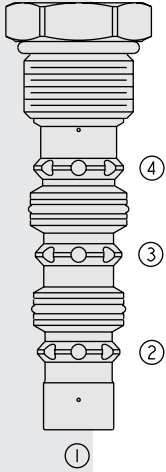


# DIRECTIONAL CONTROLS

## HS52-42 Low Side (Hot Oil) Shuttle, Springless



### DESCRIPTION

A spool-type, closed in transition, 2-position, 3-way hot oil shuttle valve, which may be used on hydrostatic transmissions to direct charge pump oil to a heat exchanger or to tank.

### OPERATION

With internal piloting at port ①, ② or ④, oil will flow from the port opposite of the port piloted to port ③, thus removing oil from the low-pressure side for cooling or filtration purposes. The valve is **springless**, relying solely on the internal pilot pressure signal to shift to either side. The **HS52-42** is closed in transition.

### FEATURES

- Hardened parts for long life.
- Industry common cavity.

### RATINGS

**Operating Pressure:** 345 bar (5000 psi) when used in steel body

**Flow Rate:** See Performance Chart

**Internal Leakage:** 164 cc/minute (10 cu. in./minute) max.

**Temperature:** -40 to 120°C

**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

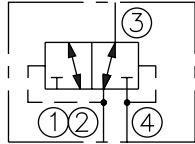
**Cavity:** VC12-4; See page 9.112.1

**Cavity Tool:** CT12-4XX; See page 8.600.1

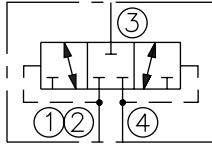
**Seal Kit:** SK12-2x-TB

### SYMBOLS

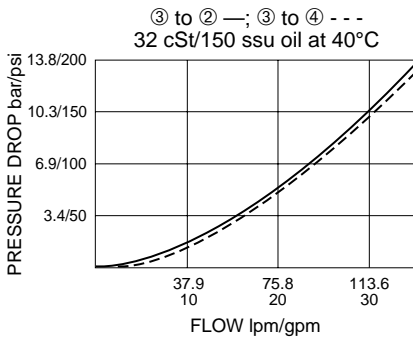
#### USASI/ISO:



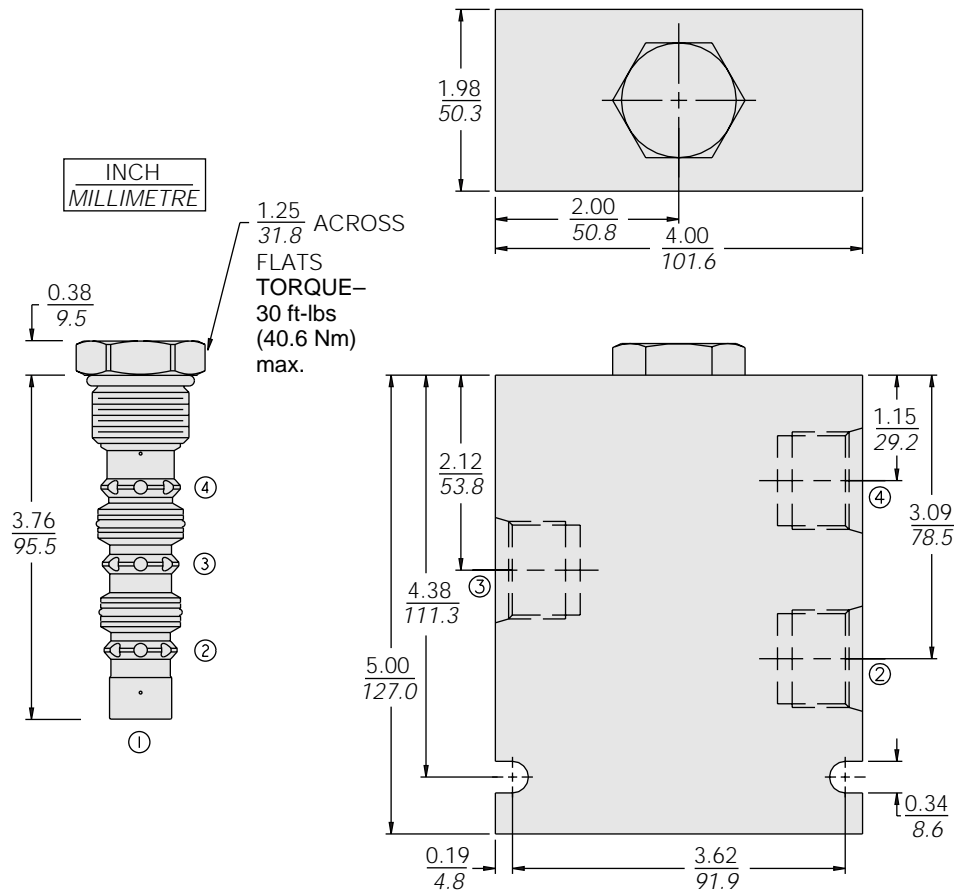
#### TRANSITION:



### PERFORMANCE (Cartridge Only)



## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.15 kg. (0.32 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Polyurethane seals and polyester  
elastomer back-ups required for  
operation over 207 bar (3000 psi).

**Ported Body:** Weight: 3.57 kg.  
(7.87 lbs.); Ductile Iron (code "D")  
standard, rated to 345 bar (5000 psi).  
Some body dimensions may differ.  
See page 8.012.1.

## TO ORDER

HS52 - 42 - -

**Porting**  
Cartridge Only **0**  
SAE 12 (Ductile) **12TD**

### Seals

- N** Buna N (Std.)
- V** Fluorocarbon
- P** Polyurethane — required for  
operation over 207 bar (3000 psi)