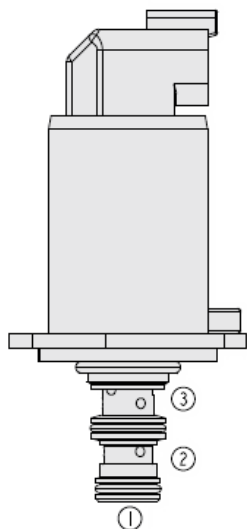




Overview



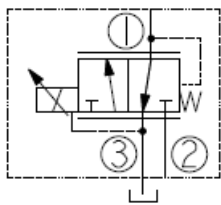
Description

The EHP98-G35AX is a direct-acting, spool-type, proportional, pressure reducing relieving valve. It is a 3rd generation hydraforce drop-in, flange mounted cartridge type valve for use with mineral based or synthetic (with lubricating properties) hydraulic fluids. The coil is an integral part of the valve and is not serviceable the regulated pressure is proportional to the input electrical current in the pressure ranges shown.

Features

- Economical drop-in style.
- Mounting plate option.
- Compact size.
- Retrofit option for EHP98-T35.
- Quick response time.
- Inlet screen and pressure options.
- Top-mounted connector.
- Low leakage.

Symbol



Ratings

Pressure Ratings

| | | |
|---|--------------------|--------------------------------------|
| Pressure rating | 241 bar (3500 psi) | - Note: Port 2 |
| | 45 bar (650 psi) | - Note: Port 1 |
| | 34.2 bar (500 psi) | - Note: Port 3 |
| Proof pressure | 54 bar (780 psi) | - Note: Port 3 |
| | 345 bar (5000 psi) | - Note: Ports 1 and 2 |
| Burst pressure | 258 bar (3750 psi) | - Note: All ports pressurized |
| Control pressure at maximum control current | 20 bar (290 psi) | |

Flow Ratings

| | | |
|--------------------------|--|--|
| Flow rating | 5.7 lpm (1.5 gpm) | |
| Maximum internal leakage | 200 ml/min (12.2 in ³ /min) | - Note: De-energized, at 241 bar (3500 psi) |
| | 200 ml/min (12.5 in ³ /min) | - Note: Energized at I _{max} , at 241 bar (3500 psi) |
| Hysteresis | 4 % | - Note: At 150 Hz PWM |

Other Ratings

| | |
|----------------------|-----------------------------------|
| Cycle life | 10 million cycles |
| Environmental rating | IP69K |
| Corrosion protection | 960 hour salt spray per ASTM B117 |

Temperature Ratings

| | | |
|-----------------------------|-------------------------------|--|
| Operating fluid temperature | -40 to 149 °C (-40 to 300 °F) | - Note: With HNBR seals |
| | -26 to 204 °C (-15 to 400 °F) | - Note: With fluorocarbon seals |
| | -54 to 107 °C (-65 to 225 °F) | - Note: With polyurethane seals |
| Storage temperature | -40 to 70 °C (-40 to 158 °F) | |
| Ambient temperature | -40 to 80 °C (-40 to 176 °F) | |



Operating Parameters

| | |
|-----------------------|--|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |

Properties

| | |
|------------------------------|--|
| Unit weight | 0.26 kg (0.57 lb) |
| Internal wetted surface area | 90 cm ² (14 in ²) |

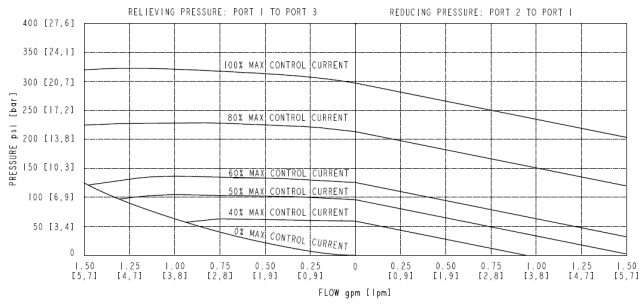
Electrical Parameters

| | | |
|-------------------------|-----------|--------------------------|
| Maximum control current | 1.130 A | - Note: Coil 10 V |
| | 0.940 A | - Note: Coil 12 V |
| | 0.780 A | - Note: Coil 14 V |
| | 0.565 A | - Note: Coil 20 V |
| | 0.470 A | - Note: Coil 24 V |
| | 0.390 A | - Note: Coil 28 V |
| Coil resistance | 4.83 ohm | - Note: Coil 10 V |
| | 7.28 ohm | - Note: Coil 12 V |
| | 10.05 ohm | - Note: Coil 14 V |
| | 18.35 ohm | - Note: Coil 20 V |
| | 29.54 ohm | - Note: Coil 24 V |
| | 40.36 ohm | - Note: Coil 28 V |
| Valve inductance | 68 mH | - Note: Coil 10 V |
| | 104 mH | - Note: Coil 12 V |
| | 152 mH | - Note: Coil 14 V |
| | 284 mH | - Note: Coil 20 V |
| | 433 mH | - Note: Coil 24 V |
| | 645 mH | - Note: Coil 28 V |



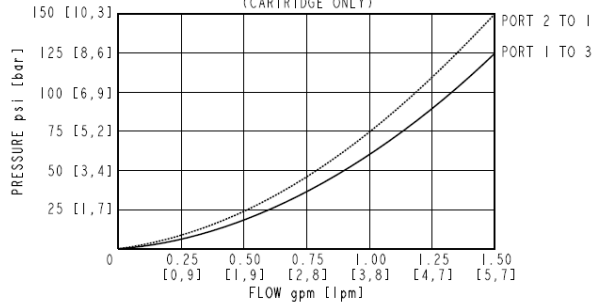
Performance

TYPICAL REDUCING / RELIEVING PRESSURE VS FLOW CHARACTERISTIC
 TYPICAL REDUCING / RELIEVING PRESSURES AT VARIOUS PERCENTAGES OF MAXIMUM CONTROL CURRENTS
 INLET: 3500 psi [241 bar], 150 Hz PWM (BOTH DIRECTIONS)

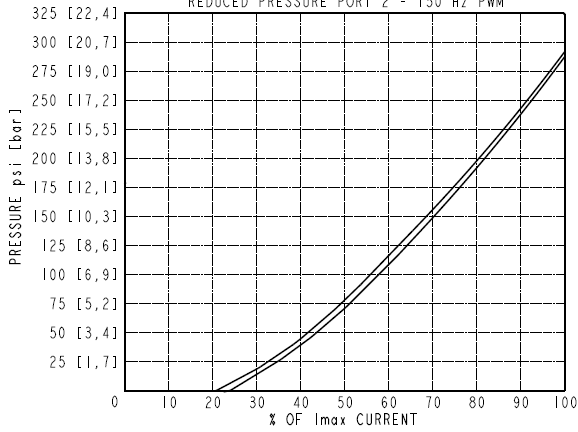


GENERAL TEST CONDITIONS
 (UNLESS OTHERWISE SPECIFIED)
 OIL: MOBIL DTE # 104°F [40°C], 32 cSt.

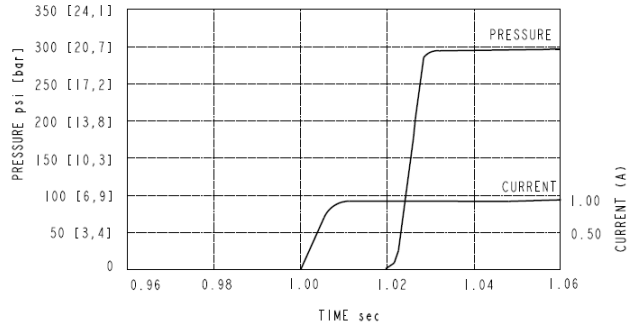
PRESSURE DROP VS FLOW CHARACTERISTIC
 (CARTRIDGE ONLY)



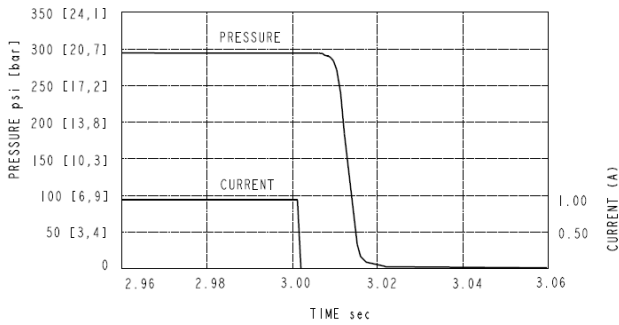
REDUCING PRESSURE VS CURRENT CHARACTERISTIC
 REDUCED PRESSURE PORT 2 - 150 Hz PWM



TYPICAL STEP RESPONSE CURVE - ON TIME
 3500 psi [241 bar] INLET PRESSURE
 DC CURRENT, REGULATED PORT: BLOCKED

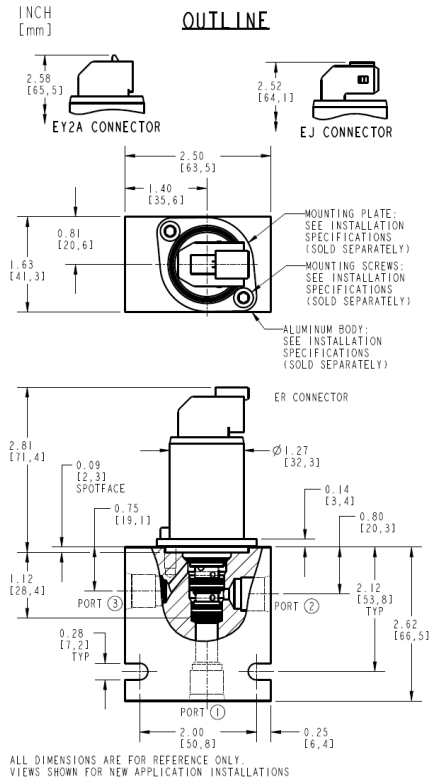


TYPICAL STEP RESPONSE CURVE - OFF TIME
 3500 psi [241 bar] INLET PRESSURE
 DC CURRENT, REGULATED PORT: BLOCKED





Dimensions



Installation Specifications

| | | |
|-------------------------|--|--|
| Cavity | VC-G027 | - Note: Standard configuration |
| Installation type | Flange mounted | |
| Orientation restriction | None | |
| Mounting screw torque | 3 to 4 N-m (2.2 to 3.0 ft-lb) | - Note: For standard VC-G027 Cavity |
| | 1.2 to 1.5 N-m (0.9 to 1.1 ft-lb) | - Note: For retrofit VC-T009 Cavity |
| Note | For retro-fitting into older drop-in cavities and other mounting options, see "Mounting-options-for-G3-valves" technical reference | |

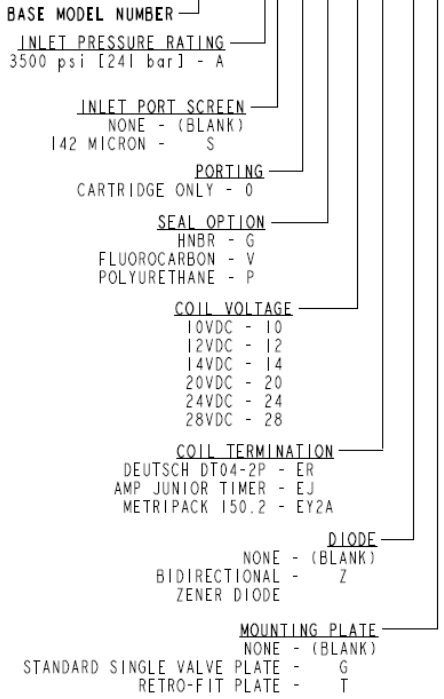
Accessories

| | | |
|------------------|--|---|
| Mounting plate | HF P/N 4595096 | - Note: Use with standard VC-G027 cavity |
| | HF P/N 4210226 | - Note: Use with retrofit VC-T009 cavity |
| Mounting screw | M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately) | - Note: Use with standard VC-G027 cavity |
| | M4 x 0.7 x 12 mm long, HF P/N: 4001015 (sold separately) | - Note: Use with retrofit VC-T009 cavity |
| Seal kit | SK-G027-X | - Note: X=seal option |
| Ported test body | HF P/N: 71611X0 | |

Order Code



ORDERING INFORMATION
EHPR98-G35AX-0-X-XXXX/X-X



| POSITION | CODE | DESCRIPTION |
|----------|-------|--|
| | | EHPR98-G35AG-H-J-KL-U |
| G | | Screen |
| G | BLANK | NONE |
| G | S | 100 Mesh Screen |
| H | | Line Body |
| H | 0 | No Body |
| J | | Seal |
| J | G | HNBR (Hydrogenated Nitrile Butadiene Rubber) |
| J | V | Fluorocarbon |
| J | P | Polyurethane |
| K | | Coil Voltage |
| K | 10 | 10 VDC |
| K | 12 | 12 VDC |
| K | 14 | 14 VDC |
| K | 20 | 20 VDC |
| K | 24 | 24 VDC |
| K | 28 | 28 VDC |
| L | | Coil Termination |
| L | EJ | E-Coil, AMP Jr. |
| L | ER | E-Coil, Deutsch |
| L | EY2A | E-Coil, Metri-Pack 150.2 |
| U | | Mounting Plate |
| U | BLANK | None |
| U | G | Standard Single Valve Plate |
| U | T | Retro-Fit Plate |