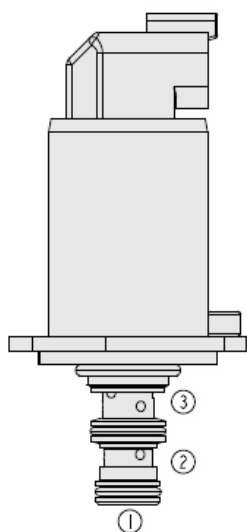




Overview



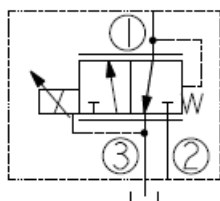
Description

The EHPR98-G35 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 EHPR98-T35.
- Quick response time.
- Inlet screen and pressure options.
- Top-mounted connector.
- Low leakage.

Symbol



Ratings

Pressure Ratings

Pressure rating	103 bar (1500 psi)	- Note: Port 2
	45 bar (650 psi)	- Note: Port 1
	34.5 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	6 lpm (1.6 gpm)	
Maximum internal leakage	45 ml/min (2.7 in ³ /min)	- Note: EHPR98-G35 at 24 bar (350 psi)
	15 ml/min (1.0 in ³ /min)	- Note: EHPR98-G35F at 24 bar (350 psi)
Hysteresis	4 %	- Note: 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

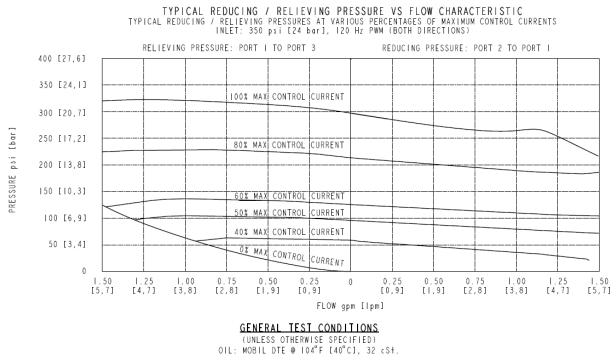
Unit weight	0.26 kg (0.57 lb)
Internal wetted surface area	90 cm ² (14 in ²)

Electrical Parameters

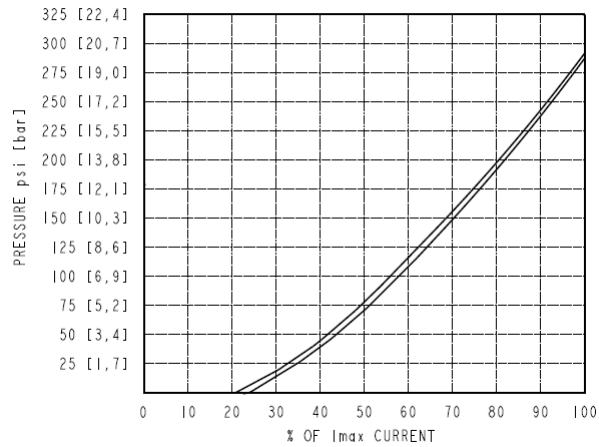
Maximum control current	1.130 A	- Note: Coil 10 V
	0.940 A	- Note: Coil 12 V
	0.780 A	- Note: Coil 14 V
	0.565 A	- Note: Coil 20 V
	0.470 A	- Note: Coil 24 V
	0.390 A	- Note: Coil 28 V
Dither PWM frequency	120 Hz	- Note: EHPR98-G35
	150 Hz	- Note: EHPR98-G35F
Coil resistance	4.83 ohm	- Note: Coil 10 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



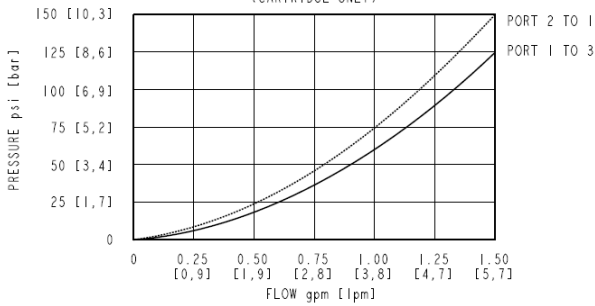
Performance



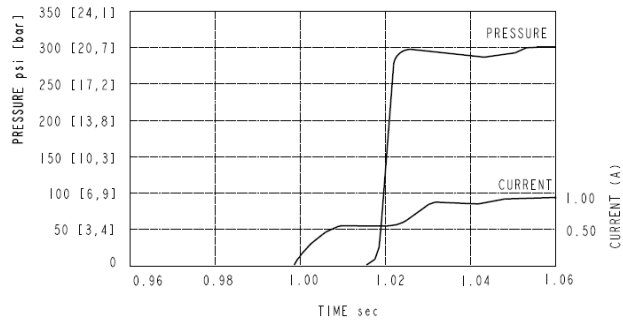
REDUCING PRESSURE VS CURRENT CHARACTERISTIC
REDUCED PRESSURE PORT 2 - 120 Hz PWM



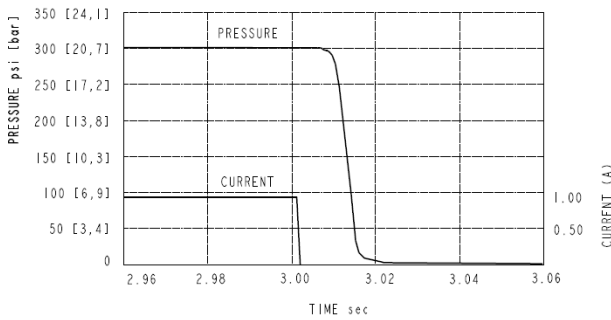
PRESSURE DROP VS FLOW CHARACTERISTIC
(CARTRIDGE ONLY)



TYPICAL STEP RESPONSE CURVE - ON TIME
300 psi [21 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED

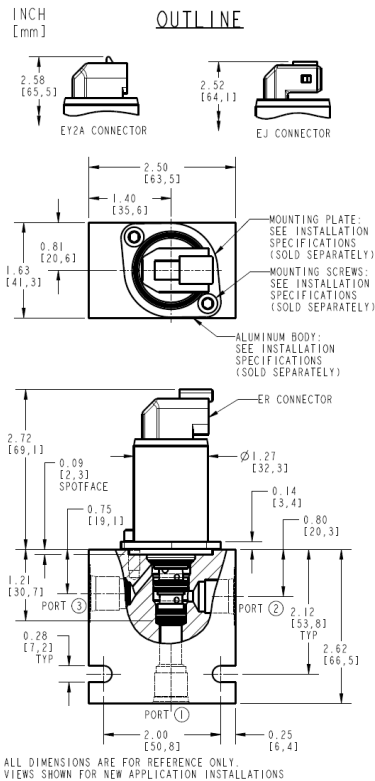


TYPICAL STEP RESPONSE CURVE - OFF TIME
300 psi [21 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED





Dimensions



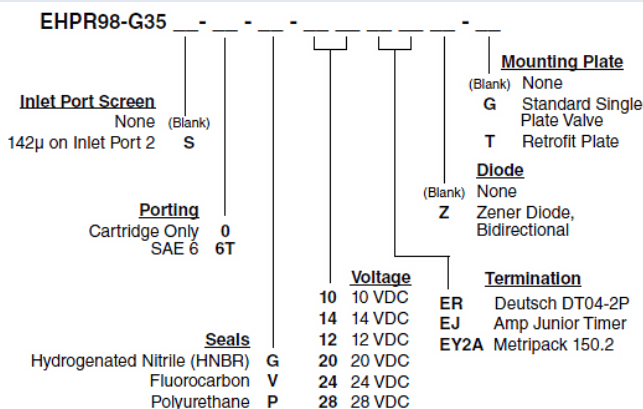
Installation Specifications

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



Model Options



EHPR98-G35DG-H-J-KL-U

D Plunger Option

CODE	DESCRIPTION
BLANK	Standard
F	Fast responding

G Screen

CODE	DESCRIPTION
BLANK	NONE
S	100 Mesh Screen

H Line Body

CODE	DESCRIPTION
0	No Body

J Seal

CODE	DESCRIPTION
G	HNBR (Hydrogenated Nitrile Butadiene Rubber)
V	Fluorocarbon
P	Polyurethane

K Coil Voltage

CODE	DESCRIPTION
10	10 VDC
12	12 VDC
14	14 VDC
20	20 VDC
24	24 VDC
28	28 VDC

L Coil Termination

CODE	DESCRIPTION
EJ	E-Coil, AMP Jr.
ER	E-Coil, Deutsch
EY2A	E-Coil, Metri-Pack 150.2

U Mounting Plate

CODE	DESCRIPTION
BLANK	None
G	Standard Single Valve Plate
T	Retro-Fit Plate