Comatrol
RESPONSIVENESS IN MOTION
Member of the Danfoss Group

Solenoid Valves Catalog
2-Way Spool
SV08-22-02

OPERATION

Solenoid Valve, Spool Type, 2-Position, 2-Way, Normally Closed, Pull-Type. When de-energized, the SV08-22-02 blocks flow in both directions. When energized, the spool shifts to allow flow in both directions. Follow the "Operating Envelope" limits to ensure shifting of the valve during operation.

Shown with Robust Coil,
Deutsch Connector

APPLICATIONS

These spool-type valves are primarily used in mobile and industrial applications for blocking the flow of a 2-way function, pump unloading or cylinder regeneration. Solenoid spool-type valves are direct acting and respond quickly to coil voltage input. Spool valves will have some leakage due to spool clearance, so if your application requires no leakage at the working port(s), apply a low leakage poppet valve(s), like PO check valve, counterbalance valve, etc., in addition to this solenoid valve. This valve can operate with an inlet pressure of 315 bar for 400,000 cycles. In case of inlet from port 2 this value can be increased to 600,000 cycles.

SPECIFICATIONS

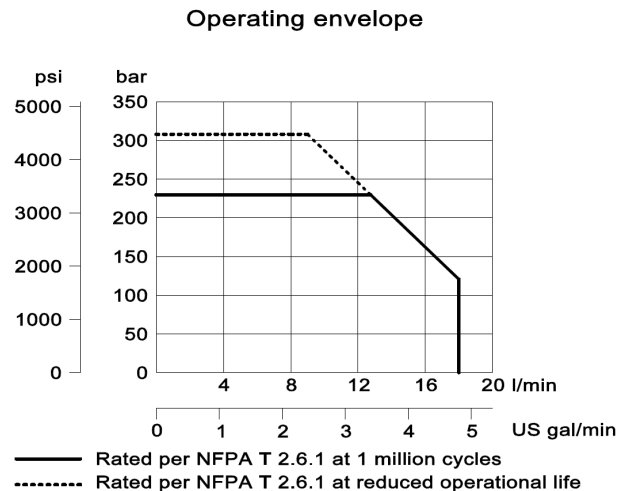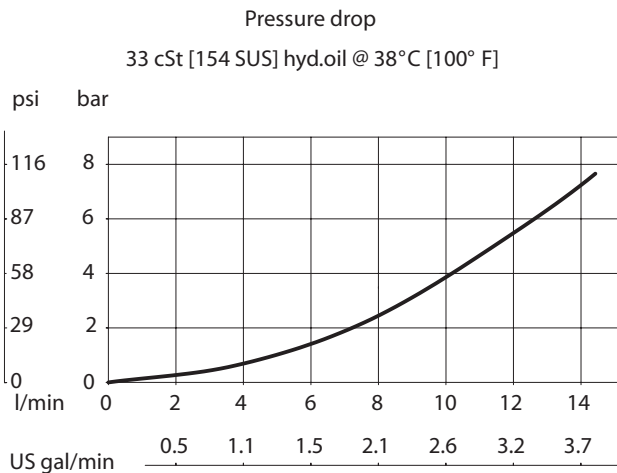|	
Rated pressure*	230 bar [3300 psi]**
Rated flow at 7 bar [100 psi]	14 l/min [4 US gal/min]
Weight	0.29 kg [0.64 lb]
Cavity	SDC08-2
Standard Coil	M13 20 Watt
Robust Coil	R13 16 Watt Robust Nut P/N **173800539** (no coil O-rings needed)

* Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles).

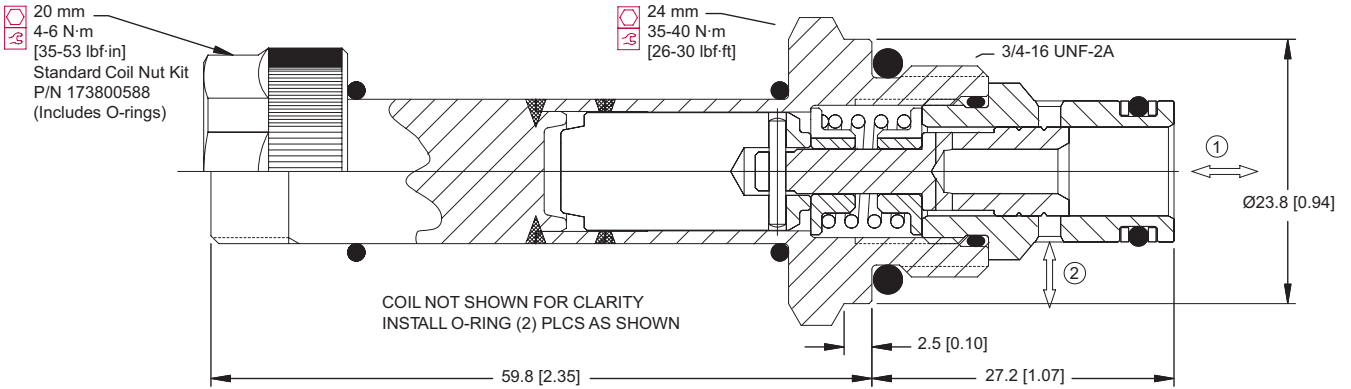** See 315 bar pressure rating note on page 10.
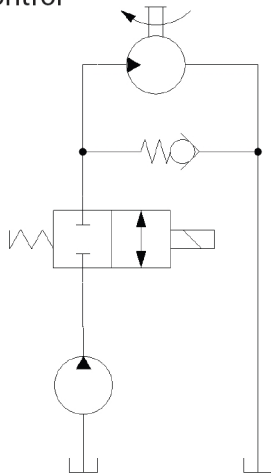
SCHEMATIC

PERFORMANCE CURVES

Pressure drop
33 cSt [154 SUS] hyd.oil @ 38°C [100° F]

Operating envelope

Rated per NFPA T 2.6.1 at 1 million cycles
Rated per NFPA T 2.6.1 at reduced operational life

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DIMENSIONS

20 mm
4-6 N·m
[35-53 lbf·in]
Standard Coil Nut Kit
P/N 173800588
(Includes O-rings)

24 mm
35-40 N·m
[26-30 lbf·ft]

3/4-16 UNF-2A

① Ø23.8 [0.94]

COIL NOT SHOWN FOR CLARITY
INSTALL O-RING (2) PLCS AS SHOWN

②

2.5 [0.10]
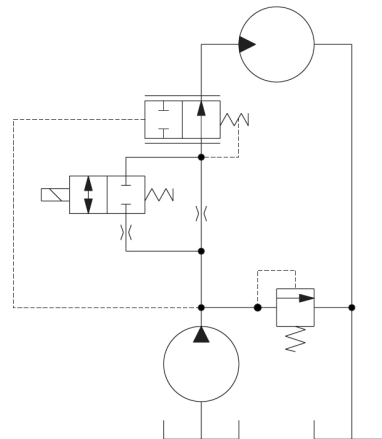
59.8 [2.35]

27.2 [1.07]

EXAMPLE CIRCUITS

On-Off Motor Control

Two-speed motor circuit

ORDERING INFORMATION

SV08 - 22 - 02 - 12D - DE - B - 00

Solenoid Valve, 08 Size Cavity

22: 2 Position, 2 Way, Spool Type

03: Schematic: Normally Closed, Pull Type

Code	Body and Ports	Body Nomenclature
00	Cartridge Only	No Body
4S	#4 SAE, AL	CP08-2-4S
6S	#6 SAE, AL	CP08-2-6S
S6S	#6 SAE, Steel	CP08-2-S6S
DG2B	1/4 BSP, AL	SDC08-2-DG2B
DG3B	3/8 BSP, AL	SDC08-2-DG3B
S3B	3/8 BSP, Steel	CP08-2-S3B

Seal Code	Material	Seal Kits
B	Buna-N	354003119
V	Viton	354003619

Coil Voltage	Standard Coil Code	Robust Coil Code
No Coil, with nut*	00	R00
10 VDC	10D	R10D
12 VDC	12D	R12D
20 VDC	20D	R20D
24 VDC	24D	R24D
110 VAC**	110A	-
220 VAC**	220A	-

* Standard coil – plastic nut and O-rings
R-coil – steel nut P/N 173800539
(no coil O-rings needed)
** DIN only - external rectifier needed

Coil Termination	Standard Coil Code	IP Rating	Robust Coil Code	IP Rating
No Coil	00	-	00	-
Amp Junior	AJ	IP67	-	
Amp Junior with Diode	AJD	IP67	-	
AMP SuperSeal 1.5	AS	IP67	AS	IP69K
AMP SuperSeal with Diode	ASD	IP67	ASDB	IP69K
Deutsch	DE	IP67	DE	IP69K
Deutsch with Diode	DED	IP67	DEDB	IP69K
Flying Leads	FL	IP65	FL	IP69K
Flying Leads with Diode	FLD	IP65	FLDB	IP69K
DIN 43650	DN	IP65	-	-
Metri-Pack 150 Type 2	-	-	M3	IP69K
Metri-Pack 150 with Diode	-	-	M3DB	IP69K