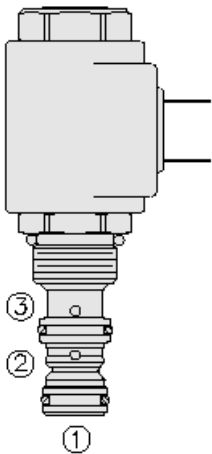




## Overview



### Description

EHPR08-33X is a direct-acting, spool-type, proportional, pressure reducing/relieving valve. The regulated pressure is proportional to the input electrical current. EHPR08-33X free flow from port 1 to port 3 when no current is applied to the coil. With coil energized, port 2 is connected to port 1. Increasing current to the coil will increase the control (reduced) pressure proportionally. If pressure at port 1 exceeds the setting induced by the coil, pressure from port 1 to port 3 is relieved.

### Operation

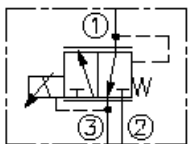
The EHPR08-33 free flow from 1 to 3 when no current is applied to the coil. When the coil is energized, 2 is connected to 1. Increasing current applied to the coil will increase the control (reduced) pressure proportionally. If pressure at 1 exceeds the setting induced by the coil, pressure from 1 is relieved to 3.

**Note:** back pressure on port 3 becomes additive to the pressure setting at a 1:1 ratio.

### Manual Override Operation

Engages at 2 1/4 turns, builds pressure at 11.7 bar (170 psi) per turn.

### Symbol



### Features

- 12 and 24 volt coils standard.
- Optional manual override.
- Industry-common cavity.
- Optional waterproof E-Coils rated up to IP69K.

## Ratings

### Pressure Ratings

Pressure rating	241.3 bar (3500 psi)	- <b>Note:</b> At port 2 (inlet)
	103.4 bar (1500 psi)	- <b>Note:</b> At port 1
	68.9 bar (1000 psi)	- <b>Note:</b> At port 3. Maximum pressure difference between ports 1 or 3 and port 2
Proof pressure	379.2 bar (5500 psi)	
Burst pressure	827.4 bar (12000 psi)	
Pressure rise	-1.24 bar/lpm (-68 psi/gpm)	- <b>Note:</b> (reducing)
Maximum reducing pressure	26 bar (375 psi)	- <b>Note:</b> Pressure is additive to valve setting

### Flow Ratings

Flow rating	4.0 lpm (1.0 gpm)	- <b>Note:</b> Port 1 to port 3 (coil de-energized)
Maximum internal leakage	33 ml/min (2 in <sup>3</sup> /min)	- <b>Note:</b> At 26 bar (375 psi)
Hysteresis per cent	3 %	- <b>Note:</b> (PWM)

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N 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 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

### Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117 (gehpr08-33x)
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## Operating Parameters

Fluids	Mineral based or synthetic with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



## Properties

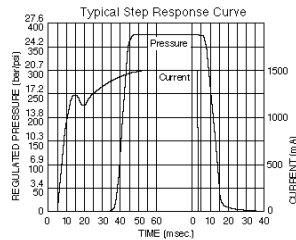
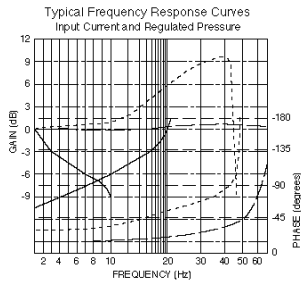
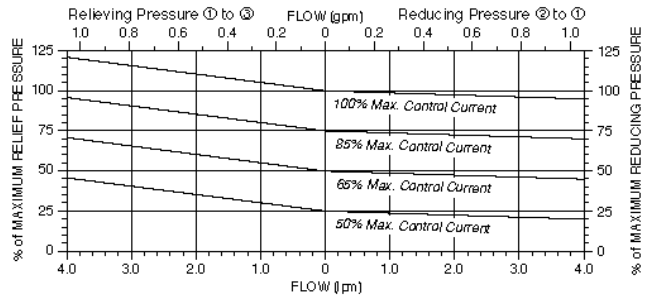
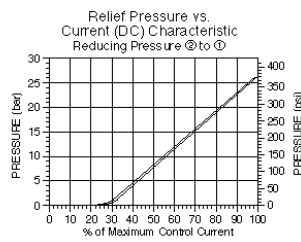
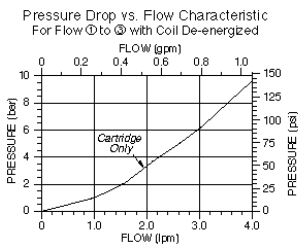
Adjustment torque	0.9 to 2.0 N-m (8.8 to 17.7 in-lb)
Unit weight	0.14 kg (0.31 lb)
Internal wetted surface area	90 cm <sup>2</sup> (13.9 in <sup>2</sup> )

## Electrical Parameters

Valve inductance	53 mH	- <b>Note:</b> E-series coil 12 V
	223 mH	- <b>Note:</b> E-series coil 24 V
	25 mH	- <b>Note:</b> D-series coil 10 V
	35 mH	- <b>Note:</b> D-series coil 12 V
	130 mH	- <b>Note:</b> D-series coil 20 V
Maximum control current	180 mH	- <b>Note:</b> D-series coil 24 V
	1.42 A	- <b>Note:</b> E-series coil 12 V
	0.71 A	- <b>Note:</b> E-series coil 24 V
	1.5 A	- <b>Note:</b> D-series coil 10 V
	1.2 A	- <b>Note:</b> D-series coil 12 V
	0.75 A	- <b>Note:</b> D-series coil 20 V
	0.65 A	- <b>Note:</b> D-series coil 24 V

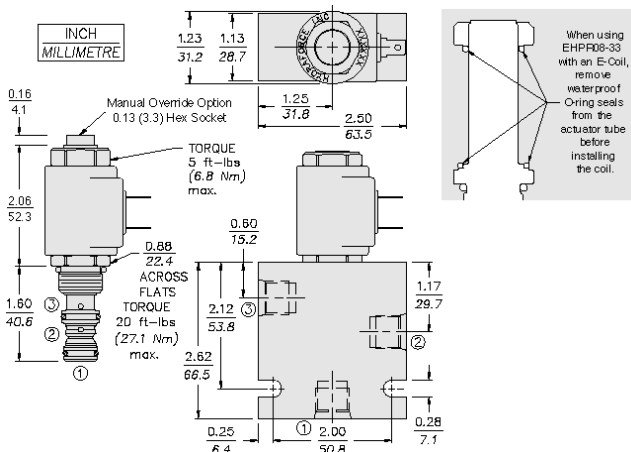
## Performance

Typical Relieving/Reducing Pressure vs. Flow Characteristic  
Typical Relieving Pressure at Various %'s of Maximum Control Current  
Pressure Range "A" (26 bar/375 psi); Cartridge in Body



Signal 25% ±10% ——— Inlet: 30 bar (500 psi), 4 lpm (1 gpm)  
Signal 50% ±50% ——— Regulated: Blocked Tank: <math>0.15\text{ bar (2 psi)}</math>  
Signal 85% ±10% - - - - - Input Signal: Sinusoidal

## Dimensions





## Installation Specifications

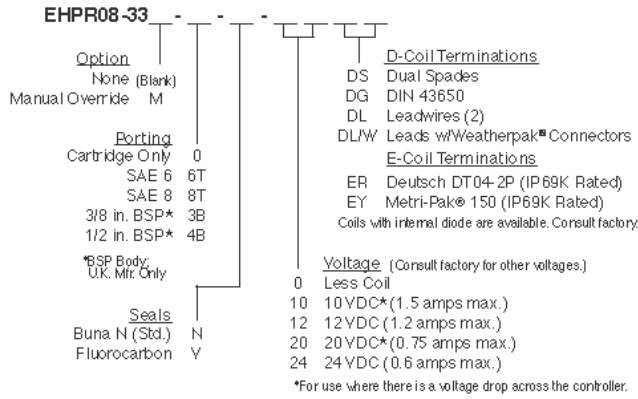
Cavity	VC08-3
Cartridge installation torque	25.8 to 28.6 N-m (19 to 21 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK08-3X-OO	- <b>Note:</b> X = seal option
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**Order Code**



**Model Options**

**EHPR08-33E-H-J-L**

**E Manual Override**

CODE	DESCRIPTION
BLANK	NONE
M	Variable Position Override, Red Knurled Knob

**H Line Body**

CODE	DESCRIPTION
0	No Body
4T	Aluminum SAE 4
6T	Aluminum SAE 6
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
3B	Aluminum BSPP 3/8" (3)
3BD	Ductile Iron BSPP 3/8" (3)

**J Seal**

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

**L Coil**

CODE	DESCRIPTION
0	No Coil
12DG	12 VDC, D-Coil, DIN 43650
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires
24DS	24 VDC, D-Coil, Dual Spade
24ER	24 VDC, E-Coil, Deutsch