

## HANSEN TECHNOLOGIES CORPORATION



2" HOTV Oil Temperature Valve

### Specifications, Applications, Service Instructions & Parts

#### HANSEN OIL TEMPERATURE VALVE 1½" through 3" (40 mm through 80 mm)

for Oil-Cooling Circuits

ISO 9000

### INTRODUCTION

The Hansen Oil Temperature Valve is a 3-way mixing valve used to accurately control the oil temperature of screw compressors or other oil-cooling circuits within appropriate design parameters. The internal thermostatic element modulates to maintain a near constant temperature at the outlet of the valve.

### ADVANTAGES

Easy to service—the valve can stay in line  
Durable Teflon sliding seal is compatible with most refrigerants, oils, and temperatures, unlike O-ring designs  
Suitable for mixing or diverting applications

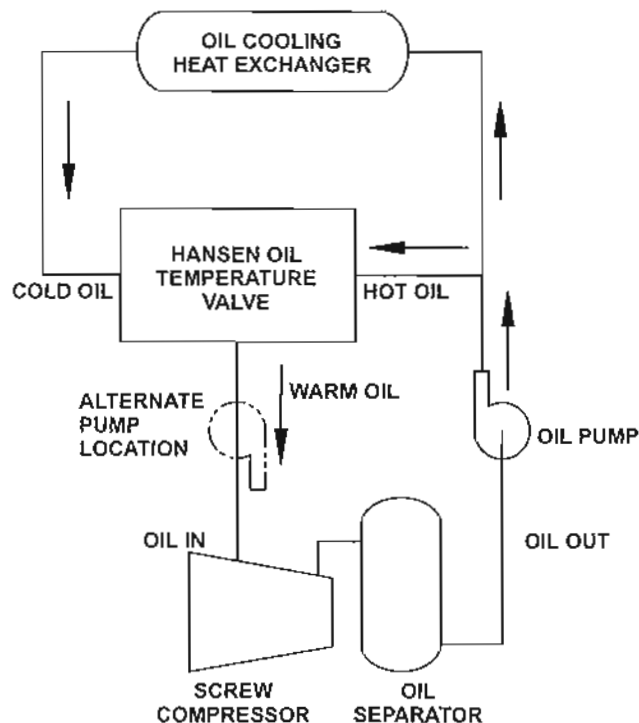
### KEY FEATURES

Rugged, all-steel construction, weld ends  
Low pressure drop  
Thermostatic element is stainless steel with a plated sensing bulb  
Suitable for oils operating with ammonia, R22, R134a, and other compatible refrigeration systems

### SPECIFICATIONS

Safe Working Pressure: 400 psig (27 bar) standard, contact Hansen for higher pressures  
Body: Cast steel, ASTM-A352 LCB  
Cover: Steel plate, ASTM-A36  
Sliding Seal: Composite Teflon  
Cover Gasket: Nonasbestos, fiber gasket  
Temperature Range: ±10°F (±6°C) of nominal temperature

### TYPICAL MIXING APPLICATION

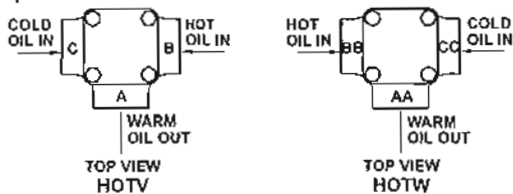


### OPERATION

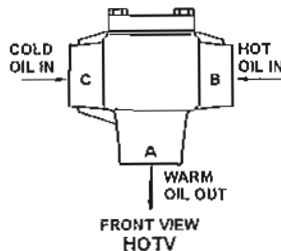
As oil and refrigerant are circulated through the screw compressor, the oil is heated. The hot oil is fed to the valve and it is also fed to a heat exchanger, which provides cold oil to the opposite side of the valve. The thermostatic element modulates the flow of oil from the cold oil port and the hot oil port to maintain the nominal temperature setting at the outlet.

## SECTION

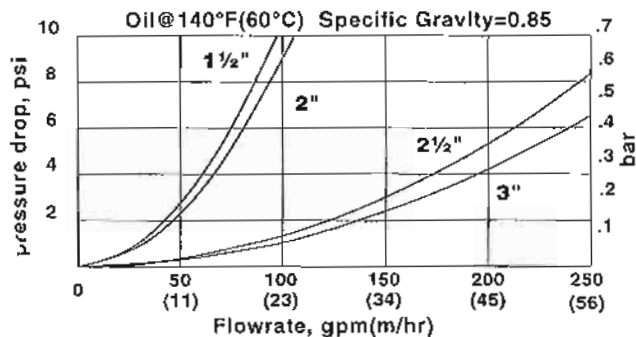
Two models are available for the 1½" (40 mm) and 2" (50 mm) sizes, HOTV and HOTW. The only difference is the position of the hot oil and cold oil inlets.



The 2½" (65 mm) and 3" (80 mm) sizes only require one model. The "T-body" style of these valves allows reversal of inlets by simply turning the valve around.



## FLOW RATE VS. PRESSURE DROP

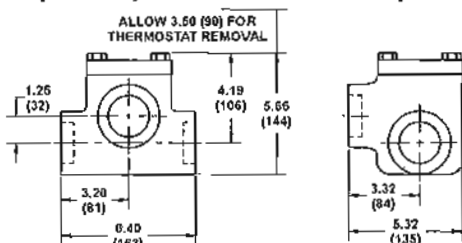


## INSTALLATION

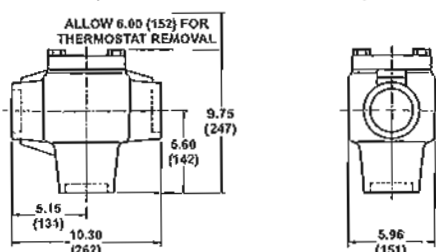
Remove the cover and element before welding the valve body in the line. The valve can be mounted in any position. Avoid mounting valve at the high point of the system where a gas pocket may form. After the valve is welded in the line, reassemble it and check for leaks before placing it in service.

## INSTALLATION DIMENSIONS, INCH (MM)

1½" SW (40mm) and 2" SW or BW (50mm)



2½" SW or BW (65mm) and 3" BW (80mm)

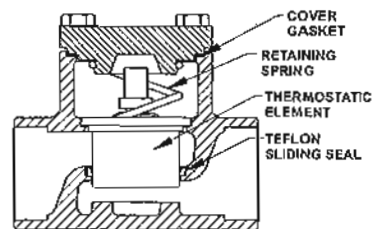


## SERVICE AND MAINTENANCE

Before opening the valve for service, be sure it is isolated and pumped out to zero pressure. Loosen the cover bolts equally, break the gasket seal, and check for residual oil or refrigerant pressure. Then, remove the bolts. Remove and replace the thermostatic element if necessary. Reinstall the retaining spring. Replace the cover gasket. Place the cover back on. For 1½" and 2" valves torque the cover bolts equally to 60 ft-lbs (80 Nm), and for 2½" and 3" valves, torque the cover bolts equally to 125 ft-lbs (170 Nm). Check for leaks before returning the valve to service.

## PARTS LIST

Thermostatic Element Replacement Kit (Consists of 1 thermostatic element and 1 cover gasket)		
Nominal Temperature	Part Number	
	1½", 2"	2½", 3"
120°F (49°C)	30-1104	30-1109
130°F (54°C)	30-1103	contact factory
140°F (60°C)	30-1105	contact factory



## CAUTION

These instructions and related safety precautions must be read completely and understood before selecting, using, or servicing these valves. Only knowledgeable, trained technicians should install, operate, or service these valves. Stated temperature and pressure limits should not be exceeded. Components should not be removed from a system unless it has been evacuated to zero pressure. See also Safety Precautions in the current List Price Bulletin and the Safety Precautions Sheet supplied with product. Escaping fluids can cause injury, especially to the eyes and lungs.

## WARRANTY

Hansen valves are guaranteed for one year F.O.B. our plant. No consequential damages or field labor is included.

## ORDERING INFORMATION

**To Order:** Specify catalog number HOTV (or optional HOTW for 1½" or 2"), size, connection style (socket weld or butt weld), and temperature setting. Temperature setting of 120°F (49°C) is standard; 130°F (54°C) or 140°F (60°C) are also available.

## HANSEN TECHNOLOGIES CORPORATION

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