



Overview

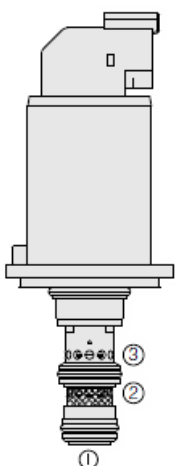
Description

The EHPR98-G38HXX 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.

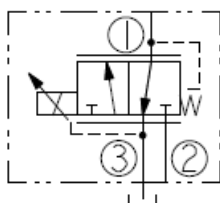
NOTE: * The 'H' pressure option is to be used in applications with inlet pressures that exceed 69 bar (1000 psi) at port 2. See standard and 'D' options for inlet pressures below 69 bar (1000 psi).

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	69 to 241 bar (1000 to 3500 psi)	- Note: Port 2
	45 bar (650 psi)	- Note: Port 1
	34.5 bar (500 psi)	- Note: At port 3
Proof pressure	345 bar (5000 psi)	- Note: Ports 1, 2 pressurized
	54 bar (780 psi)	- Note: Port 3
Burst pressure	380 bar (5500 psi)	- Note: Ports 1, 2 pressurized
	250 bar (3625 psi)	- Note: Port 3
Control pressure at maximum control current	21 bar (305 psi)	- Note: EHPR98-G38HA
	25 bar (363 psi)	- Note: EHPR98-G38HB
	30 bar (435 psi)	- Note: EHPR98-G38HC

Flow Ratings

Flow rating	23 lpm (6 gpm)	
Maximum internal leakage	200 ml/min (12.2 in ³ /min)	- Note: At 241 bar (3500 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)	- Note: HNBR
	-26 to 204 °C (-15 to 400 °F)	- Note: 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 ² (23.0 in ²)

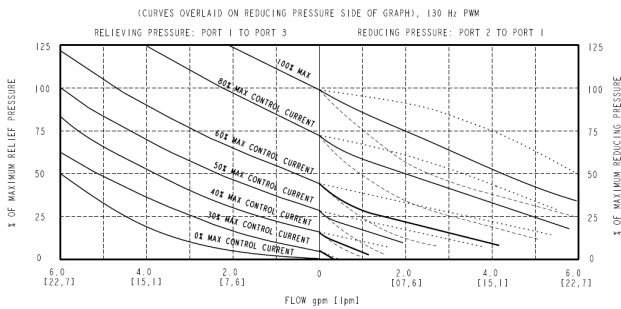
Electrical Parameters

Maximum control current	1.050 A	- Note: At 10 V
	0.0880 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
Coil resistance	4.83 ohm	- Note: 10 V coil
	7.28 ohm	- Note: 12 V coil
	10.05 ohm	- Note: 14 V coil
	18.35 ohm	- Note: 20 V coil
	29.54 ohm	- Note: 24 V coil
	40.36 ohm	- Note: 28 V coil
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
Hysteresis	4 %	- Note: At 120 Hz PWM



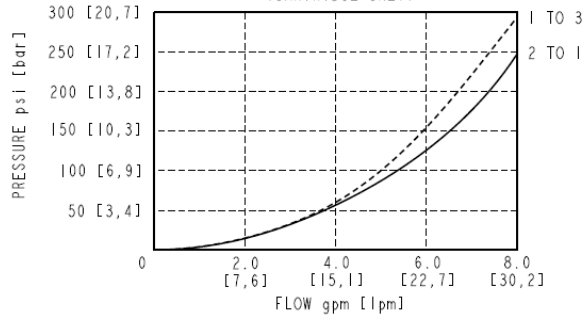
Performance

REDUCING / RELIEVING PRESSURE VS FLOW CHARACTERISTIC
 TYPICAL REDUCING / RELIEVING PRESSURES AT VARIOUS PERCENTAGES OF MAXIMUM CONTROL CURRENT
 INLET: 500 psi [34 bar] 1500 psi [103 bar] 3500 psi [241 bar]

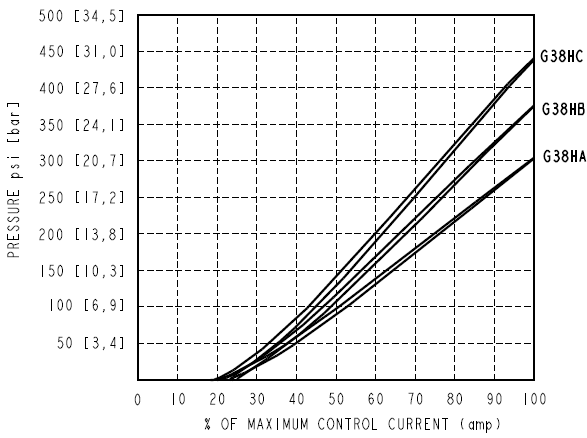


GENERAL TEST CONDITIONS
 (UNLESS OTHERWISE SPECIFIED)
 OIL: MOBIL DTE # 104°F [40°C], 32 cSt.

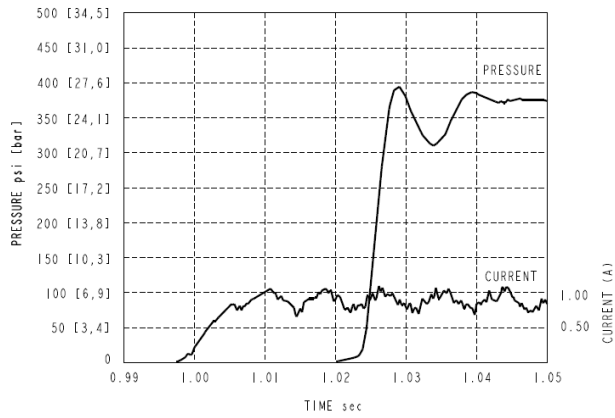
PRESSURE DROP VS FLOW CHARACTERISTIC (CARTRIDGE ONLY)



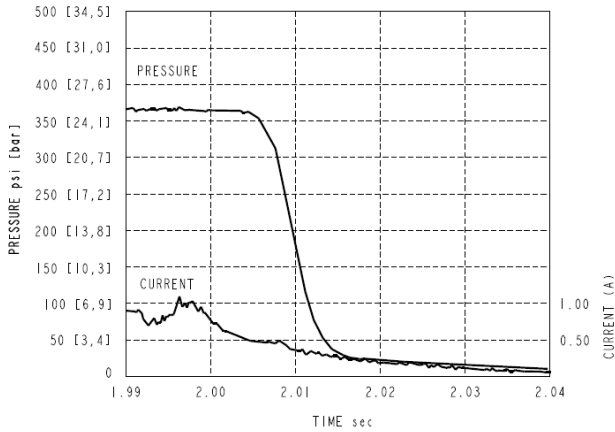
REDUCING PRESSURE VS CURRENT CHARACTERISTIC
 REDUCED PRESSURE PORT 2 TO PORT 1 (120 Hz PWM)



TYPICAL STEP RESPONSE CURVE (G38B) - ON TIME
 3500 psi [241 bar] INLET PRESSURE
 130 Hz PWM, REGULATED PORT: BLOCKED

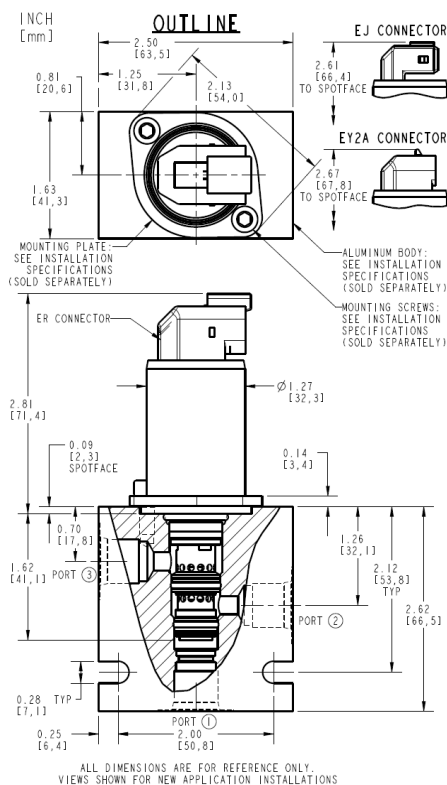


TYPICAL STEP RESPONSE CURVE (G38B) - OFF TIME
 3500 psi [241 bar] INLET PRESSURE
 130 Hz PWM, REGULATED PORT: BLOCKED





Dimensions



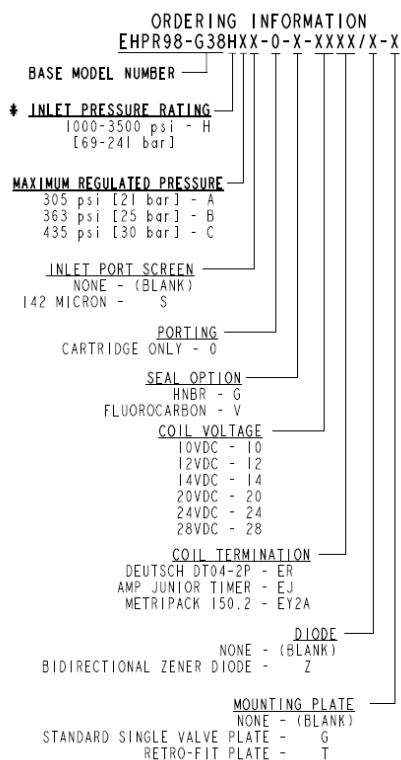
Installation Specifications

Cavity	VC-G028	- 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 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-G028 cavity
	HF P/N 4210226	- Note: Use with retrofit VC-T011 cavity
Mounting screw	M5 x 0,8 x 12 mm long, HF P/N: 4002609 (sold separately)	- Note: Use with standard VC-G028 cavity
	M4 x 00.7 x 12 mm long, HF P/N: 4001015 (sold separately)	- Note: Use with retrofit VC-T011 cavity
Seal kit	SK-G028-X	- Note: X=seal option
Ported test body	HF P/N: 71612X0	

Order Code



Model Options

EHPR98-G38HDG-H-J-KL-U

D Max Regulated Pressure

CODE	DESCRIPTION
A	21 bar (305 psi)
B	25 bar (363 psi)
C	30 bar (435 psi)

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



CODE	DESCRIPTION
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