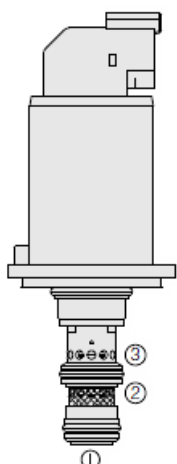




Overview



Description

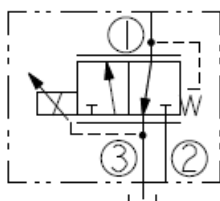
The EHPR98-G38XXX is a direct-acting, spool-type, proportional, pressure reducing relieving valve. It is a 3rd generation hydraforce drop-in, flange mounted cartridge type valve for use with mineral based or synthetic (with lubricating properties) hydraulic fluids. The coil is an integral part of the valve and is not serviceable the regulated pressure is proportional to the input electrical current in the pressure ranges shown.

NOTE: The standard plunger is recommended in applications with inlet pressures up to 34 bar (500 psi) that require faster response with increased volume at the control port. Minimum volume at the control port may cause the valve to become unstable. For applications with inlet pressures up to 69 bar (1000 psi) and decreased volume at the control port the damped plunger is recommended.

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	44.8 bar (650 psi)	- Note: At port 1
	34.5 bar (500 psi)	- Note: At port 2 (standard plunger)
	69 bar (1000 psi)	- Note: At port 2 (damped plunger)
	34.5 bar (500 psi)	- Note: At port 3
Proof pressure	207 bar (3000 psi)	- Note: Ports 1, 2
	54 bar (780 psi)	- Note: Port 3
Burst pressure	249 bar (3625 psi)	- Note: All ports pressurized
Control pressure at maximum control current	21 bar (305 psi)	- Note: EHPR98-G38A
	25 bar (363 psi)	- Note: EHPR98-G38B
	30 bar (435 psi)	- Note: EHPR98-G38C

Flow Ratings

Flow rating	23 lpm (6 gpm)	
Maximum internal leakage	50 ml/min (3.1 in ³ /min)	- Note: 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)	- 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



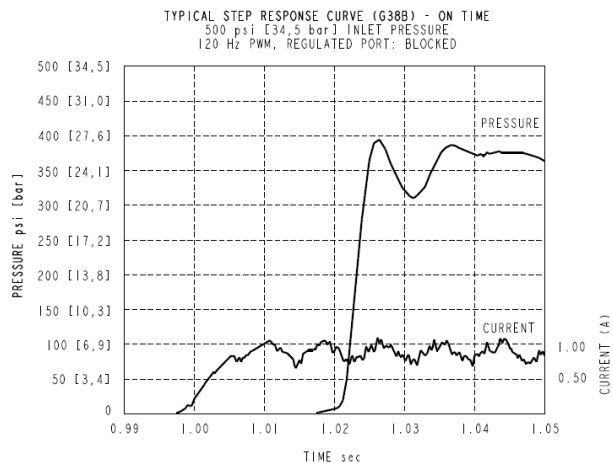
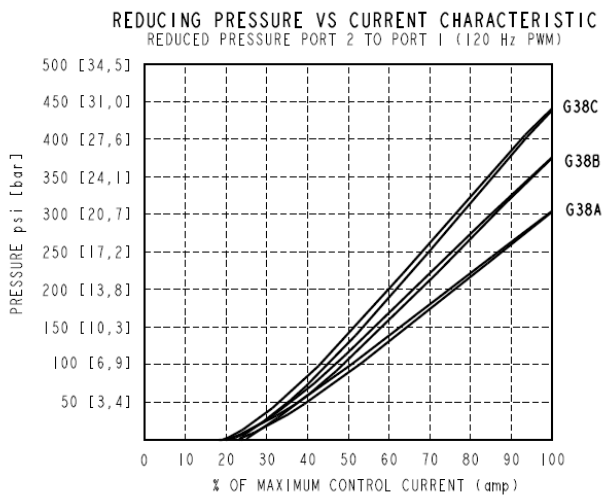
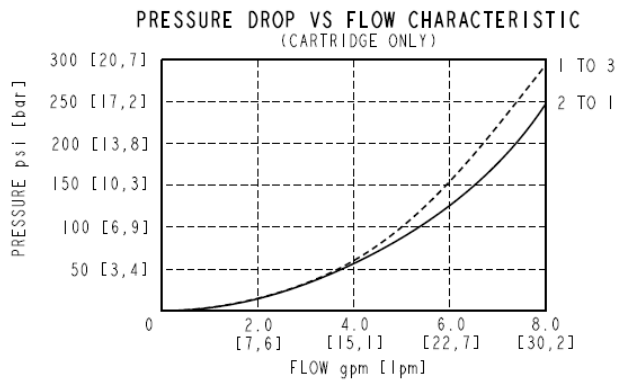
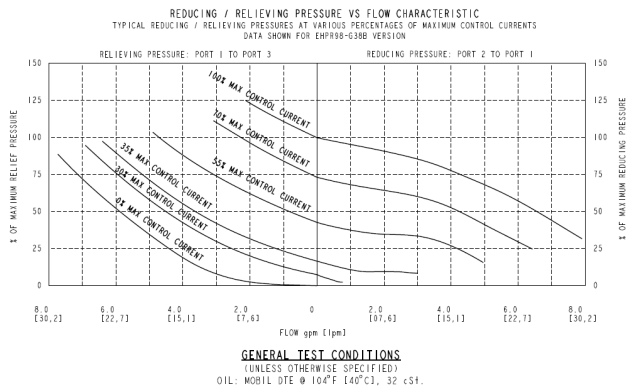
Properties

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

Electrical Parameters

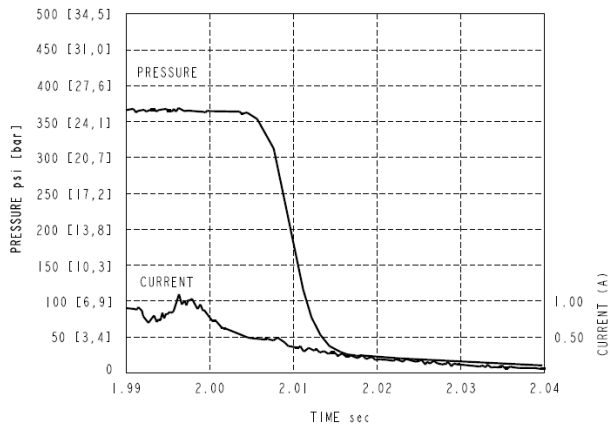
Maximum control current	1.050 A	- Note: At 10 V
	0.0880 A	- Note: At 12 V
	0.720 A	- Note: At 14 V
	0.525 A	- Note: At 20 V
	0.440 A	- Note: At 24 V
	0.360 A	- Note: At 28 V
Valve inductance	77 mH	- Note: 10 V coil
	118 mH	- Note: 12 V coil
	165 mH	- Note: 14 V coil
	301 mH	- Note: 20 V coil
	446 mH	- Note: 24 V coil
	680 mH	- Note: 28 V coil
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
Hysteresis	4 %	- Note: At 120 Hz PWM

Performance



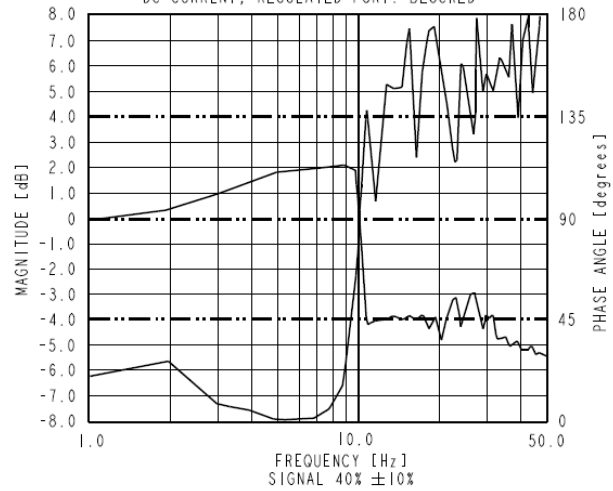


TYPICAL STEP RESPONSE CURVE (G38B) - OFF TIME
500 psi [34,5 bar] INLET PRESSURE
120 Hz PWM, REGULATED PORT: BLOCKED



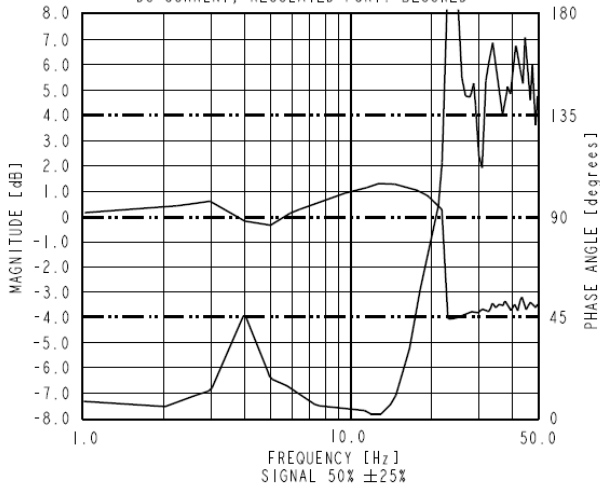
TYPICAL FREQUENCY RESPONSE CURVE

500 psi [34 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED



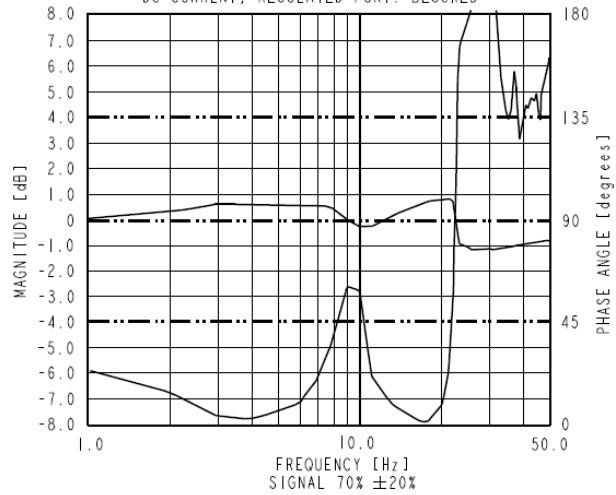
TYPICAL FREQUENCY RESPONSE CURVE

500 psi [34 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED



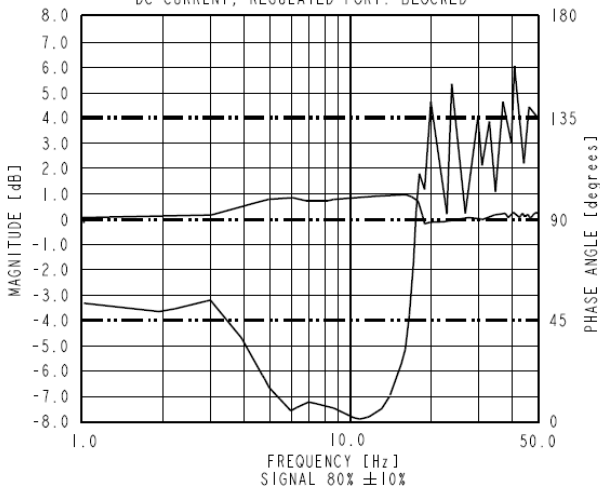
TYPICAL FREQUENCY RESPONSE CURVE

500 psi [34 bar] INLET PRESSURE
DC CURRENT, REGULATED PORT: BLOCKED



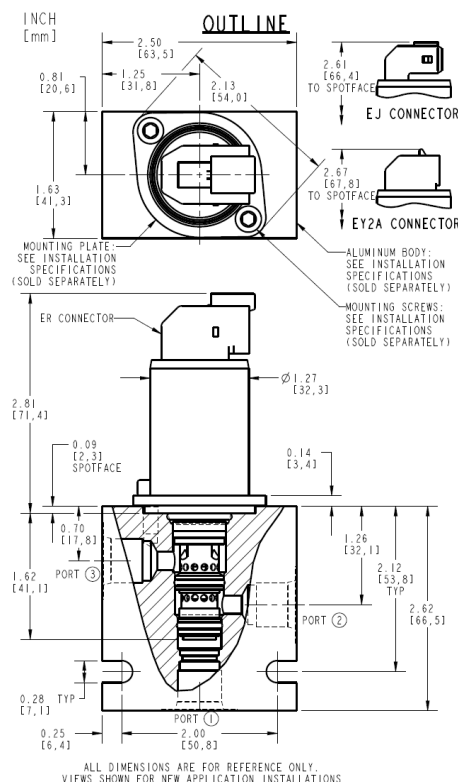
TYPICAL FREQUENCY RESPONSE CURVE

500 psi [34 bar] INLET PRESSURE
DC CURRENT, 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



ORDERING INFORMATION

EHPR98-G38XXX-0-X-XXXX/X-X

BASE MODEL NUMBER	
MAXIMUM REGULATED PRESSURE	
290 psi [20 bar] - A	
363 psi [25 bar] - B	
435 psi [30 bar] - C	
INLET PORT SCREEN	
NONE - (BLANK)	
142 MICRON - S	
PLUNGER OPTION	
* STANDARD - (BLANK)	
DAMPED - D	
PORTING	
CARTRIDGE ONLY - 0	
SEAL OPTION	
HNBR - G	
FLUOROCARBON - V	
COIL VOLTAGE	
10VDC - 10	
12VDC - 12	
14VDC - 14	
20VDC - 20	
24VDC - 24	
28VDC - 28	
COIL TERMINATION	
DEUTSCH DT04-2P - ER	
AMP JUNIOR TIMER - EJ	
METRIPACK 150.2 - EY2A	
DIODE	
NONE - (BLANK)	
BIDIRECTIONAL - Z	
ZENER DIODE	
MOUNTING PLATE	
NONE - (BLANK)	
STANDARD SINGLE VALVE PLATE - G	
RETRO-FIT PLATE - T	

Model Options**EHPR98-G38DFG-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)

F Plunger Option

CODE	DESCRIPTION
BLANK	Standard Version
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