



# Solenoid Valves Technical Information

## 2-Way Poppet

### SVP10-NCR



### OPERATION

This is a normally-closed, pilot-operated, poppet-type 10-size solenoid valve with free reverse flow. When de-energized, the valve acts as a check valve, allowing flow from port 1 to port 2, and blocking flow from port 2 to port 1. When energized, the valve's poppet is shifted and allows flow from port 2 to port 1, and from port 1 to port 2. This valve is available with an optional pull-type manual override.

### APPLICATIONS

This valve is designed for low leakage applications and can be used in a circuit with a single acting cylinder to control motion, provide load holding or as a general purpose diverter or dump valve. The SVP10-NCR can operate at an inlet pressure of 315 bar on port 2 for 250,000 cycles.



Shown with Standard Coil,  
Deutsch Connector

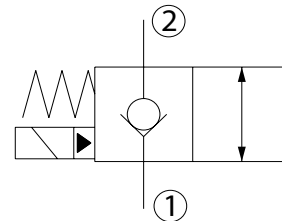
### SPECIFICATIONS

|                               |                              |
|-------------------------------|------------------------------|
| Rated pressure*               | 230 bar [3300 psi]**         |
| Rated flow at 7 bar [100 psi] | 80 l/min [21 US gal/min]     |
| Leakage                       | 6 drops/min @ Rated pressure |
| Weight                        | 0.43 kg [0.95 lb]            |
| Cavity                        | <b>SDC10-2</b>               |
| Standard Coil                 | <b>M16 26 Watt</b>           |

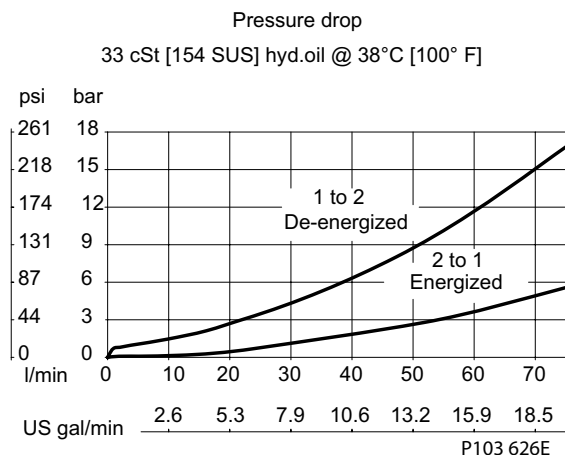
\* Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles).

\*\* See 315 bar pressure rating note on page 10.

### SCHEMATIC



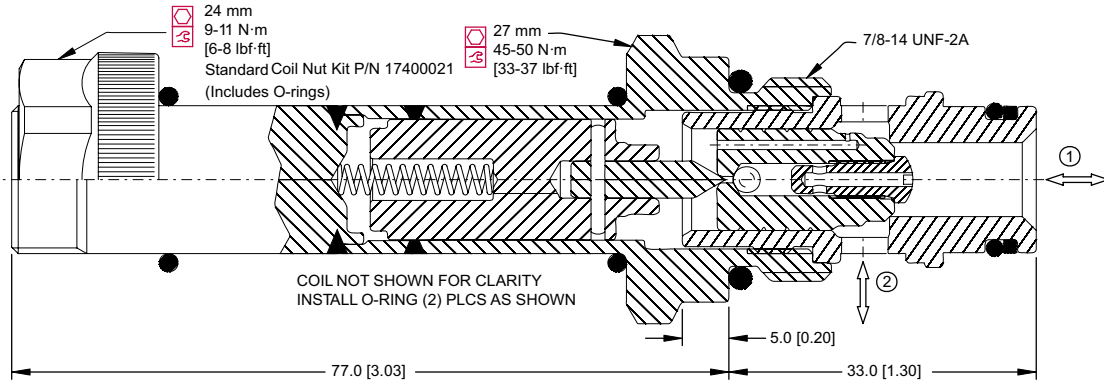
### PERFORMANCE CURVES



### DIMENSIONS

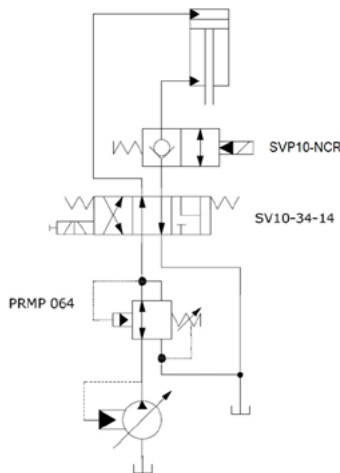
mm [in]

### Cross-sectional view

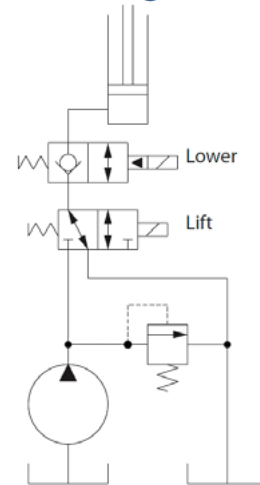


### EXAMPLE CIRCUITS

Height Control with Float Option



Lift, hold, & lower single acting cylinder



P103 102E

### ORDERING INFORMATION

## SVP10 - NCR - 12D - DE - M - B - F - 00

Solenoid Valve,  
Poppet Type, 10  
Size Cavity

NCR:  
Normally Closed, Free  
Reverse Flow, Pull Type

Filter:  
No Filter  
Filter 300 µm

| Code | Body and Ports | Body Nomenclature |
|------|----------------|-------------------|
| 00   | Cartridge Only | No Body           |
| 6S   | #6 SAE, AL     | CP10-2-6S         |
| 8S   | #8 SAE, AL     | CP10-2-8S         |
| S8S  | #8 SAE, Steel  | CP10-2-S8S        |
| DG3B | 3/8 BSP, AL    | SDC10-2-DG3B      |
| DG4B | 1/2 BSP, AL    | SDC10-2-DG4B      |
| S4B  | 1/2 BSP, Steel | CP10-2-S4B        |

| Seal Code | Material | Seal Kits |
|-----------|----------|-----------|
| B         | Buna-N   | 354000719 |
| V         | Viton    | 354000819 |

| Coil Voltage       | Standard Coil Code | Robust Coil Code |
|--------------------|--------------------|------------------|
| No Coil, with nut* | 00                 | R00              |
| 10 VDC             | 10D                | R10D             |
| 12 VDC             | 12D                | R12D             |
| 20 VDC             | 20D                | R20D             |
| 24 VDC             | 24D                | R24D             |
| 110 VAC**          | 110A               | -                |
| 220 VAC**          | 220A               | -                |

\* Standard coil – plastic nut and O-rings  
R-coil – steel nut P/N 173804910  
(no coil O-rings needed)

\*\* DIN only - external rectifier needed

| Coil Termination          | Standard Coil Code | IP Rating | Robust Coil Code | IP Rating |
|---------------------------|--------------------|-----------|------------------|-----------|
| No Coil                   | 00                 | -         | 00               | -         |
| Amp Junior                | AJ                 | IP67      | -                | -         |
| Amp Junior with Diode     | AJD                | IP67      | -                | -         |
| AMP SuperSeal 1.5         | AS                 | IP67      | AS               | IP69K     |
| AMP SuperSeal with Diode  | ASD                | IP67      | ASDB             | IP69K     |
| Deutsch                   | DE                 | IP67      | DE               | IP69K     |
| Deutsch with Diode        | DED                | IP67      | DEDB             | IP69K     |
| Flying Leads              | FL                 | IP65      | FL               | IP69K     |
| Flying Leads with Diode   | FLD                | IP65      | FLDB             | IP69K     |
| DIN 43650                 | DN                 | IP65      | -                | -         |
| Metri-Pack 150 Type 2     | -                  | -         | M3               | IP69K     |
| Metri-Pack 150 with Diode | -                  | -         | M3DB             | IP69K     |

| Code | Manual Override |
|------|-----------------|
| Omit | No Override     |
| M    | Pull Screw      |