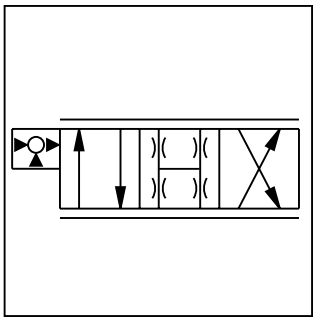
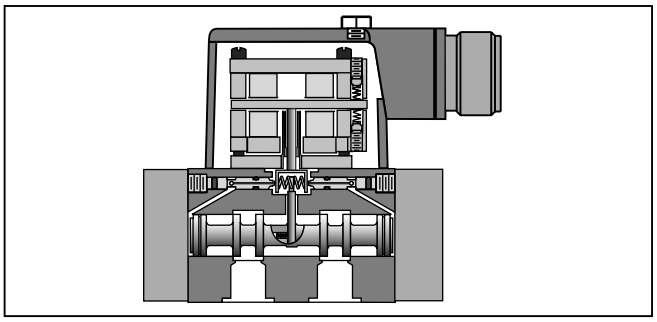
General Description

Series DY15 are two stage, 4-way, flapper and nozzle style servovalves. This valve is rated for 210 Bar (3000 PSI) standard, or can be built for 350 Bar (5000 PSI) service. The pressure ratings are the same for both the tool steel construction or the optional stainless steel spool and body.







Features

- Lapped spool and body.
- No ball glitch.
- Tool steel, or stainless steel, spool and body.
- Nozzle and flapper design.
- Unique port pattern (see next page).
- Survives high tank port pressures.

C

Specifications

Flow Rating @ 70 Bar (1000 PSID)	57, 75 and 95 LPM (15, 20 and 25 GPM)
Supply Pressure	10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI)
Leakage Flow @ 70 Bar (1000 PSID)	0.95 – 1.7 LPM (0.25 – 0.45 GPM)
Tank Port Pressure	210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance
Input Command	±50 mA std.
Frequency Response @ 90° phase shift	> 45 Hz (See Performance Curves)
Non-Linearity	≤ 10%
Threshold	≤ 0.5%

Null Shift with temperature with pressure	≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI)
Presssure Gain % change in pressure per 1% change in input command	30% minimum, 70% maximum
Step Response	10 – 90%, < 18 ms < 18 ms up to 75 LPM (20 GPM) < 20 ms up to 95 LPM (25 GPM)
Fluid	Mineral Oil, 60 – 225 SSU 1000 SSU maximum
Operating Temperature	-1°C to + 106°C (+30°F to +225°F)
Protection Class	NEMA 4, IP65
Filtration	ISO 4406 15/12 or better

DY15 — Series | Material Options | Coils | Wiring | Seals | Operating Pressure | Flows | Special Options | Factory Code for Special Options

Code	Description
Omit	Standard
D	(Specify) See list below

Code	Description
A	Steel (standard)
B	Stainless Steel
Z*	Special (specify)

* Material selection does not affect operating pressure

Code	Description
15	57 LPM (15 GPM)
20	76 LPM (20 GPM)
25	95 LPM (25 GPM)

Code	Description
A	210 Bar (3000 PSI)
B	350 Bar (5000 PSI)
Z	Special (specify)

Operating pressure is independent of material selection.

Code	Description	Parallel	Series
D	200 ohm (Std.)	50 mA	25 mA
F	80 ohm	80 mA	40 mA
G	22 ohm	200 mA	100 mA
K	40 ohm	150 mA	75 mA
L	360 ohm	30 mA	15 mA
M	475 ohm	40 mA	20 mA
R	750 ohm	30 mA	15 mA
T	1000 ohm	10 mA	5 mA
V	1200 ohm	40 mA	20 mA
Z	Special (specify)		

Code	Description
N	Nitrile (standard)
V	Fluorocarbon
E *	EPR
Z *	Special (specify)

* Consult factory for delivery

Code	Connector over:	Flow P to C2 with:
C	Port C1	(+) Signal to A, C
D	Port C1	(+) Signal to B, D
Z	Special (specify)	

Weight: 1.8 kg (3.9 lbs.)

Special Options:

Consult factory for price, delivery and availability of special options.

Special coil
Special wiring
Special seals
Special flow rate
Dual flow rate
Dual gain
Zener barriers
High frequency torque motor (Models 5, 10, 12 & 15 only)

Accessories

Cable with Mating Connector: EHC154S

Mating Connector: MS3106E-14S-2S

Bolt Kit: Included with valve

Flushing Valve: 11-0600

Subplate: 55-0300-2 SAE-16 Side ports

Null Adjust Tool: 27-0210

Electronic Drivers: 23-5030, 23-7030, BD90*, BD95* and BD101*

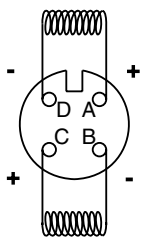
When used in conjunction with Series BD90/95 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



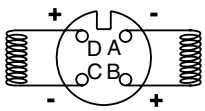
Flushing valve is rated for 3000 psi operation.

Wiring Option C
(Standard)



Dyval and Pegasus standard.

Wiring Option D



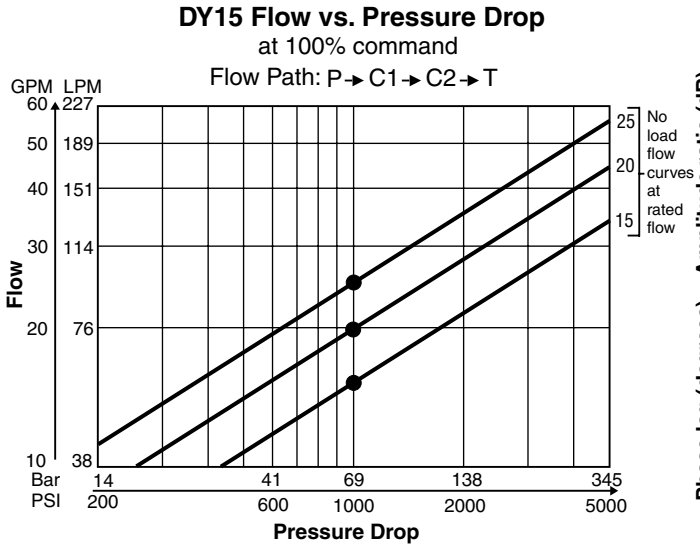
Moog, Atchley and Vickers standard.

In both cases, polarity shown connects P to C2 port.

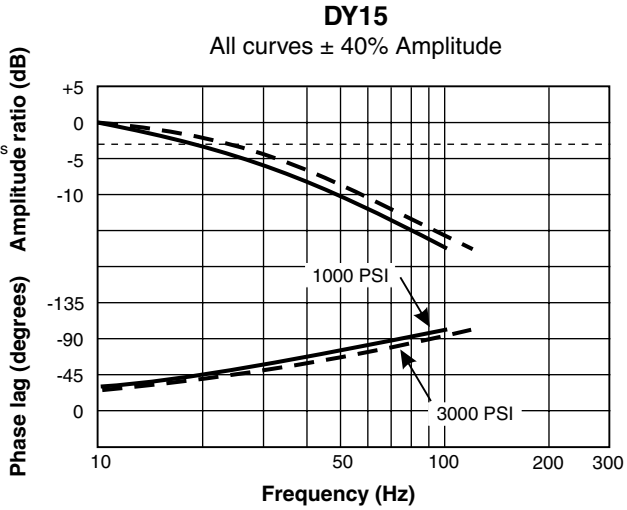
DY15.p65, dd

Parker Hannifin Corporation
Hydraulic Valve Division
Elyria, Ohio, USA

Performance Curves



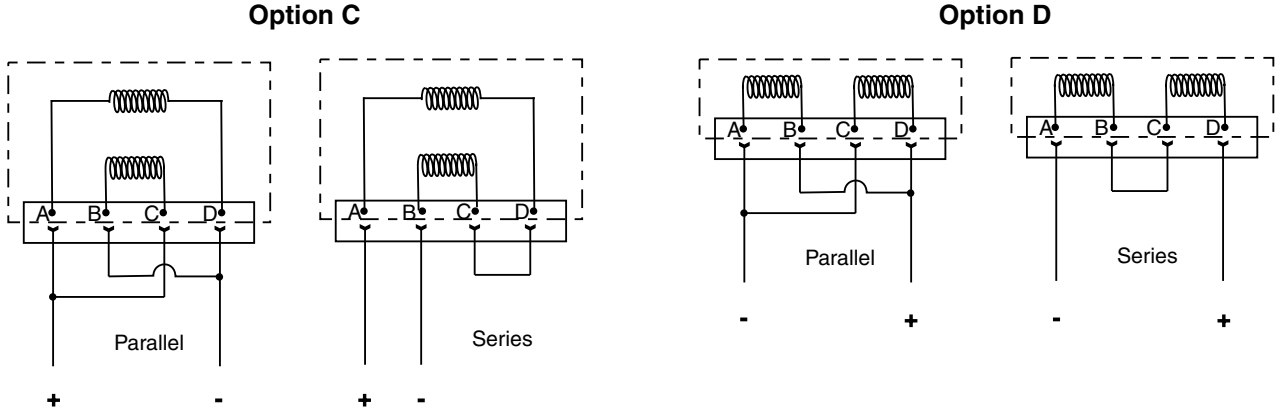
Frequency Response



C

Installation Wiring Options

This servovalve has two coils. This illustration shows the internal wiring configurations for options C and D. When connecting the valve to a drive amplifier, the user's external wiring may put the coils either in parallel or in series as needed. Refer to the illustrations below and to the mounting pattern for this valve to insure proper control phasing.

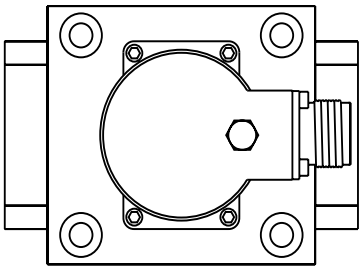


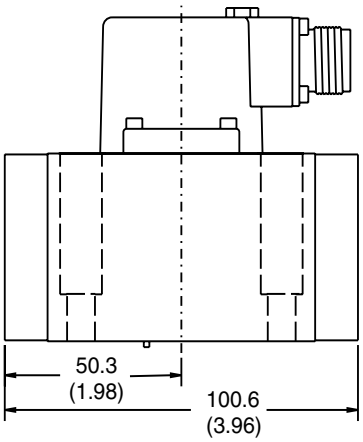
Polarity shown connects flow from P to C2 port.

C

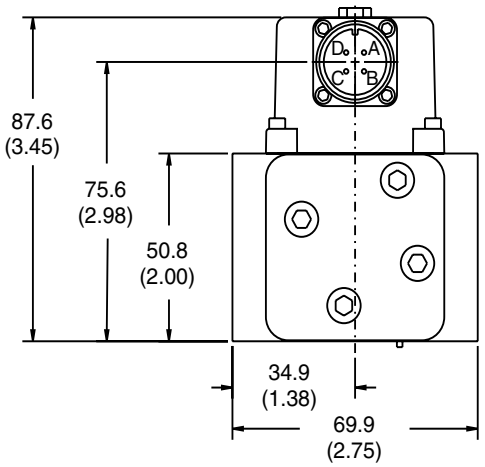
Dimensions

Inch equivalents for millimeter dimensions are shown in (**)

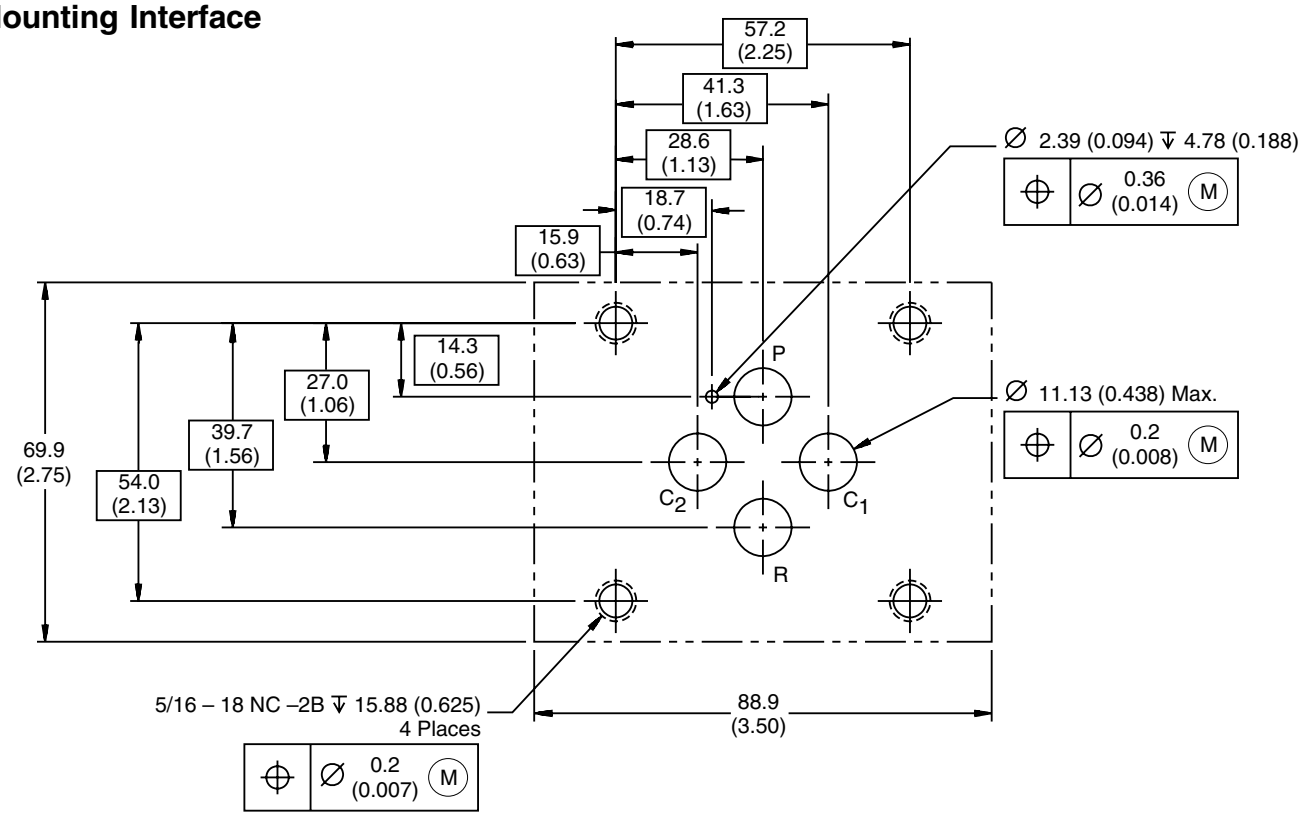




Connector over port C1



Mounting Interface



DY15.p65, dd