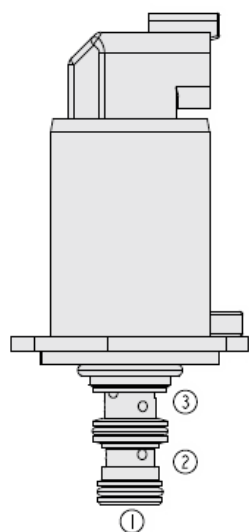




## Overview



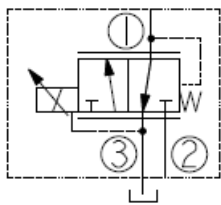
### Description

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

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	241 bar (3500 psi)	- <b>Note:</b> Port 2
	45 bar (650 psi)	- <b>Note:</b> Port 1
	34.2 bar (500 psi)	- <b>Note:</b> Port 3
Proof pressure	54 bar (780 psi)	- <b>Note:</b> Port 3
	345 bar (5000 psi)	- <b>Note:</b> Ports 1 and 2
Burst pressure	258 bar (3750 psi)	- <b>Note:</b> 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 <sup>3</sup> /min)	- <b>Note:</b> De-energized, at 241 bar (3500 psi)
	200 ml/min (12.5 in <sup>3</sup> /min)	- <b>Note:</b> Energized at I <sub>max</sub> , at 241 bar (3500 psi)
Hysteresis	4 %	- <b>Note:</b> 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)	- <b>Note:</b> With HNBR seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> 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 <sup>2</sup> (14 in <sup>2</sup> )

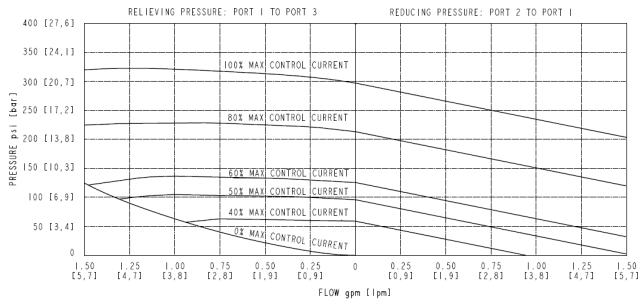
## Electrical Parameters

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



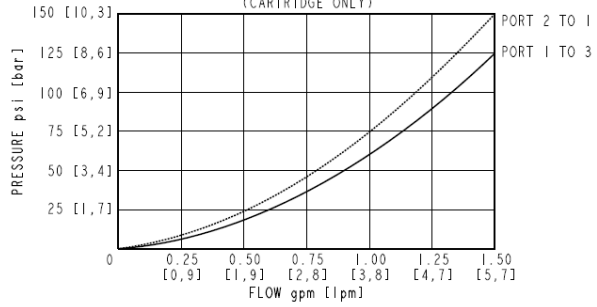
**Performance**

**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)

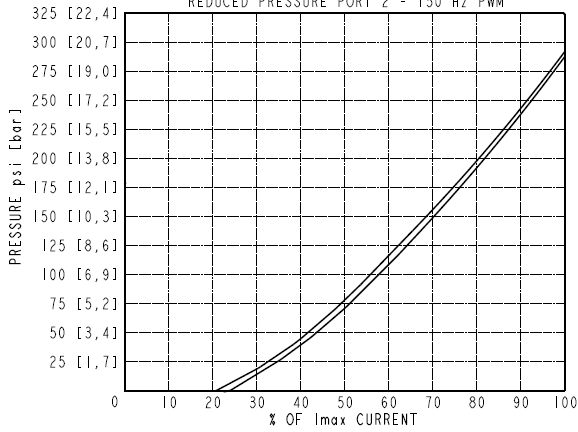


**GENERAL TEST CONDITIONS**  
 (UNLESS OTHERWISE SPECIFIED)  
 OIL: MOBIL DTE # 104°F [40°C], 32 cSt.

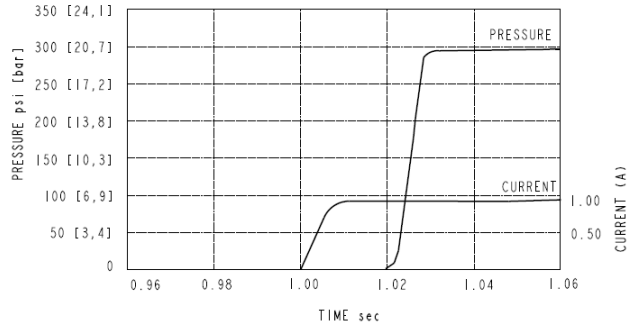
**PRESSURE DROP VS FLOW CHARACTERISTIC**  
 (CARTRIDGE ONLY)



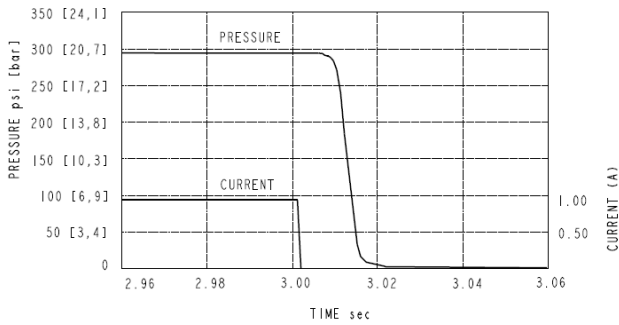
**REDUCING PRESSURE VS CURRENT CHARACTERISTIC**  
 REDUCED PRESSURE PORT 2 - 150 Hz PWM



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

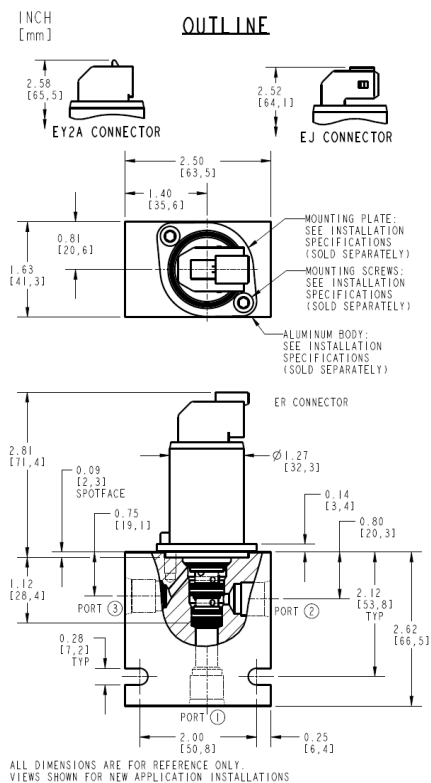


**TYPICAL STEP RESPONSE CURVE - OFF TIME**  
 3500 psi [241 bar] INLET PRESSURE  
 DC CURRENT, REGULATED PORT: BLOCKED





## Dimensions



## Installation Specifications

Cavity	VC-G027	- <b>Note:</b> Standard configuration
Installation type	Flange mounted	
Orientation restriction	None	
Mounting screw torque	3 to 4 N-m (2.2 to 3.0 ft-lb)	- <b>Note:</b> For standard VC-G027 Cavity 1.2 to 1.5 N-m (0.9 to 1.1 ft-lb) - <b>Note:</b> 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

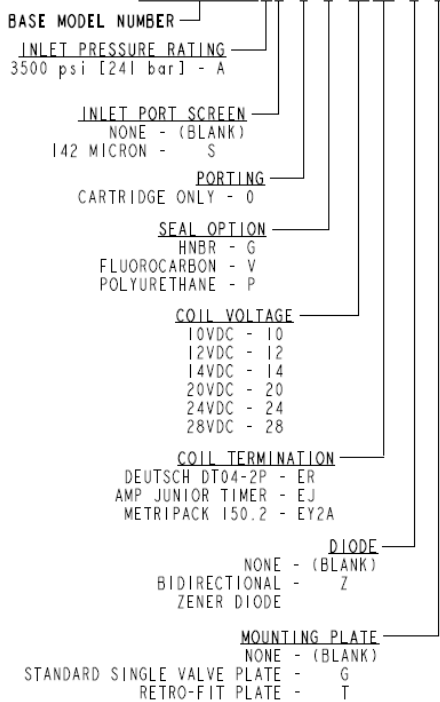
Mounting plate	HF P/N 4595096	- <b>Note:</b> Use with standard VC-G027 cavity
	HF P/N 4210226	- <b>Note:</b> Use with retrofit VC-T009 cavity
Mounting screw	M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately)	- <b>Note:</b> Use with standard VC-G027 cavity
	M4 x 0.7 x 12 mm long, HF P/N: 4001015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

## Order Code



**ORDERING INFORMATION**

**EHPR98-G35AX-0-X-XXXX/X-X**



**Model Options**

**EHPR98-G35AG-H-J-KL-U**

**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.



CODE	DESCRIPTION
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