC	175 ± 50 mA	800 ± 100 mA

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus);
Installation: No restrictions;
Cavity: T12-3A;See page 305.

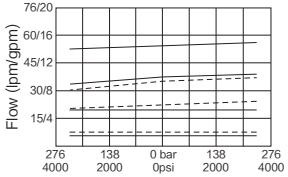
PERFORMANCE (Cartridge Only)

Flow vs. Current
Input Flow: 76 lpm/20 gpm
12V Coil; 110 Hz PWM
3-Ported —— ; 2 Ported – – – –
32 cSt/150 sus oil at 40° C



PERCENT OF MAX.CONTROL CURRENT

Regulated Flow vs. Pressure
Input Flow: 76 lpm/20 gpm
12V Coil; 110 Hz PWM
32 cST/150 sus oil at 40° C

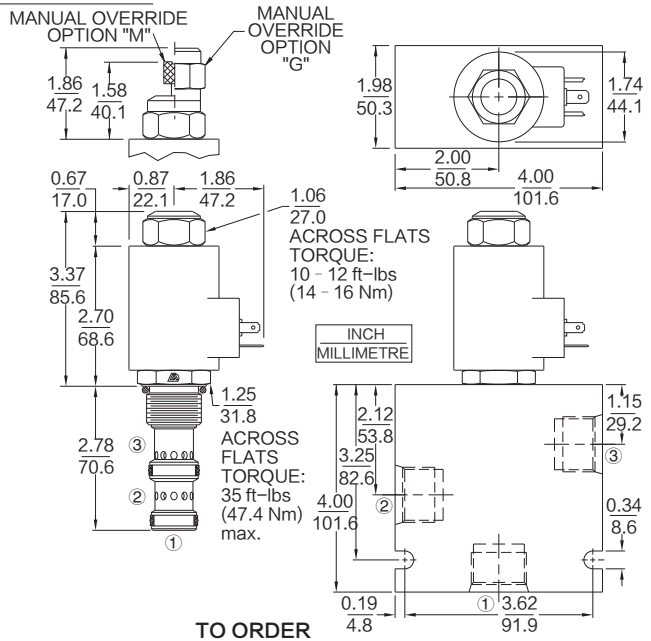


Bypass > Regulated Regulated > Bypass
PRESSURE

Recommended Electronic Controllers:

输入信号 带 12V 线圈	DIN 线圈 安装	PCB 板	金属盒式	DIN 导轨安装
0-5 VDC 0-10 VDC 4-20mA PWM	7114950 4000070 4000123 —	4000046 4000141 4000143 4000144	4000049 4000124 4000130 4000133	4000136 4000137 4000139 4000140
带 12V 线圈				
0-5 VDC 0-10 VDC 4-20 mA PWM	4000161 4000165 4000169 —	4000194 4000141 4000143 4000144	4000174 4000182 4000186 4000133	4000136 4000137 4000139 4000140

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.36 kg.(0.80 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body: Weight: 1.09 kg. (2.4 lbs.) Anodized highstrength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ.
70-Size "D" Coil: Weight: 0.32 kg. (0.7 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnet-wire.
70-Size "E" Coil: Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. IP69K rated.

TO ORDER

DPV72-30 - - - -

Flow Range
Required. See Performance Curves. A B

Porting
None (Blank)
Manual Override M
Manual Override with Guard G

Voltage Std. Coil
0 Cartridge Only
10T SAE 10
12T SAE 12
16T SAE 16
4B 1/2 in. BSP*
6B 3/4 in. BSP*
*BSP Body; U.K. Mfr. Only

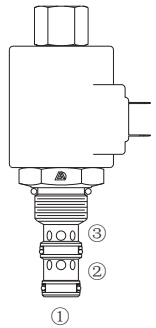
Seals
Buna N (Std.) N
Polyurethane P
Fluorocarbon V

Termination D-Coil
DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors

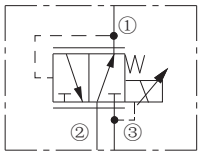
Termination E-Coil
IP69K Rated
ER Deutsch DT04-2P
EY Metri-Pack® 150

Voltage
0 Less Coil
12 12 VDC
24 24 VDC

DTS10-36 Proportional Electric Reducing/Relieving

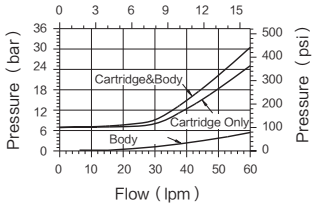


ISO SYMBOL



PERFORMANCE (Cartridge Only)

Coilde-energized: ① to ③
Pressure Drop vs.Flow
Ratings Flow (gpm)



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type reducing/relieving valve, which can be infinitely adjusted across a prescribed range using a variable electric input.Pressure output is proportional to DC current input. This valve is intended for use as a pressure limiting device in demanding applications.

OPERATION

With current applied to the valve coil,DTS10-36 blocks flow from ② to ① until sufficient pressure is present at ① to open the pilot section by offsetting the electrically induced solenoid force. Increasing electric current will increase the control (reduced)pressure at ① . With no current applied to the solenoid, the valve will relieve pressure at ① at approximately 6,9 bar (100 psi), regardless of pressure at ② .

The DTS10-36 has an optional manual override feature. This allows the valve to be set when the electric supply is lost. The manual setting is added to the electric setting,so when using the manual override feature to establish a minimum setting, care is required to prevent the system from becoming over-pressurized.

FEATURES

- Manual OverrideOptions. ● Industry common cavity.
- Deflated options ● Optional waterproof E-Coils rated up to IP69K.
- 12 and 24 volt coils standard.

RATINGS

Max Operating Pressure:241 bar (3500 psi)

Max Control Current:

12 VDC Coil 为 1.10 A；24 VDC Coil 为 0.55 A

Relief Pressure Range from Zero to Maximum Control Current:

A：6.9 - 207 bar (100 - 3000 psi)；

B：6.9 - 159 bar (100 - 2300 psi)

C：6.9 - 117 bar (100 - 1700 psi)

Rated Flow:57 lpm (15 gpm), △ P=22.8 bar (330 psi), Cartridge only, ① to ③ coil de-energized Max Pilot Flow:0.76 lpm (0.2 gpm) .

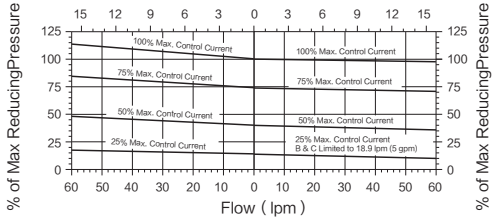
Temperature:-40℃ ~ 120℃ (-40 ~ 250 ℉), with Buna N seals

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Cavity:T10-3A；See page 301.

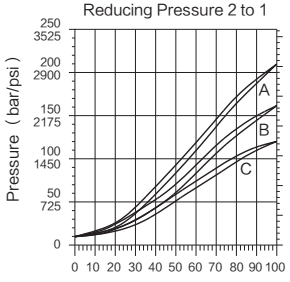
Typical Reducing/RelievingPressure vs.Flow rating
In different per (%)of Max Typical Reducing Pressure
Spring Range "A" (207 bar/3000 psi)；(Body included)

RelievingPressure ① to ③ FLOW (gpm) ReducingPressure ② to ①

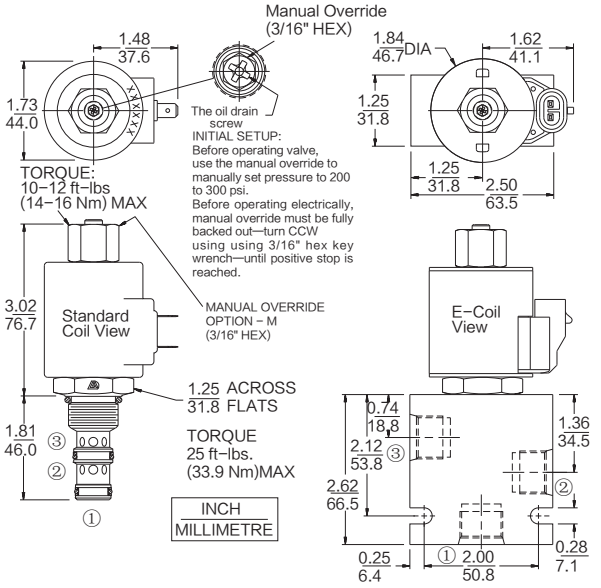


PERFORMANCE (Continued)

Relief Pressure
vs. Current (DC) Characteristic
200 Hz PWM
Reducing Pressure 2 to 1



DIMENSIONS



MATERIALS

Cartridge: Weight:0.25kg (0.55lbs)；
Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard PortedBody:Weight:
0.16kg (0.35lbs)； Anodized highstrength 6061 T6 aluminum alloy,rated to 240 bar (3500 psi); Ductile iron bodies available; dimensions may differ.

Standard Coil: Weight:0.27kg(0.60lbs)；
Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

E-Coil: Weight:0.41kg (0.9lbs)；
Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors.

TO ORDER

DTS10-36 - - - - - -

MAXRelieving PRESSURE

207 bar (3000 psi)	A
159 bar (2300 psi)	B
117 bar (1700 psi)	C

Options

None	(Blank)
Vent screw	S
Manual Override	M

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
3/8 in. BSP*	3B
1/2 in. BSP*	4B

Seals

Buna N (Std.)	N
Fluorocarbon	V

Voltage Std. Coil

0	Less Coil**
10	10 VDC (MAX 1.30 A)
12	12 VDC (MAX 1.10 A)
20	20 VDC (MAX 0.65 A)
24	24 VDC (MAX 0.55 A)

Coils with internal diode are available. Consult factory.

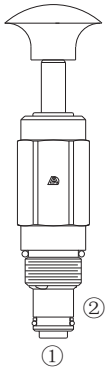
Termination (VDC) Std. Coil

DS	Dual Spades
DG	DIN 43650
DL	Leadwires (2)
DL/W	Leads w/ Weatherpak® Connectors
DR	Deutsch DT04-2P

Termination (VDC) E-Coil

ER	Deutsch DT04-2P (IP69K Rated)
EL	Leadwires (2)
EY	Metri-Pack® 150 (IP69K Rated)

DHP10-20 Hand Pump



DESCRIPTION

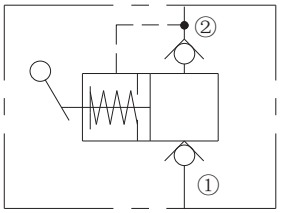
A screw-in, cartridge-style, push and release type hand pump with two built-in checks.

OPERATION

DHP10-20 will provide a specific displacement of oil to port ①.

Note: As with any mechanical hydraulic actuator (piston rods, rotating pump shaft,etc.) the shaft will become coated with a minute amount of oil from the internal high pressure system. The rod protruding from the hand pump may feel damp with oil after use. This is desirable because the oil coating serves to lubricate the shaft seal, reducingfriction and assuring extended seal life.

ISO SYMBOL



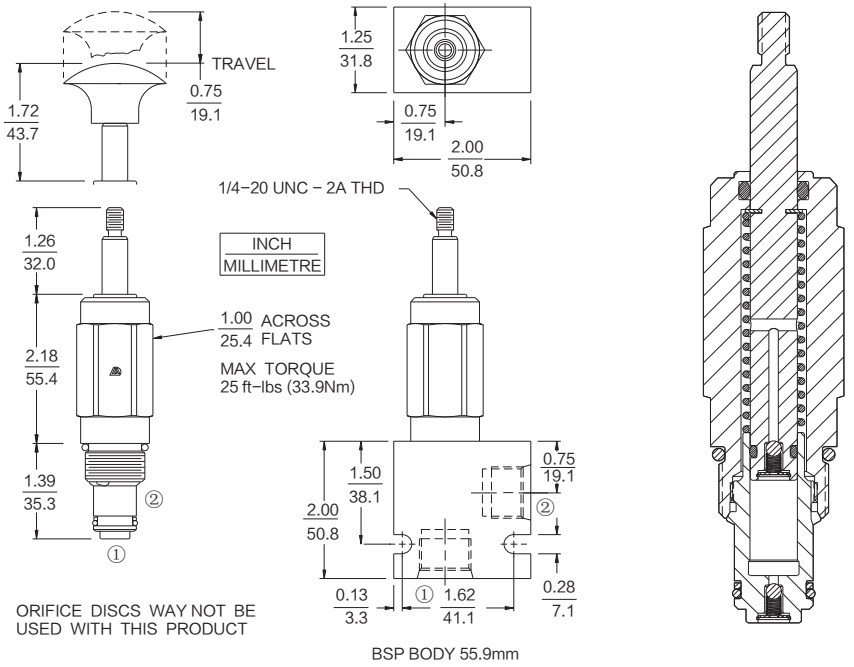
FEATURES

- Hardened parts for long life.
- Heavy duty construction.
- Industry common cavity.

RATINGS

Operating Pressure:
Ports ① 为 207 bar/3000 psi；Ports ② 为 69 bar/1000 psi
Displacement: 1.36 cc/0.083 cu. in. per stroke
Force Required: 30 lbs. to attain 17 bar/250 psi
Internal Leakage: From port ① to port ② : 0.15 cc/3 drops per minute maximum at 207 bar/3000 psi
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)
Cavity: T10-2B；See page 300.

DIMENSIONS



MATERIALS

Cartridge: Weight:0.27 kg (0.60 lbs)；
Steel with hardened worksurfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Standard Ported Body:Weight:
0.16 kg (0.35 lbs)；
Anodized highstrength 6061 T6 aluminum alloy, rated to 240 bar(3500 psi)；
Ductile iron bodies available; dimensions may differ.

TO ORDER

DHP10-20 - - -

Shaft/Knob

Threaded Shaft	T
Black Plastic Knob	K
Red Plastic Knob	D

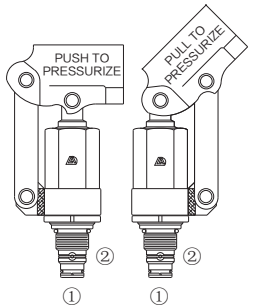
Seals

N	Buna N
V	Fluorocarbon

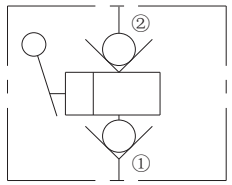
Ports

0	Cartridge Only
6T	SAE 6
8T	SAE 8
2B	1/4 in. BSP*
3B	3/8 in. BSP*
4B	1/2 in. BSP*

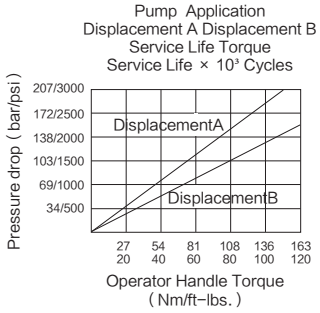
DHP10-21 Hand Pump



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, push and release type hand pump with two built-in checks.

OPERATION

DHP10-21 provides hydraulic flow to 0.65 cu. in. per stroke, at pressures to 207 bar(3000 psi). Integral suction and outlet checks provide a compact device which delivers true operational system flows. See chart for handle torque requirements.

Note: As with any mechanical hydraulic actuator (piston rods, rotating pump shaft,etc.) the shaft will become coated with a minute amount of oil from the internal high pressure system. The rod protruding from the hand pump may feel damp with oil after use. This is desirable because the oil coating serves to lubricate the shaft seal,reducing friction and assuring extended seal life.

FEATURES

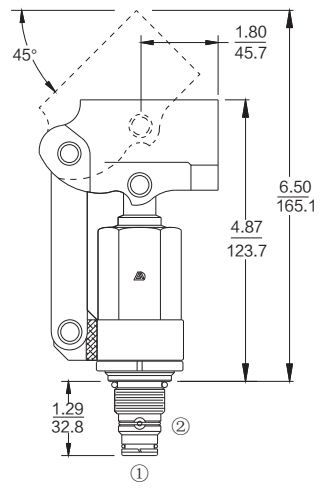
- Hardened parts for long life.
- Handle beam rotates 360°
- Push or pull linkage standard.
- Heavy duty construction.
- Industry common cavity.
- Displacement up to 10.6 cc (0.65 cu in.) per stroke.

RATINGS

Operating Pressure:207 bar (3000 psi)
Flow: Up to 10.6 cc (0.65 cu. in.) per stroke
Leakage:
5 drops/minute(0.25 ml/min) maximum at 207 bar (3000 psi)
Suction Pressure:194 mm Hg (7.6 in. Hg, 104 in. H2O) less than atmospheric pressure
Temperature:-40℃ ~ 120℃
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to420 cSt (50 to 2000 sus)
Cavity:T10-2B; See page 300.
Handle Kit:40 cm (16 in.) long handle with plastic grip, 2.65 kg. (1.2 lbs.)

DIMENSIONS

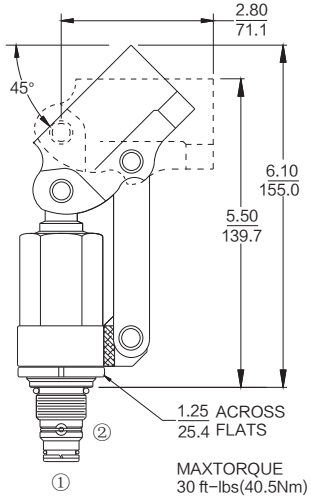
PUSH TO PRESSURIZE



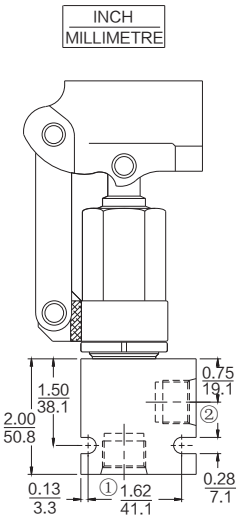
The Beam (Handle Socket)
Inside Diameter 0.85" (21.6 mm)
Beam Rotates around Vertical Axis
for 360° Handle Positioning

ORIFICE DISCS WAY NOT BE USED WITH THIS PRODUCT

PULL TO PRESSURIZE



BSP BODY 55.9mm



MATERIALS

Cartridge: Weight:4.19 kg (1.9 lbs.);
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Anodized aluminum knobs.
Standard Ported Body:Weight:
0.16 kg (0.35 lbs);
Anodized highstrength aluminum alloy,
rated to 207 bar (3000 psi).
Ductile iron bodies available;
dimensions may differ.

TO ORDER

DHP10-21 - - -

****Push orPull**

Push Handle Actuation A
Pull Handle Actuation B

*Shipped as kit for installation

Ports

Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B
1/2 in. BSP* 4B

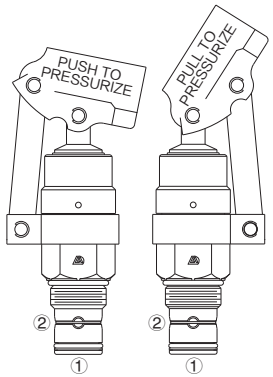
Seals

N Buna N (Std.)
V Fluorocarbon

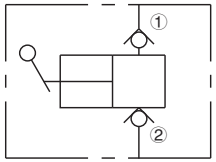
Displacement

A 7.4 ml (0.45 cu. in.) per stroke
B 10.6 ml (0.65 cu. in.) per stroke

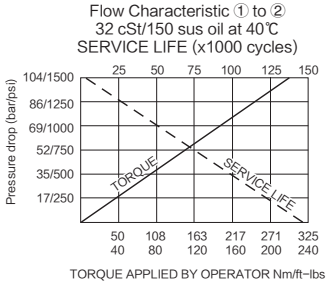
DHP16-21Hand Pump



ISO SYMBOL



PERFORMANCE (Cartridge Only)



DESCRIPTION

A screw-in, cartridge-style, push or pull type hand pump with two built-in checks.

OPERATION

The DHP16-21 provides hydraulic fl ow to 1.3 cu. in. per stroke, at pressures to 96 bar(1500 psi).

Note: As with any mechanical hydraulic actuator (piston rods, rotating pump shaft,etc.) the shaft will become coated with a minute amount of oil from the internal high pressure system. The rod protruding from the hand pump may feel damp with oil after use. This is desirable because the oil coating serves to lubricate the shaft seal,reducing friction and assuring extended seal life.

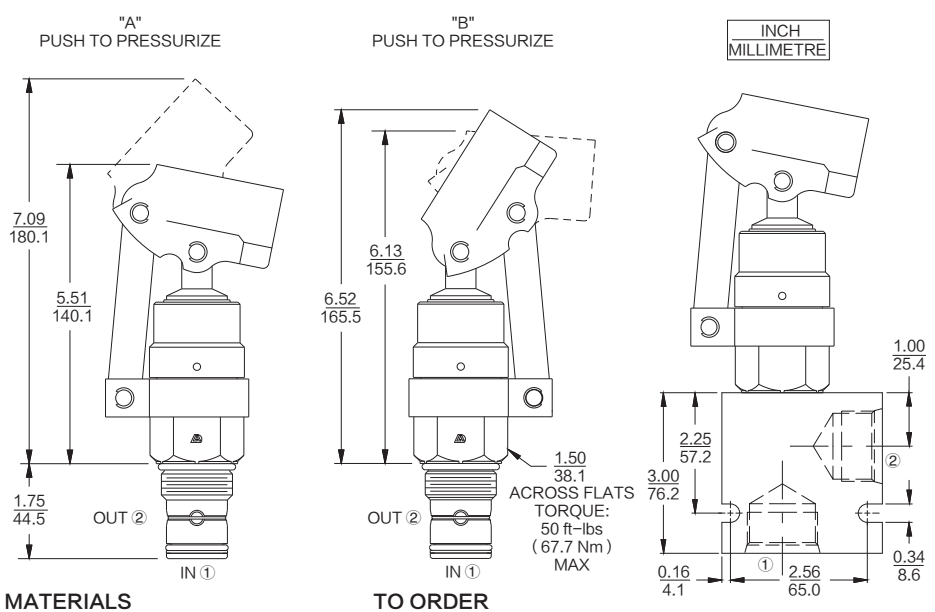
FEATURES

- Hardened parts for long life.
- Handle Beam rotates 360°
- Push or pull linkage standard.
- Heavy duty construction.
- Industry common cavity.
- Displacement up to 21.3 cc (1.3 cu in.) per stroke.

RATINGS

System Pressure: 207 bar (3000 psi)
Pressure Generated by DAHP16-21: 96 bar (1500 psi) maximum
Proof Pressure: 345 bar (5000 psi)
Internal Leakage: From port to the inside of the pump: 5 drops/ minute(0.25 cc/minute) max. at 207 bar (3000 psi)
Suction Pressure: 194 mm Hg (7.6 in. Hg, 104 in. H2O) less thanatmospheric pressure
Temperature: -40 to 120°
Filtration: See page
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus)
Ixxxxxxxxxxxxxxnstallation: No restrictions; See page
Cavity: T16-2A; See page 307.
Handle Kit: 16 in. handle, 2.65 kg. (1.2 lbs.)Part no. 6502340; Must be ordered separately

DIMENSIONS



MATERIALS

Cartridge: Weight: 1.27 kg. (2.8 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.
Standard Ported Body: Weight:
0.57 kg. (1.25 lbs.) Anodized highstrength6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page

TO ORDER

DHP16-21 - - -

****Push or Pull**

Push Handle Actuation	A
Pull Handle Actuation	B

*Shipped as kit for installation
Handle Kit Part no. 6502340; Must be ordered separately.

Seals

N	Buna N (Std.)
V	Fluorocarbon

Porting

0	Cartridge Only
12T	SAE 12
16T	SAE 16
6B	3/4 in. BSP*
8B	1 in. BSP*

Comparison Table for Specification of Cartridge Valves

SEQUENCE NUMBER	HUANUO	HF/SUN	SEQUENCE NUMBER	HUANUO	HF/SUN	Note
1	DCV04-20	CV04-20	30	DFC10-20	FC10-20	
2	DCV08-20	CV08-20	31	DFC12-20	FC12-20	
3	DCV10-20	CV10-20	32	DFC10-21	FC10-21	
4	DCV12-20	CV12-20	33	DFD50-45	FD50-45	
5	DCV16-20	CV16-20	34	DFR10-39	FR10-39	
6	DCV42-M20	CV42-M20	35	DFR12-33	FR12-33	
7	DCV08-21	CV08-21	36	DRV08-20	RV08-20	
8	DCV10-24	CV10-24	37	DRV10-20	RV10-20	
9	DCV12-21	CV12-21	38	DRV10-26	RV10-26	
10	DCKCB-XCN	CKCB-XCN	39	DRV12-26	RV12-26	
11	DPC08-30	PC08-30	40	DRV16-26	RV16-26	
12	DPC10-32	PC10-32	41	DRV08-22	RV08-22	
13	DDC08-40	DC08-40	42	DRV10-22	RV10-22	
14	DDC10-40	DC10-40	43	DRV10-23	RV10-23	
15	DLS04-30	LS04-30	44	DRPEE	RPEE	
16	DLS08-B30	LS08-B30	45	DRPGE	RPGE	
17	DLS10-30	LS10-30	46	DUP10-30	UP10-30	
18	DPD10-40	PD10-40	47	DUP10-40	UP10-40	
19	DPD10-41	PD10-41	48	DPS08-30	PS08-30	
20	DEP08-35	EP08-35	49	DPS10-30	PS10-30	
21	DEP10-S35	EP10-S35	50	DPS08-32	PS08-32	
22	DEP12-S35	EP12-S35	51	DPS10-32	PS10-32	
23	DNV08-20	NV08-20	52	DPS10-36	PS10-36	
24	DNV10-20	NV10-20	53	DPR08-32	PR08-32	
25	DNV12-20	NV12-20	54	DPR10-32	PR10-32	
26	DNV08-21	NV08-21	55	DPR10-36	PR10-36	
27	DNV10-22	NV10-22	56	DPR50-38	PR50-38	
28	DMR10-20	MR10-20	57	DCBCA-LHN	CBCA-LHN	
29	DFC08-20	FC08-20	58	DCBCA-LHN	CBCA-LHN	

SEQUENCE NUMBER	HUANUO	HF/SUN	SEQUENCE NUMBER	HUANUO	HF/SUN	Note
59	DCBGA-LHN	CBGA-LHN	89	DSV08-29	SV08-29	
60	DCCCA-LHN	CCCA-LHN	90	DSV10-29	SV10-29	
61	DCBHA-LHN	CBHA-LHN	91	DSV08-30	SV08-30	
62	DCBBG-LJN	CBBG-LJN	92	DSV08-31	SV08-31	
63	DCBCG-LJN	CBCG-LJN	93	DSV10-34	SV10-34	
64	DCBGG-LJN	CBGG-LJN	94	DSV38-38	SV38-38	
65	DCBEG-LJN	CBEG-LJN	95	DSV08-40	SV08-40	
66	DSV08-20	SV08-20	96	DSV10-40	SV10-40	
67	DSV10-20	SV10-20	97	DSV10-44	SV10-44	
68	DSV12-20	SV12-20	98	DSV08-47A	SV08-47A	
69	DSV08-20J	SV08-20J	99	DSV10-47A	SV10-47A	
70	DSV16-20	SV16-20	100	DSV08-47B	SV08-47B	
71	DSV38-20J	SV38-20J	101	DSV10-47B	SV10-47B	
72	DSV08-21	SV08-21	102	DSV08-47C	SV08-47C	
73	DSV10-21	SV10-21	103	DSV10-47C	SV10-47C	
74	DSV12-21	SV12-21	104	DSV08-47D	SV08-47D	
75	DSV16-21	SV16-21	105	DSV10-47D	SV10-47D	
76	DSV08-22	SV08-22	106	DSV10-5915	SV10-5915	
77	DSV10-22	SV10-22	107	DMR10-47A	MR10-47A	
78	DSV12-22	SV12-22	108	DMR10-47B	MR10-47B	
79	DSV16-22	SV16-22	109	DTS10-26	TS10-26	
80	DSV08-23	SV08-23	110	DPV70-30	PV70-30	
81	DSV10-23	SV10-23	111	DPV72-30	PV72-30	
82	DSV16-23	SV16-23	112	DTS10-36	TS10-36	
83	DSV10-25	SV10-25	113	DHP10-20	HP10-20	
84	DSV08-26	SV08-26	114	DHP10-21	HP10-21	
85	DSV38-26	SV38-26	115	DHP16-21	HP16-21	
86	DSV08-28	SV08-28				
87	DSV10-28	SV10-28				
88	DSV12-28	SV12-28				

Comparison Table forHuayiJingji Coils and Hydraforce Coils

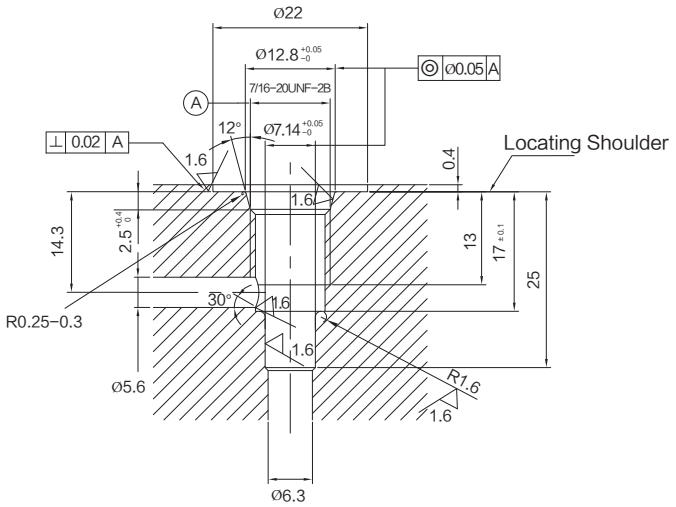
08# Coils			10# Coils		
Working Voltage	HF DL Coil Part No.	DLCoil Part No.	Working Voltage	HF DL Coil Part No.	DLCoil Part No.
12VDC	6302012	DH-11-014	12VDC	6352012	DH-11-023
24VDC	6302024	DH-11-015	24VDC	6352024	DH-11-024

08# Coils			10# Coils		
Working Voltage	HF DL Coil Part No.	DLCoil Part No.	Working Voltage	HF DL Coil Part No.	DLCoil Part No.
12VDC	6306012	DH-11-006	12VDC	6356012	DH-11-010
24VDC	6306024	DH-11-001	24VDC	6356024	DH-11-002
115VAC	6316115	DH-11-007	115VAC	6366115	
230VAC	6316230	DH-11-037	230VAC	6366230	DH-11-011

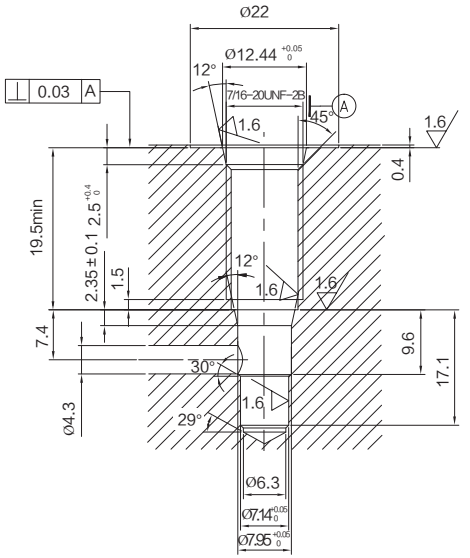
08# Coils			10# Coils		
Working Voltage	HF DL Coil Part No.	DLCoil Part No.	Working Voltage	HF DL Coil Part No.	DLCoil Part No.
12VDC	4303612	DH-11-008	12VDC	4303712	DH-11-012
24VDC	4303624	DH-11-009	24VDC	4303724	DH-11-013

08# Coils			10# Coils		
Working Voltage	HF DL Coil Part No.	DLCoil Part No.	Working Voltage	HF DL Coil Part No.	DLCoil Part No.
12VDC	4305112	DH-11-003	12VDC	4305712	DH-11-018
24VDC	4305124	DH-11-025	24VDC	4305724	DH-11-019

T04-2A

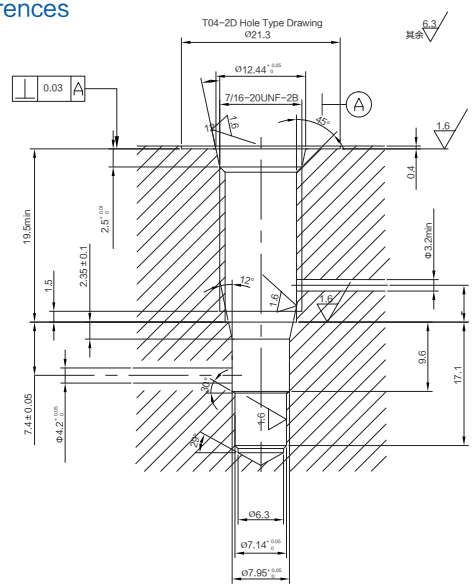


T04-2B

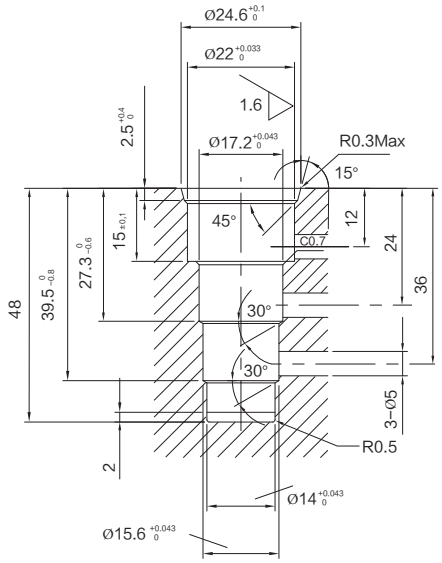


Technical References

T04−2D

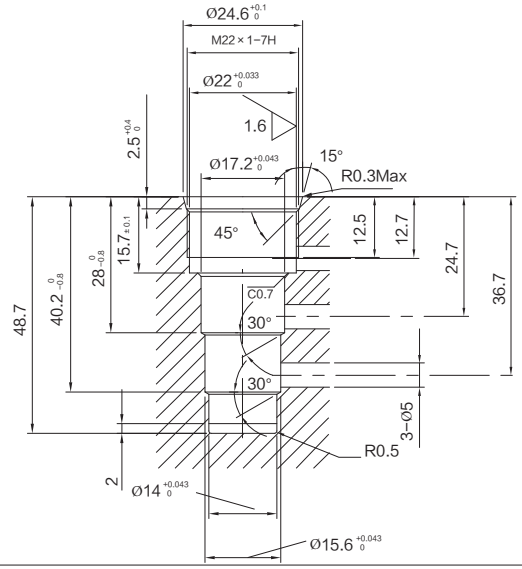


T06−3A



Technical References

T06−3B



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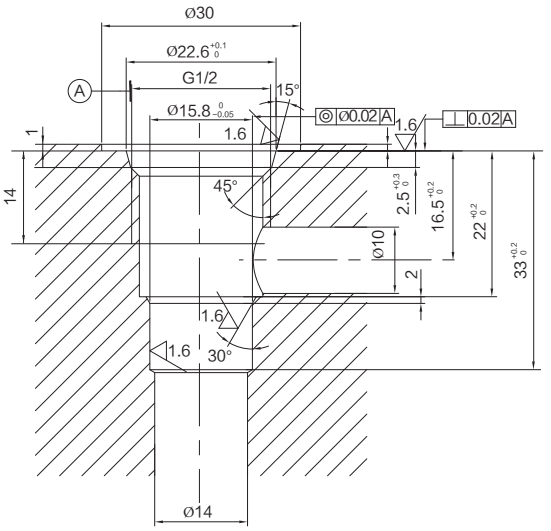

Technical References

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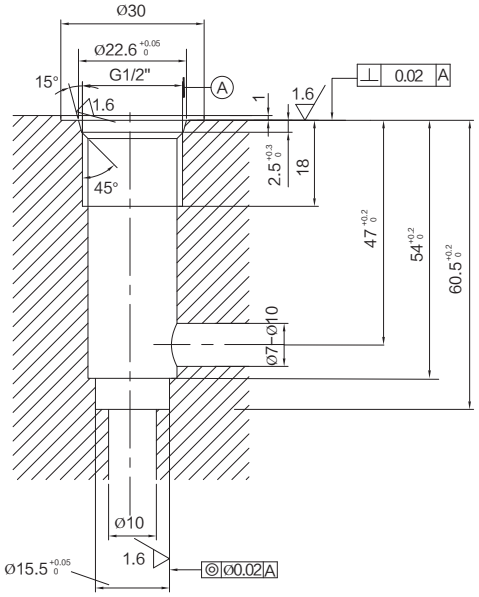
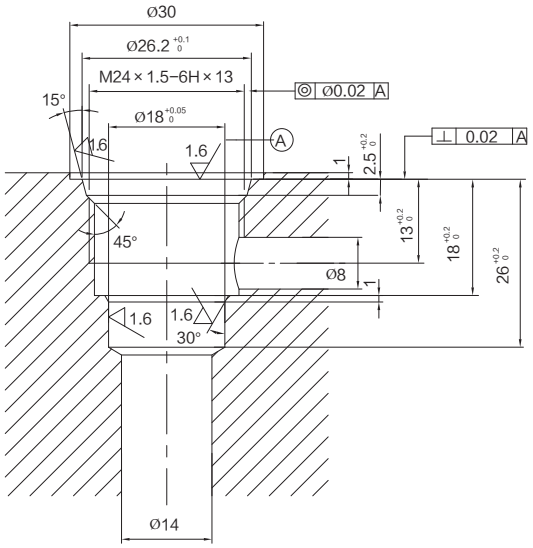
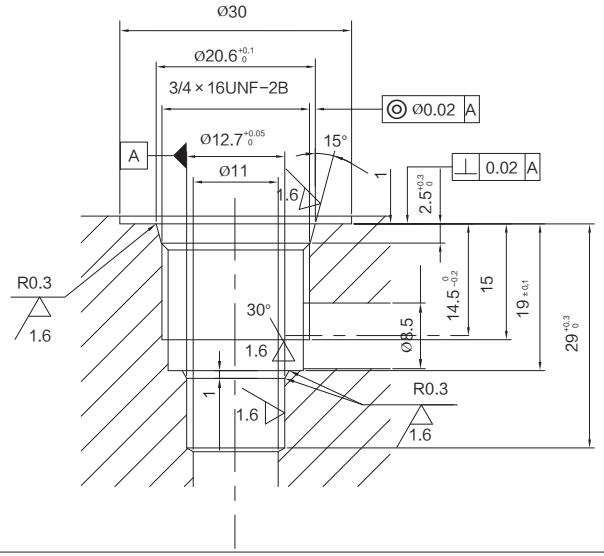


T08−2C

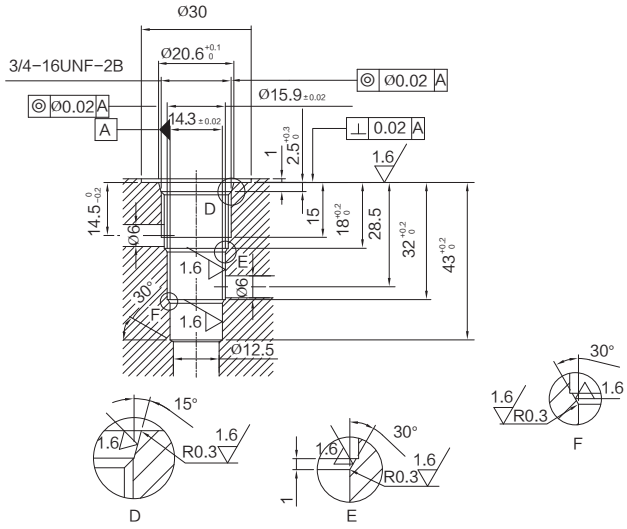


Technical References

T08−2E

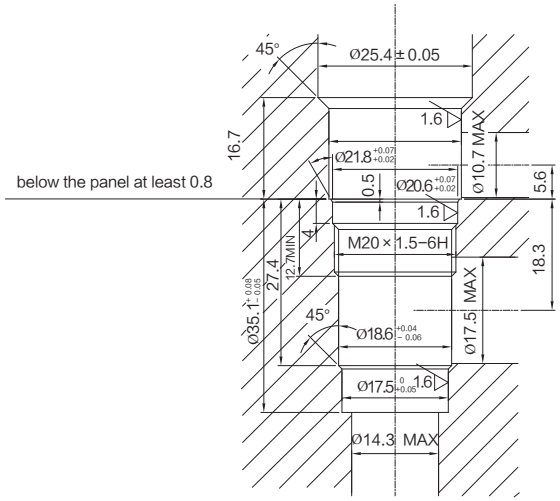


T08−3A

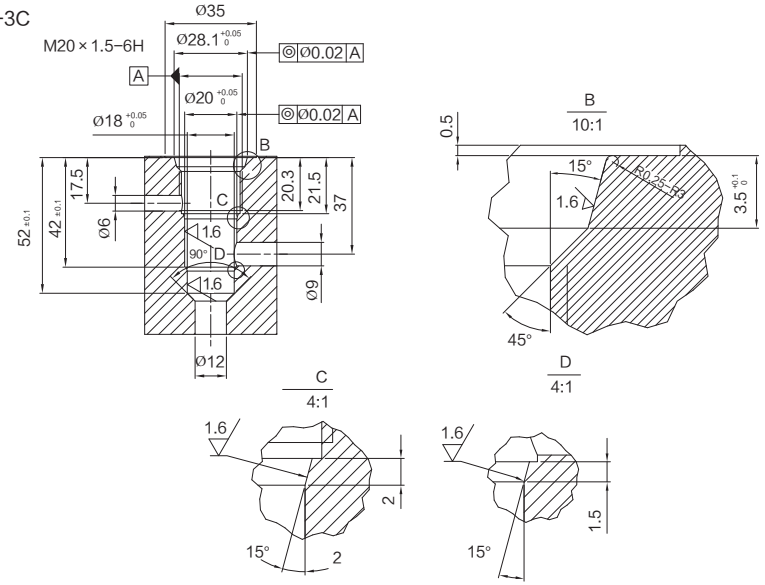


Technical References

T08-3B

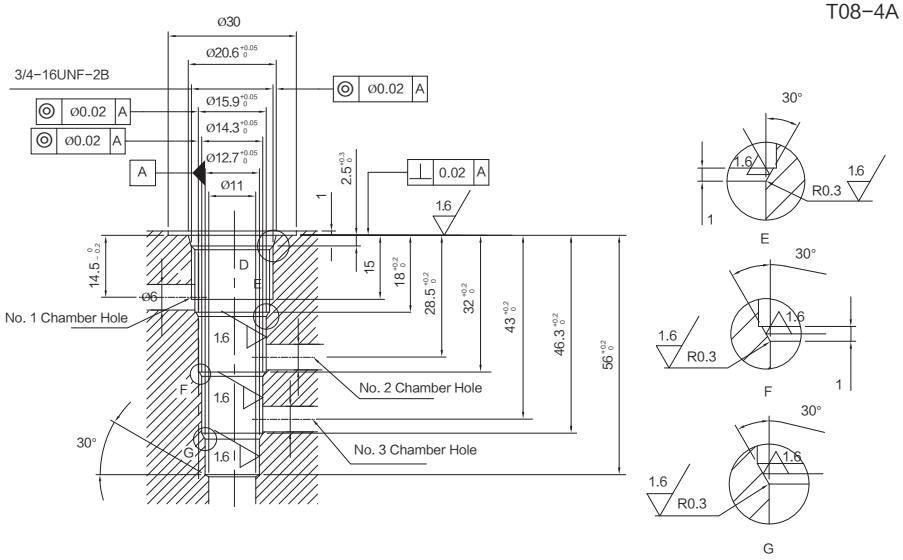


T08-3C

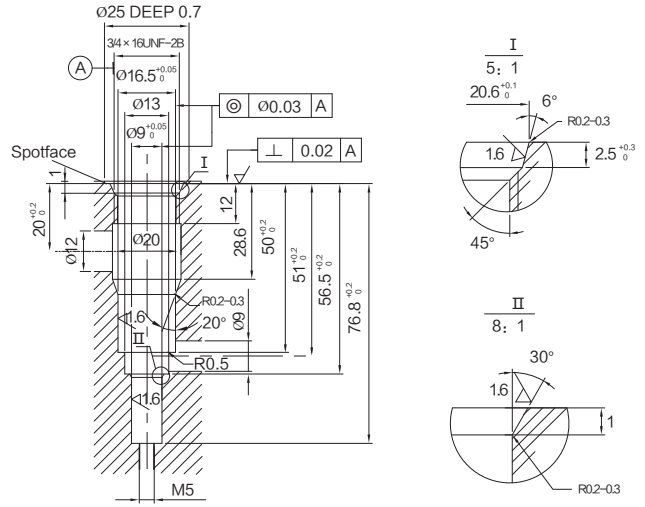


Technical References

T08-4A

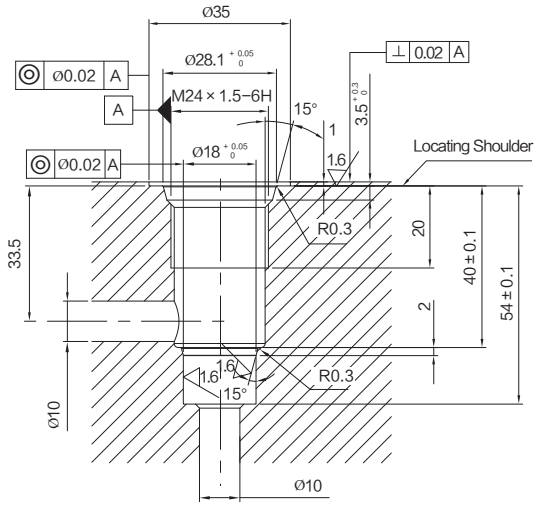


T08-3AS

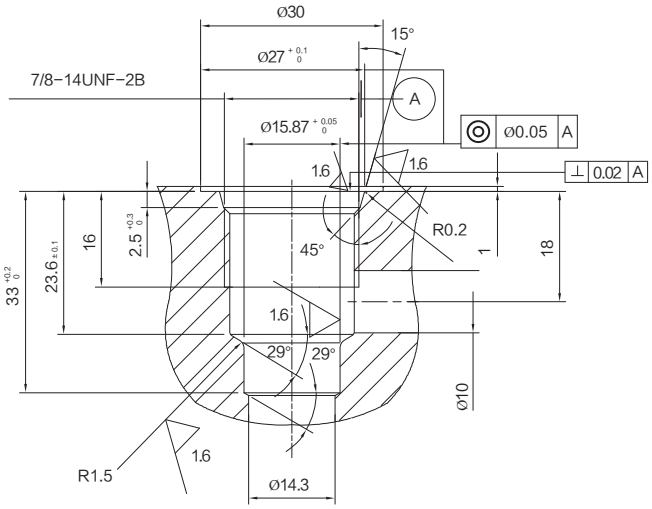


Technical References

T10−2A

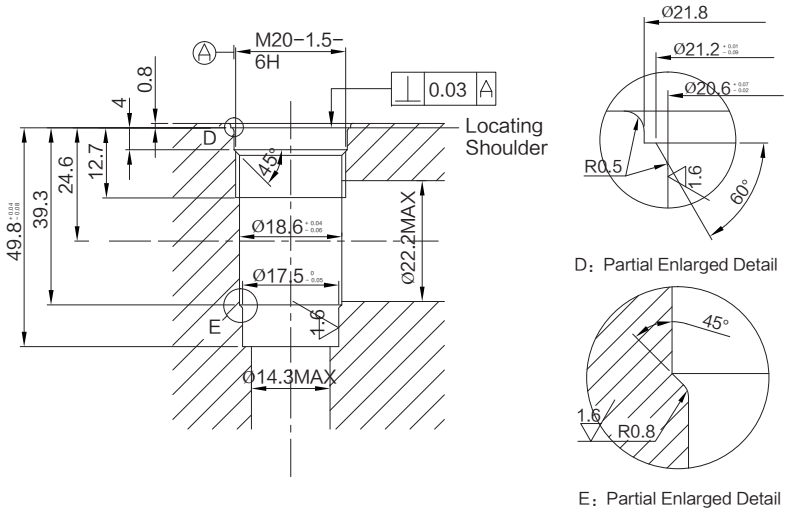


T10−2B



Technical References

T10−2D



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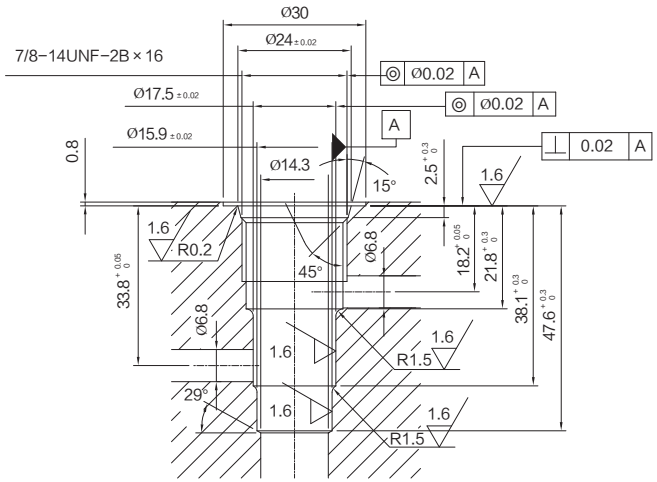
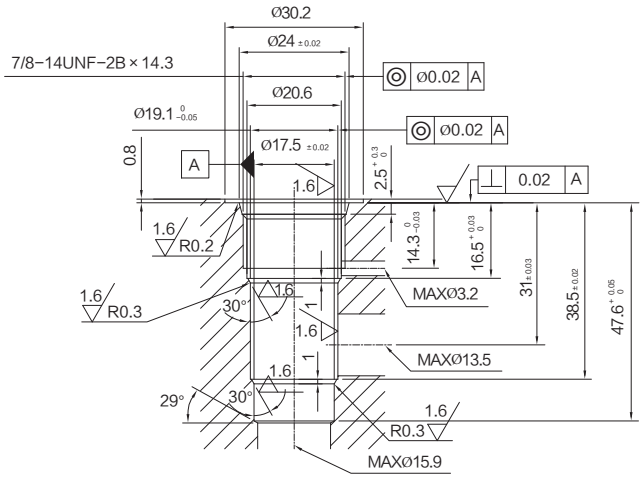


Technical References

T10-3AS



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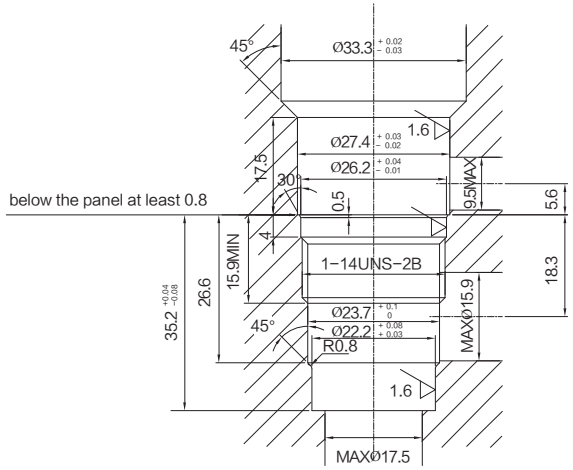

Technical References

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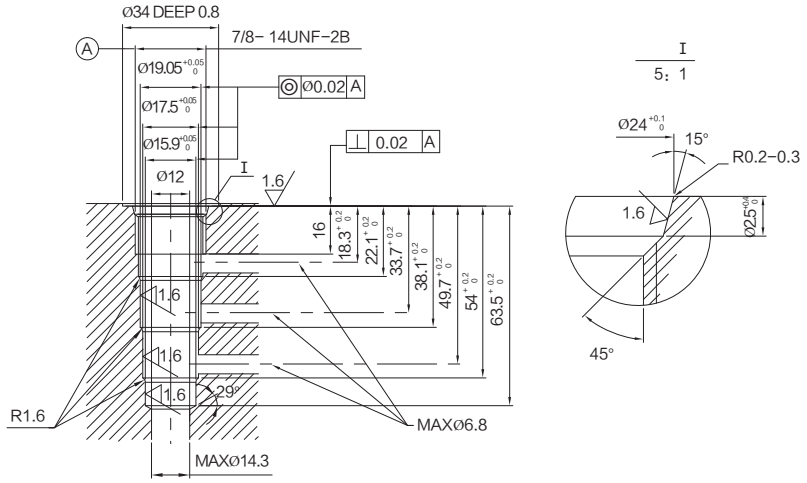
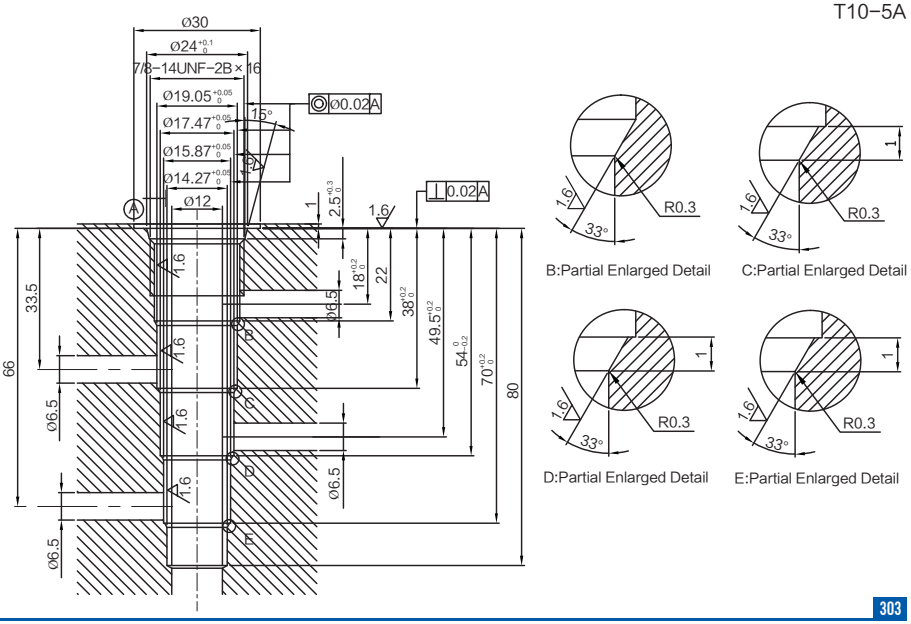
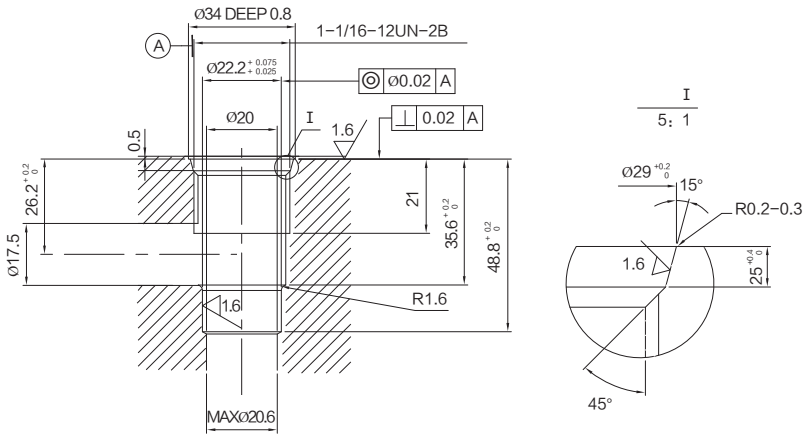


T10-5A

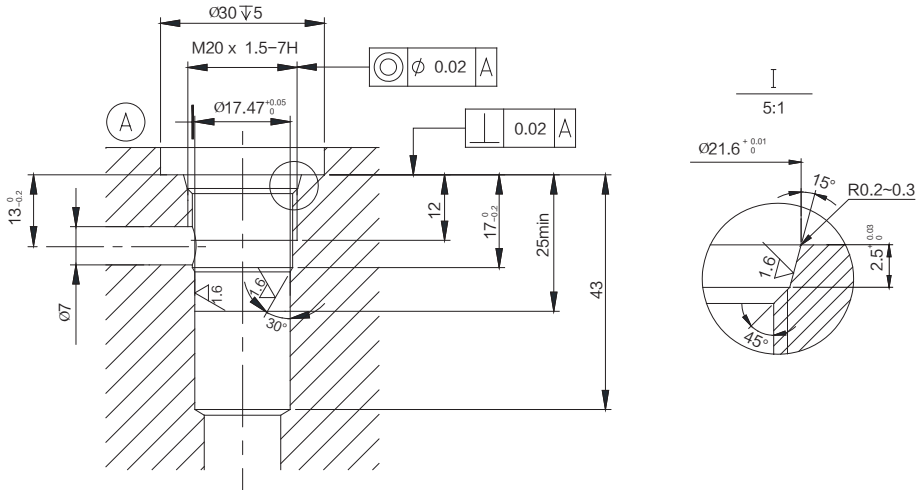


Technical References

T12-2A

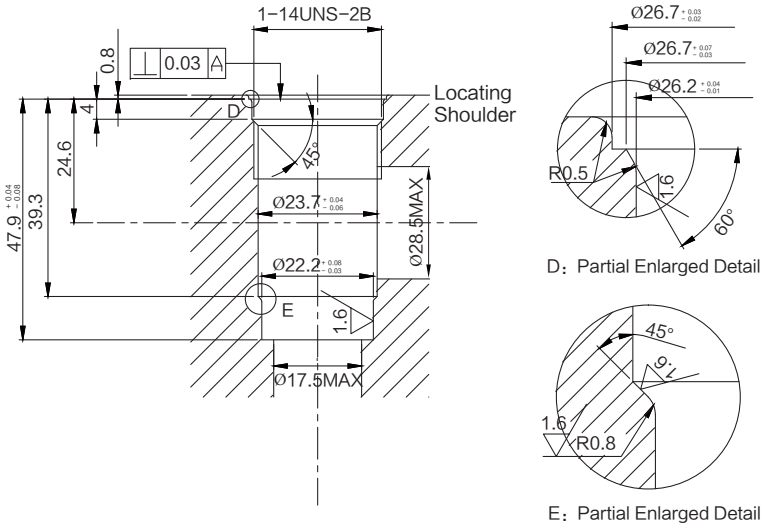


T12-2G

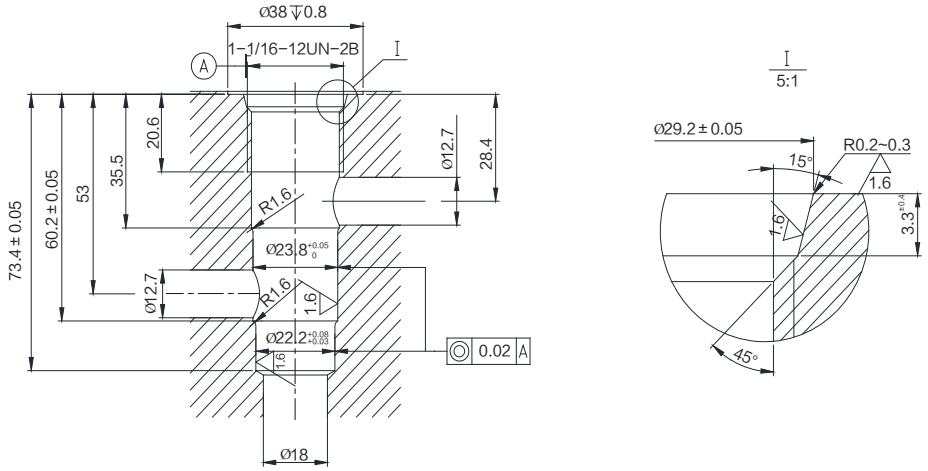


Technical References

T12-2H

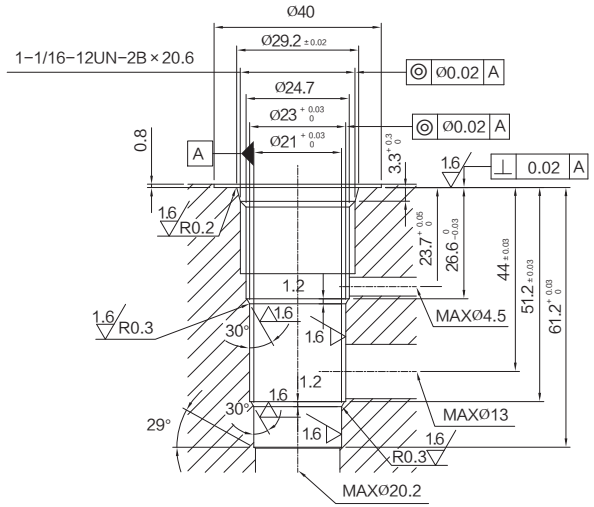


T12-3A



Technical References

T12−3AS



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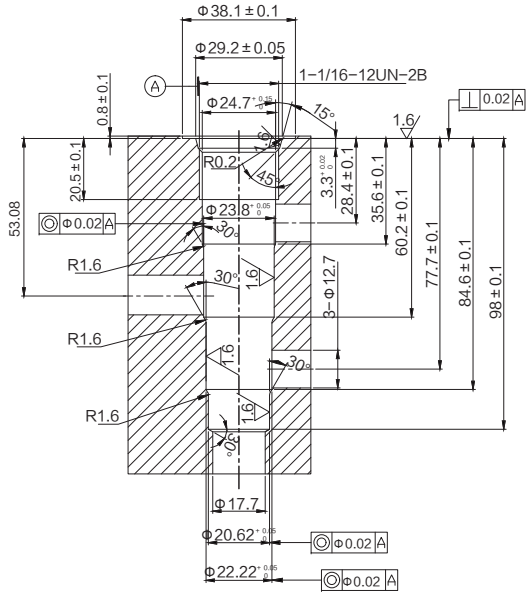

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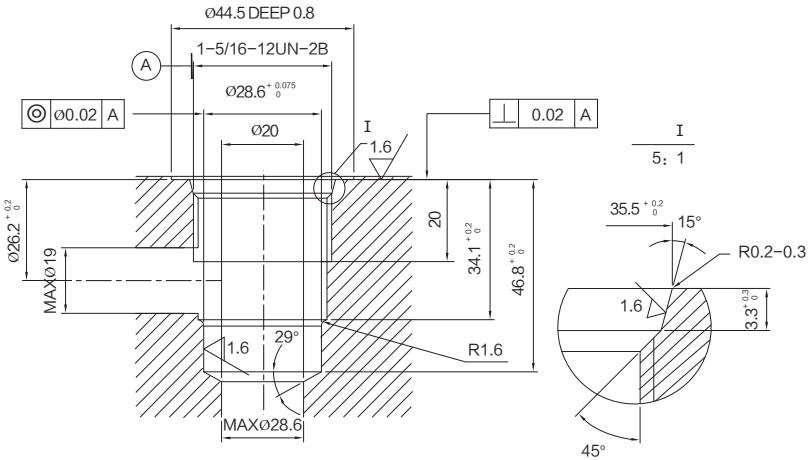

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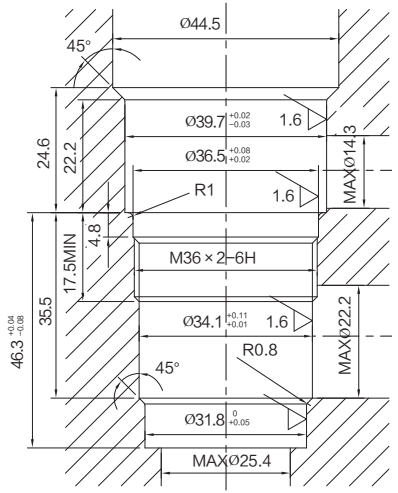
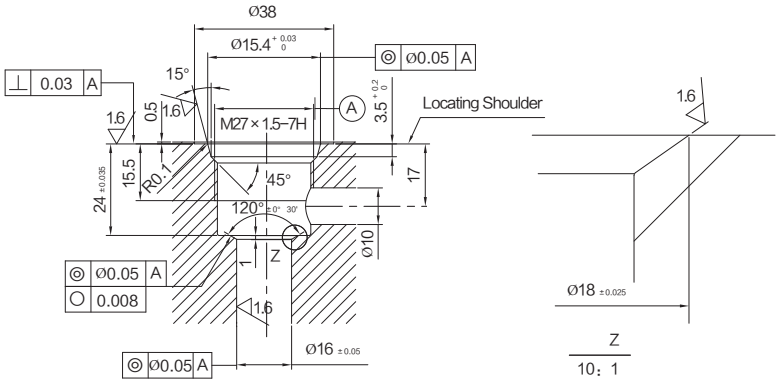


Thread and all diameters concentricity should be less than 0.05

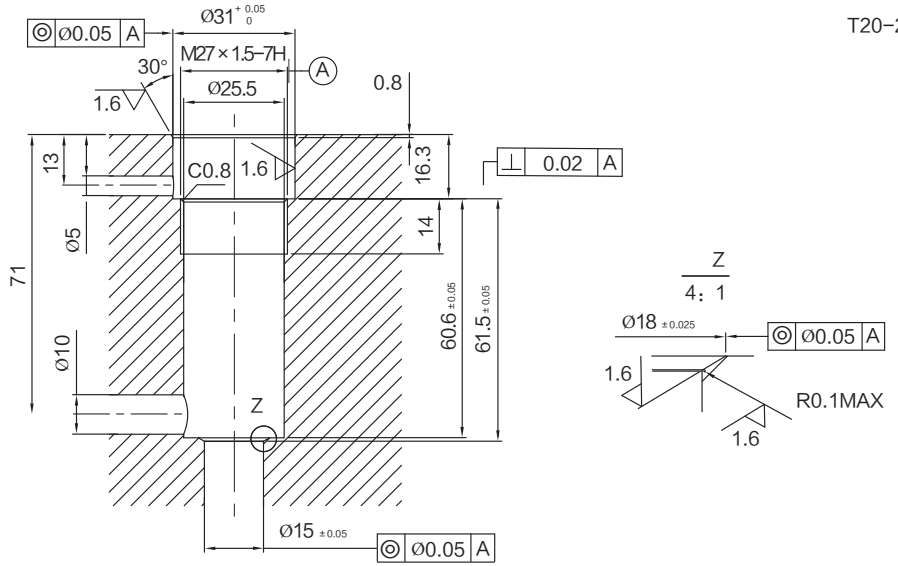
Technical References

T20−2A



Technical References

T20−2B



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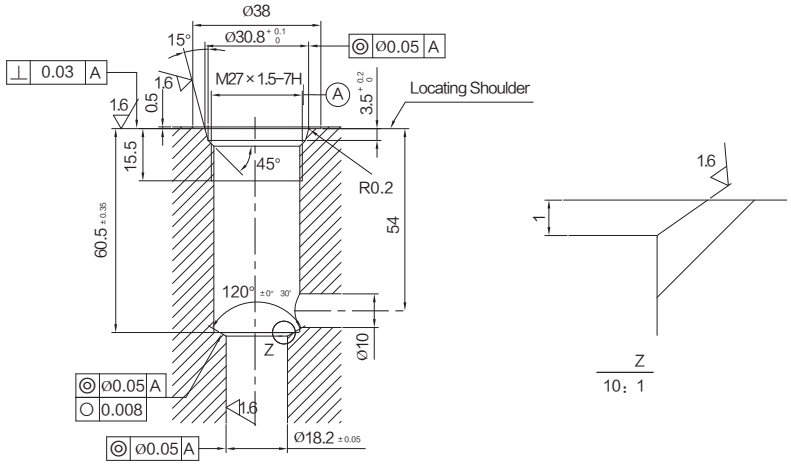

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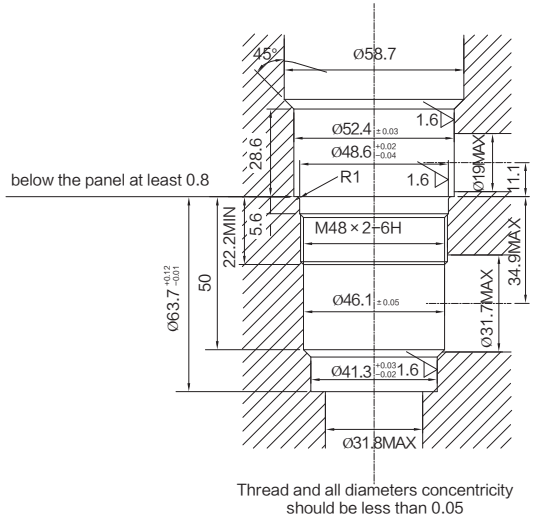
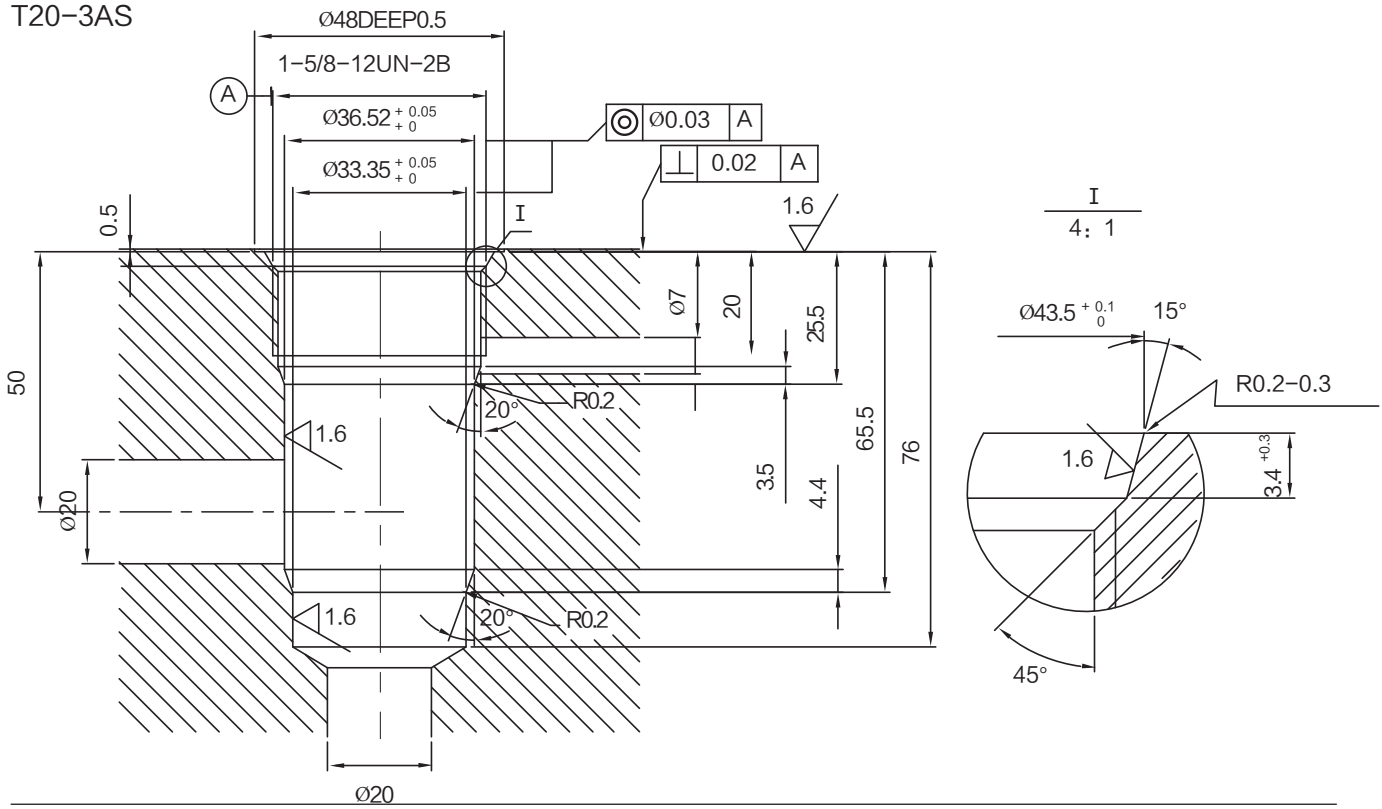


Technical References

T20-3AS



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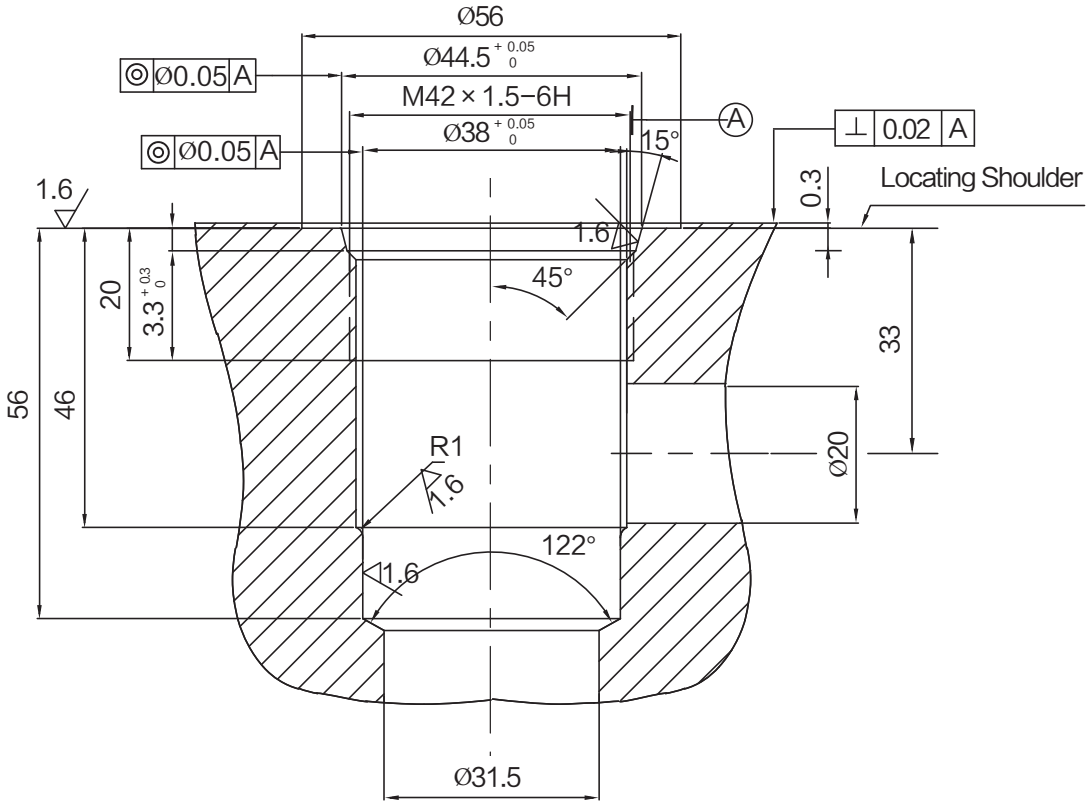

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