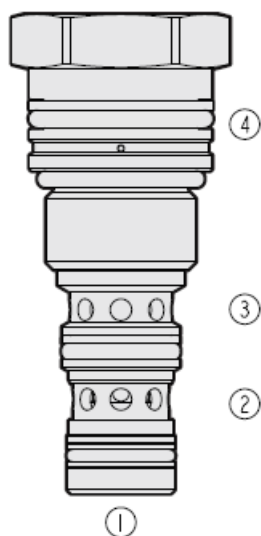




## Overview



### Description

The HVPR10-E48X is a screw in, cartridge style, direct acting, spool type, hydraulic pressure reducing / relieving valve with internal spring pilot chamber and spool damping chamber. It is designed to act as a pressure regulating device for secondary circuits. Port 2 may be protected by 60 mesh, 250 micron rated screen with option S.

### Operation

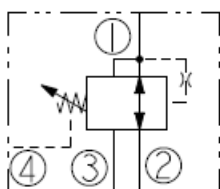
In its steady state, the hvpr10-e48x allows flow to pass bidirectionally from port 2 to port 1. External pilot pressure at port 4 predetermines valve setting. Upon attainment of a predetermined pressure at port 1, the spool shifts to block flow at port 2, thereby regulating pressure at port 1. In this mode, the valve will also relieve port 1 to port 3 at a variable value over the set reducing pressure.

**Note:** Tank port pressure is additive to pressure setting at ratio of 1:1.

### Features

- Control reducing pressure using an external reference.
- Hardened spool and cage for long life.
- Optional inlet screen.

## Symbol



## Ratings

### Pressure Ratings

|                 |                      |                       |
|-----------------|----------------------|-----------------------|
| Pressure rating | 350 bar (5075 psi)   | - <b>Note:</b> Port 1 |
|                 | 241.3 bar (3500 psi) |                       |
| Proof pressure  | 517.1 bar (7500 psi) |                       |
| Burst pressure  | 1379 bar (20000 psi) |                       |

### Flow Ratings

|                          |                                    |  |
|--------------------------|------------------------------------|--|
| Flow rating              | 113.6 lpm (30 gpm)                 |  |
| Maximum internal leakage | 82 ml/min (5 in <sup>3</sup> /min) | - <b>Note:</b> At 85% of the pressure setting applied to port 2. |

### 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 urethane seals     |
| Storage temperature         | -40 to 70 °C (-40 to 160 °F)  |  |
| Ambient temperature         | -40 to 70 °C (-40 to 160 °F)  |  |

## Operating Parameters

|                                       |  |
|---------------------------------------|--|
| Fluids                                | Mineral based or synthetic with lubricating properties |
| Fluid viscosity range                 | 7.4 to 420 cSt   |
| Maximum operating contamination level | 20/18/14 per ISO 4406                                  |

## Properties

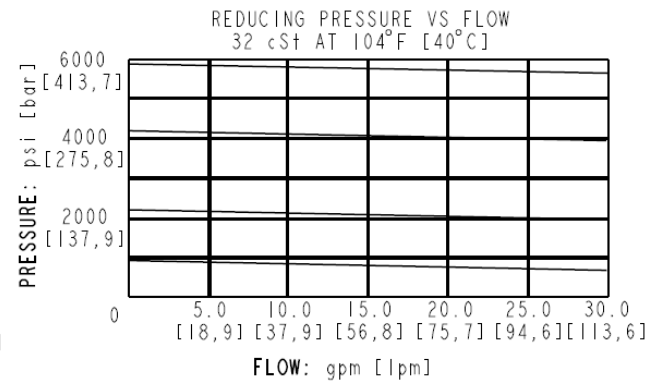
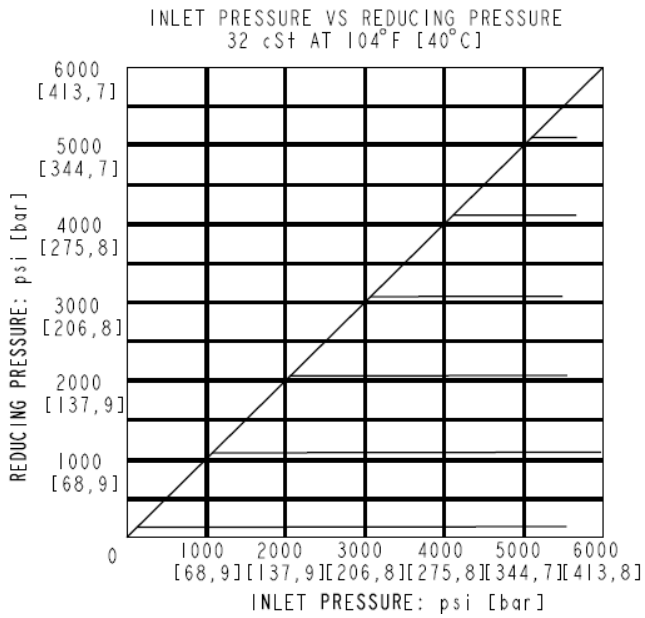
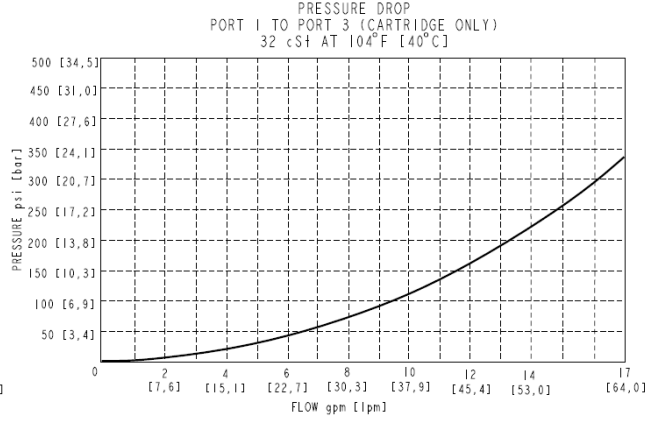
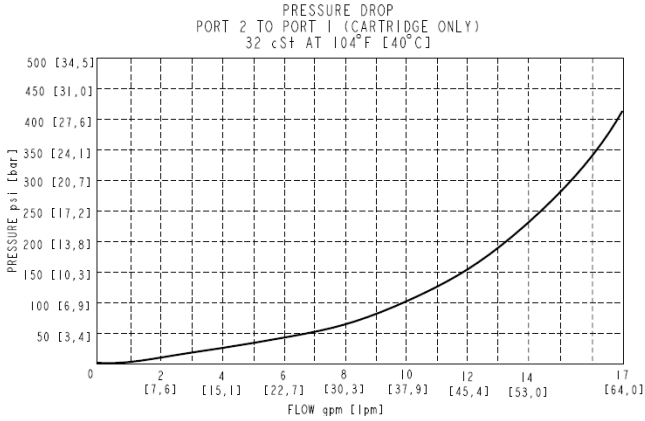
|                              |   |
|------------------------------|---|
| Unit weight                  | 0.17 kg (0.37 lb)                           |
| Internal wetted surface area | 141 cm <sup>2</sup> (21.8 in <sup>2</sup> ) |



## Installation Specifications

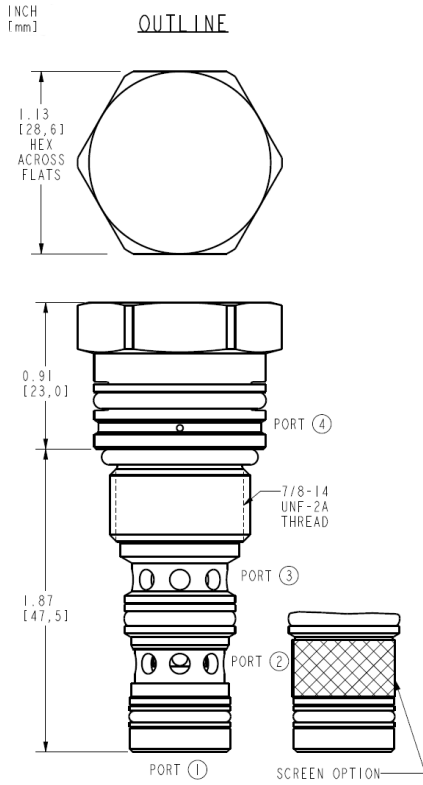
|                               |                                    |
|-------------------------------|------------------------------------|
| Cavity                        | HVC10-E4                           |
| Cartridge installation torque | 94.9 to 108.5 N-m (70 to 80 ft-lb) |
| Orientation restriction       | None                               |

## Performance





## Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY

## Accessories

Seal kit

SK10-E4X-BBM  
SK10-E4U-OOO

- **Note:** X = N and V seal options

- **Note:** U seal option



**Order Code**

ORDERING INFORMATION:

**HVPR10-E48X-0-X**

BASE MODEL NUMBER:

SCREEN OPTION:

NONE - BLANK  
SCREEN - S

PORTING:

CARTRIDGE ONLY - 0

SEAL OPTION:

BUNA N - N  
FLUOROCARBON - V  
URETHANE - U

**Model Options**

**HVPR10-E48G-H-J**

**G Screen**

| CODE  | DESCRIPTION |
|-------|-------------|
| BLANK | No Screen   |
| S     | Screen      |

**H Line Body**

| CODE | DESCRIPTION        |
|------|--------------------|
| 0    | No Body            |
| 8TD  | Ductile Iron SAE 8 |

**J Seal**

| CODE | DESCRIPTION  |
|------|--------------|
| N    | Buna-N       |
| V    | Fluorocarbon |