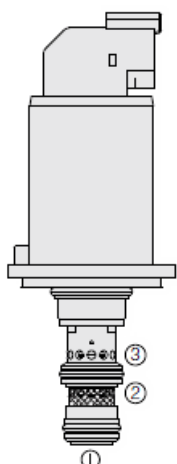




## Overview



### Description

The ehpr98-g38xx 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

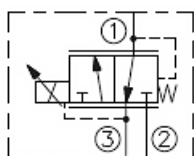
### Operation

The EHPR98-G33 allows free flow from 1 to 3 when no current is applied to the coil. When the coil is energized, 2 is connected to 1. Increasing current applied to the coil will increase the control (reduced) pressure proportionally. If pressure at 1 exceeds the setting induced by the coil, pressure from 1 is relieved to 3

### Features

- Economical drop-in style.
- Mounting plate option.
- Several regulated pressure ranges.
- Retrofit option for EHPR98-T38.
- Quick response time.
- Screen option.
- Top-mounted connector.
- Low leakage.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	34.5 bar (500 psi)	- <b>Note:</b> At all ports
Proof pressure	207 bar (3000 psi)	- <b>Note:</b> Port 1
	207 bar (3000 psi)	- <b>Note:</b> Port 2
	54 bar (780 psi)	- <b>Note:</b> Port 3
Burst pressure	249 bar (3625 psi)	- <b>Note:</b> All ports pressurized
Control pressure at maximum control current	21 bar (305 psi)	- <b>Note:</b> EHPR98-G38A
	25 bar (363 psi)	- <b>Note:</b> EHPR98-G38B
	30 bar (435 psi)	- <b>Note:</b> EHPR98-G38C

### Flow Ratings

Flow rating	23 lpm (6 gpm)	
Maximum internal leakage	50 ml/min (3.1 in <sup>3</sup> /min)	- <b>Note:</b> At 34.5 bar (500 psi) de-energized

### 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> HNBR
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> Fluorocarbon
Storage temperature	-40 to 70 °C (-40 to 158 °F)	
Ambient temperature	-40 to 120 °C (-40 to 248 °F)	

## Operating Parameters

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



Properties

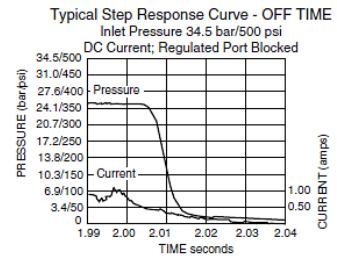
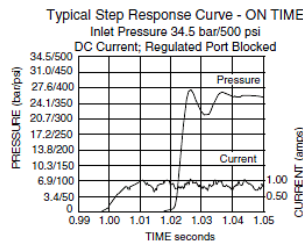
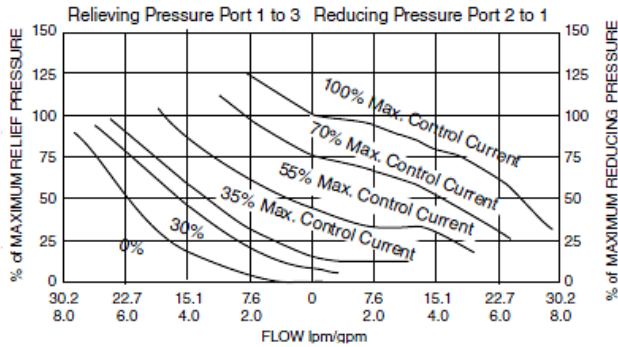
Unit weight	0.27 kg (0.60 lb)
Internal wetted surface area	148 cm <sup>2</sup> (23.0 in <sup>2</sup> )

Electrical Parameters

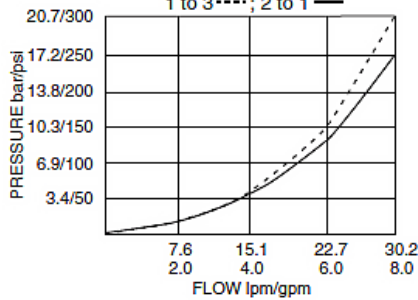
Maximum control current	1.050 A	- Note: At 10 V
	0.8880 A	- Note: At 12 V
	0.720 A	- Note: At 14 V
	0.525 A	- Note: At 20 V
	0.440 A	- Note: At 24 V
	0.360 A	- Note: At 28 V
Valve inductance	77 mH	- Note: 10 V coil
	118 mH	- Note: 12 V coil
	165 mH	- Note: 14 V coil
	301 mH	- Note: 20 V coil
	446 mH	- Note: 24 V coil
	680 mH	- Note: 28 V coil

Performance

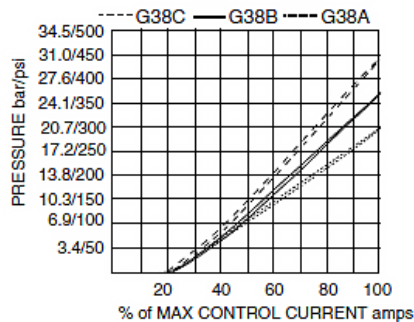
Typical Relieving/Reducing Pressure vs. Flow Characteristic  
 Typical Relieving Pressure at Various %s of Maximum Control Current  
 Data Shown for EHPR98-G38



Pressure Drop vs. Flow  
 Cartridge Only  
 1 to 3 - - - - ; 2 to 1 —

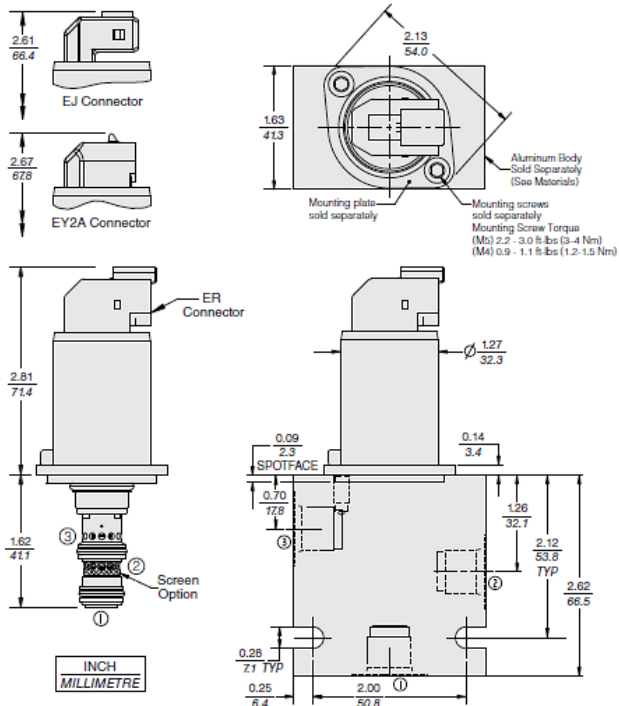


Reducing Pressure vs. Current  
 12V Coil 100 Hz PWM  
 Reduced Pressure Port 2





## Dimensions



## Materials

### Materials

**Cartridge Including Coil:** Weight: 0.27 kg. (0.60 lbs.) Steel with hardened work surfaces. Zinc-nickel plated exposed surfaces. HNBR seals standard. Coil is encapsulated, Class M high-temperature magnet wire, with zinc-nickel plated shell.

**Ported Test Body:** Part No. 7161210

**Mounting Screws:** Must be ordered separately; M5 x 0.8 x 12 mm Long, Part No. 4002609 (with standard VC-G028 cavity); M4 x 0.7 x 12 Long; Part No. 4001015 (with retrofit application VC-T011 cavity).

## Installation Specifications

Cavity	VC-G028
Installation type	Flange mounted
Orientation restriction	None
Mounting screw torque	3 to 4 N-m (2.2 to 3 ft-lb)
Note	For retro-fitting into older drop-in cavities and other mounting options, see "g3_mounting_options" technical reference

## Accessories

Mounting plate	Hf p/n 4595096
Mounting screw	M5 - 0,8 x 12mm long, hf p/n: 4002609 (sold separately)
Valve body	Hf p/n 71612x0 (sold separately) for retro-fitting into older drop-in cavities and other mounting options, see "g3_mounting_options" outline drawing.
Seal kit	SK-G028-X - <b>Note:</b> X = seal option



**Order Code**

POSITION	CODE	DESCRIPTION
		EHPR98-G38DG-H-J-KL-U
D		Max Regulated Pressure
D	A	21 bar (305 psi)
D	B	25 bar (363 psi)
D	C	30 bar (435 psi)
G		Screen
G	BLANK	NONE
G	S	100 Mesh Screen
H		Line Body
H	0	No Body
J		Seal
J	G	HBNR (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

