

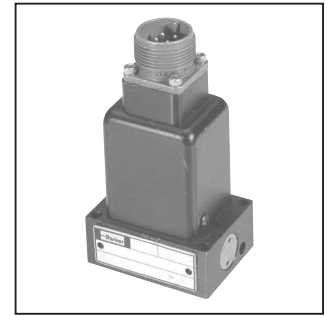
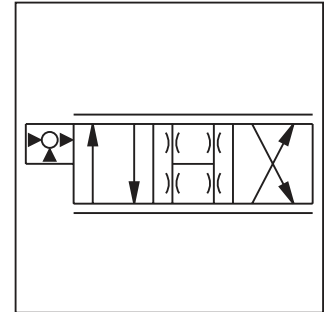
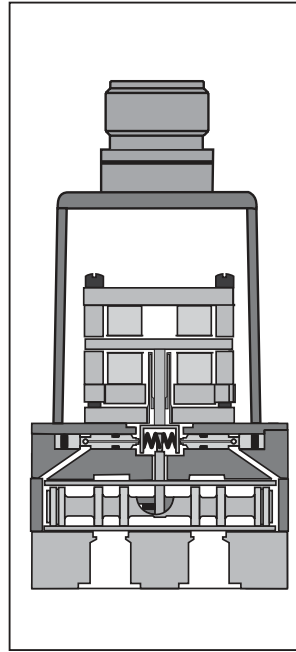
General Description

Series DY3H and DY6H are two stage, 4-way, high frequency, closed loop servovalves, with mechanical spool position feedback. These valves use a flapper and nozzle type, torque motor driven pilot stage to drive the sliding spool second stage. The unique rigid pin feedback design avoids ball glitch problems, which can occur in other types of servovalves.

The DY3H and DY6H offer a compact, lower cost alternative without sacrificing performance in systems operating at 105 Bar (1500 PSI) or less.

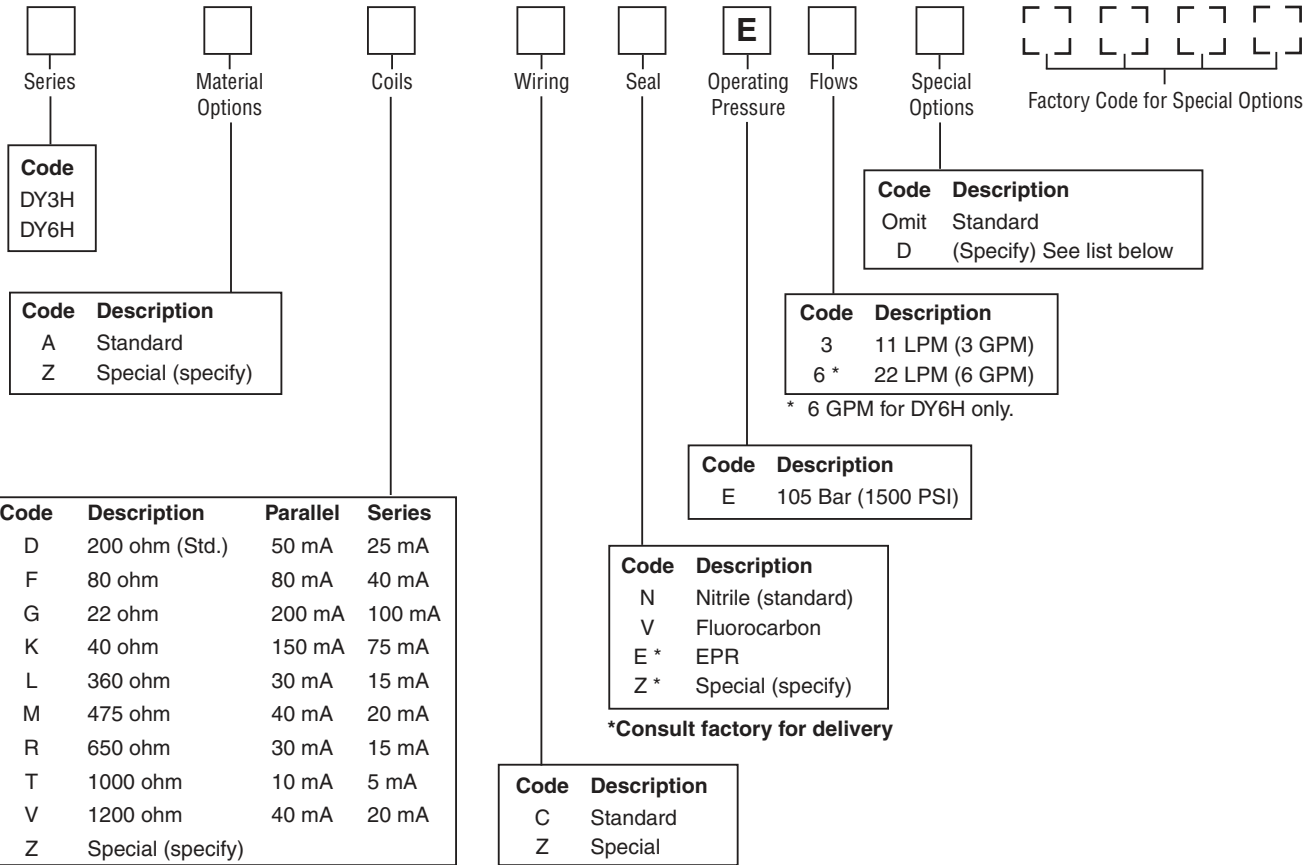
Features

- Precision lapped spool and sleeve.
- No ball glitch.
- High frequency response.
- Nozzle and flapper design.
- Adapters available for mounting to D03 or ISO port patterns.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 11 and 22 LPM (3 and 6 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 105 Bar (145 – 1500 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 1.3 – 1.9 LPM (0.3 – 0.5 GPM) | Step Response | 10 – 90%, < 6 ms for DY3H < 8 ms for DY6H |
| Tank Port Pressure | 105 Bar (1500 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 190 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |



Accessories

- Cable with Mating Connector:** EHC154S
- Mating Connector:** MS3106E-14S-2S
- Bolt Kit:** Included with valve
- Flushing Valve:** 11-0300
- Subplate:** 55-0800-2 SAE-4 Side ports
- Null Adjust Tool:** 6522A13
- Electronic Drivers:** 23-7030, BD90*, BD101*

When used in conjunction with Series BD90 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

Special Options:

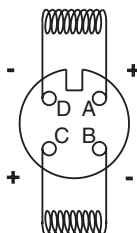
Consult factory for price, delivery and availability of special options.

- Special coil
- Special wiring
- Special seals

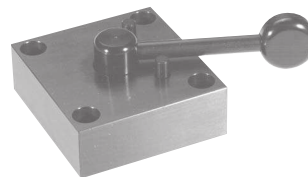
Weight:

- DY3H 0.34 kg (0.56 lbs.)
- DY6H 0.34 kg (0.56 lbs.)

Wiring Option C
(Standard)



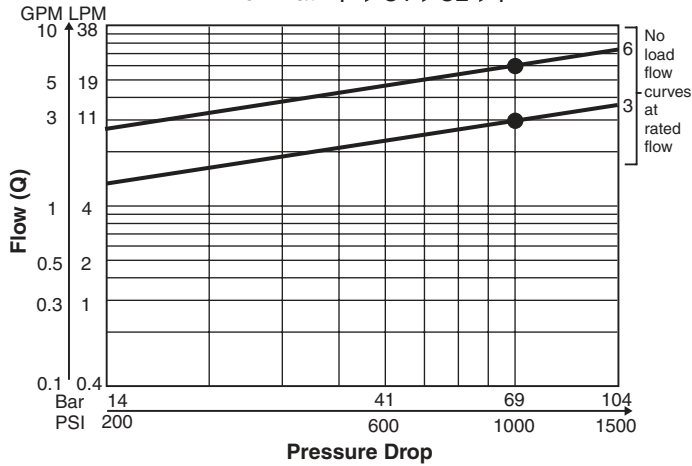
Polarity shown connects P to C2 port.



Flushing valve is rated for 3000 psi operation.

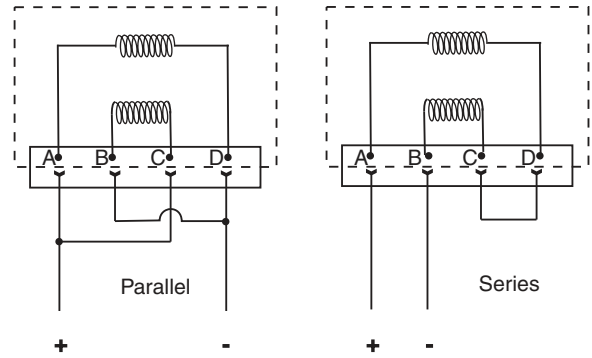
Performance Curves

Flow vs. Pressure Drop
 at 100% command
 Flow Path: P → C1 → C2 → T



Installation Wiring Options

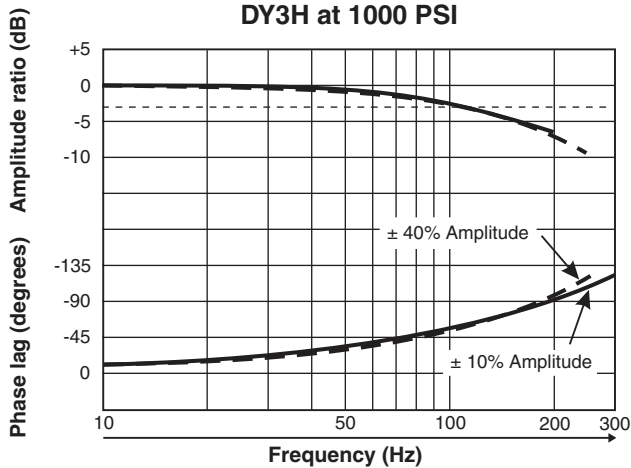
This servovalve has two coils. This illustration shows the internal wiring configurations for these valves. When connecting the valve to a drive amplifier, the user's external wiring may put the coils either in parallel or in series as needed. Refer to the illustration below and to the mounting pattern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



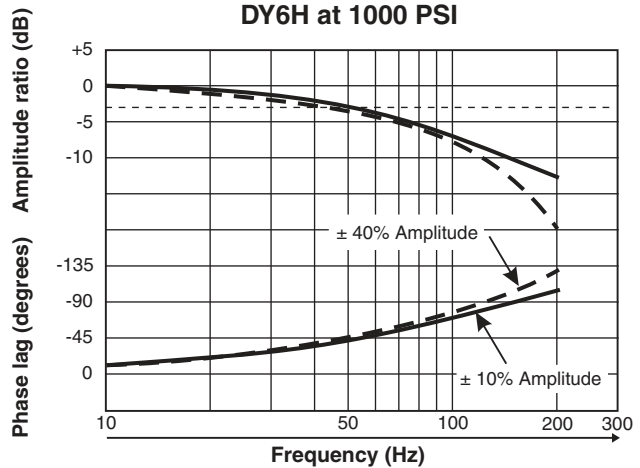
Polarity shown connects flow from P to C2 port.

Frequency Response

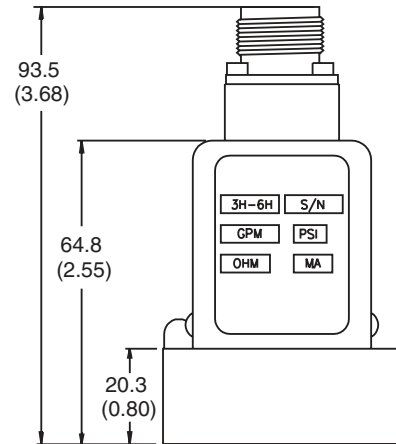
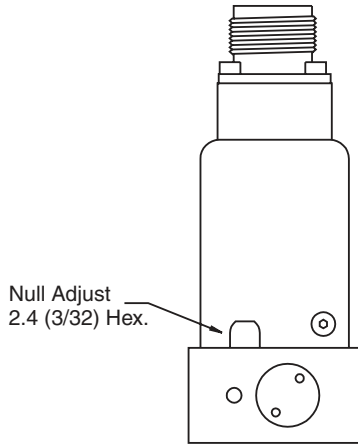
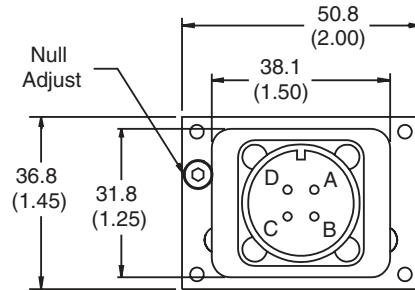
DY3H at 1000 PSI



DY6H at 1000 PSI

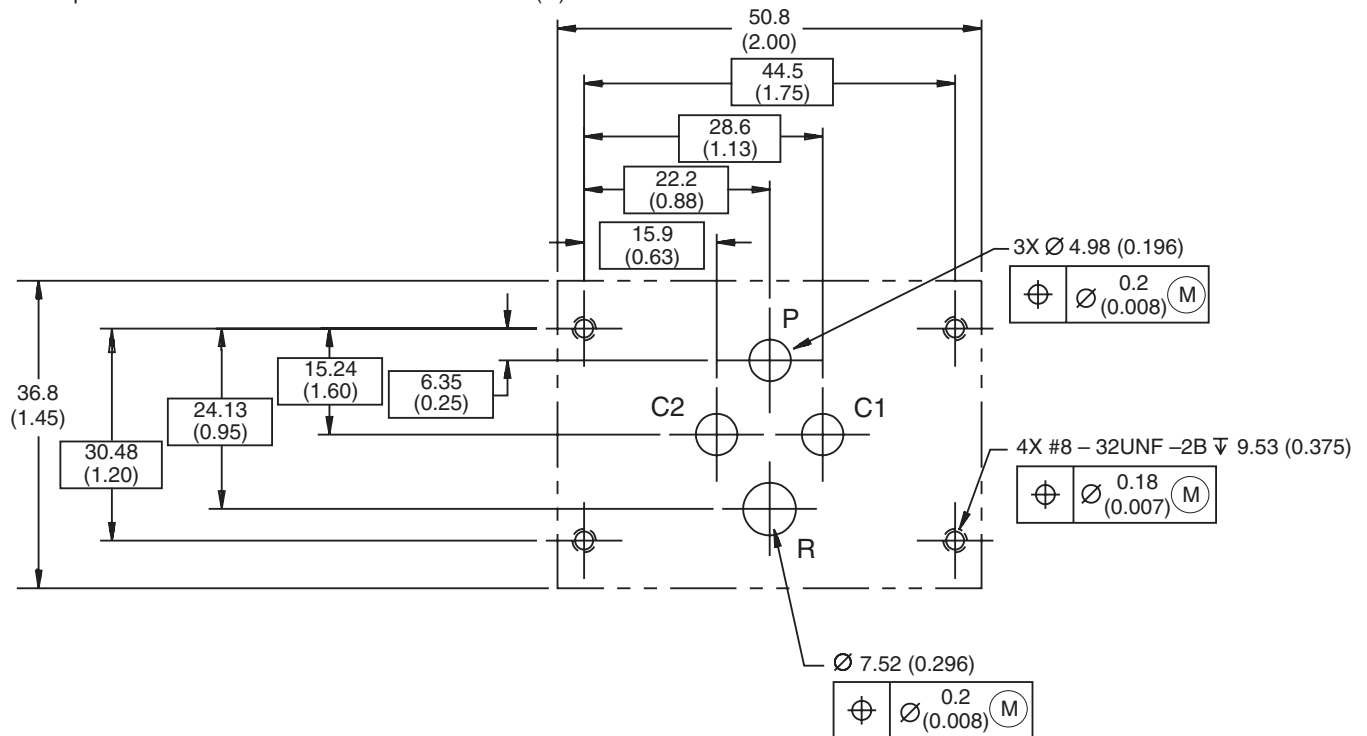


Inch equivalents for millimeter dimensions are shown in (**)



Mounting Interface

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



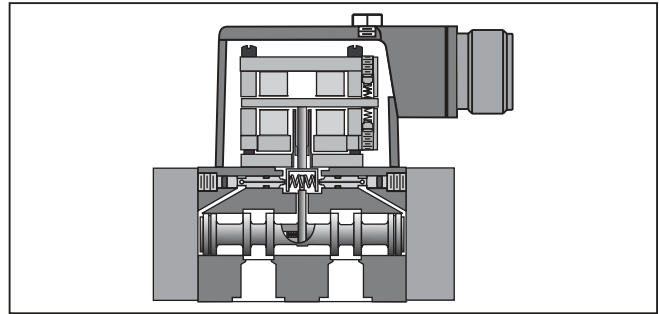
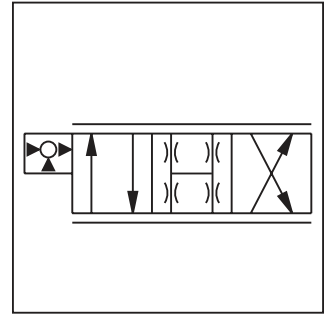
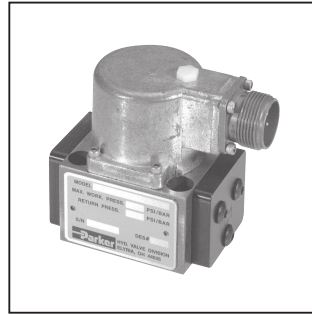
General Description

Series DY01 are two stage, 4-way, flapper and nozzle style servovalves. The DY01 servovalve combines a spool and sleeve construction, and a high frequency torque motor, for optimal performance. The unique rigid pin feedback design avoids ball glitch problems, which can occur in other types of 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.

The DY01 servovalve was specially designed for high precision flight simulator applications.

Features

- Precision lapped spool and sleeve.
- No ball glitch.
- Tool steel, or stainless steel, spool and body.
- Versatile 21.59 mm (0.850 in.) port circle, can mount to standard 19.81 mm (0.780 in.) and 23.62 mm (0.930 in.) port circle patterns.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 3 and 11 LPM (1 and 3 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% Minimum, 70% Maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.42 – 0.95 LPM (0.11 – 0.25 GPM) | Step Response | 10 – 90%, < 8 ms |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to + 82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 180 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |

DY01

Series

Material Options

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

* Material selection does not affect operating pressure.

Coils

| 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) | | |

Wiring

| 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) | |

Seal

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

* Consult factory for delivery

Operating Pressure

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

Operating pressure is independent of material selection.

Flows

| Code | Description |
|------|-------------------|
| 1 | 3.8 LPM (1 GPM) |
| 1.5 | 5.7 LPM (1.5 GPM) |
| 3 | 11 LPM (3 GPM) |

Special Options

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

Factory Code for Special Options

Weight: 1.0 kg (2.1 lbs.)

Accessories

Cable with Mating Connector: EHC154S

Mating Connector: MS3106E-14S-2S

Bolt Kit: Included with valve

Flushing Valve: 11-0500

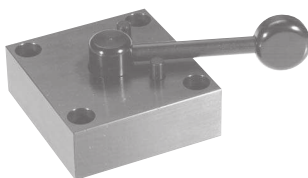
Subplate: 55-0100-8S SAE-8 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

When used in conjunction with Series BD90 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



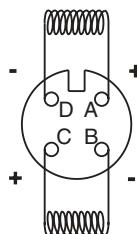
Flushing valve is rated for 3000 psi operation.

Special Options:

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

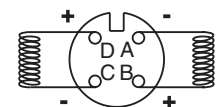
- Special coil
- Special wiring
- Special seals
- Special flow rate
- Dual flow rate
- Dual gain
- Zener barriers

Wiring Option C (Standard)



Polarity shown connects P to C2 port.

Wiring Option D

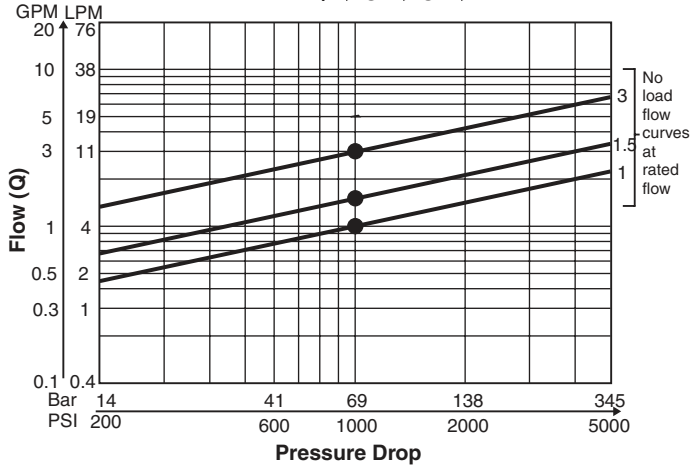


Moog, Atchley and Vickers standard.

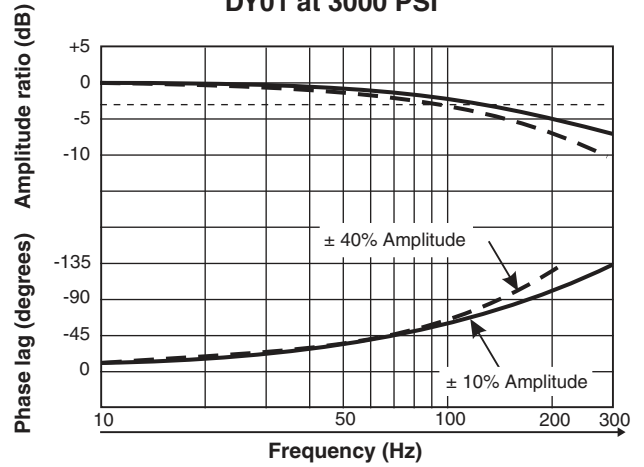
Performance Curves

Frequency Response

DY01 Flow vs. Pressure Drop
 at 100% command
 Flow Path: P → C1 → C2 → T



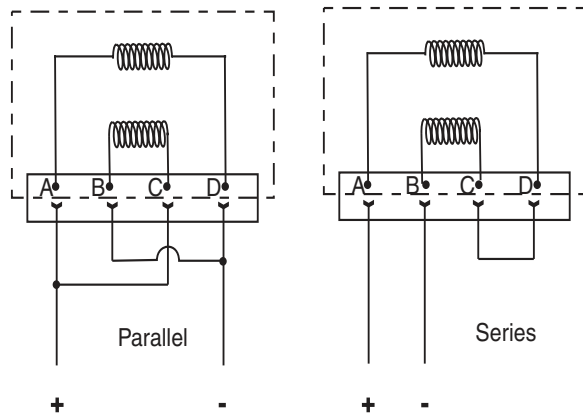
DY01 at 3000 PSI



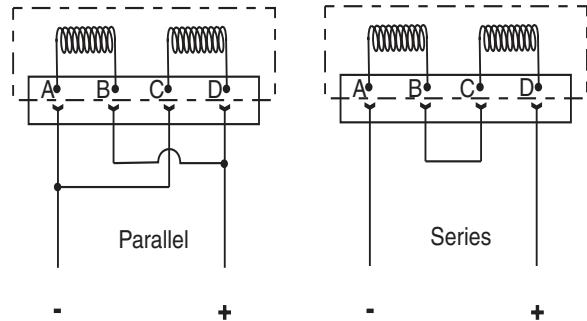
Installation Wiring Options

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.

Option C

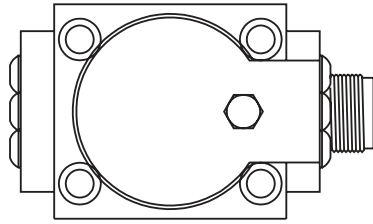


Option D

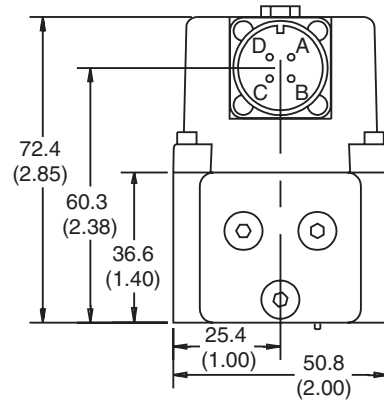
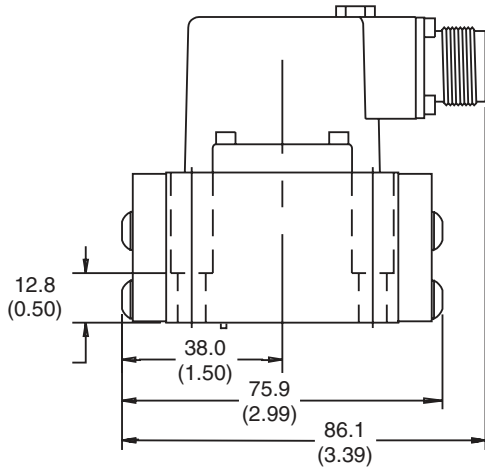


Polarity shown connects flow from P to C2 port.

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

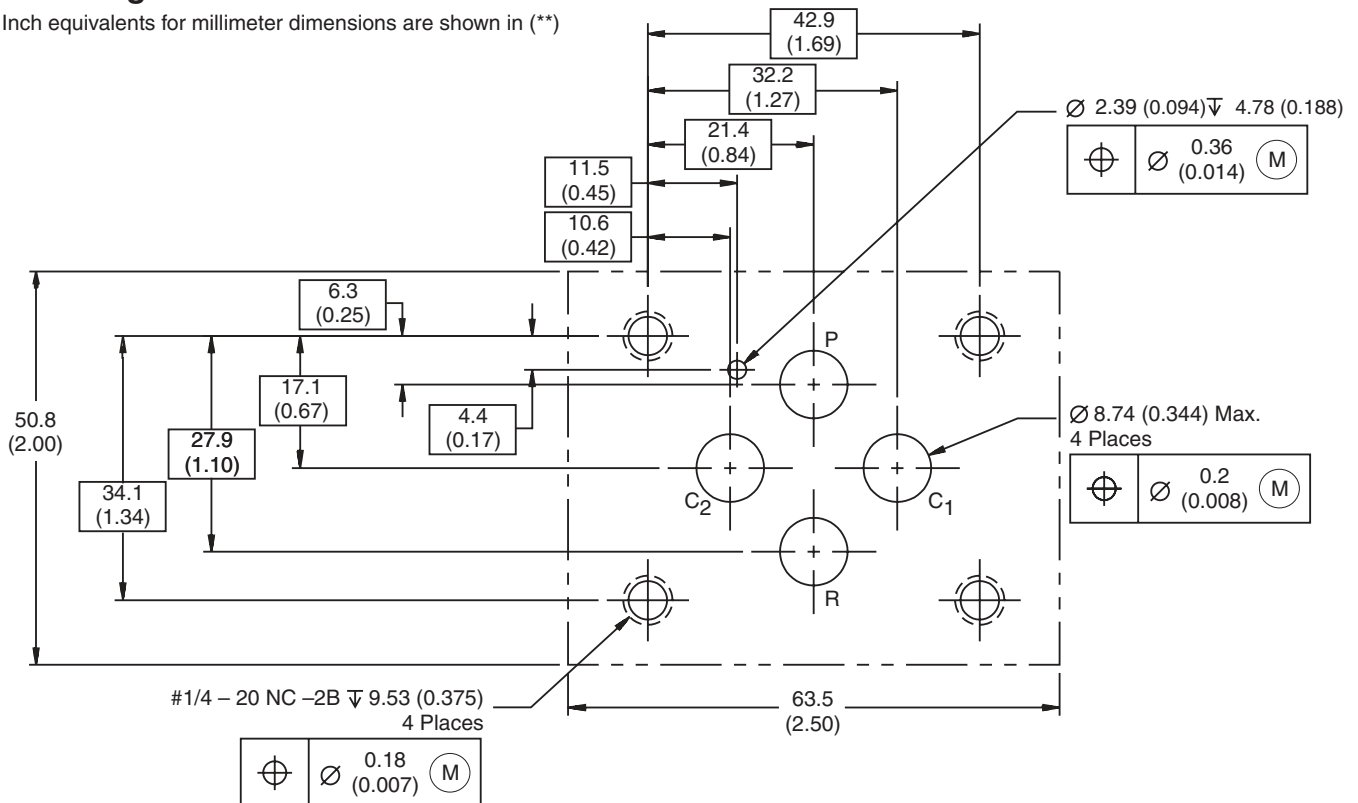


Connector over port C1



Mounting Interface

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



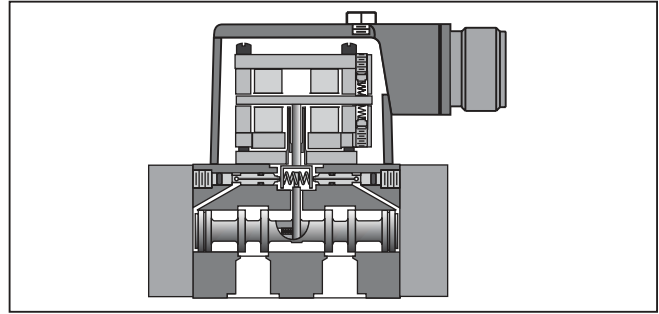
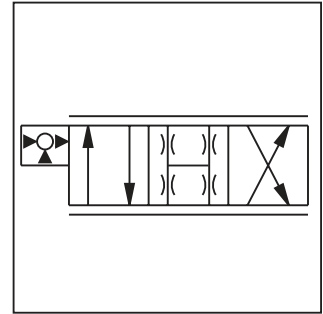
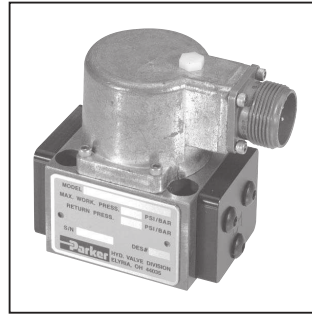
C

General Description

Series DY05 are two stage, 4-way, flapper and nozzle style servovalves. The DY05 has a wide range of flow ratings within a lower cost spool and body design. The unique rigid pin feedback design avoids ball glitch problems, which can occur in other types of servovalves. These valves are 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.
- Versatile 21.59 mm (0.850 in.) port circle, can mount to standard 19.81 mm (0.780 in.) and 23.62 mm (0.930 in.) port circle patterns.
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 0.95, 1.9, 3.8, 9.5 and 19 LPM (0.25, 0.5, 1.0, 2.5 & 5 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.42 – 0.95 LPM (0.11 – 0.25 GPM) | Step Response | 10 – 90%, < 11 ms |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 100 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |



DY05

Series

Material Options

Coils

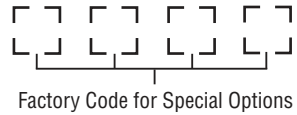
Wiring

Seal

Operating Pressure

Flows

Special Options



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

* Material selection does not affect operating pressure.

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

| Code | Description |
|------|---------------------|
| 0.25 | 0.95 LPM (0.25 GPM) |
| 0.5 | 1.9 LPM (0.5 GPM) |
| 1 | 3.8 LPM (1 GPM) |
| 2.5 | 9.5 LPM (2.5 GPM) |
| 5 | 19 LPM (5 GPM) |

| 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 |
|------|--------------------|
| A | 210 Bar (3000 PSI) |
| B | 350 Bar (5000 PSI) |
| Z | Special (specify) |

Operating pressure is independent of material selection.

Weight: 1.0 kg (2.1 lbs.)

| 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) | |

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: 11-0500

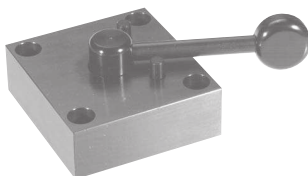
Subplate: 55-0100-8S SAE-8 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

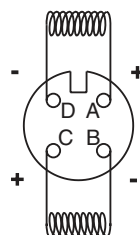
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



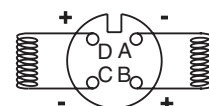
Flushing valve is rated for 3000 psi operation.

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.

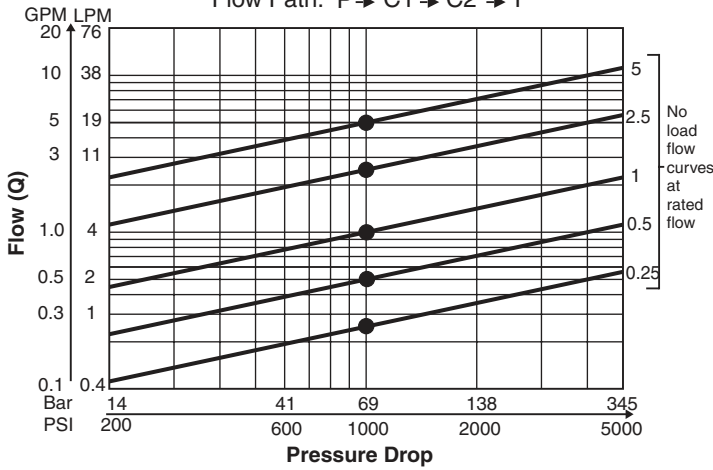
Performance Curves

Frequency Response

DY05 Flow vs. Pressure Drop

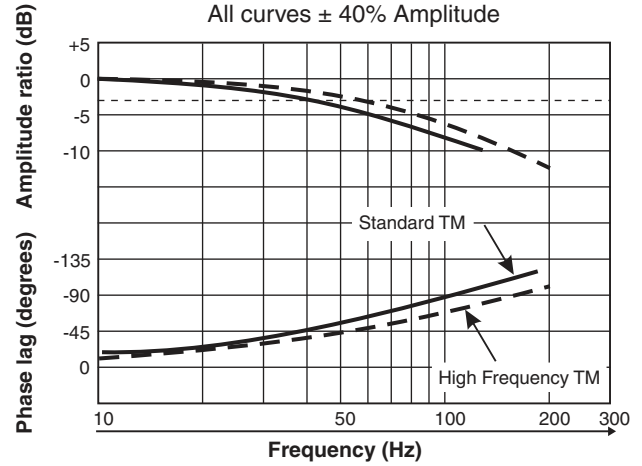
at 100% command

Flow Path: P → C1 → C2 → T



DY05 at 3000 PSI

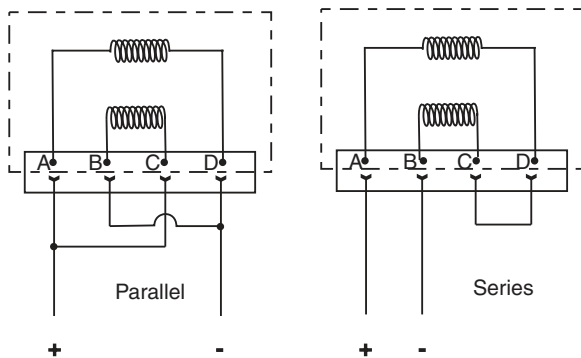
All curves ± 40% Amplitude



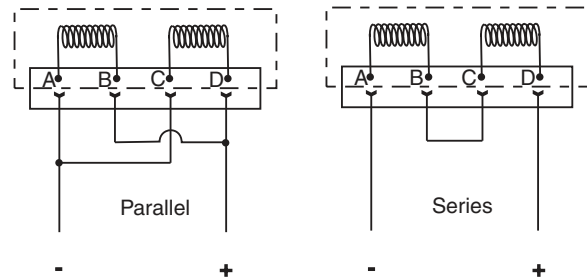
Installation Wiring Options

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.

Option C



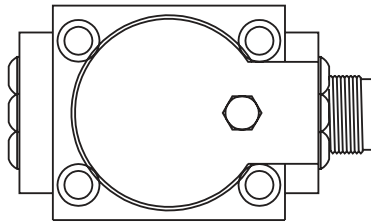
Option D



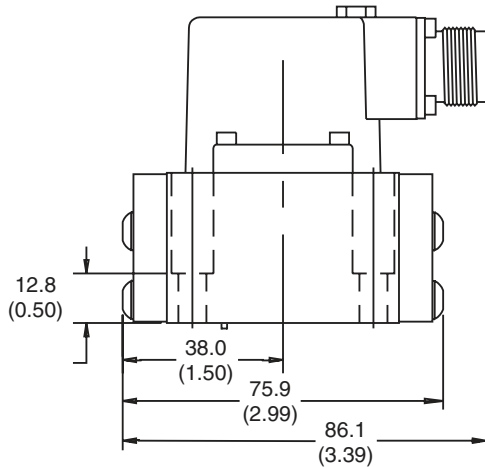
Polarity shown connects flow from P to C2 port.



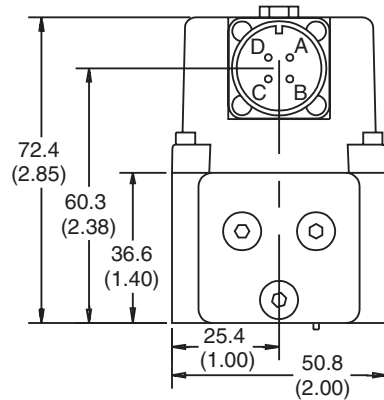
Inch equivalents for millimeter dimensions are shown in (**)



C

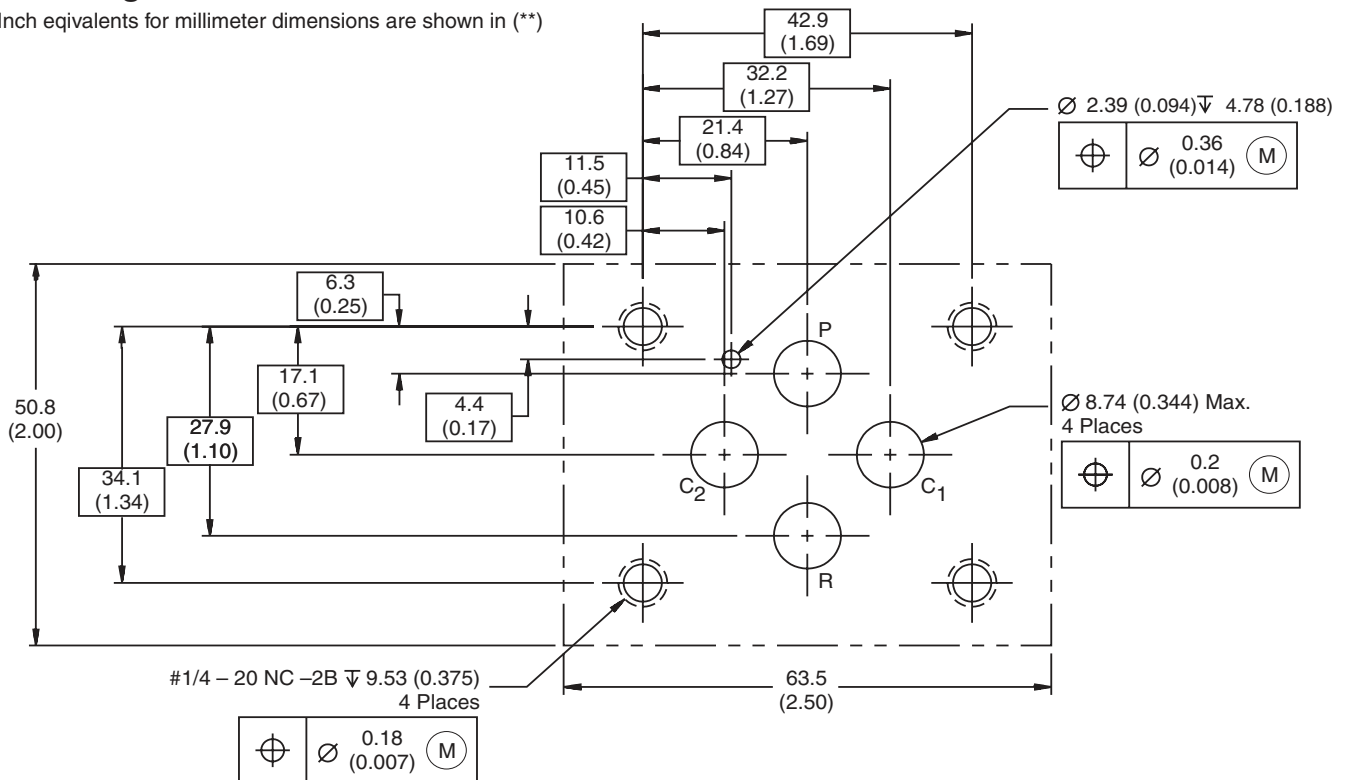


Connector over port C1



Mounting Interface

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

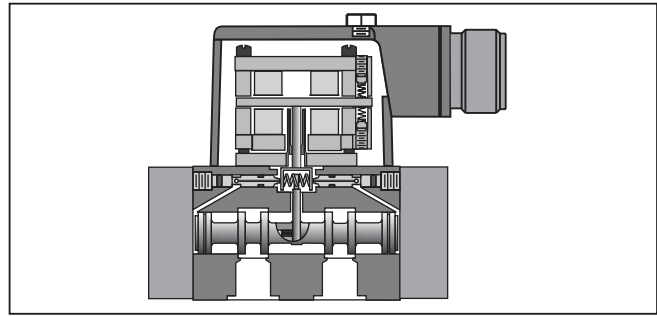
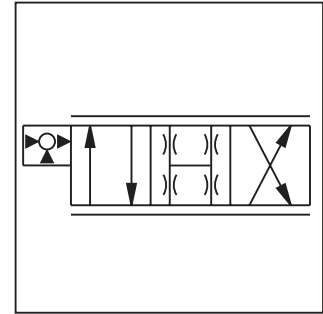
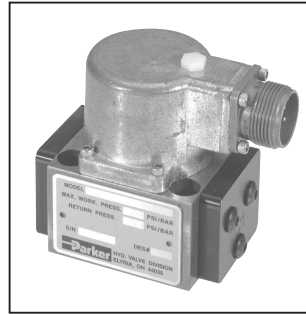


General Description

Series DY10 are two stage, 4-way, flapper and nozzle style servovalves. The DY10 is a higher flow version of the DY05. The unique rigid pin feedback design avoids ball glitch problems, which can occur in other types of servovalves. These valves are 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.
- Versatile 21.59 mm (0.850 in.) port circle, can mount to standard 19.81 mm (0.780 in.) and 23.62 mm (0.930 in.) port circle patterns.
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 28 and 38 LPM (7.5 and 10 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.57 – 1.1 LPM (0.15 – 0.3 GPM) | Step Response | 10 – 90%, < 13 ms |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 100 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |

DY10

Series

Material Options

Coils

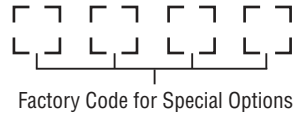
Wiring

Seal

Operating Pressure

Flows

Special Options



Factory Code for Special Options

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

* Material selection does not affect operating pressure.

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

| Code | Description |
|------|------------------|
| 7.5 | 28 LPM (7.5 GPM) |
| 10 | 38 LPM (10 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 |
|------|--------------------|
| N | Nitrile (standard) |
| V | Fluorocarbon |
| E * | EPR |
| Z * | Special (specify) |

* Consult factory for delivery

Weight: 1.0 kg (2.1 lbs.)

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

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: 11-0500

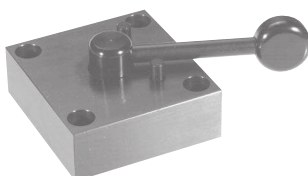
Subplate: 55-0100-8S SAE-8 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

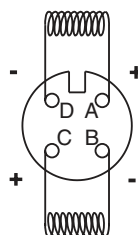
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



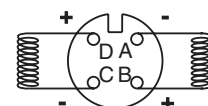
Flushing valve is rated for 3000 psi operation.

Wiring Option C (Standard)



Dyval and Pegasus standard.

Wiring Option D



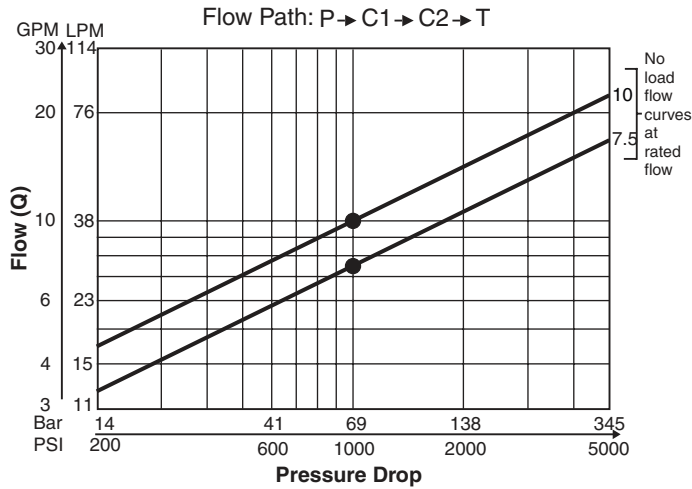
Moog, Atchley and Vickers standard.

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

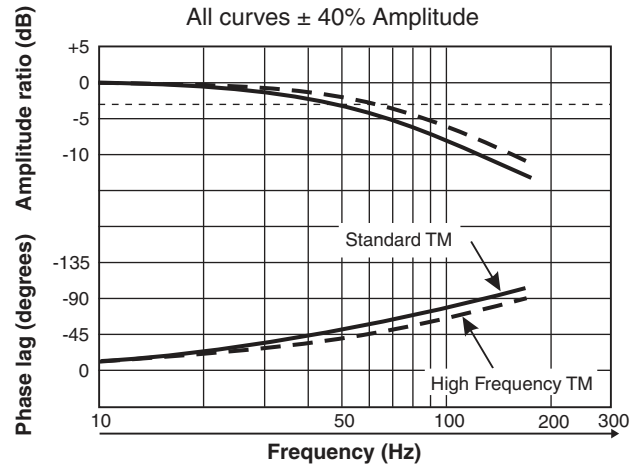
Performance Curves

Frequency Response

DY10 Flow vs. Pressure Drop
 at 100% command



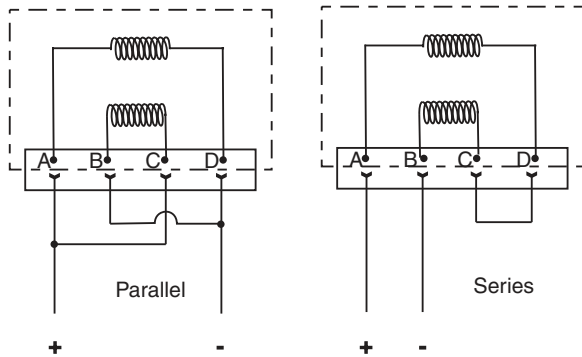
DY10 at 3000 PSI



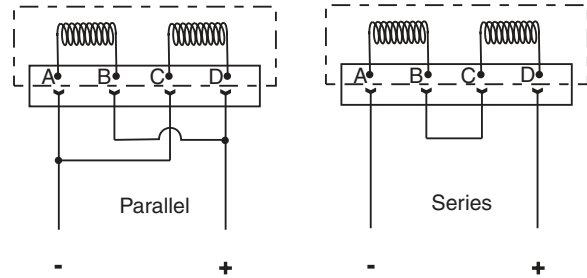
Installation Wiring Options

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.

Option C



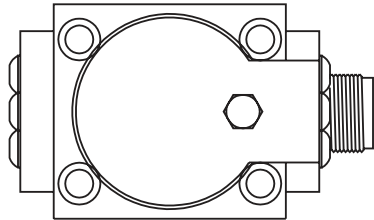
Option D



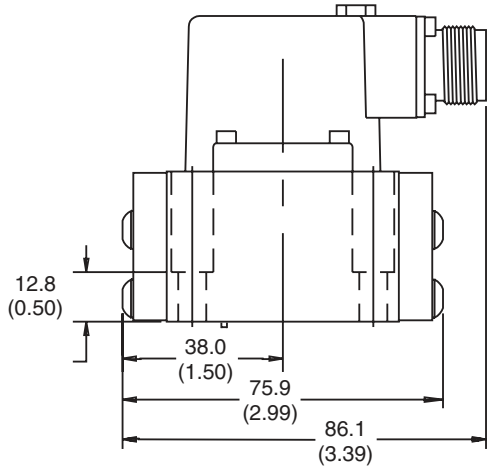
Polarity shown connects flow from P to C2 port.



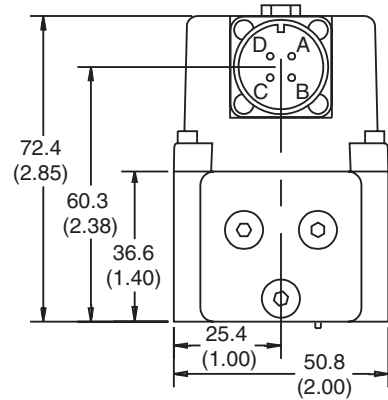
Inch equivalents for millimeter dimensions are shown in (**)



C

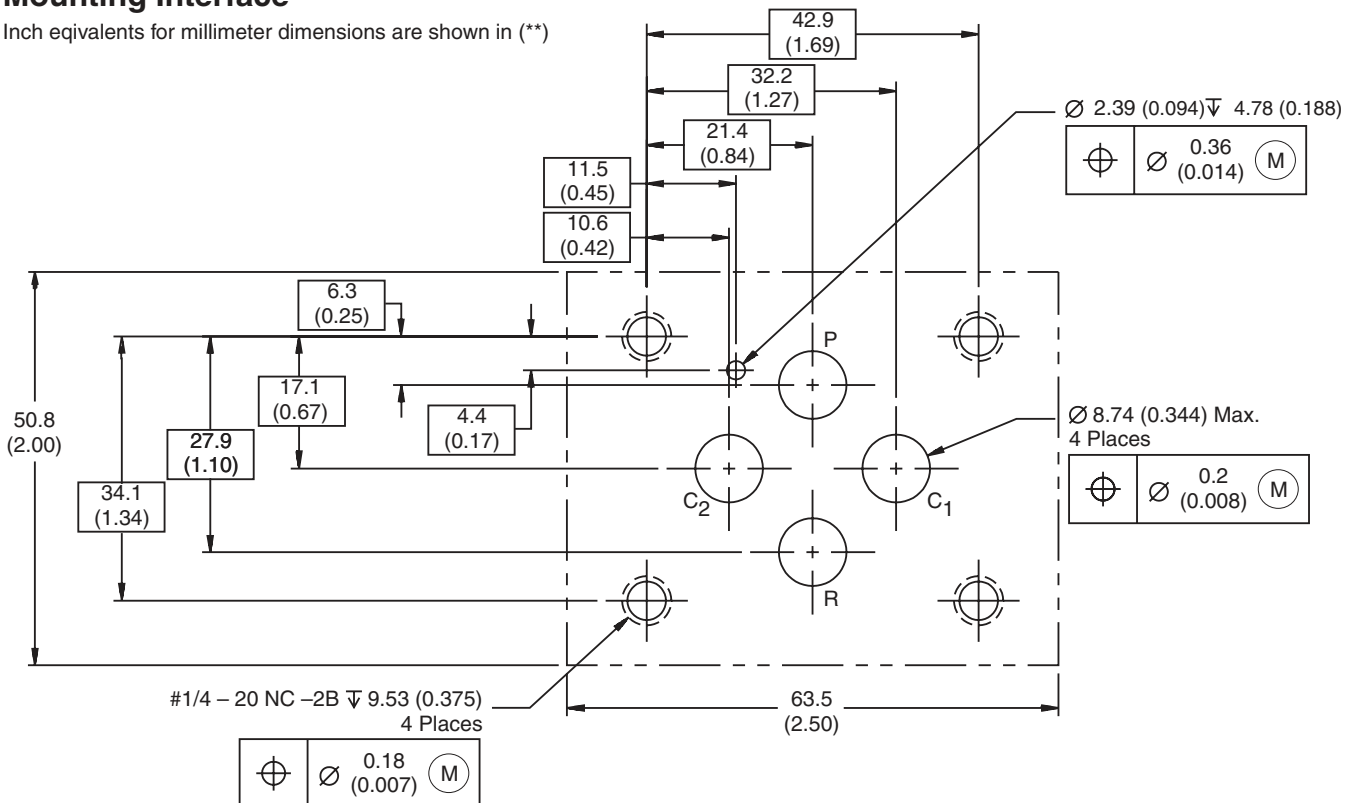


Connector over port C1



Mounting Interface

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

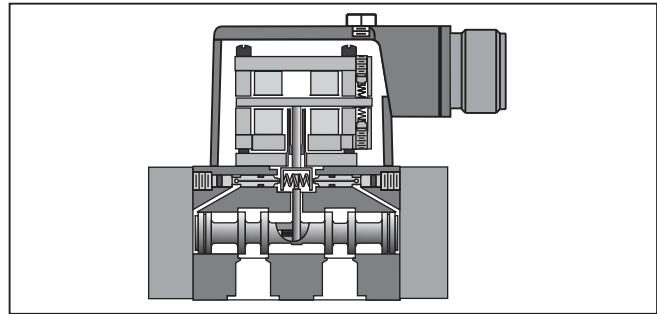
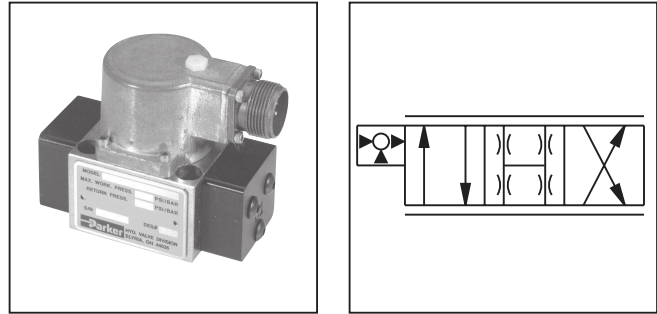


General Description

Series DY12 are two stage, 4-way, flapper and nozzle style servovalves. They have the same port pattern and body as the DY10 valve, but have a longer spool stroke for higher flow. The unique rigid pin feedback design avoids ball glitch problems, which can occur in other types of servovalves. These valves are 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.
- Versatile 21.59 mm (0.850 in.) port circle, can mount to standard 19.81 mm (0.780 in.) and 23.62 mm (0.937 in.) port circle patterns.
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 47 and 57 LPM (12.5 and 15 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.57 – 1.1 LPM (0.15 – 0.3 GPM) | Step Response | 10 – 90%, < 13 ms |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 100 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |

DY12

Series

Material Options

Coils

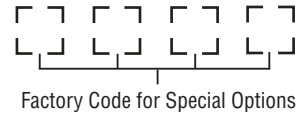
Wiring

Seal

Operating Pressure

Flows

Special Options



Factory Code for Special Options

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

* Material selection does not affect operating pressure.

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

| Code | Description |
|------|-------------------|
| 12.5 | 47 LPM (12.5 GPM) |
| 15 | 57 LPM (15 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: 1.0 kg (2.1 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: 11-0500

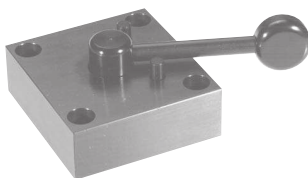
Subplate: 55-0100-8S SAE-8 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

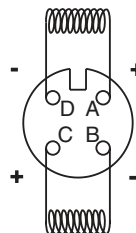
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



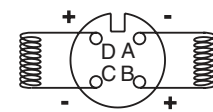
Flushing valve is rated for 3000 psi operation.

Wiring Option C (Standard)



Dyval and Pegasus standard.

Wiring Option D (Standard)

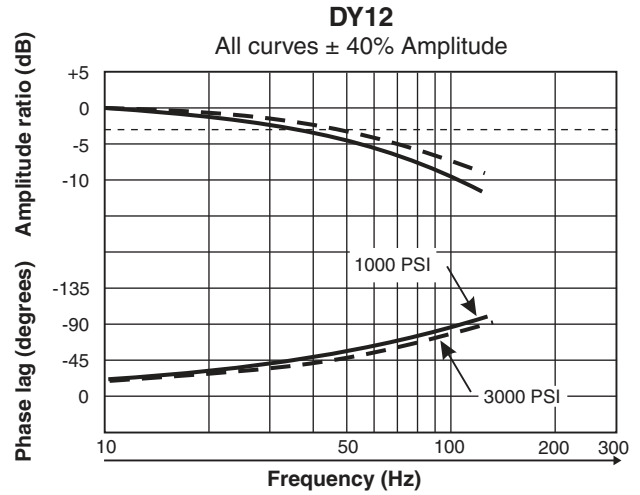
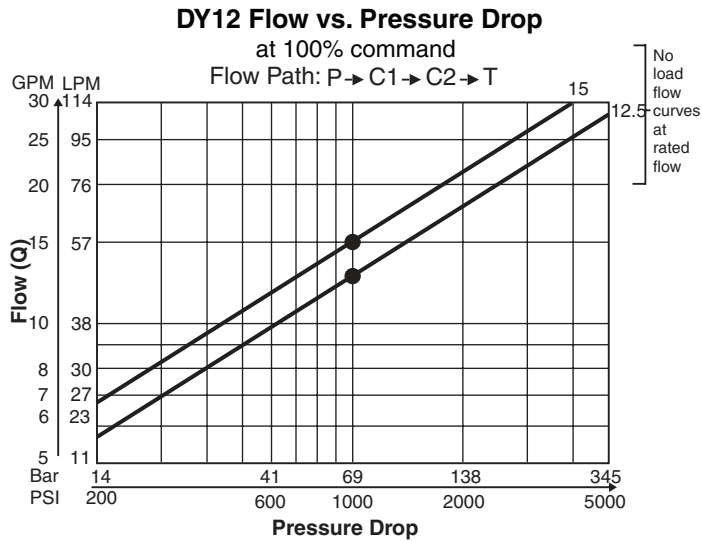


Moog, Atchley and Vickers standard.

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

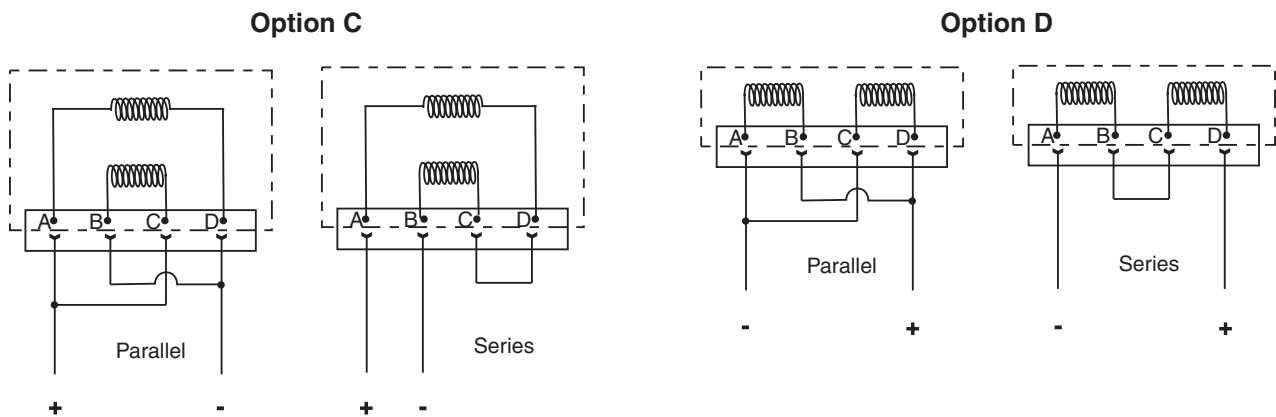
Performance Curves

Frequency Response



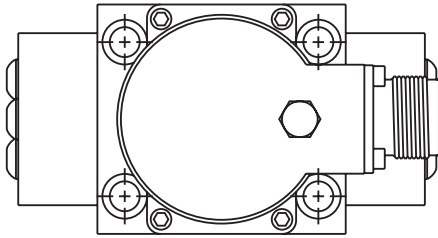
Installation Wiring Options

This servovalve has two coils. This illustration shows the internal wiring configurations for these valves. 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 illustration below and to the mounting pattern for this valve to insure proper control phasing.

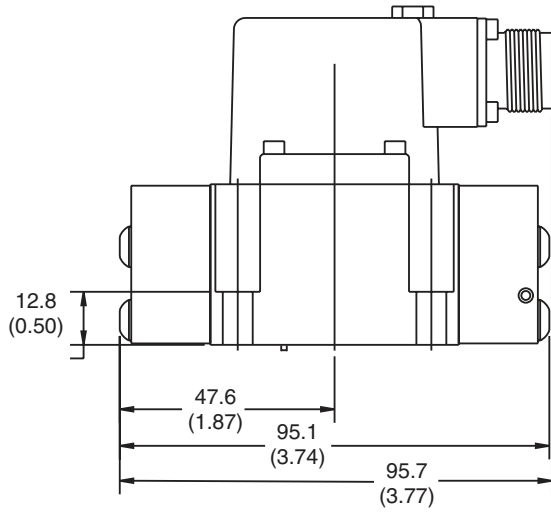


Polarity shown connects flow from P to C2 port.

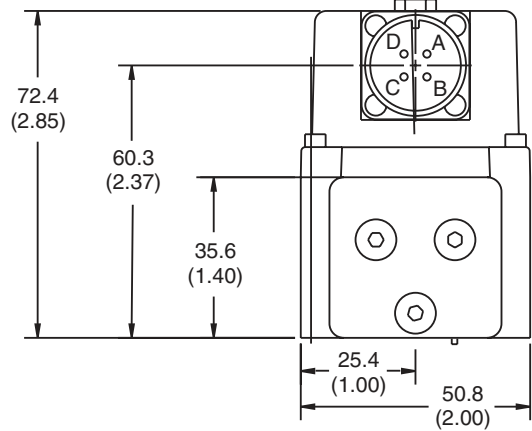
Inch equivalents for millimeter dimensions are shown in (**)



C

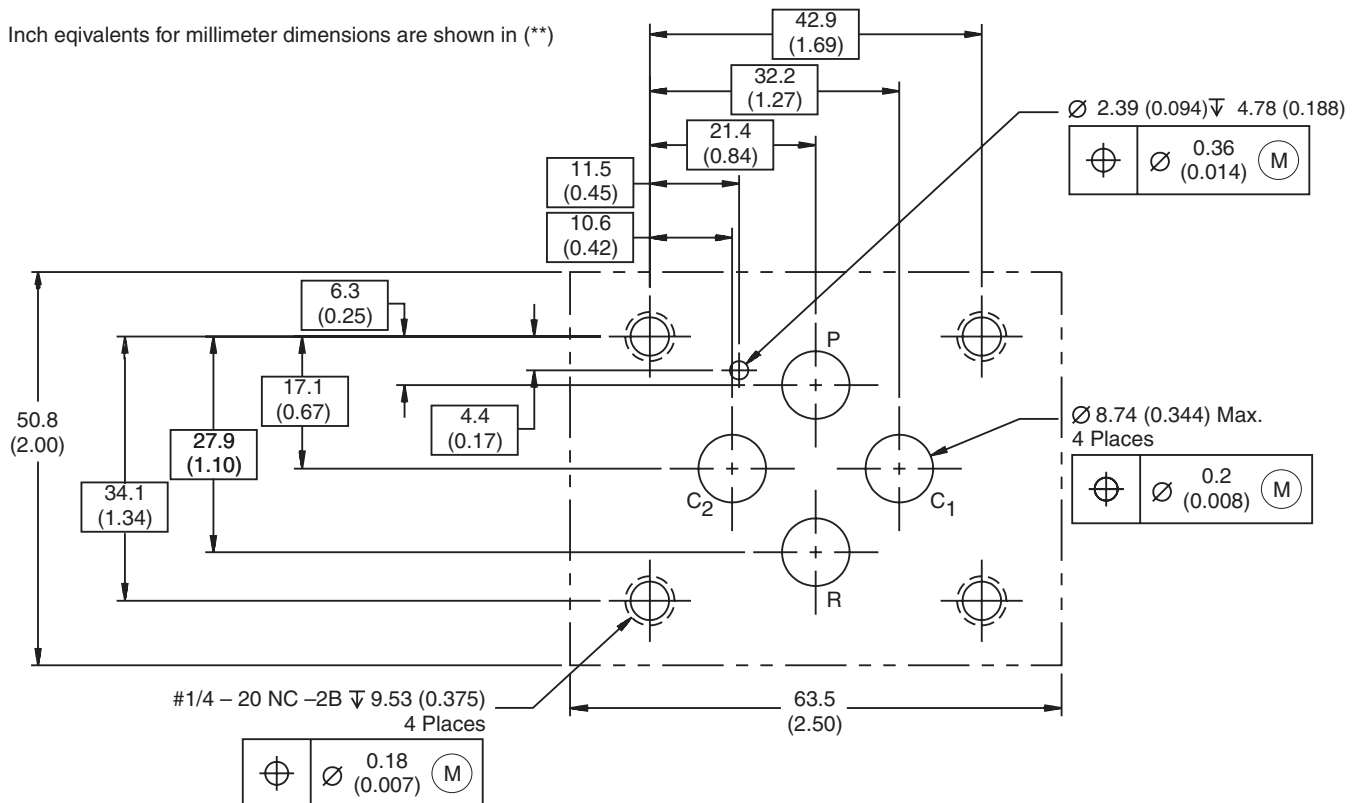


Connector over C1 port



Mounting Interface

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

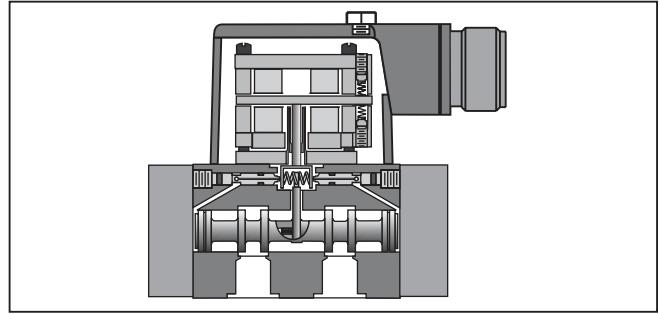
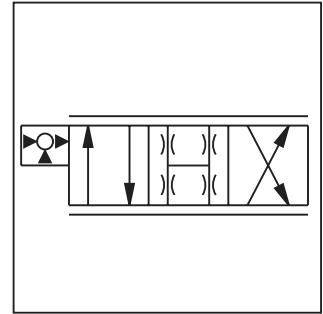
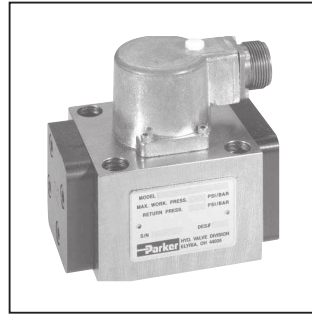


General Description

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). (1 in. port circle)
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 57, 75 and 95 LPM (15, 20 and 25 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.95 – 1.7 LPM (0.25 – 0.45 GPM) | Step Response | 10 – 90%, < 18 ms < 18 ms up to 75 LPM (20 GPM) < 20 ms up to 95 LPM (25 GPM) |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 45 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |



DY15

Series

Material Options

Coils

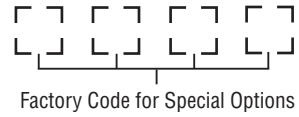
Wiring

Seal

Operating Pressure

Flows

Special Options



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

* Material selection does not affect operating pressure

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

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

| 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 |
|------|--------------------|
| A | 210 Bar (3000 PSI) |
| B | 350 Bar (5000 PSI) |
| Z | Special (specify) |

Operating pressure is independent of material selection.

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

* Consult factory for delivery

Weight: 1.8 kg (3.9 lbs.)

| 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) | |

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

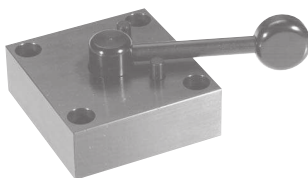
Subplate: 55-0300-2 SAE-16 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

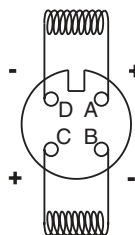
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



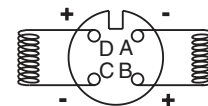
Flushing valve is rated for 3000 psi operation.

Wiring Option C (Standard)



Dyval and Pegasus standard.

Wiring Option D

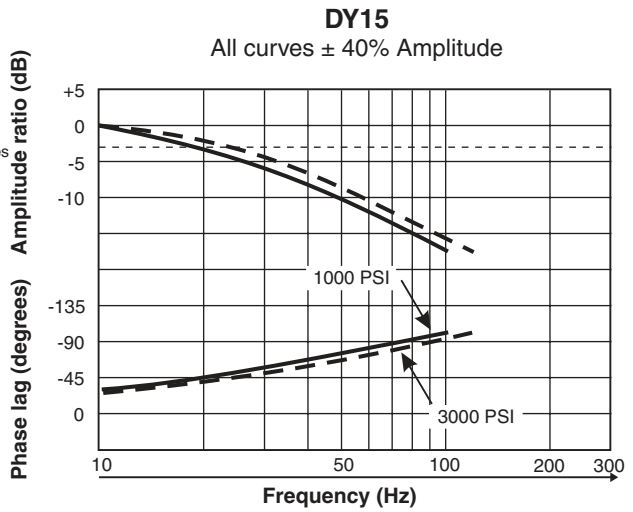
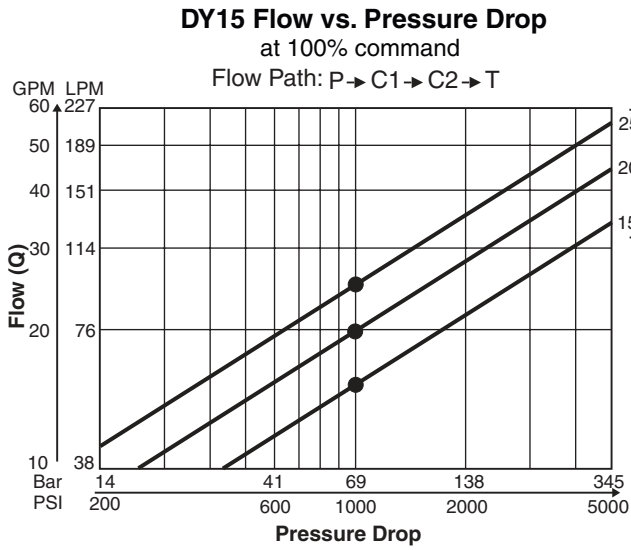


Moog, Atchley and Vickers standard.

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

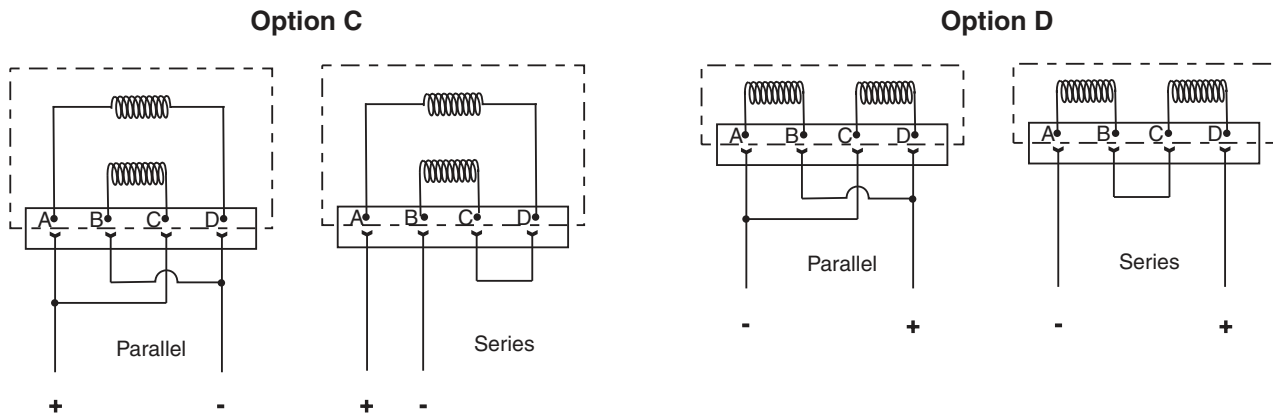
Performance Curves

Frequency Response



Installation Wiring Options

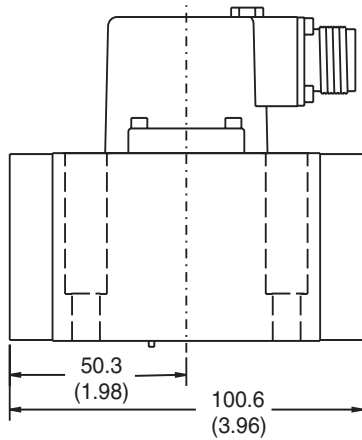
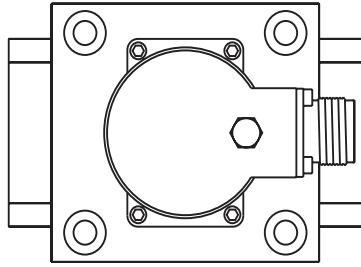
This servovalve has two coils. This illustration shows the internal wiring configurations for options C and D. When connecting the valve to a drive amplifier, the user's external wiring may put the coils either in parallel or in series as needed. Refer to the illustrations below and to the mounting pattern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



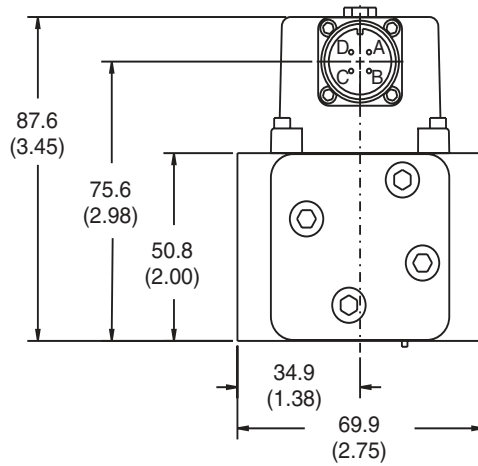
Polarity shown connects flow from P to C2 port.



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

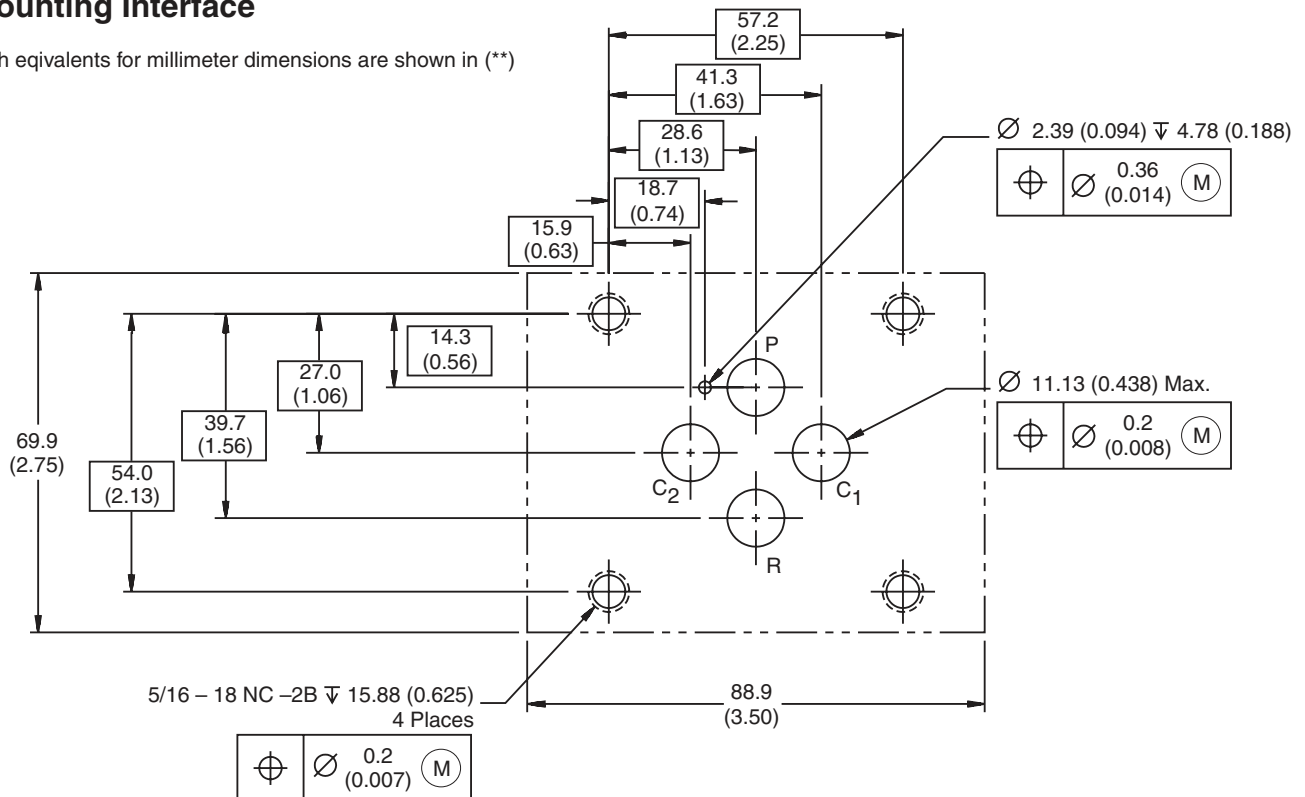


Connector over port C1



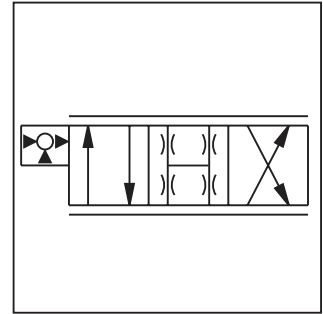
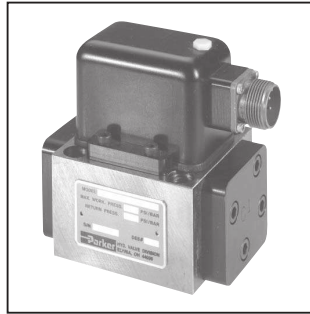
Mounting Interface

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



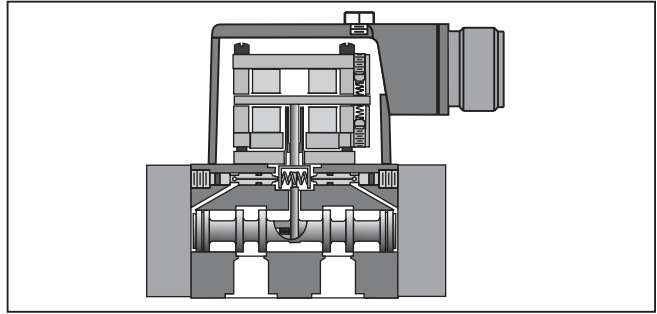
General Description

Series DY25 are two stage, 4-way, flapper and nozzle style servovalves. They have the same port pattern and body dimensions as the DY15, but use a higher force torque motor pilot. These valves are 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, and 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). (1 in. port circle)
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|--|
| Flow Rating @ 70 Bar (1000 PSID) | 57 and 75 LPM (25 and 30 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 0.95 – 1.7 LPM (0.25 – 0.45 GPM) | Step Response | 10 – 90%, < 18 ms @ 95 LPM (25 GPM) < 20 ms @ 114 LPM (30 GPM) |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 35 Hz (See Performance Curves) | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |

DY25

Series

Material Options

Coils

Wiring

Seal

Operating Pressure

Flows

Special Options

Factory Code for Special Options

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

* Material selection does not affect operating pressure

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

| Code | Description |
|------|------------------|
| 25 | 95 LPM (25 GPM) |
| 30 | 114 LPM (30 GPM) |

| 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 |
| R | 750 ohm | 30 mA | 15 mA |
| Z | Special (specify) | | |

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

Operating pressure is independent of material selection.

| 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: 1.9 kg (4.2 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

Accessories

Cable with Mating Connector: EHC154S

Mating Connector: MS3106E-14S-2S

Bolt Kit: Included with valve

Flushing Valve: 11-0600

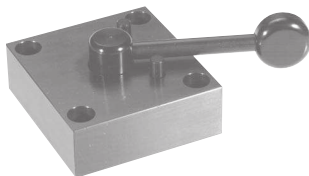
Subplate: 55-0300-2 SAE-16 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

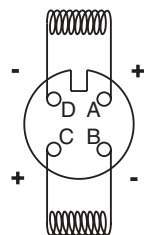
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



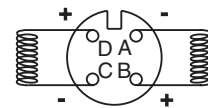
Flushing valve is rated for 3000 psi operation.

Wiring Option C (Standard)



Dyval and Pegasus standard.

Wiring Option D

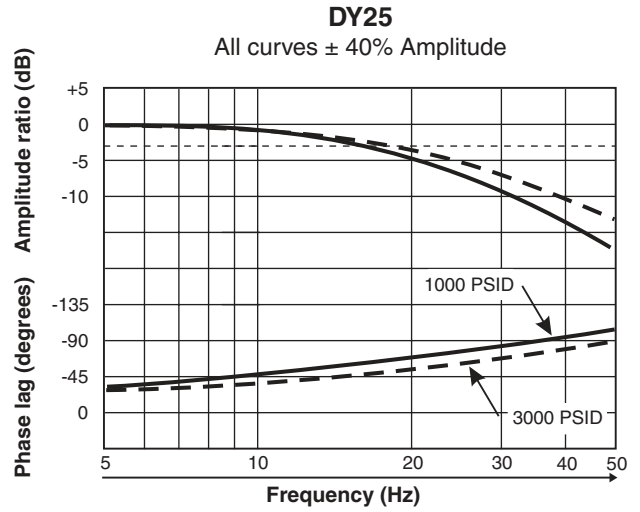
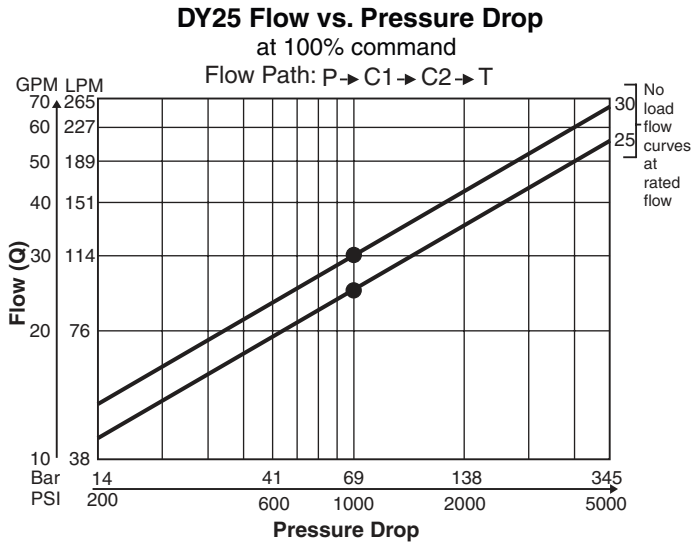


Moog, Atchley and Vickers standard.

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

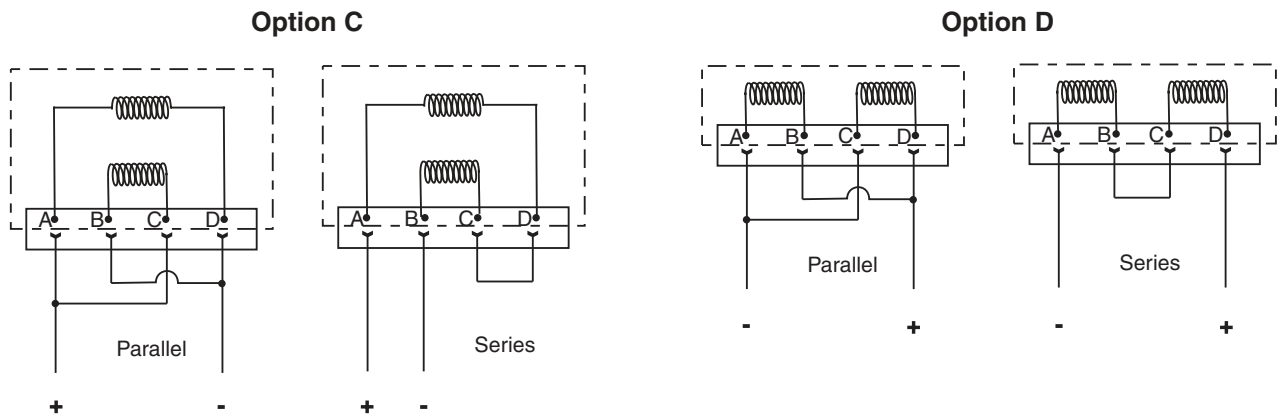
Performance Curves

Frequency Response



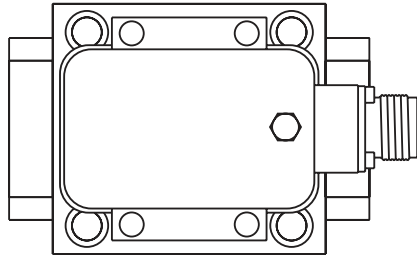
Installation Wiring Options

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.

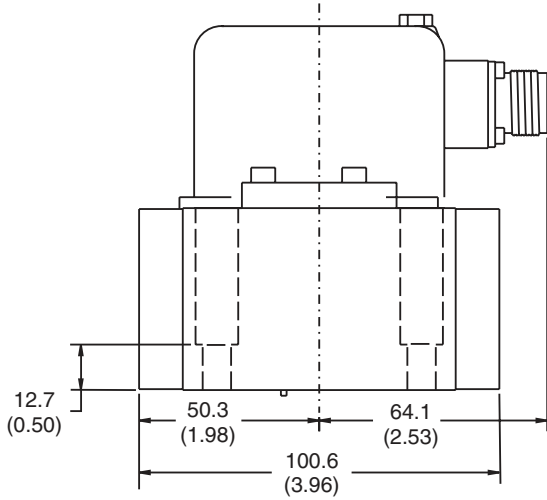


Polarity shown connects flow from P to C2 port.

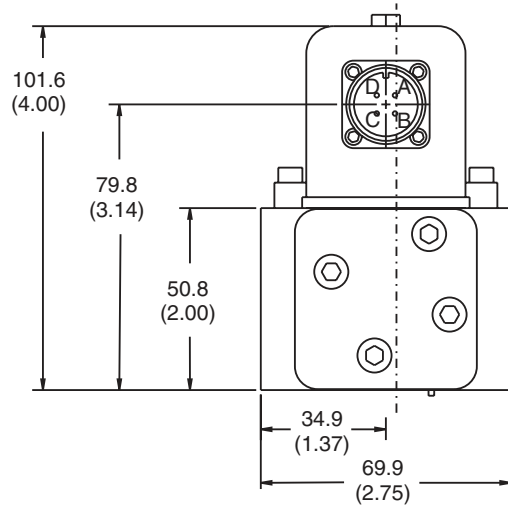
Inch equivalents for millimeter dimensions are shown in (**)



C

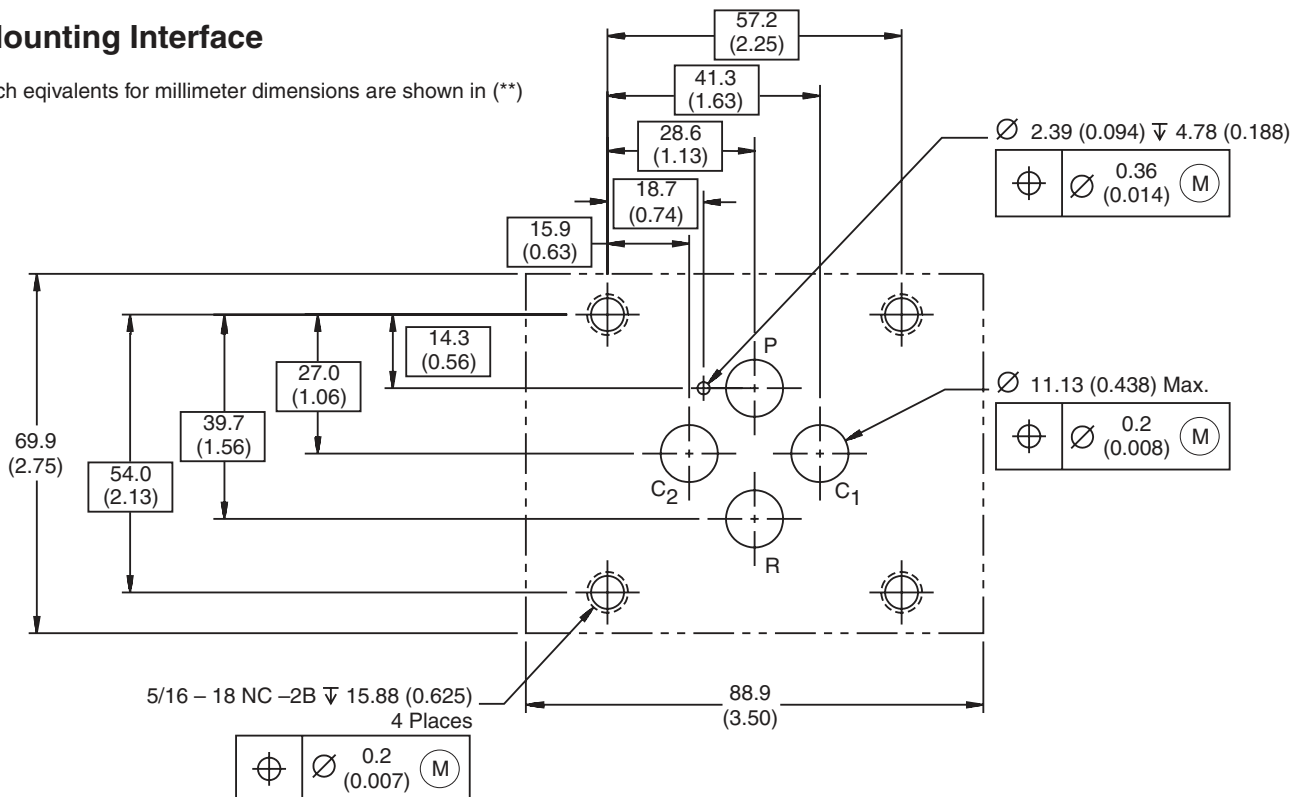


Connector over C1 port



Mounting Interface

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

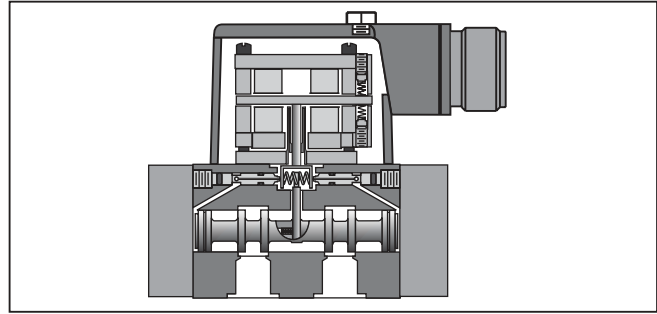
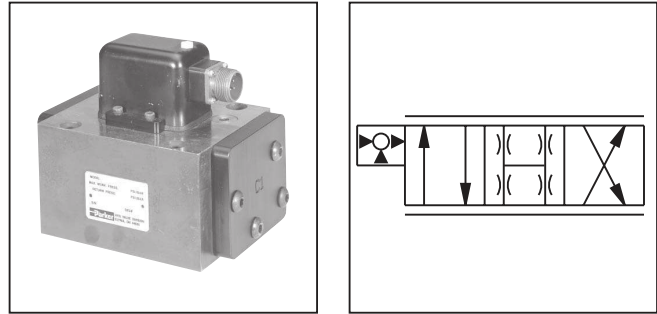


General Description

Series DY45 are two stage, 4-way, flapper and nozzle style servo valves. These valves are 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, and 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 mounting pattern). (1.8" port circle)
- Survives high tank port pressures.



Specifications

| | | | |
|--|---|---|---|
| Flow Rating @ 70 Bar (1000 PSID) | 150, 190 and 225 LPM (40, 50 and 60 GPM) | Null Shift with temperature with pressure | ≤ 2% per 55°C (100°F) ≤ 2% per 70 Bar (1000 PSI) |
| Supply Pressure | 10 – 210 Bar (145 – 3000 PSI) opt. 350 Bar (5000 PSI) | Pressure Gain % change in pressure per 1% change in input command | 30% minimum, 70% maximum |
| Leakage Flow @ 70 Bar (1000 PSID) | 1.3 – 2.7 LPM (0.35 – 0.70 GPM) | Step Response | 10 – 90%, < 25 ms |
| Tank Port Pressure | 210 Bar (3000 PSI) Max. < 10 Bar (145 PSI) for best performance | Fluid | Mineral Oil, 60 – 225 SSU 1000 SSU maximum |
| Input Command | ±50 mA std. | Operating Temperature | -1°C to +82°C (+30°F to +180°F) |
| Frequency Response @ 90° phase shift | > 30 Hz at ±10% amplitude | Protection Class | NEMA 4, IP65 |
| Non-Linearity | ≤ 10% | Filtration | ISO 4406 15/12 or better |
| Threshold | ≤ 0.5% | | |



DY45

Series

Material Options

Coils

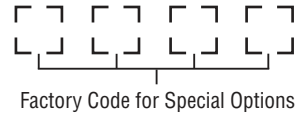
Wiring

Seal

Operating Pressure

Flows

Special Options



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

* Material selection does not affect operating pressure

| 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 |
| R | 750 ohm | 30 mA | 15 mA |
| Z | Special (specify) | | |

| 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) | |

| Code | Description |
|------|--------------------------|
| Omit | Standard |
| D | (Specify) See list below |

| Code | Description |
|------|------------------|
| 40 | 150 LPM (40 GPM) |
| 50 | 190 LPM (50 GPM) |
| 60 | 225 LPM (60 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 |
|------|--------------------|
| N | Nitrile (standard) |
| V | Fluorocarbon |
| E* | EPR |
| Z* | Special (specify) |

* Consult factory for delivery

Weight: .3 kg (16.0 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

Accessories

Cable with Mating Connector: EHC154S

Mating Connector: MS3106E-14S-2S

Bolt Kit: Included with valve

Flushing Valve: 11-0700

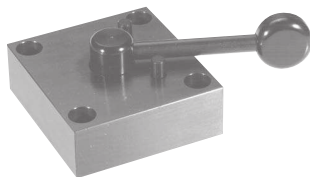
Subplate: 55-0200-2 SAE-24 Side ports

Null Adjust Tool: 6522A13

Electronic Drivers: 23-7030, BD90*, BD101*

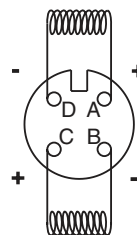
When used in conjunction with Series BD90 and BD101 servo amplifiers or a motion controller, Series BD valves will provide accurate control of rotary and linear actuators.

* For output currents >15 mA



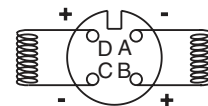
Flushing valve is rated for 3000 psi operation.

Wiring Option C (Standard)



Dyval and Pegasus standard.

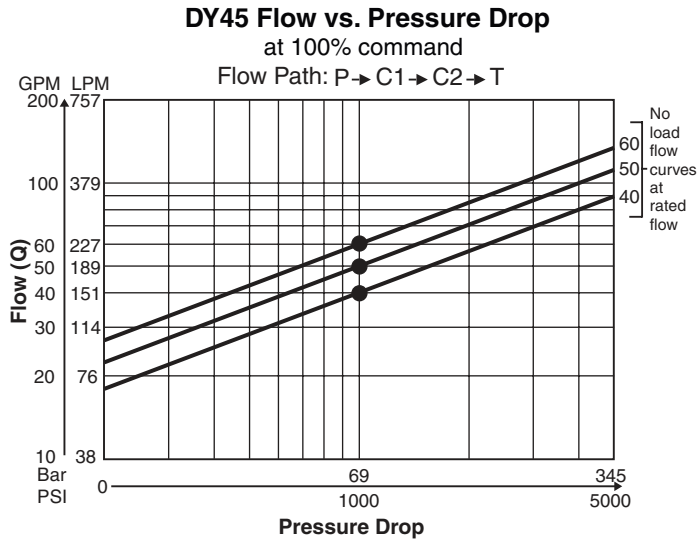
Wiring Option D



Moog, Atchley and Vickers standard.

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

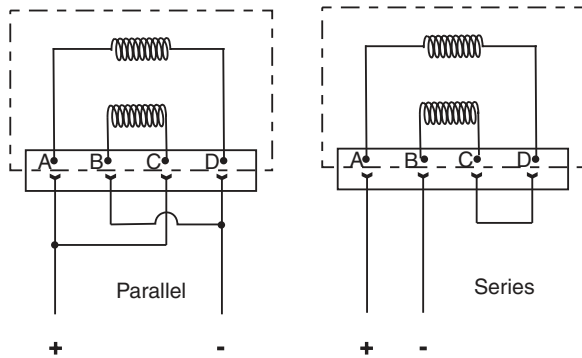
Performance Curves



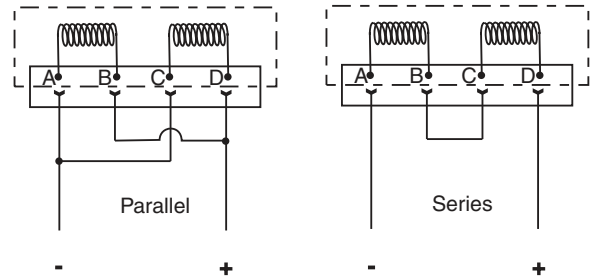
Installation Wiring Options

This servo valve 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.

Option C

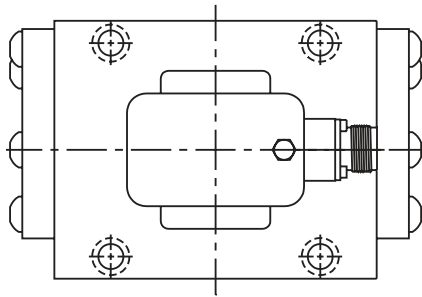


Option D

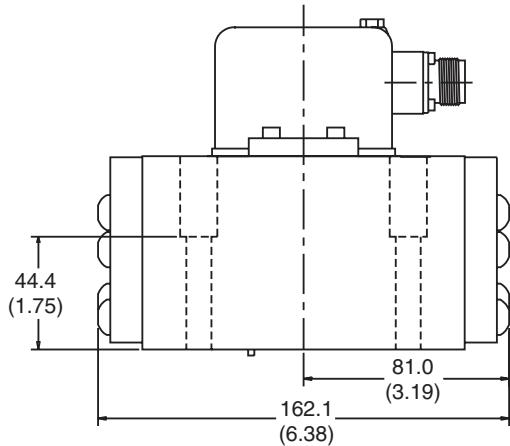


Polarity shown connects flow from P to C2 port.

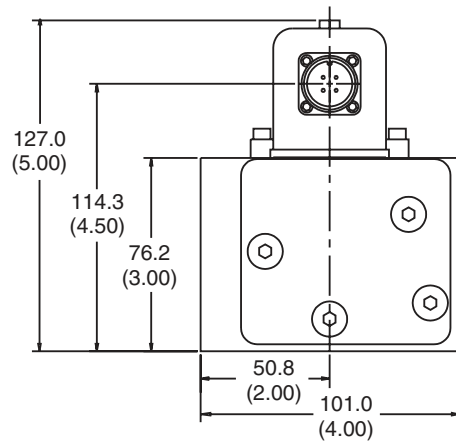
Inch equivalents for millimeter dimensions are shown in (**)



C



Connector over C1 port



Mounting Interface

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

