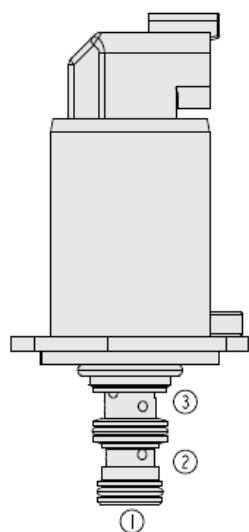




Overview



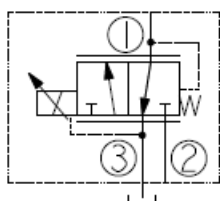
Description

The EHPR98-G33XX 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 to replace EHPR98-T33
- 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, 2
Burst pressure	258 bar (3750 psi)	- Note: All ports pressurized
Control pressure at maximum control current	30 bar (435 psi)	

Flow Ratings

Flow rating	3.8 lpm (1.0 gpm)	
Maximum internal leakage	30 ml/min (1.8 in ³ /min)	- Note: At 34.5 bar (500 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: HNBR
	-26 to 204 °C (-15 to 400 °F)	- Note: Fluorocarbon
	-54 to 107 °C (-65 to 225 °F)	- Note: Polyurethane
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

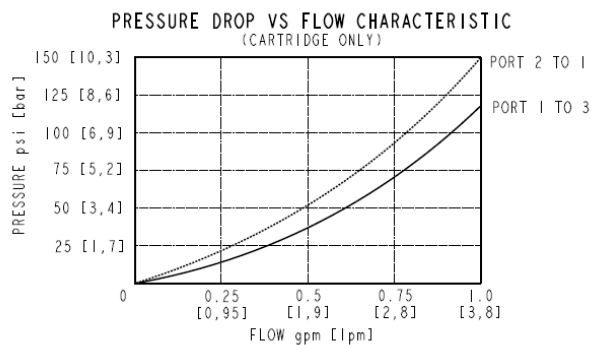
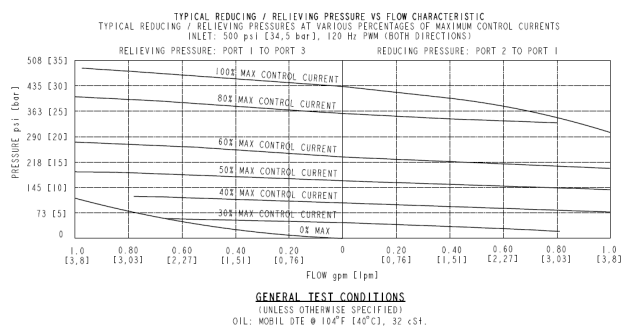
Unit weight	0.26 kg (0.57 lb)
Internal wetted surface area	90 cm ² (14 in ²)

Electrical Parameters

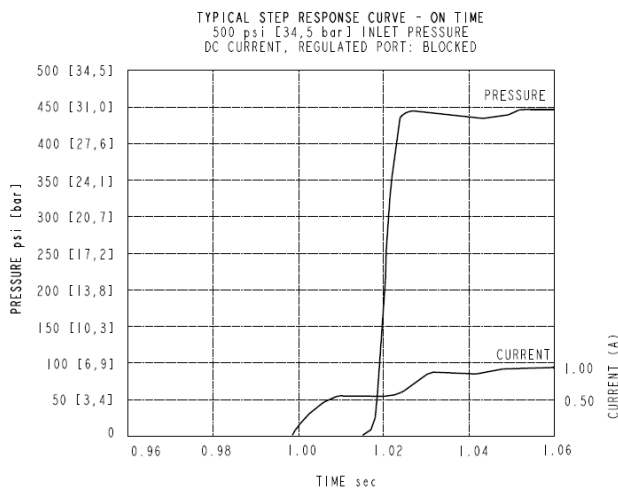
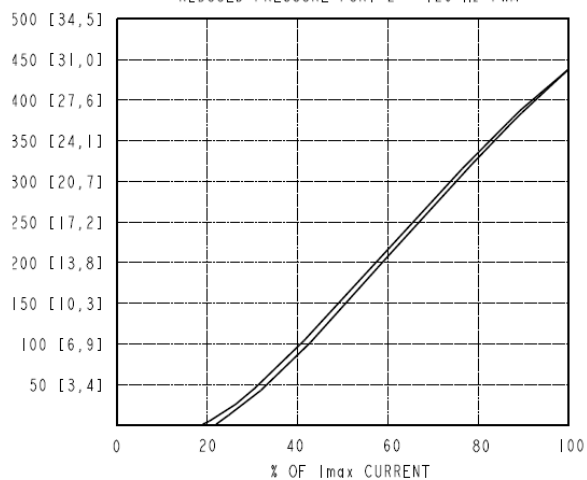
Maximum control current	1.130 A	- Note: Coil 10 V
	0.940 A	- Note: Coil 12 V
	0.780 A	- Note: Coil 14 V
	0.565 A	- Note: Coil 20 V
	0.470 A	- Note: Coil 24 V
	0.390 A	- Note: Coil 28 V
Coil resistance	4.83 ohm	- Note: Coil 10 V
	7.28 ohm	- Note: Coil 12 V
	10.05 ohm	- Note: Coil 14 V
	18.35 ohm	- Note: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



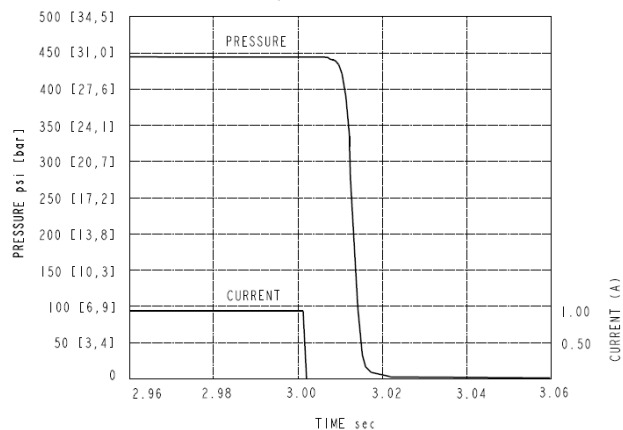
Performance



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

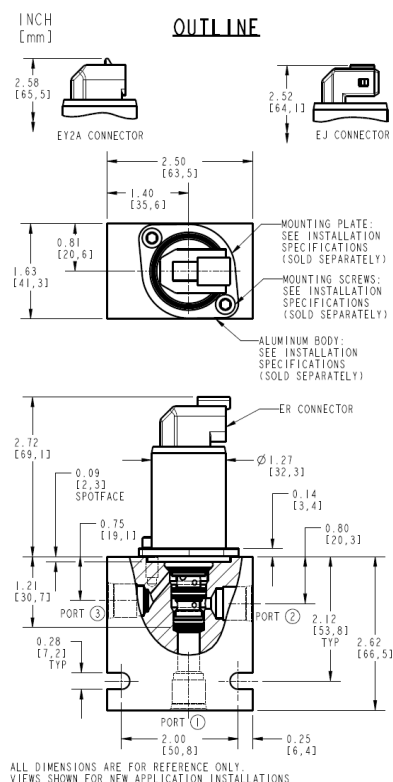


TYPICAL STEP RESPONSE CURVE - OFF TIME
500 psi [34,5 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED





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

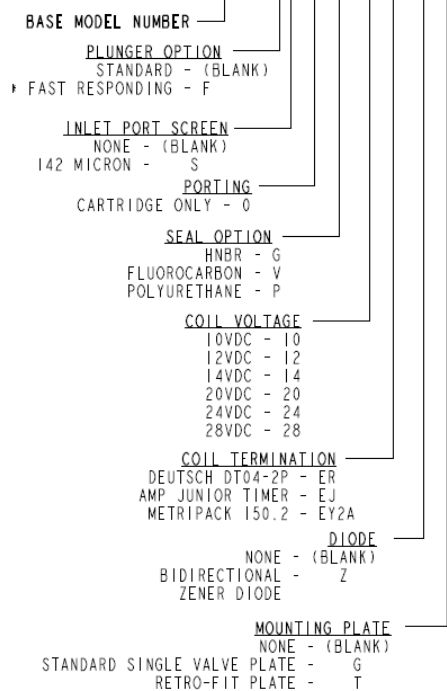
Mounting plate	HF P/N 4595096	- Note: Use with standard VC-G027 cavity
	HF P/N 4210226	- Note: Use with retrofit VC-T009 cavity
Mounting screw	M5 x 0.8 x 12 mm long, HF P/N: 4002609 (sold separately)	- Note: Use with standard VC-G027 cavity
	M4 x 0.7 x 12 mm long, HF P/N: 4001015 (sold separately)	- 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-G33XX-0-X-XXXX/X-X

**Model Options****EHPR98-G33DG-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



CODE	DESCRIPTION
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