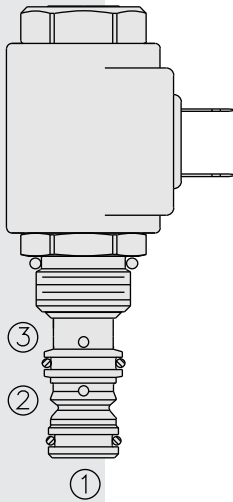


## EHPR08-33 Proportional Reducing/Relieving Valve



### DESCRIPTION

A screw-in, cartridge-style, direct acting, spool-type reducing/relieving valve, which can be infinitely adjusted across a prescribed range using a variable electric input. Pressure output is proportional to DC current input. This valve is intended for use as a pressure control device in demanding applications.

### OPERATION

The **EHPR08-33** 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.

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

### FEATURES

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

### RATINGS

**Maximum Inlet Pressure at port ②:** 207 bar (3000 psi)

**Maximum Tank Pressure at port ③:** 34.5 bar (500 psi)

**Maximum Control Current:** 1.2 amps for 12 VDC coil; 0.6 amps for 24 VDC coil;  
For other voltages, consult factory

**Dither Frequency Required:** 200 Hz

**Typical Frequency Response:** See Section 10

**Hysteresis:** Less than 3%

**Reducing/Relieving Pressure Range from Zero to Maximum Control Current:**  
0–26 bar (0–375 psi)

**Rated Flow:** 4.0 lpm (1.05 gpm),  $\Delta P=6$  bar (87 psi), Cartridge only,  
① to ③ coil de-energized

**Step Response:**  $T_{ON} < 30$  ms;  $T_{OFF} < 12$  ms

**Flow Path:** Free Flow: ① to ③ coil de-energized; Reduced: ② to ① coil energized;  
Relieving: ① to ③ coil energized

**Temperature:** -40 to 120°C (-40 to 250°F), with standard Buna N seals

**Ambient Air Temperature:** -40 to 80°C (-40 to 176°F)

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of  
7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

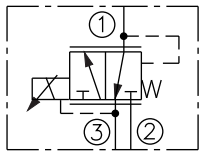
**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC08-3; See page 9.108.1; **Cavity Tool:** CT08-3XX; See page 8.600.1

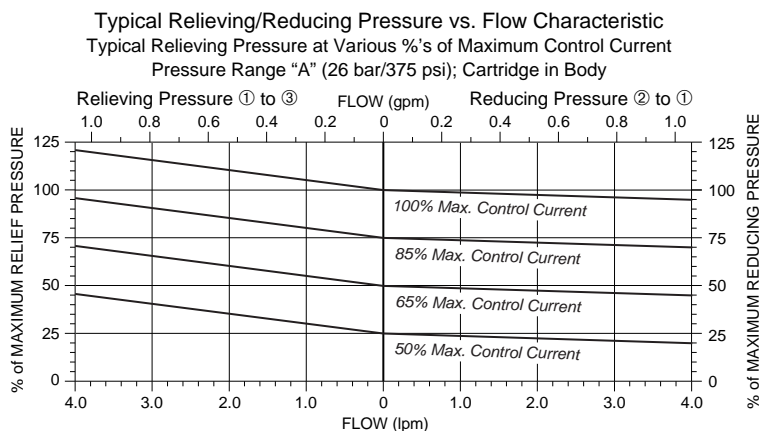
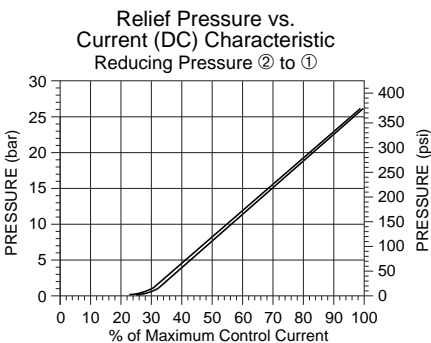
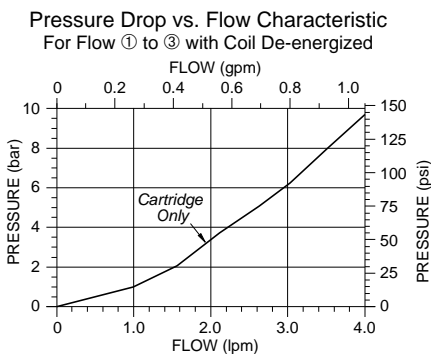
**Seal Kit:** SK08-3X-00; See page 8.650.1

### SYMBOLS

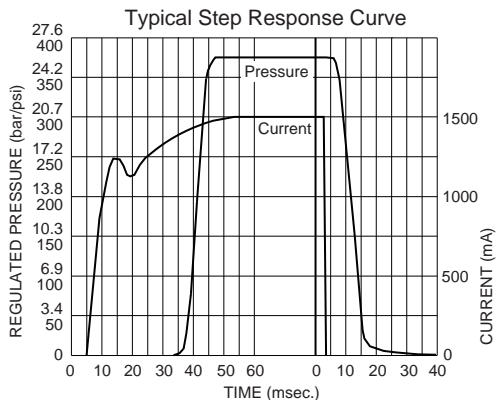
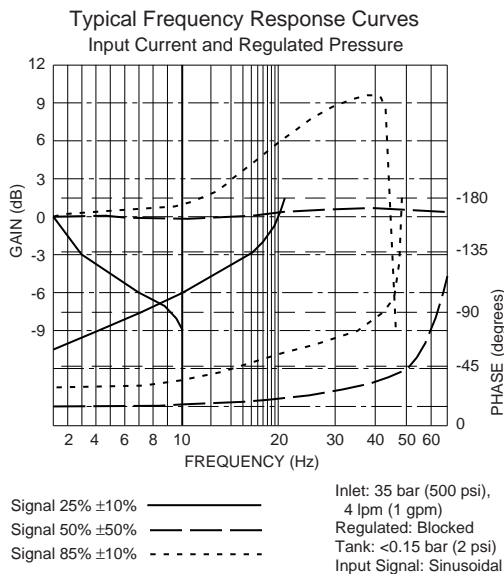
#### USAS/ISO:



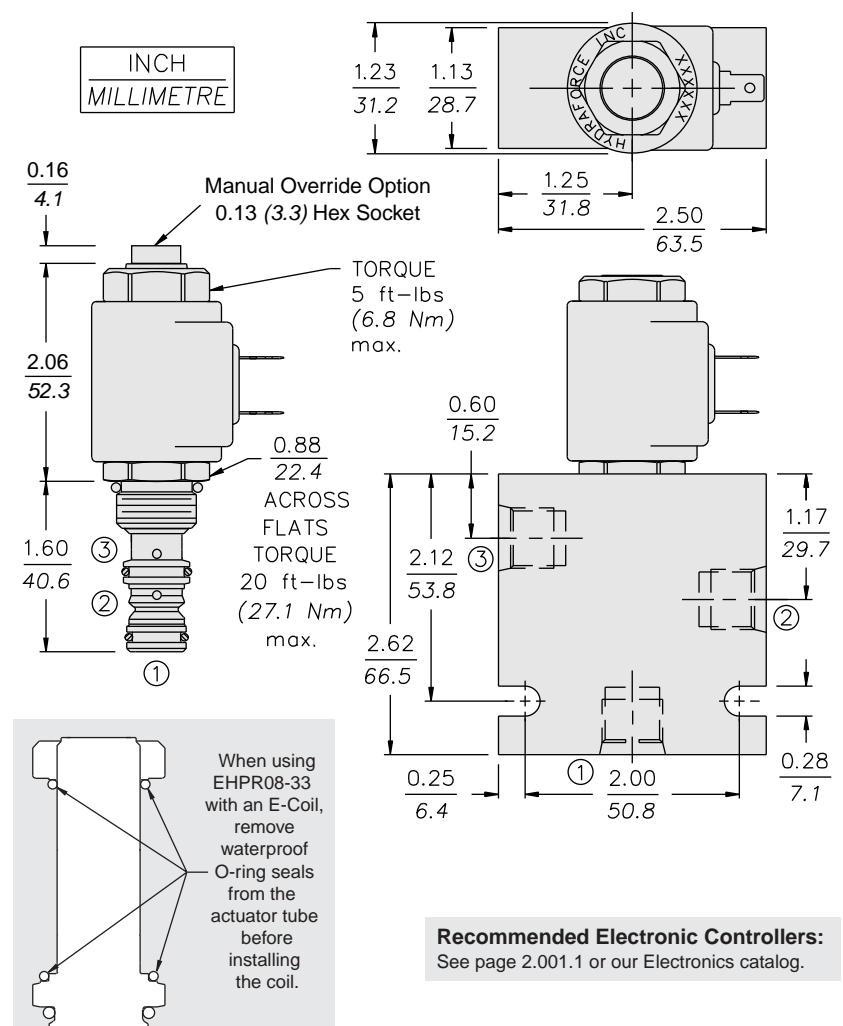
### PERFORMANCE



PERFORMANCE (continued)



DIMENSIONS



**Recommended Electronic Controllers:**  
See page 2.001.1 or our Electronics catalog.

MATERIALS

**Cartridge:** Weight: 0.25 kg. (0.55 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings standard.

**Standard Ported Body:** Weight:  
0.16 kg. (0.35 lbs.) Anodized high-  
strength 6061 T6 aluminum alloy,  
rated to 207 bar (3000 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.008.1

**EHPR Series Coil:**

**D-Coil:** Weight: 0.11 kg. (0.25 lbs.)  
Unitized, thermoplastic encapsu-  
lated, Class H high temperature  
magnetwire. See page 3.200.1

**E-Coil:** Weight: 0.14 kg. (0.3 lbs.)  
Fully encapsulated with rugged  
external metal shell. Rated up to  
IP69K with integral connectors.  
See page 3.400.1

TO ORDER

EHPR08-33

- Option
  - None (Blank)
  - Manual Override **M**
- Porting
  - Cartridge Only **0**
  - SAE 6 **6T**
  - SAE 8 **8T**
  - 3/8 in. BSP\* **3B**
  - 1/2 in. BSP\* **4B**
- Seals
  - Buna N (Std.) **N**
  - Fluorocarbon **V**

\*BSP Body;  
U.K. Mfr. Only

**D-Coil Terminations**

- DS** Dual Spades
- DG** DIN 43650
- DL** Leadwires (2)
- DL/W** Leads w/Weatherpak® Connectors

**E-Coil Terminations**

- ER** Deutsch DT04-2P (IP69K Rated)
  - EY** Metri-Pak® 150 (IP69K Rated)
- Coils with internal diode are available. Consult factory.

**Voltage** (Consult factory for other voltages.)

- 0** Less Coil
- 10** 10 VDC\* (1.5 amps max.)
- 12** 12 VDC (1.2 amps max.)
- 20** 20 VDC\* (0.75 amps max.)
- 24** 24 VDC (0.6 amps max.)

\*For use where there is a voltage drop across the controller.