



*HS6 Solenoid Valve  
with Close-Coupled ST050 Strainer*

## Specifications, Applications, Service Instructions & Parts

### HS6 SOLENOID VALVE 5/32" (4 mm) PORT

Flanged  
1/4" thru 3/4"  
(7 mm thru 20 mm)  
for refrigerants



## INTRODUCTION

This flanged, industrial refrigeration duty solenoid valve is very simple and compact but rugged in construction. Body is plated steel alloy with a direct lifting stainless steel plunger that contains a teflon seat that closes on a stainless steel orifice. When electrically energized, seat opens wide; when de-energized, it closes to stop flow in the arrow direction 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, CO2 and other approved refrigerants or oil.

## MAXIMUM RATINGS, AMMONIA

Liquid, Receiver Pressure: 15 Tons (52 kW)

Flow Factor: Cv=0.41 (Kv=0.35)

## ADDITIONAL FEATURES

Encapsulated Hansen standard coil

300 psi (20 bar) MOPD

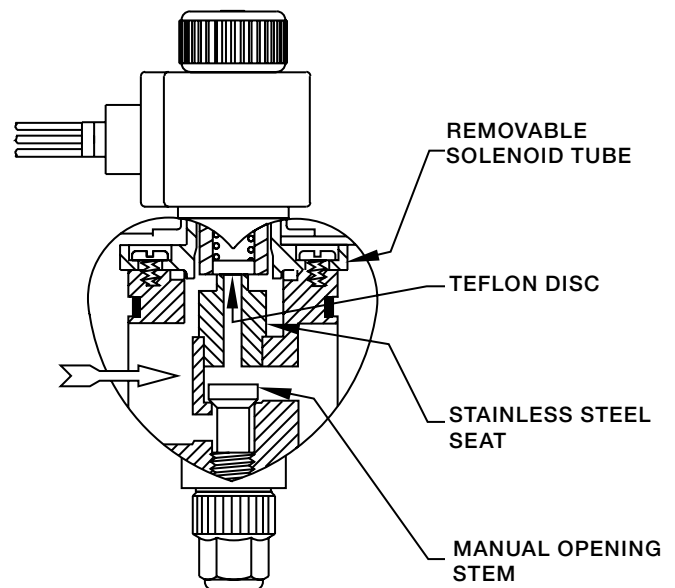
Available close-coupled strainer

Heavy-duty, direct lift

CSA Certified Status

Non-asbestos gaskets

## KEY FEATURES



## 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),  
600 psig (40 bar) available for CO2

Operating Temperature: -60°F to 240°F  
(-50°C to 115°C)

## ADVANTAGES

Power saving, low-wattage encapsulated coil; teflon seat; stainless steel trim; spring-closing; double-seal manual opening stem. One standard encapsulated coil fits all Hansen valves.

## INSTALLATION

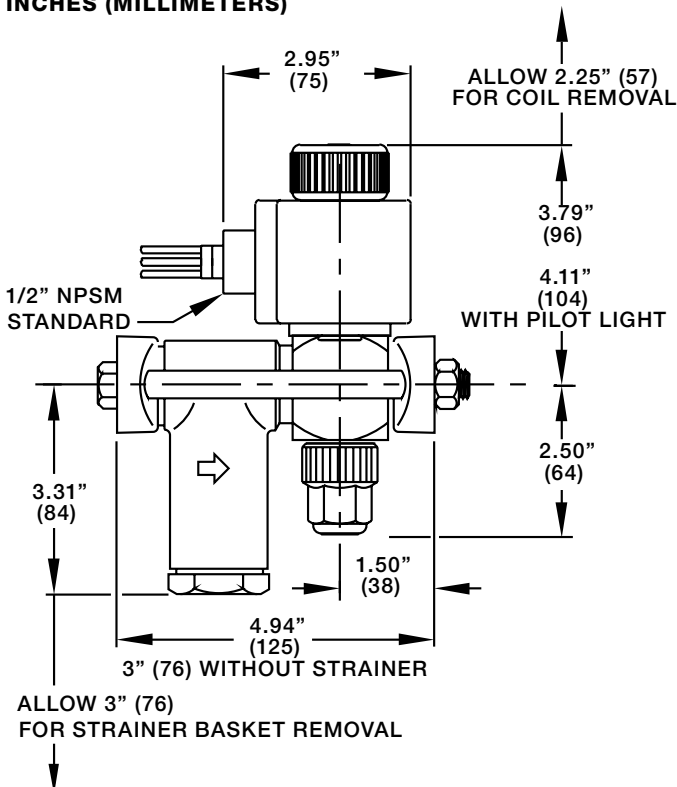
Match arrow on body with system flow direction. Protect interior of valve from dirt during installation; normally use close-coupled inlet strainer. Allow 2.25" (57 mm) above valve for coil removal, 1" (25 mm) below for seal cap removal, and 3" (76 mm) below strainer for screen removal. If a pressure reversal can occur, as during hot gas defrost with liquid recirculation, use a check valve on the outlet side of the HS6. For proper flange gasket sealing, care must be taken when threading or welding to assure flanges are parallel to each other and perpendicular to pipe. Also, gaskets should be lightly oiled and all bolts must be tightened evenly.

## ELECTRICAL

The coil draws 16 watts and will operate properly between 85% and 110% of rated voltage (24V coil draws 19 watts). Standard coil connection is a 1/2" fitting (NPSM) for conduit, with two 18" wire leads and ground wire. Coils with DIN plug or 1/2" NPSM quick disconnect plug are available. Contact the factory. All coils are totally encapsulated and meet NEMA 3R (rainproof) and NEMA 4 (splashproof, approx. IP65) requirements. 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 valve before connecting any electrical conduit. Pilot lights are available.

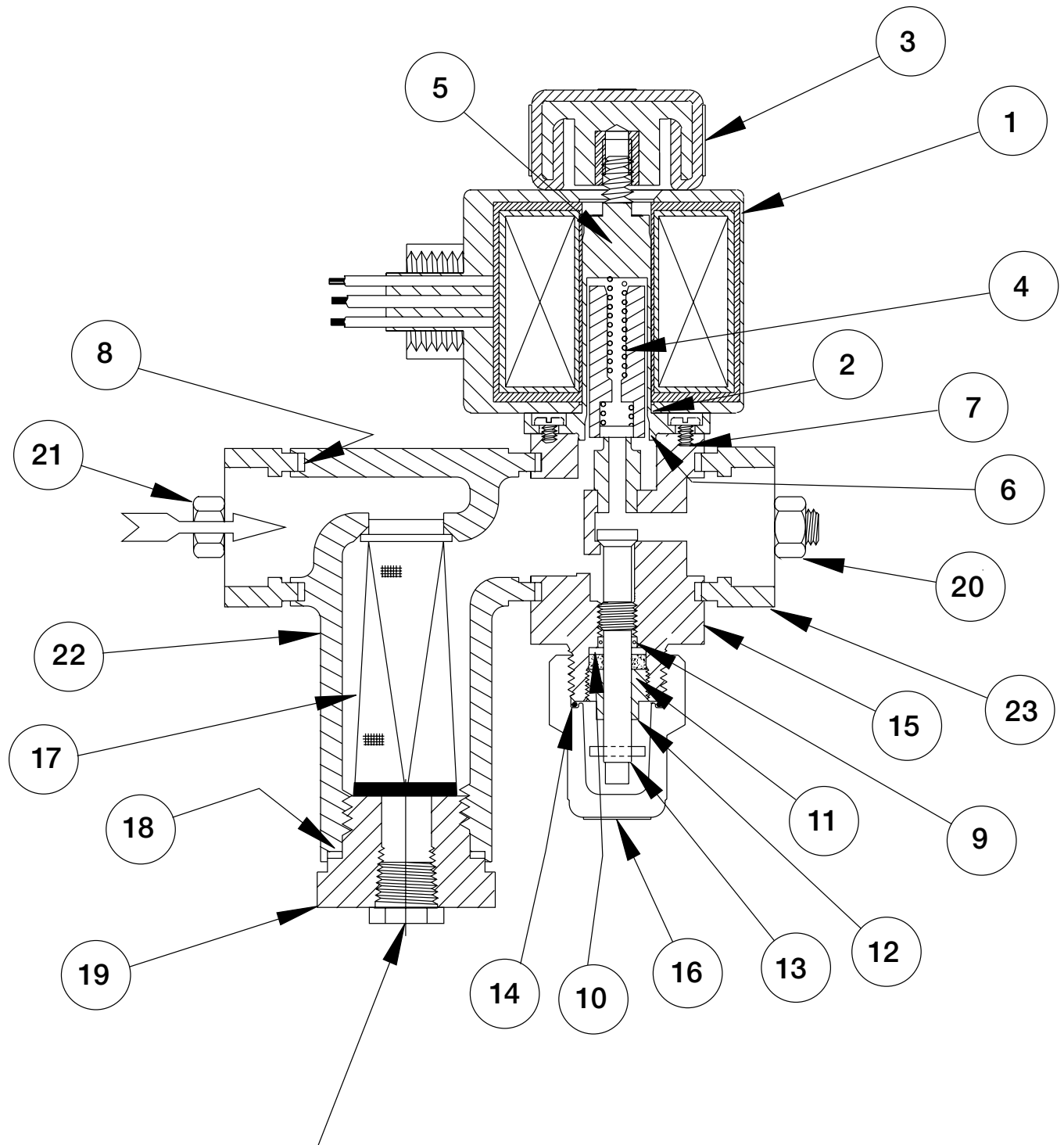
## INSTALLATION DIMENSIONS

INCHES (MILLIMETERS)



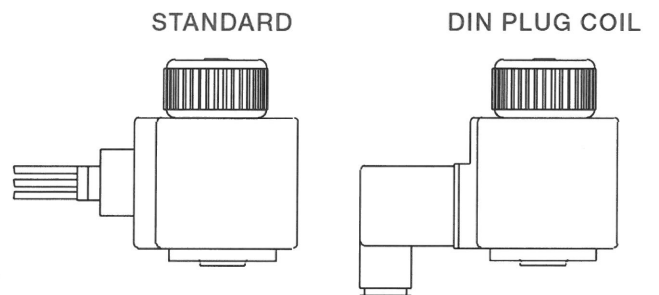
## PARTS LIST

Item	Description	Qty	Part No.
1a	Coil Kit (115V) 1/2" Fitting 18" w/leads	1	70-1085
1b	Coil Kit (208/230V) 1/2" Fitting w/leads	1	70-1086
1c	Coil Kit (24V) 1/2" Fitting w/leads	1	70-1087
	<b>Coil Kit (Other Voltages / Connections)</b>		FACTORY
	<i>Above kits consist of:</i>		
1	Bare Coil	1	
3	Coil Knob	1	
2	Coil O-Ring	1	
	<b>Solenoid Tube/Plunger Kit</b>	1	70-1059
	<i>Above kit consists of:</i>		
5	Solenoid Tube	1	
4	Plunger	1	
6	Solenoid Tube O-Ring	1	
2	Coil O-Ring	1	
3	Coil Knob	1	
7	Screws	4	
	<b>Gasket Kit</b>	1	70-1011
	<i>Above kit consists of:</i>		
6	Solenoid Tube Gasket	1	
8	Flange Gasket	3	
9	Stem O-Ring	1	
10	Stem Washer	1	
11	Stem Packing	1	
12	Packing Nut	1	
13	Pin	1	
14	Seal Cap O-Ring	1	
	<b>Seal Cap Kit</b>	1	70-1075
	<i>Above kit consists of:</i>		
16	Seal Cap	1	
14	Seal Cap O-Ring	1	
	<b>Strainer Screen Kit</b>	1	78-1001
	<i>Above kit consists of:</i>		
17	Screen Assembly	1	
18	Strainer Cap O-Ring	1	
	<b>Bolt and Nut Kit for HS6 less Strainer</b>	1	70-1006
	<b>Bolt and Nut Kit for HS6 with Strainer</b>	1	70-1007
	<i>Above kits consist of:</i>		
20	Flange Nut (7/16" - 14")	2	
21a	Flange Bolt (less strainer) 3.75"	2	
21b	Flange Bolt (with strainer) 5.5"	2	
15	Body	1	
19	Strainer Cap	1	
22	1/2" Strainer	1	
23	Flanges		



1/4" OIL DRAIN CONNECTION (OPTIONAL)

Voltage	Frequency (Hertz)	Inrush Amps	Holding Amps	Resistance at Room Temperature (Ohms)
115 VAC	60	0.73	0.24	56 ± 6
	50	0.93	0.31	
208/230 VAC	60 (208V)	0.32	0.11	226 ± 23
	60 (240V)	0.41	0.14	
	50 (230V)	0.47	0.16	
24 VAC	60	3.42	1.14	2 ± .2
	50	4.56	1.52	
24 VDC	DC	1.20	1.20	20 ± 2



## 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 is jammed closed with dirt.

**Failure to close:** Controlling switch or thermostat not opening contacts; manual opening stem is turned in; dirt under seat; eroded seat parts; plunger is 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 coil. Remove the coil by unscrewing the coil knob. Loosen the four solenoid tube screws and break gasket seal, proceeding cautiously to avoid any refrigerant still remaining inside the valve. 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. Always replace the solenoid tube when replacing the plunger. These are wear parts and must be inspected as part of a routine maintenance program. The seat orifice is integral with the body. Install new solenoid tube gasket and oil lightly. Reassemble tube to body with four screws. Factory torque is 2 ft-lbs (2.8 Nm). 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 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 system has been evacuated to zero pressure. See also the Safety Precautions in the current List Price and the Safety Precautions Sheet supplied with product. Escaping refrigerant might cause personal injury, particularly to the eyes and lungs.

## WARRANTY

All Hansen products, except electronics, are guaranteed against defective materials or workmanship for one year F.O.B. factory. Electronics are guaranteed against defective materials or workmanship for 90 days F.O.B. factory. No consequential damages or field labor is included.

## ORDERING INFORMATION

Flange Connection Style & Sizes Inches (Millimeters)		
FPT, SW, WN		ODS
STD	ALSO	STD
1/2" (15)	1/4" (7) 3/8" (10) 3/4" (20)	5/8" (16)

FPT: Female Pipe Thread (American National Standard)  
SW: Socket Weld to accommodate American and API pipe  
WN: Weld Neck to match American Schedule 40 pipe  
ODS: Outside Diameter Sweat, for copper tube size

Standard encapsulated 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 1/2" NPSM quick disconnect plug are available; please specify when ordering. Pilot lights are also available.

## OPTIONAL BEACON PILOT LIGHTS

Pilot Light Kit includes Beacon pilot light, knob and o-ring. A/C Coils Only.

### TO ORDER:

Specify type, connection type and size, volts, and strainer if required. Unless otherwise specified, standard coil with 1/2" connection will be supplied.

Beacon Pilot Light Kits	
Color	Part No.
Red	70-1100
Amber	70-1101
Green	70-1102



## TYPICAL SPECIFICATIONS

"Refrigerant solenoid valves shall have encapsulated, watertight coils, Teflon seats, steel or ductile iron bodies, spring closing pilot and main valve seats, and be suitable for a safe working pressure of 400 psig (27 bar), as manufactured by Hansen Technologies Corporation or approved equal."



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