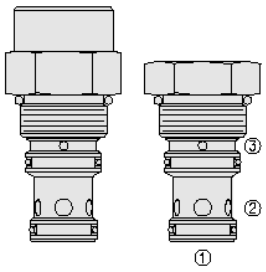
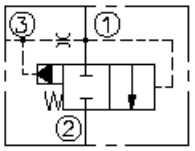
## Overview




### Symbol




### Description

The EV16-S34 is a screw-in, cartridge style, hydraulic directional element.

### Operation

The valve is a spring-biased blocking valve with an internal pilot orifice. The EV16-S34 shifts to allow full flow from port 1 to port 2 only when port 3 is vented to create a pressure drop across the internal orifice which exceeds the pressure of the bias spring value.

**note:** orifice disc should not be used with this product.

### Features

- Multiple function/application potential.
- Smooth shift transition.
- Low pressure drop.
- Tall cap version for higher bias springs 90, 110 and 160. The tall cap is also required when the valve is specified with manual override and the 40 size bias spring. Extra tall cap version for bias spring 240.
- Optional manual override only for 40, 90, 110, 160 and 240 psi bias springs.
- "G" metering option for metered flow control when opening.
- Industry common cavity.

## Ratings

### Pressure Ratings

| | |
|---|---|
| Pressure rating | 241 bar (3500 psi) |

### Flow Ratings

| | | |
|---|---|---|
| Flow rating | 189 lpm (50 gpm) | |
| Maximum internal leakage | 164 ml/min (10 in³/min) | **- Note:** At 3000 psi 207 bar |

### Temperature Ratings

| | | |
|---|---|---|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | **- Note:** With buna N seals |
| | -26 to 204 °C (-15 to 400 °F) | **- Note:** With fluorocarbon seals |
| | -54 to 107 °C (-65 to 225 °F) | **- Note:** With polyurethane seals |
| Storage temperature | -40 to 70 °C (-40 to 160 °F) | |
| Ambient temperature | -40 to 70 °C (-40 to 160 °F) | |

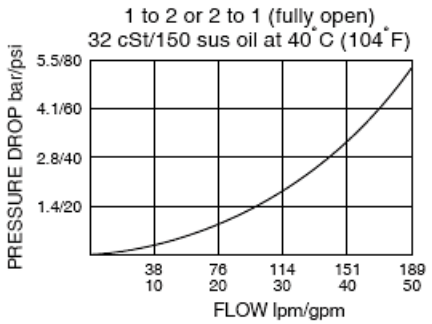
## Operating Parameters

| | |
|---|---|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 20/18/14 per ISO 4406. EV16-S34T EV16-S34 (reference all sheets) d:2.3 m:2.1 1-5/16-12 un-2a thread |

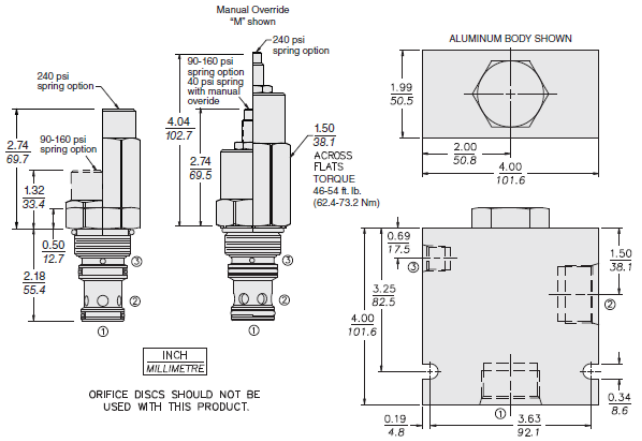
## Properties

| | | |
|---|---|---|
| Unit weight | 0.29 kg (0.63 lb) | **- Note:** Ev16-s34-0-x-70 |
| | 0.41 kg (0.91 lb) | **- Note:** Ev16-s34t-0-x-160 |
| | 0.72 kg (1.58 lb) | **- Note:** Ev16-s34t-0-x-240 |
| | 0.57 kg (1.26 lb) | **- Note:** Ev16-s34tm-0-x-160 |
| | 0.86 kg (1.90 lb) | **- Note:** Ev16-s34tm-0-x-240 |
| Internal wetted surface area | 367 cm² (56.91 in²) | **- Note:** Ev16s34tm0x240 |
| | 292 cm² (45.30 in²) | **- Note:** Ev16s34tm0x160 |
| | 287 cm² (44.53 in²) | **- Note:** Ev16s34t0x240 |
| | 233 cm² (36.12 in²) | **- Note:** Ev16s34t0x160 |
| | 182 cm² (28.17 in²) | **- Note:** Ev16s340x70 |

## Performance




## Dimensions



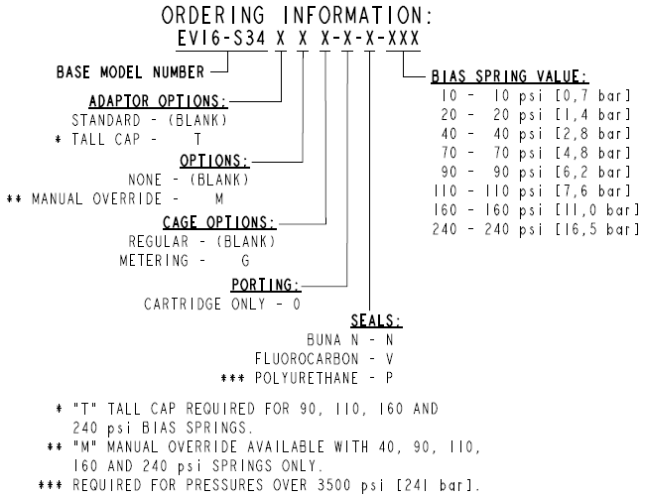

## Installation Specifications

| | |
|---|---|
| Cavity | VC16-S3 |
| Cartridge installation torque | 62.4 to 73.2 N-m (46 to 54 ft-lb) |
| Orientation restriction | None. D:2.3 m:2.1 flow gpm [lpm] pressure drop psi [bar] 0 30 [114] 20 [76] 10 [38] pressure drop VS flow 1 to 2 (fully open) 32 cSt at 104$f [40$c] 40 [151] 50 [189] 20 [1,4] 40 [2,8] 60 [4,1] 80 [5,5] |

## Accessories

| | | |
|---|---|---|
| Seal kit | SK16-S3X-MM (x = seal option) | **- Note:** X = seal option |

## Order Code




* "T" TALL CAP REQUIRED FOR 90, 110, 160 AND 240 psi BIAS SPRINGS.
** "M" MANUAL OVERRIDE AVAILABLE WITH 40, 90, 110, 160 AND 240 psi SPRINGS ONLY.
*** REQUIRED FOR PRESSURES OVER 3500 psi [241 bar].

**Model Options**

**EV16-S34CDF-H-J-R**

**C Adaptor Option**

| CODE | DESCRIPTION |
|---|---|
| BLANK | Standard Cap |
| T | Tall Cap |

### D Cage Option

| CODE | DESCRIPTION |
|---|---|
| BLANK | Standard Cage |
| G | Metering (staggered holes) |

### F Stroke Limiter

| CODE | DESCRIPTION |
|---|---|
| BLANK | Standard |
| M | Stroke Limiter |

### H Line Body

| CODE | DESCRIPTION |
|---|---|
| 0 | No Body |
| 16T | Aluminum SAE 16 |

### J Seal

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

### R Spring

| CODE | DESCRIPTION |
|---|---|
| 10 | 10 psi Bias Spring |
| 20 | 20 psi Bias Spring |
| 40 | 40 psi Bias Spring |
| 70 | 70 psi Bias Spring |
| 90 | 90 psi Bias Spring |
| 110 | 110 psi Bias Spring |
| 160 | 160 psi Bias Spring |
| 240 | 240 psi Bias Spring |