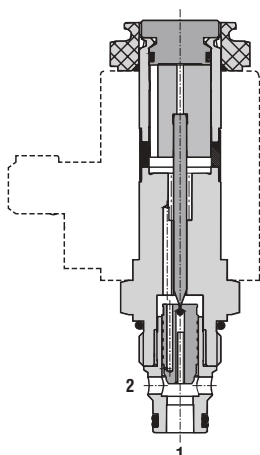


2/2 Directional Valve, Solenoid Operated, Poppet Type, Piloted

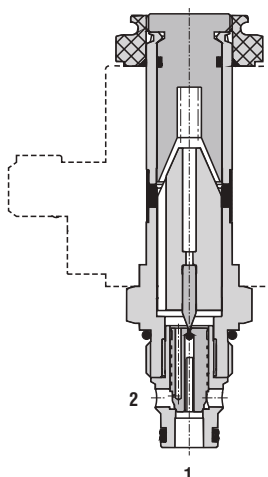
SD3E-A2

3/4-16 UNF • $Q_{\max}$ 30 l/min (8 GPM) • $p_{\max}$ 420 bar (6100 PSI)

Normally Open



Normally Closed



Technical Features

- › Hardened precision parts
- › High flow capacity and leak-free closing
- › High transmitted hydraulic power up to 420 bar
- › Lightline design 250 bar with reduced solenoid power for production cost saving
- › Normally open and normally closed version
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Coil interchangeability among SD*-A* product line
- › Standard version zinc-coated with surface protection acc. to ISO 9227 (240 h salt spray)

Functional Description

2/2 screw-in cartridge poppet valve, pilot operated. The one-directional valve with 3/4-16 UNF connection thread is designed for on-off flow control with leak-free closing in 2→1 flow direction. In the opposite flow direction the valve is opened by fluid pressure.

Model Code	202	2L2
Symbol		

Technical Data

Valve size / Cartridge cavity		3/4-16 UNF-2A / A2 (C-8-2)	
		Lightline	High performance
Max. flow	l/min (GPM)	30 (7.9)	30 (7.9)
Max. operating pressure	bar (PSI)	250 (3600)	420 (6100)
Max. internal leakage in the direction 2→1 ($v=32 \text{ mm}^2/\text{s}$)	cm^3/min	≤ 0.25 at 250 bar	
Fluid temperature range (NBR)	$^{\circ}\text{C}$ ($^{\circ}\text{F}$)	-30...60 (-22...140)	-30...80 (-22...176)
Fluid temperature range (FPM)	$^{\circ}\text{C}$ ($^{\circ}\text{F}$)	-20...60 (-4...140)	-20...80 (-4...176)
Ambient temperature range	$^{\circ}\text{C}$ ($^{\circ}\text{F}$)	-30...50 (-22...122)	-30...80 (-22...176)
Fluid viscosity range	$\text{mm}^2/\text{s}^{-1}$	10 ... 500	
Weight without coil	kg (lbs)	0.12 (0.26)	0.20 (0.44)
General information		Type	
Coil types		Products and operating conditions	
Valve bodies		C 14B* C 19B*	
In-line mounted		SB-A2*	
Sandwich mounted		SB-*A2*	
Cavity details / Form tools		SMT-A2*	
Spare parts		HA 8010	

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

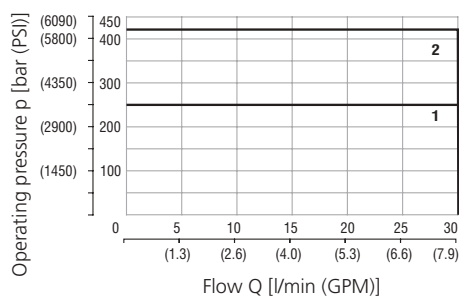
Operating limits - Lightline + High performance

L - Oil 60 $^{\circ}\text{C}$ (140 $^{\circ}\text{F}$) / Ambient temperature/
50 $^{\circ}\text{C}$ (122 $^{\circ}\text{F}$) / Voltage U_N -10% (21.6 VDC)
HP - Oil 80 $^{\circ}\text{C}$ (176 $^{\circ}\text{F}$) / Ambient temperature
50 $^{\circ}\text{C}$ (122 $^{\circ}\text{F}$) / Voltage U_N -10% (21.6 VDC)

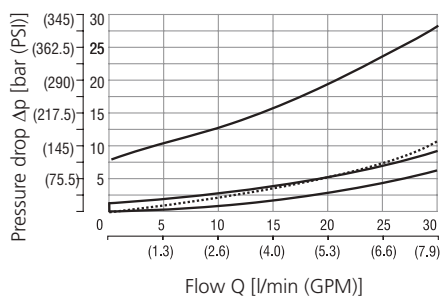
Pressure drop related to flow rate

- Lightline

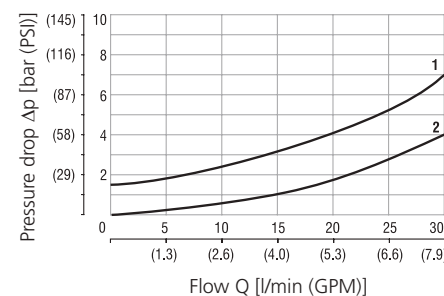
- High performance



	Model	Connection
1	L2L2	1→2, 2→1
1	L2O2	1→2, 2→1
2	H2L2	1→2, 2→1
2	H2O2	1→2, 2→1



	Model	Connection	Solenoid
1	L2L2	1→2	on
1	L2L2	2→1	on
1	L2O2	2→1	off
2	L2L2	1→2	off
3	L2O2	1→2	on
4	L2O2	1→2	off

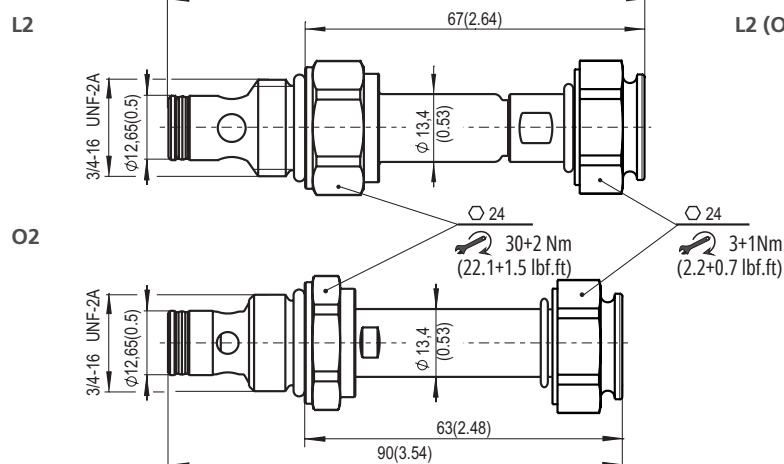


	Model	Connection	Solenoid
1	H2L2	1→2	off
2	H2L2	1→2	on
2	H2L2	2→1	on
2	H2O2	1→2	off
2	H2O2	2→1	off

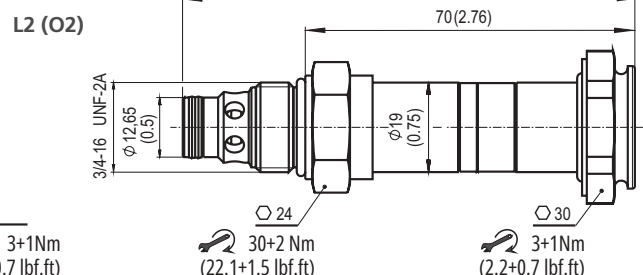
For operating limits under conditions and flow directions other than shown contact our technical support.

Dimensions in millimeters (inches)

Lightline



High performance



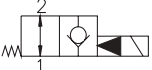
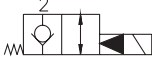
Manual Override in millimeters (inches)

*Only for High performance version

No designation* - standard for 2O2	Designation M2 for 2O2* - rubber boot protected	Designation M5 for 2O2* - socket head screw, size 2.5	Designation M9 for 2O2 - without manual override
 ~ 70.0 (2.76)	 ~ 81.5 (3.21)	 ~ 77.6 (3.06)	 H ~ 70.0 (2.76) L ~ 90.0 (3.54)
Designation M7 for 2L2*- removable handwheel with locking**	Designation M4 for 2L2* - hand screw	Designation M5 for 2L2* - socket head screw, size 2.5	Designation M9 for 2L2 - without manual override
 H ~ 96(3.78) Torque to tighten screw of handwheel after coil mounting: 2.8+0.2 Nm (2.1+0.1 lbf.ft)	 ~ 88.8 (3.50)	 ~ 88.8 (3.50)	 H ~ 70.0 (2.76) L ~ 94.0 (3.70)
**Basic position 1 of the M7 manual override Spool of valve is operated by solenoid.		**Position 2 of the M7 manual override Spool of the valve is shifted by handwheel and locked in this position.	

In case of solenoid malfunction or power failure, the valve spool can be shifted by manual override under the condition that the pressure in the back line does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

Ordering Code

SD3E-A2 /						-	
2/2 directional valve, solenoid operated, poppet type, piloted							
Valve cavity 3/4-16 UNF (C-8-2)							
Model Lightline High performance		L H					
Functional symbol							
			2O2				
			2L2				