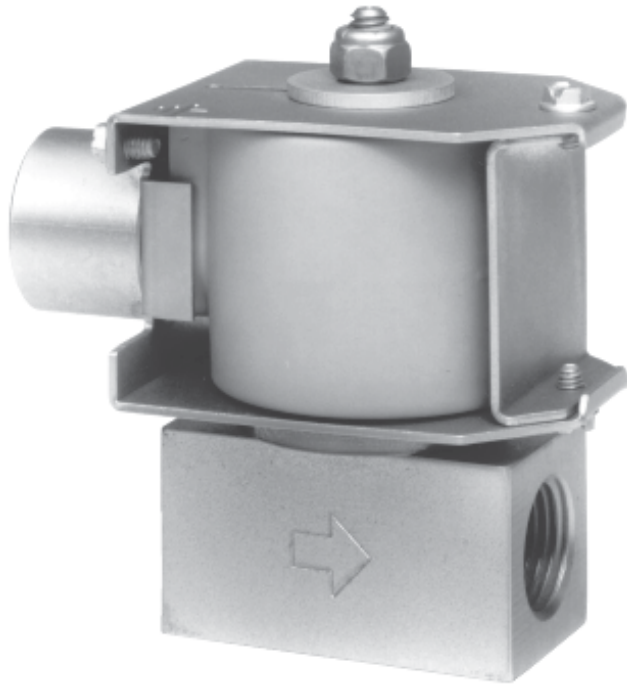


## HANSEN TECHNOLOGIES CORPORATION



HS2 Solenoid Valve

### INTRODUCTION

This threaded end industrial refrigeration duty solenoid valve is very simple and compact but rugged in construction. Body is plated steel alloy. The direct lifting stainless steel plunger contains a Teflon seat which closes on a stainless steel orifice. When electrically energized, valve opens wide; when de-energized, flow stops in the direction of the arrow on the valve body.

### APPLICATIONS

This small, direct lifting valve is used primarily as a pilot for various larger gas-powered or liquid powered main valves, as a remote pilot for back pressure regulators or other devices, or as a liquid stop valve for expansion valves, float valves, or as a general purpose pilot line for ammonia, R22, R134a, and other approved refrigerants or oil.

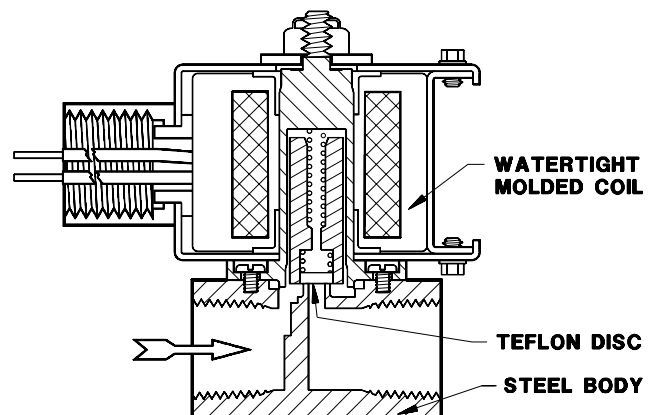
### Specifications, Applications, Service Instructions & Parts

#### HS2 SOLENOID VALVE $5/32$ " (4mm) PORT

Threaded End  
 $1/4$ " ,  $3/8$ " ,  $1/2$ " FPT  
for refrigerants



### KEY FEATURES



### ADDITIONAL FEATURES

- Compact, low cost
- Low wattage, Hansen standard coil
- 300 PSI (20 bar) MOPD
- Stainless steel seat orifice
- Removable solenoid tube
- Body easily grabbed by wrench
- Heavy-duty, direct lift
- CSA Certified
- Nonasbestos gaskets

## MATERIAL SPECIFICATIONS

Body: Steel, plated  
 Solenoid Tube: Stainless steel  
 Plunger: Stainless steel  
 Seat Orifice: Stainless steel  
 Seat: Teflon  
 Safe Working Pressure: 400 PSIG (27 bar)  
 Operating Temperature: -60°F to +240°F  
 (-50 to +115°C)

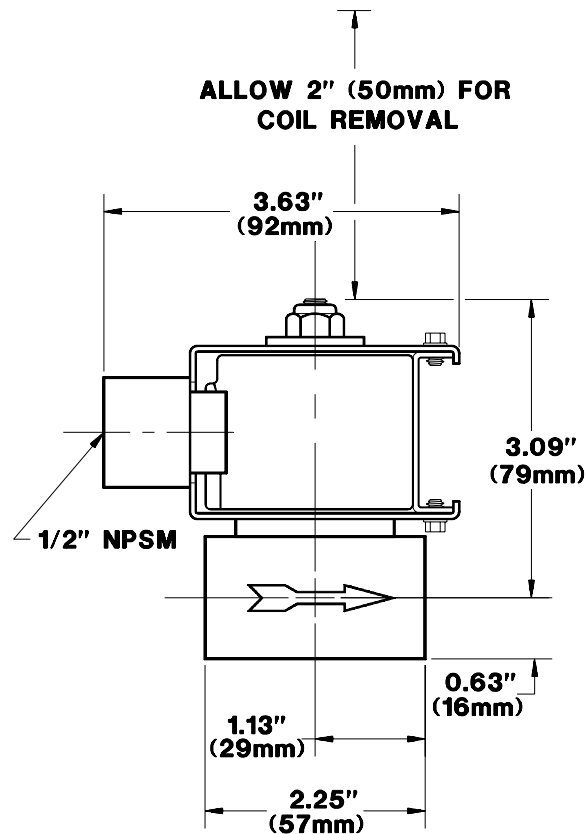
## ADVANTAGES

Power-saving, low-wattage molded coil; Teflon disc seat; stainless steel trim; spring-closing. One standard molded coil fits all Hansen valves.

## INSTALLATION

Match the arrow on the body with the system flow direction. Protect the interior of the valve from dirt during installation. Check mating pipe threads for cleanliness and accuracy before installing. Use a small quantity of pipe dope on pipe threads. Use a flat jaw wrench on the body close to the pipe, being careful not to damage the pipe threads with pipe wrench jaws. Allow 2" (50mm) above the valve for coil removal.

## INSTALLATION DIMENSIONS



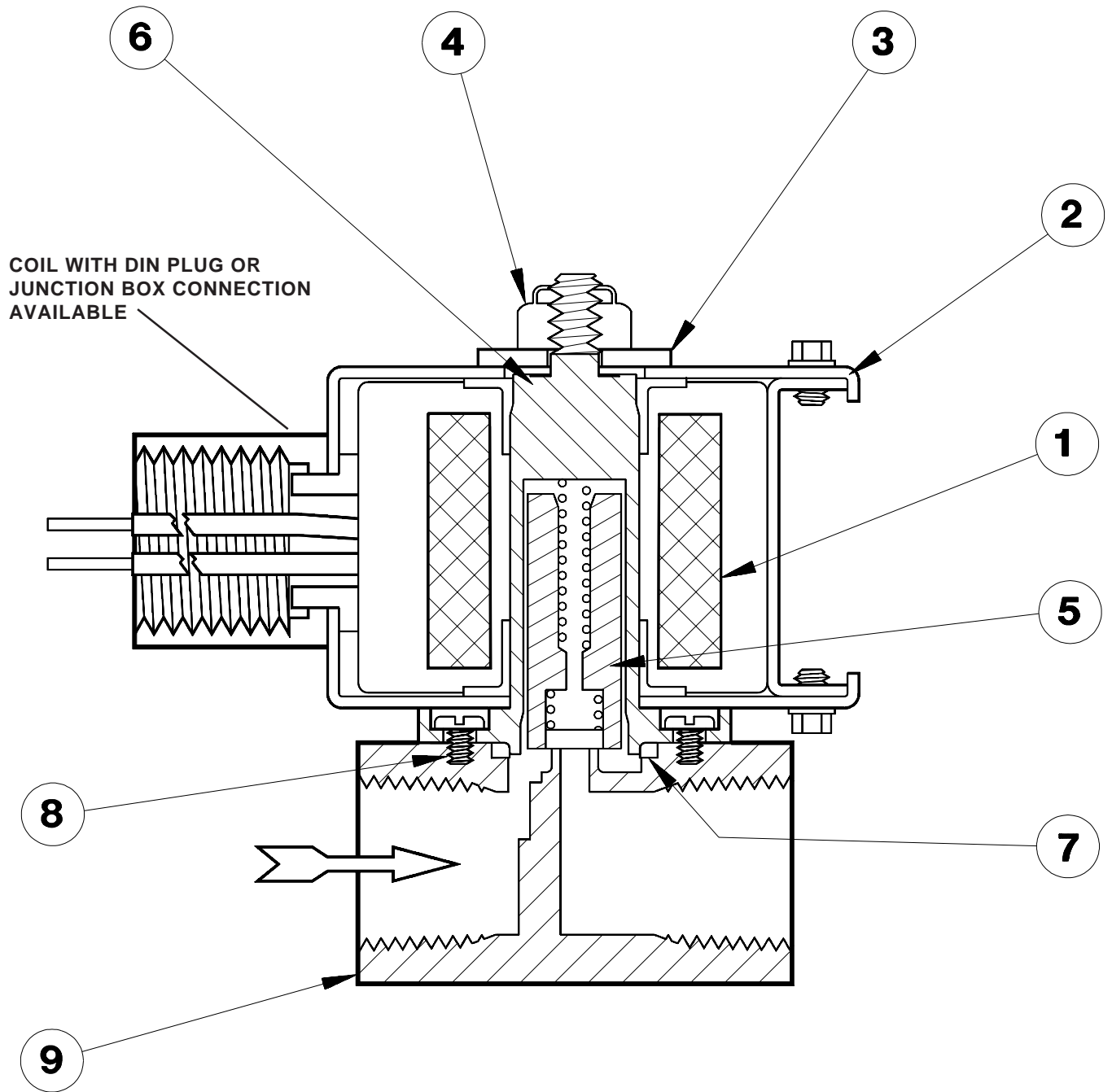
## ELECTRICAL

The coil draws 16 watts and will operate properly between 85% and 110% of the rated voltage (24V coil draws 19 watts). Standard coil connection is a 1/2" fitting (NPSM) for conduit, with 18" pigtail leads. Coils with DIN plug or junction box are available. Contact the factory. All coils have a standard zinc-plated, steel housing which meets NEMA 3R (rainproof) and NEMA 4 (splashproof, approx. IP65) requirements. The junction box is considered NEMA 1. The coil should only be energized while on the solenoid tube. Otherwise, immediate coil burnout may occur. To avoid bending the solenoid tube, remove the coil from the valve before connecting any electrical conduit. Pilot lights are available.

## PARTS LIST

ITEM	DESCRIPTION	QTY	PART NO
	<b>Coil Kit (115V) 1/2" Fitting</b>		<b>70-1057</b>
	<b>Coil Kit (208/230V) 1/2" Fitting</b>		<b>70-1056</b>
	<b>Coil Kit (24V) 1/2" Fitting</b>		<b>70-1058</b>
	<b>Coil Kit (Other Voltages)</b>		<b>FACTORY</b>
	Above Kits Consist of:		
1a	Bare Coil, 115V 50/60Hz, wire leads	1	70-0271
1b	Bare Coil, 208/230V 50/60Hz, wire leads	1	70-0286
1c	Bare Coil, 24V 50/60Hz, wire leads	1	70-0284
1d	Other Voltage Coils	1	FACTORY
2	Coil Housing Assembly Kit	1	70-1060
3	Coil Washer	1	70-0289
4	Coil Nut	1	70-0281
	<b>Solenoid Tube/Plunger Kit*</b>		<b>70-1059</b>
	Above Kit Consists of:		
5	Plunger	1	70-0295
6	Solenoid Tube	1	70-0298
7	Solenoid Tube Gasket	1	70-0301
8	Tube Screws	4	70-0297
3	Coil Washer	1	70-0289
4	Coil Nut	1	70-0281
<b>9</b>	<b>Body Assembly Kit</b>		<b>FACTORY</b>
	Complete Valve less Coil Kit		

\* Beginning in 1993, a new interchangeable, threaded top, solenoid tube as shown in this bulletin, will be used on all solenoid valves. See Hansen Coil Bulletin SC1 for more details.



## SERVICE AND MAINTENANCE

**Failure to open:** Wrong voltage coil; low line voltage; controlling switch or thermostat not contacting; coil is burned-out; inlet/outlet pressure differential too high; plunger jammed closed with dirt.

**Failure to close:** Controlling switch or thermostat not opening contacts; dirt under seat; eroded seat parts; plunger jammed upward by dirt.

Before opening the valve for service, be sure it is isolated from the system and all refrigerant is removed. Disconnect electrical power from the coil. Remove the coil by unscrewing the coil nut and removing the washer. Loosen the four solenoid tube screws sufficiently and break seal, proceeding cautiously to avoid any refrigerant still remaining inside. Then remove the tube screws to separate the solenoid tube from the body.

Check face of Teflon seat in plunger, plunger spring, and seat orifice in body. Clean, polish, or replace parts as necessary. The seat orifice is integral with the body. Install a new solenoid tube gasket and oil lightly. Reassemble the solenoid tube to the body with four screws. Carefully check the valve for leaks before restoring to service.

## CAUTION

Hansen valves are for refrigeration systems only. These instructions must be completely read and understood before selecting, using, or servicing these valves. Only knowledgeable, trained refrigeration mechanics should install, operate, or service these valves. Stated temperature and pressure limits should not be exceeded. Solenoid tubes should not be removed from valves unless the system has been evacuated to zero pressure. See also the Safety Precautions in the current List Price Bulletin and the Safety Precautions Sheet supplied with product. Escaping refrigerant might cause personal injury, particularly to the eyes and lungs.

## WARRANTY

Hansen valves are guaranteed against defective materials or workmanship for one year FOB factory. No consequential damages or field labor is included.

## ORDERING INFORMATION, HS2 SOLENOID VALVE

THREADED END CONNECTIONS, FPT	
STD	ALSO
1/2"	1/4", 3/8"

FPT: Female Pipe Thread (American National Standard)

Standard molded solenoid coil is included for 50/60Hz 208/230, 115, or 24 volts; other voltages offered. Standard coil connection is a 1/2" fitting (NPSM). Coils with DIN plug or junction box are available; contact factory. Pilot lights are available.

**TO ORDER:** Specify type, threaded end connection size, and volts. Unless otherwise specified, standard coil with 1/2" fitting will be supplied.

## TYPICAL SPECIFICATIONS

"Refrigerant direct operating solenoid valves shall have molded, watertight coils, Teflon seat, steel bodies, spring closing plunger, and be suitable for a safe working pressure of 400 psig, model HS2 as manufactured by Hansen Technologies Corporation or approved equal."

## OTHER PRODUCTS

Ammonia Pressure-Relief Valves  
Gauge, Purge, and Needle Valves: 1/4", 3/8"  
Threaded Shut-off Valves: 3/8" to 1 1/4"  
Socket Weld Shut-off Valves: 1/2" to 2 1/2"  
Welding Steel Shut-off Valves: 2" to 14"  
Expansion Valves (Regulators): 3/8" to 4"  
Refrigerant Solenoid Valves  
Refrigerant Pressure Regulators  
Small Pressure Regulators  
Refrigerant Check Valves  
Strainers  
Gas-Powered Valves  
Refrigerant Float Switches  
SEE-LEVEL® Liquid Indicators  
Float Regulators (High Side)  
Refrigerant Liquid Pumps  
Vari-Level® Adjustable Level Controls  
Techni-Level® Transducer Probes  
AUTO-PURGER®s  
Frost Master® Defrost Controllers  
Liquid Refrigerant Filter System

## HANSEN TECHNOLOGIES CORPORATION

6827 High Grove Boulevard  
Burr Ridge, Illinois 60527 U.S.A.  
Telephone: (630) 325-1565  
Toll-free: 1-800-426-7368  
FAX: (630) 325-1572