

# Proportional Valves

## ESV1-12-C

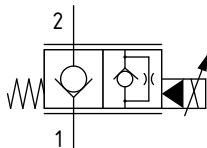
Proportional Flow Control Valve, Poppet Type, Normally Closed, Pilot Operated, Non-Compensated

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

### DESCRIPTION AND OPERATION

This is a 2-way, poppet type, normally closed, pilot operated non-compensated proportional valve. In the de-energized condition, flow is blocked from port 2 to 1 but free flow from port 1 to 2. Energizing the coil will proportionally lift the poppet off its seat opening port 2 to 1, while flow from port 1 to 2 will remain restricted. Used in conjunction with a compensator, the valve will act as the control orifice for a pressure compensated flow control.

### SCHEMATIC



### 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 [12VDC coil] 525-625 mA [24 VDC coil]
Coil Options	J series
Weight	0.23 kg [0.48 lb]
Cavity	C-12-2/C-12-2U

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

### MODEL CODE

**ESV1 - 12 - V - C - A - 4G - U - 12D - G - J**

#### Seal Option

Code	Seal kit
Omit - Buna - N	02-165875
V - Viton	02-165877

#### Housing Material

Omit - No housing  
A - Aluminium

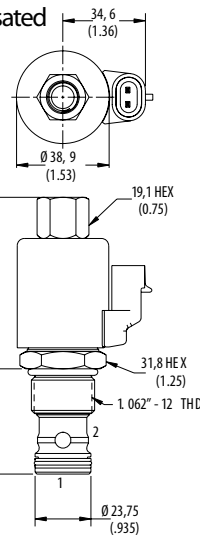
#### Housing

Code	Ports	Aluminium	Aluminium (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)



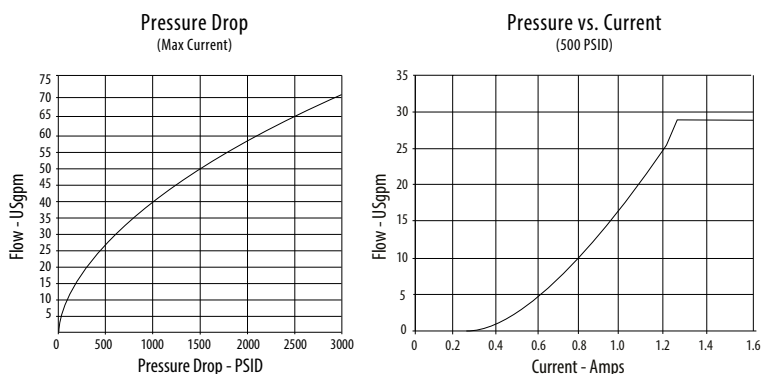
### DIMENSIONS

mm [in]

Coil Nut Torque  
9-13 Nm (7-10 ft lbs)

Installation torque  
A - 81-95 Nm [60-70 ft. lbs]

### PERFORMANCE CURVES



#### Coil series

Omit - No coil  
J-J series, 23W

#### Connector Type

Omit - No coil  
G - ISO 4400 DIN 43650  
Q - Spade terminals  
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