

## 09 Series Cartridge Valves

### 09 Series Cartridge Valves: Proportional & On/Off Pilot Controls

09 Series cartridge valves are designed for proportional and on/off pilot control of clutches, brakes and directional control valves. The 09 Series is a hybrid product— combining 10 size cavity with an 08 size tube and coil. These valves are especially designed for applications requiring low pressure losses in the system.

The 09 series includes two spool type solenoid valves with a maximum flow of 20 and 21 l/min, respectively. The third valve in the trio is a proportional pressure reducing/relieving valve (25 l/min), which is perfect when transitioning your application from on/off control to more precise proportional pilot control.

*As Comatrol, a member of the Sauer-Danfoss Group, we engineer, manufacture and supply screw-in Cartridge Valves and Hydraulic Integrated Circuits (HIC) to market-leading quality levels. We work closely with our customers around the world to deliver optimal machine control solutions based on their specific needs.*



SV09-23-02

PPR09-POD

SV09-24-01

#### Features

##### PPR09-POD: Proportional Pressure Reducing / Relieving, Pilot Operated, Normally Open to Drain

- Precise proportional pilot control of clutches and directional control valves
- Normally open to drain means no actuator movement with zero current, which is ideal for these pilot control applications

##### SV09-23-02: 2-Position, 3-Way, Spool-Type Solenoid Valve

- On-off pilot control of single-acting cylinders, clutches, or brakes
- On-off pilot control of large directional spool valves

##### SV09-24-02: 2-Position, 4-Way, Spool-Type Solenoid Valve

- On-off control of dual clutch systems or pressure-assist brakes
- Low pressure bi-directional control of motors

##### 09 Series Hybrid Design: 10 Size Cavity & 08 Size Tube and Coil

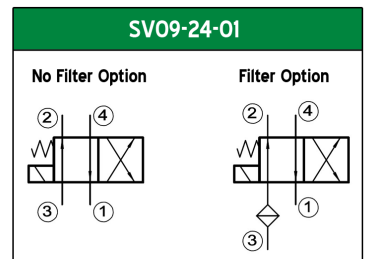
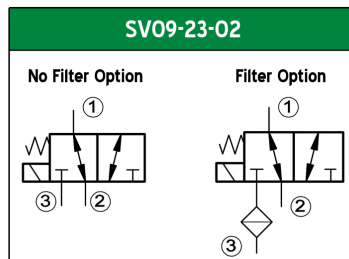
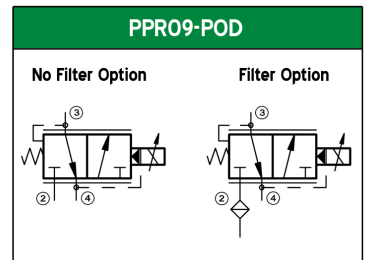
- 10 Size: Efficiency - high flow capability with minimal pressure drop
  - All three valves over 20 LPM @ 7 bar pressure drop
- 08 Size: Low wattage coil for energy savings, smaller coil for limited installation space
- Aligns product performance with customer value

##### Proven Product

- Over 500,000 valves in the field on Ag and construction equipment for transmission & brake control

##### Environmentally Robust Coils & Filter (Optional)

- Coils: For extreme environmental conditions – voltage extremes, high temperature, shock & vibration, chemicals, and/or water ingestion
- 500 micron filter available for the SV09's; 300 micron filter available for the PPR09-POD



Local Address:

**Technical Overview**

**Solenoid Valves**

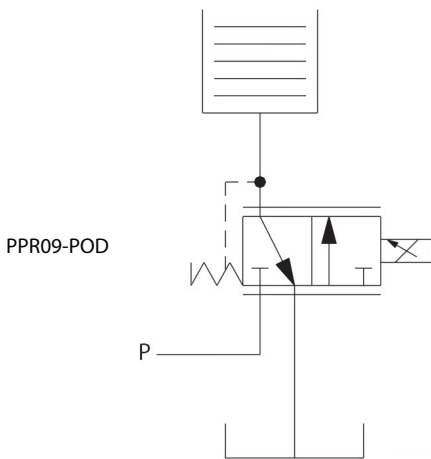
Valve	Cavity	Coil	Wattage	Pressure		Flow @ 7 bar		Leakage	Option
				bar	psi	LPM	GPM	ml/min	Screen
SV09-23-02	SDC10-3	M13 / R13	20 / 16	100	1,450	21	5.5	20	500 µm
SV09-24-01	SDC10-4	M13 / R13	20 / 16	100	1,450	20	5.3	75	500 µm

**Proportional Pressure Reducing  
 PPR09-POD**

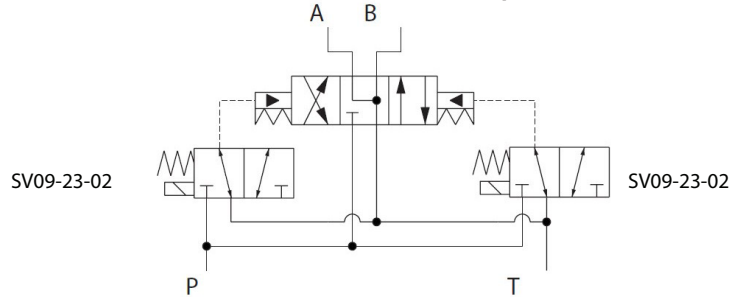
Cavity	Coil	Max Current	Max Inlet Pressure		Max Reduced Pressure		Flow @ 7 bar		Options	
			bar	psi	bar	psi	LPM	GPM	Reduced Pressure Settings	Screen
SDC10-4	M13 / R13	1.2 (12V)	50	725	25	363	25	6.6	20, 25 (bar)	300 µm

**Application Examples**

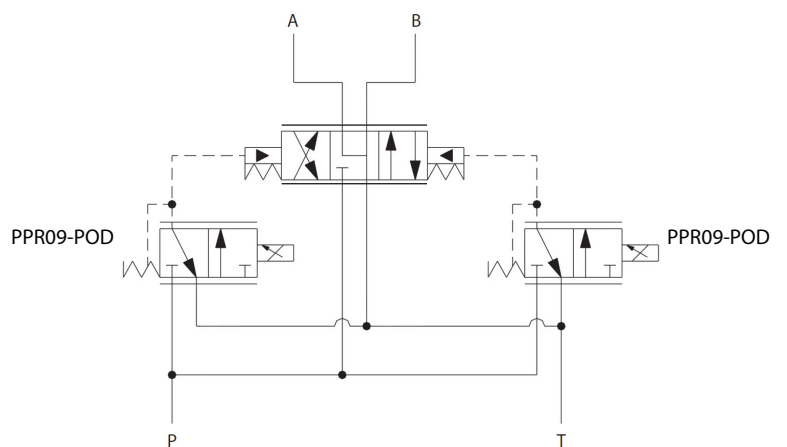
**Proportional Clutch Control**



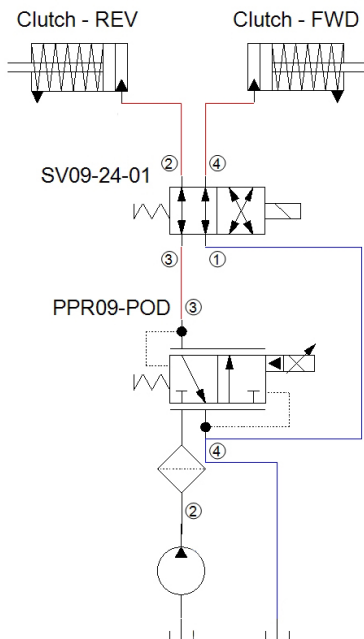
**On/Off Pilot Control for Directional Spool Valve**



**Proportional Pilot Control for Directional Spool Valve**



**Proportional Dual Clutch System**



**On/Off Pilot Control for Single Acting Cylinder, Clutch or Brake**

