



PATRIOT

PROPORTIONAL DIRECTIONAL CONTROL VALVES

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Features

- Continuous-duty rated solenoids
- Efficient wet-armature construction
- Cartridges are voltage interchangeable
- Optional waterproof E-Coils rated up to IP69K
- Industry common cavity
- Continuous-duty rated coils
- Manual override options

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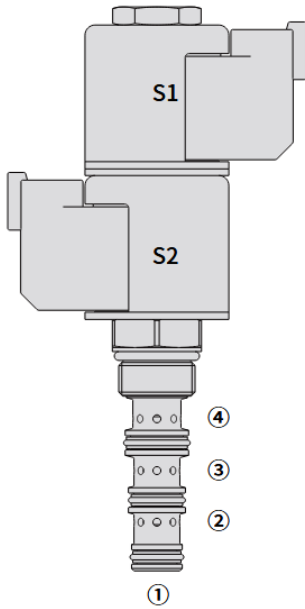
PHD08 Technical Specification

Valve	47C	47D	47DL
Max Pressure	240 Bar		
Peak Flow	4 GPM	3 GPM	2 GPM
Internal Leakage	Per side \leq 164mL/min @ 207 bar		328mL/min @207
Hysteresis	Less than 7%		
Max Control Current	1.0 A (12V)		
Dither Frequency	90-100 Hz		100 Hz
Coil Duty Rating	Standard coils and E-coils: Continuous up to 115% of nominal voltage		
Cavity	VC08-4		
Fluid	Mineral-based or synthetics with lubricating properties		
Viscosity Range	7.4 to 420 mm ² /s		
Temperature Range	-54 to 107°C (Polyurethane seals)		
	-40 to 100°C (Buna n seals)		
	-26 to 204°C (Flurocarbon seals)		
Maximum Contamination Level	The minimum pollution level is ISO4406 level 18/16/13, and level 15/13/11 is recommended to prolong the service life		





PHD08 Operation



PHD08-47C

When de-energized, the PHDD08-47D blocks flow to 3 , while allowing flow from 2 to 1 , or from 4 to 1.

When coil #1(S1) is energized flow is allowed from 3 to 4 and from 2 to 1.

Whencoil #2(S2) is energized flow is allowed from 3 to 2 and from 4 to 1.

While port 1 may be fully pressurized, it is not intended for use as the valve's inlet.

In circuits where work port flows are unequal due to cylinder ratios, the higher return flow should be directed to port 2.

PHD08-47D & 47DL

When de-energized, the PHDD08-47D blocks flow to 3 , while allowing flow from 2 to 1 , or from 4 to 1.

When coil #1(S1) is energized flow is allowed from 3 to 4 and from 2 to 1.

Whencoil #2(S2) is energized flow is allowed from 3 to 2 and from 4 to 1.

While port 1 may be fully pressurized, it is not intended for use as the valve's inlet.

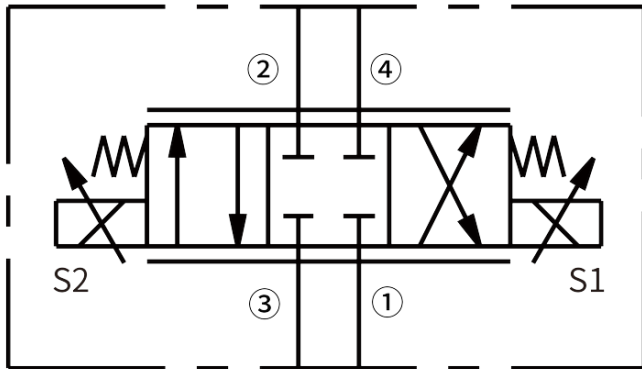
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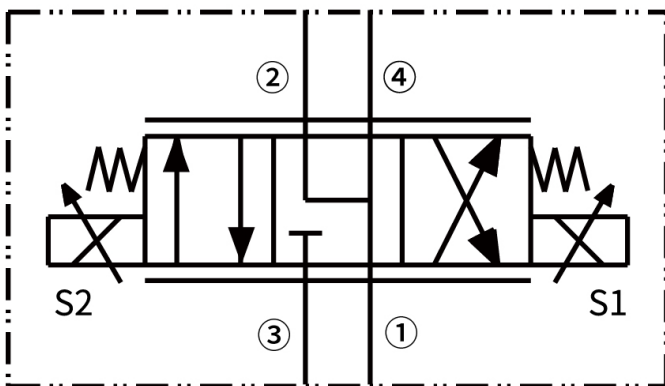
PHD08 Solenoid Options

47C



A proportional solenoid-operated, 4-way, 3-position, direct-acting, spool-type, closed center, screw-in hydraulic cartridge valve.

47D - 47DL

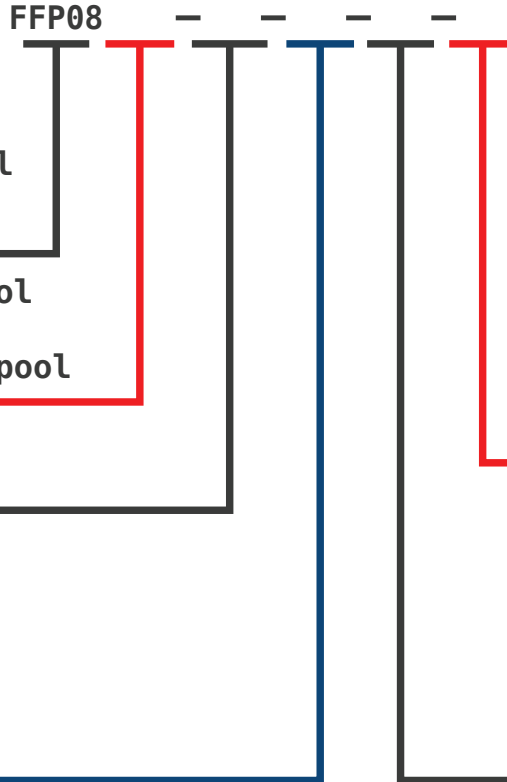


A proportional solenoid-operated, 4-way, 3-position, spool-type, direct acting motor spool, screw-in hydraulic cartridge valve.





PHD08 Order Code



Proportional Directional Control Valve

- 47C - Closed center spool
- 47D - Motor spool
- 47DL - Low flow motor spool

0 - Cartridge only

Seals

- P - Polyurethane
- N - Buna
- V - Fluorocarbon

Termination E Coils

- ER - Deutsch DT04-2P
- EL - Lead wires (2)

Termination D Coils

- DS - Dual spades
- DG - Din 43650
- DL - Lead wires (2)

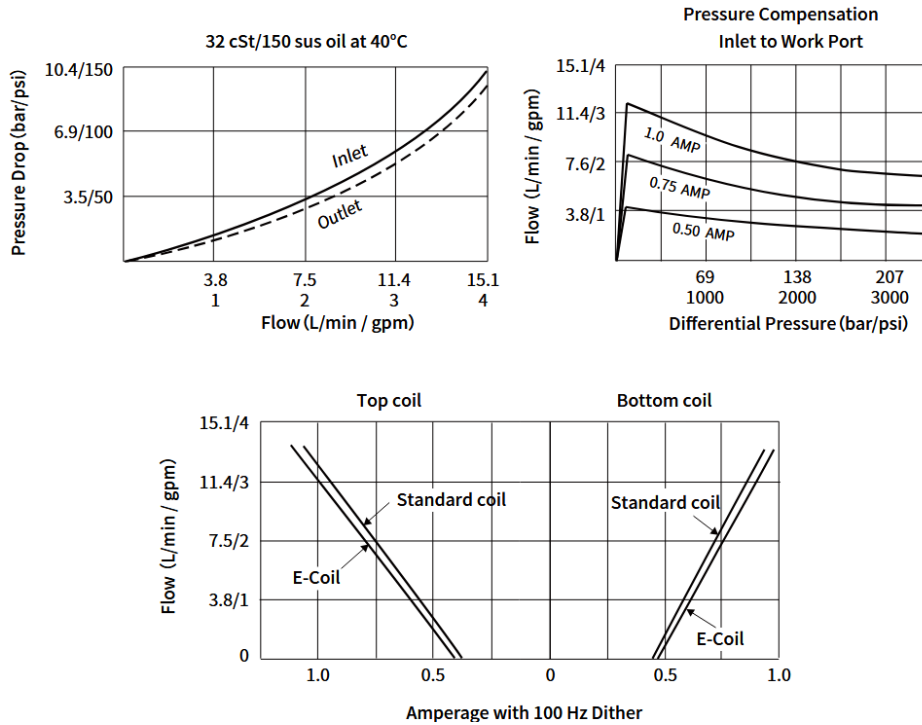
Voltage Coil

- 00 - No coil
- 10 - 10VDC
- 12 - 12VDC
- 20 - 20VDC
- 24 - 24VDC

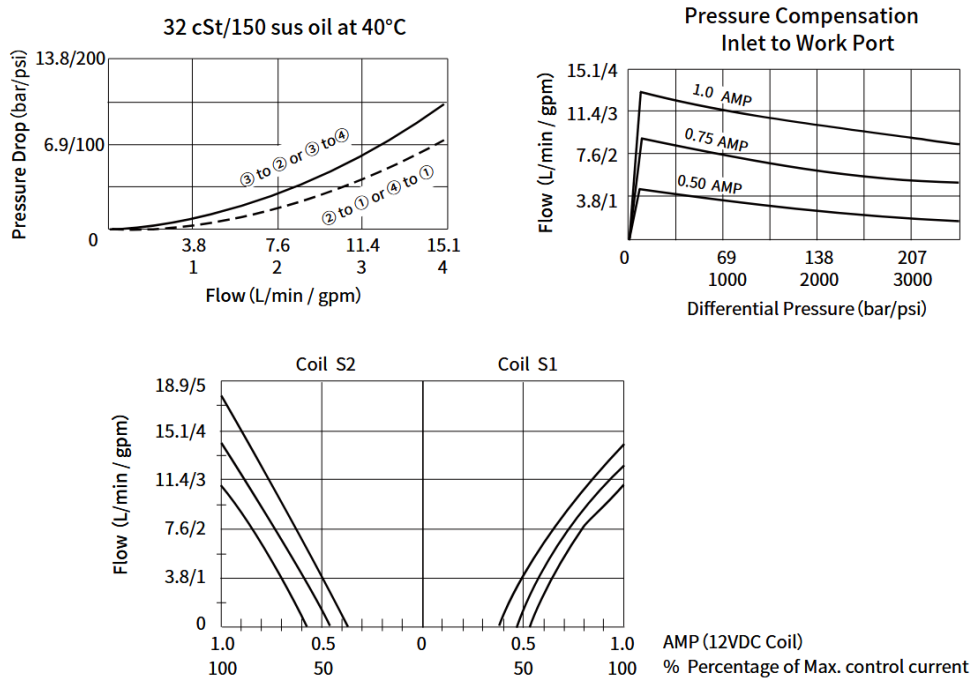




PHD08-47C Performance

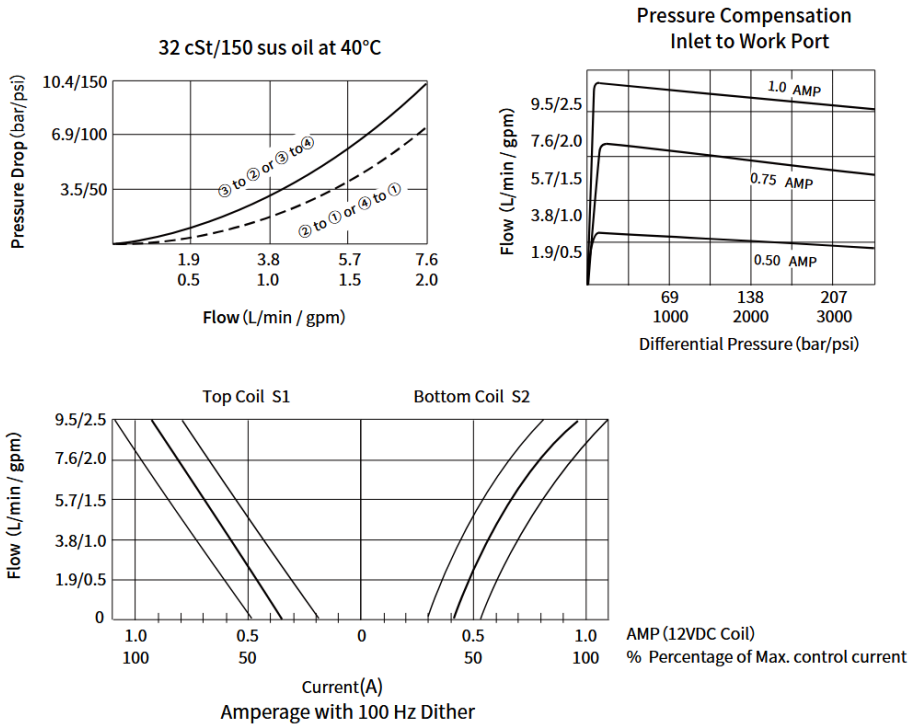


PHD08-47D Performance





PHD08-47DL Performance





PHD08 Dimensions

