

Proportional Valves

ESV1-12-O

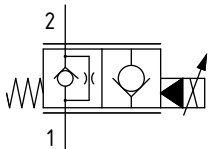
Proportional Flow Control Valve, Poppet Type, Normally Open, Pilot Operated, Non-Compensated

210 bar [3000 psi] • 103 l/min [27.3 US gpm]

DESCRIPTION AND OPERATION

This is a 2-way, poppet type, normally open, pilot operated non compensated proportional valve. In the de-energized condition, flow passes from port 2 to 1 but is restricted from port 1 to 2. Energizing the coil will proportionally push the poppet towards the seat closing port 2 to 1, while allowing free flow from port 1 to 2. Used in conjunction with a compensator, the valve will act as the control orifice for a pressure compensated flow control.

SCHEMATIC



DIMENSIONS

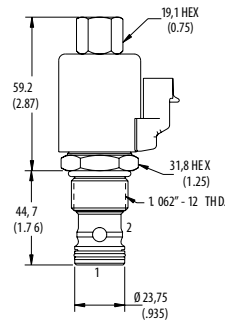
mm [in]

Coil Nut Torque

9-13 Nm (7-10 ft lbs)

Installation torque

81-95 Nm (60-70 ft lbs)



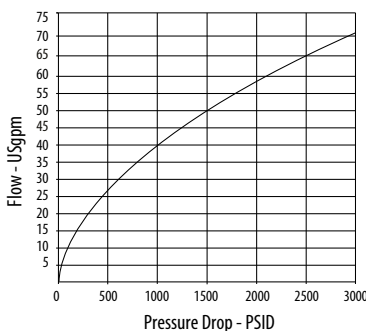
PERFORMANCE DATA

Rated pressure*	210 bar [3000 psi]
Rated flow @ 35 bar [500 psi]	103 l/min [27.3 US gpm]
Leakage	5 drops/min max @ 3000 psi
Recommended PWM frequency	120 Hz
Maximum Hysteresis	15%
Maximum control current	1150-1250 mA [12V coil] 525-625 mA [24V coil]
Coil Options	J series
Weight	0.24 kg [0.23 lb]
Cavity	C-12-2/C-12-2U

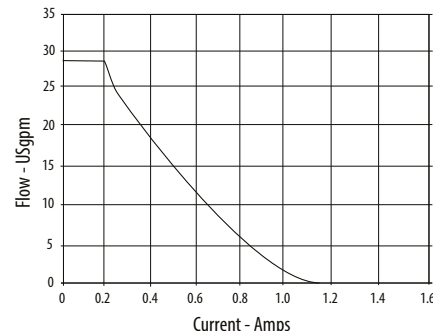
*Rated pressure based on NFPA fatigue test standards (at 1 million cycles)

PERFORMANCE CURVES

Pressure Drop
(Zero Current)



Pressure vs. Current
(500 PSID)



MODEL CODE

ESV1 - 12 - V - O - A - 4G - U - 12D - G - J

Seal Option

Code	Seal kit
Omit - Buna - N	02-165889
V - Viton	02-165888

Housing Material

Omit - No housing
A - Aluminium

Housing

Code	Ports	Aluminium	Aluminum (C-12-2U)
0	No housing		
4G	1/2" BSP	02-161118	02-161116
6G	3/4" BSP	02-161117	02-161115
10T	#10 SAE	02-160640	02-160641
12T	#12 SAE	02-160644	02-160645

* Aluminium bodies are to be used for pressures less than 210 bar [3000 psi].
* Additional housings available

Cavity

Omit - No undercut/No housing
U - Undercut (C-12-2U)

Coil series

Omit - No coil
J - S Series, 23 W

Connector Type

Omit - No coil
G - ISO 4400 DIN 43650
W - Flying lead
N - Deutsch (DC only)
Y - Amp JR (DC only)
D - Metripack 150 male (DC only)
J - Metripack 280 male (DC only)

Coil Voltage

00 - No coil, nut included (p/n 565558)
12D - 12VDC
24D - 24VDC