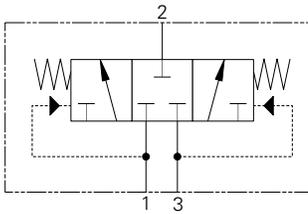


# 1HSH20 - Hot Oil Shuttle Valve

Hot oil shuttle, directional valve

20 L/min (5 USgpm) • 350 bar (5000 psi)



## Operation

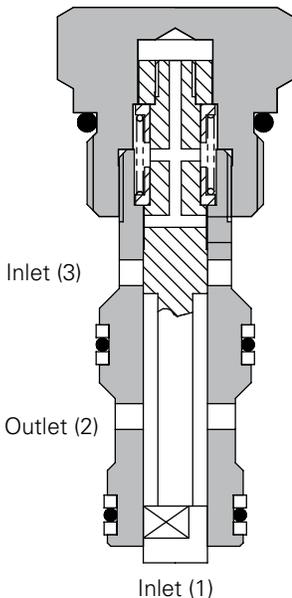
The two inlets are fed by the pressure lines of a closed loop hydraulic system. As soon as pressure rises in either line, the spool which is internally piloted opens the lower pressure side to tank through a relief valve.

This allows the charge pump flow to be exhausted to tank after the oil has done its work, hence the title 'hot oil shuttle'. If the system is reversed, the spool switches in the opposite direction, maintaining hot oil exhaust.

## Features

Compact design with high pressure rating and low pressure drop characteristics. Hardened and match ground working parts keep cross port leakage to a minimum.

## Sectional View



## Performance Data

### Ratings and Specifications

*Performance data is typical with fluid at 32 cSt (150 SUS)*

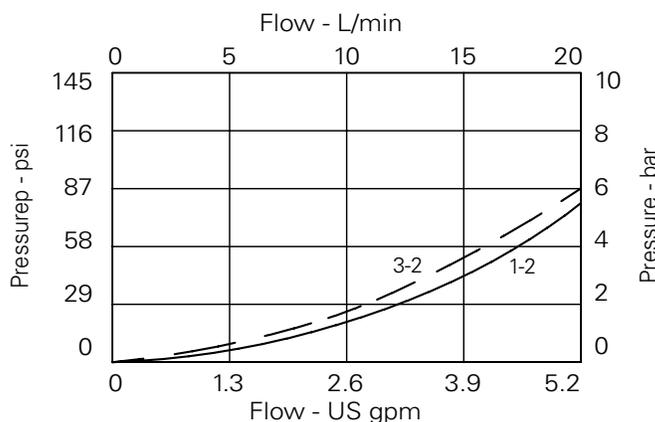
Max working pressure	350 bar (5000 psi)
Rated flow	20 L/min (5 US gpm)
Internal leakage	90 ml/min nominal per land
Temperature range	-30° to 90°C (-22° to 194°F)
Cavity	CVB-22-06-0 (see Section M)
Torque cartridge into cavity	67 Nm (50 lbs ft)
Mounting position	Line mounted
Filtration	BS5540/4 Class 18/13 (25 micron or better)
Nominal viscosity range	5 to 500 cSt
Standard housing materials	Aluminum or Steel
Weight	<b>1HSH20</b> 0.14 kg (.3 lbs), <b>1HSH251</b> 1.0 kg (2.2 lbs)
Seal kit	SK632 (Nitrile) SK632V (Viton®)

Viton is a registered trademark of E.I. DuPont

## Description

This valve provides hot oil exhaust in a closed loop hydrostatic system. The high pressure line causes the valve to open the low pressure line to tank through a back pressure relief valve, thus purging the system of extra oil supplied by the charge pump.

## Pressure Drop



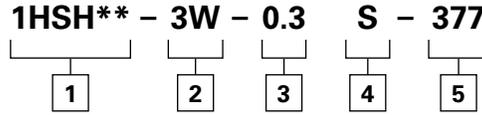
Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

# 1HSH20 - Hot Oil Shuttle Valve

Hot oil shuttle, directional valve

20 L/min (5.3 USgpm) • 350 bar (5000 psi)

## Model Code



### 1 Function

**1HSH20** - Cartridge only  
**1HSH25** - Cartridge and body

### 2 Port Size

Code	Port Size	Material	
		Aluminum	Steel
<b>3W</b>	3/8" BSP	B13519	B13520
<b>4W</b>	1/2" BSP	B13321	B13522
<b>6T</b>	3/8" SAE	B10800	
<b>8T</b>	1/2" SAE	B10801	B13526

### 3 Pilot Pressure

**0.3** - 3 bar  
**0.6** - 6 bar

### 4 Seals

**S** - Nitrile (for use with most industrial hydraulic oils)  
**SV** - Viton® (for high temperature and most special fluid applications)

### 5 Body Material

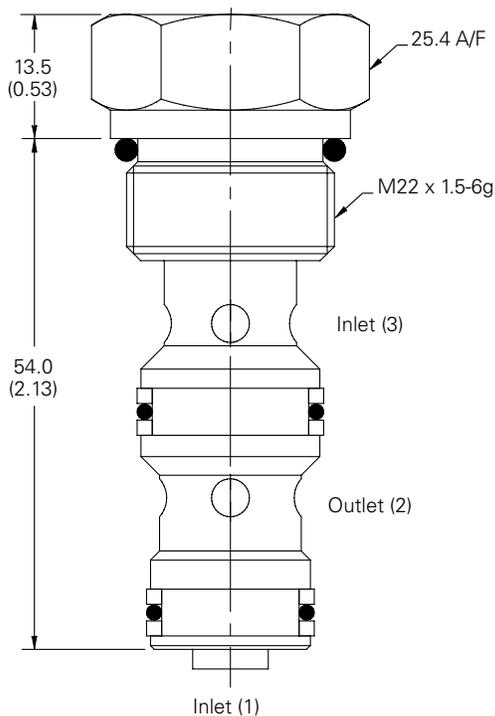
**377** - Steel  
 Omit for aluminum up to 210 bar (3000 psi)



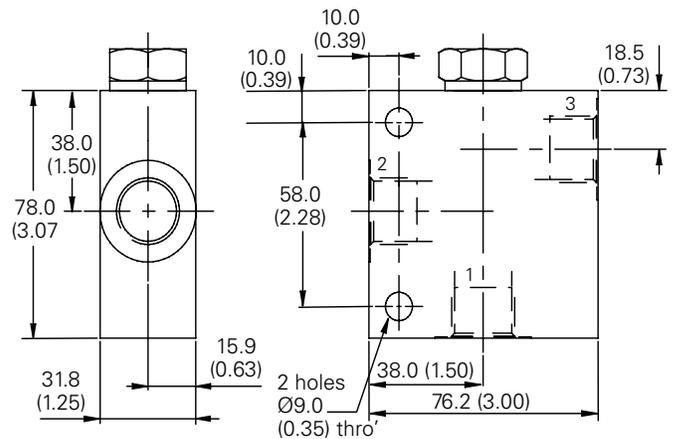
## Dimensions

mm (inch)

### Cartridge Only



### Installation Drawing



**Note:** For applications above 210 bar (3000 psi), please consult our technical department or use the steel body option.