

NEW!

HS8A with Close-Coupled ST050 Strainer

INTRODUCTION

The redesigned, heavy-duty HS8A refrigeration solenoid valve is flanged, compact, and pilot-operated. It is now more dirt resistant, erosion resistant, and corrosion resistant. A dirt controlling Teflon piston seal prevents sticking. The valve body has improved, erosion resistant flow passages. And a proprietary coating on the valve body gives unmatched corrosion protection. The HS8A is used to provide on-off control of refrigerant flow. When the coil is energized, a pressure difference across the piston opens the valve seat. When the coil is de-energized, a spring closes the main Teflon seat to stop all flow.

APPLICATIONS

The HS8A is ideal as a liquid line solenoid valve. While primarily for ammonia, this valve is also suitable for R22, R134a, and other compatible refrigerants. The most common use of this valve is to control flow to: expansion devices, recirculating liquid overfeed evaporators, hot gas defrost, and small capacity evaporator suction. In addition, the HS8A makes an ideal noncondensable gas (air) purge point solenoid valve, and is recommended for use with Hansen AUTO-PURGERS.

MAXIMUM RATINGS, AMMONIA

Liquid, Receiver Pressure: 110 Tons (387 kW)
Recirculation, 4 to 1: 36 Tons (127 kW)
Hot Gas: 10 Tons (35 kW)
Suction: 5.0 Tons (18 kW)
Flow Factor: Cv = 3.3 (2.9 Kv)

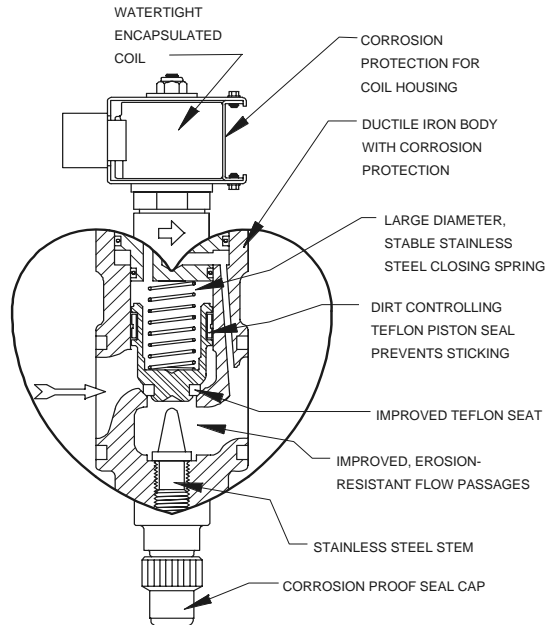
Specifications, Applications, Service Instructions & Parts

HS8A SOLENOID VALVE 1/2" (13 MM) PORT

Flanged
3/8" through 3/4"
FPT, SW, WN, ODS
for refrigerants

ISO 9002

KEY FEATURES



ADDITIONAL FEATURES

Dimensionally replaces R/S S8F and Hansen HS8
Low-wattage coil
300 psig (20.7 bar) MOPD
Teflon main & pilot seats
Close-couples to ST050 (100 mesh) strainer
Heavy-duty construction
CSA certified

MATERIAL SPECIFICATIONS

Body: Cast ductile iron, corrosion-resistant coated
 Bonnet Cartridge: Steel, plated
 Piston: Stainless steel, Teflon seal
 Plunger: Stainless steel
 Pilot Orifice: Stainless Steel
 Seats: Teflon, pilot and main
 MOPD: 300 psig (20.7 bar) AC coils only
 Safe Working Pressure: 400 psig (27 bar)
 Operating Temperature: -60°F to +240°F (-50°C to +115°C)

ELECTRICAL

The solenoid is a normally-closed (NC) device. One standard coil fits all Hansen valves. The coil draws 16 watts and operates properly between 85% and 110% of rated voltage (24V coil draws 19 watts). The standard coil connection is a 1/2" fitting (NPSM) for conduit. DIN plug, quick disconnect, and junction box coils are available. Pilot lights are also available. Contact the factory for details. Coils have a rustproofed steel housing which meets NEMA 3R (rainproof) and NEMA 4 (splashproof) requirements. The junction box version is considered NEMA 1.

The coil should only be energized while installed on the solenoid tube. Otherwise, the coil may quickly burn-out. To avoid bending the solenoid tube, remove the coil from the valve before tightening any flexible conduit connection.

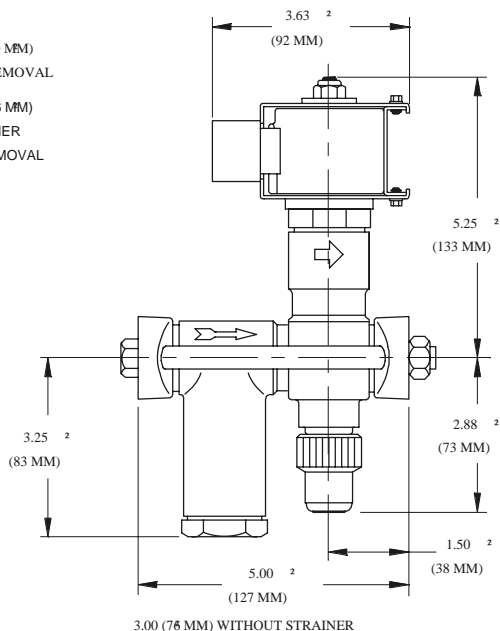
INSTALLATION

Protect the interior of the valve from dirt before and during installation. A close-coupled inlet strainer is normally installed and recommended. Allow 2" (50 mm) above the valve for coil removal and 3" (76 mm) below the strainer for screen removal. The arrow on the valve body must point in the direction of system flow. If a pressure reversal can occur use a check valve on the outlet side of the HS8A. The check valve can be close coupled directly to the HS8A outlet.

INSTALLATION DIMENSIONS

NOTES

- ALLOW 2 (50 MM)
FOR COIL REMOVAL
- ALLOW 3 (76 MM)
FOR STRAINER
BASKET REMOVAL

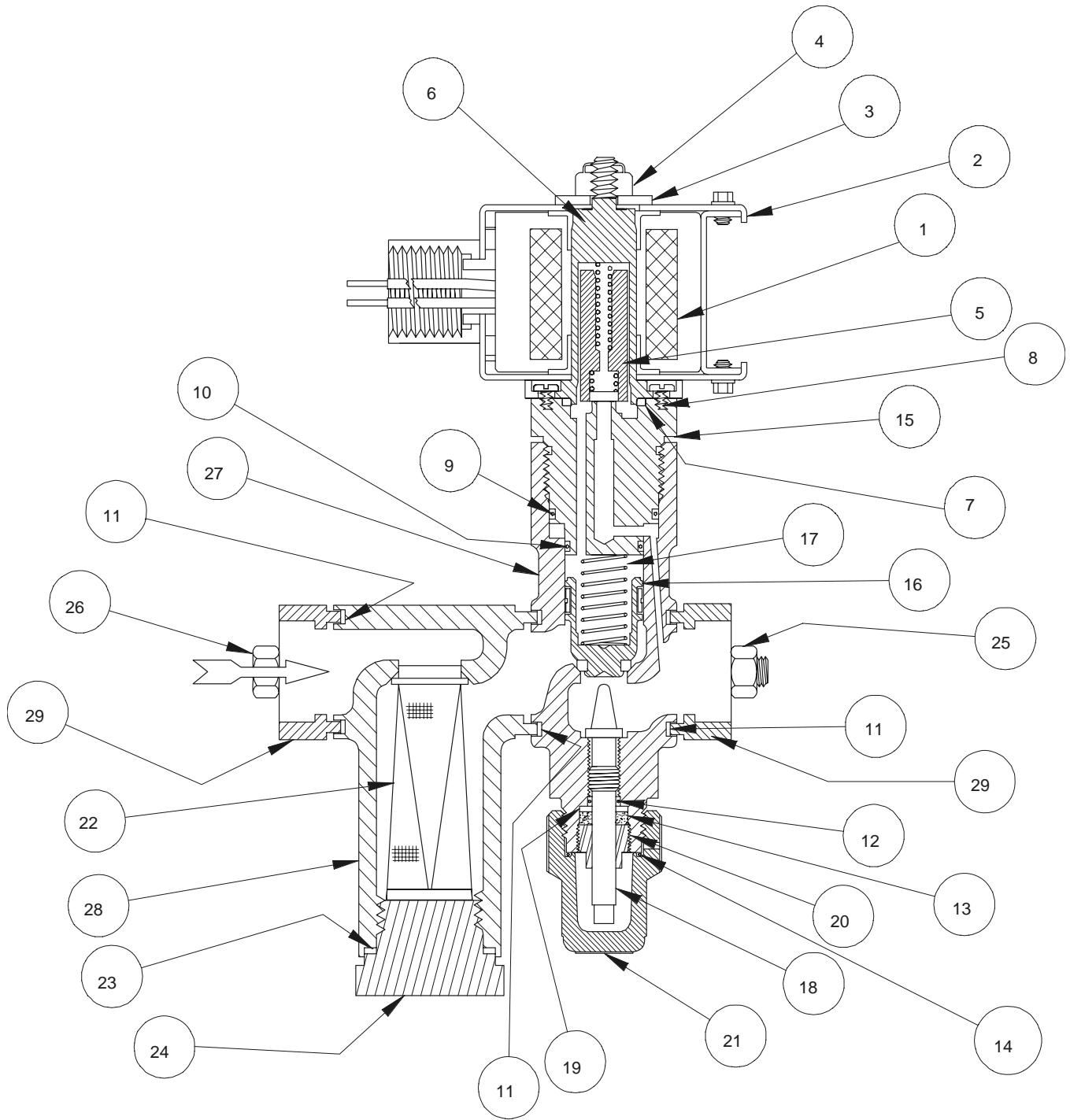


PARTS LIST, HS8A SOLENOID VALVE*

ITEM	DESCRIPTION	QTY	PART NO
	Std. Coil Kit (115V) 1/2" Fitting		70-1057
	Std. Coil Kit (230V) 1/2" Fitting		70-1056
	Std. Coil Kit (24V) 1/2" Fitting		70-1058
	Std. Coil Kit (Other Voltages)		FACTORY
	DIN Plug Coil Kits		FACTORY
	Quick Disconnect Coil Kits		FACTORY
	Coil with Junction Box Kits		FACTORY
	Above Std. Coil Kits Consist of:		
1a	Bare Coil, 115V 50/60Hz, wire leads	1	70-0271
1b	Bare Coil, 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
	Solenoid Tube/Plunger Kit		70-1059
	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
	Gasket Kit Consists of:		70-1005
7	Solenoid Tube Gasket	1	70-0301
9	Upper Body O-ring	1	70-0009
10	Lower Body O-ring	1	70-0011
11	Flange Gasket	3	70-0065
12	Stem O-ring	1	70-0010
13	Packing	1	70-0025
14a	Seal Cap Gasket (prior to 1998)	1	70-0008
14b	Seal Cap O-ring	1	70-0011
19	Packing Washer	1	70-0026
20	Packing Nut	1	70-0019
	Bonnet Cartridge Kit		70-1001
	Above Kit Consists of:		
15	Cartridge Assembly	1	70-0144
	Gasket Kit	1	70-1005
	Solenoid Tube/Plunger Kit	1	70-1059
	Piston Assembly Kit		70-1002
	Above Kit Consists of:		
16	Piston Assembly	1	70-0497
17	Closing Spring	1	70-0494
	Gasket Kit	1	70-1005
	Stem Kit Consists of:		70-1003
18	Stem	1	70-0004
	Gasket Kit	1	70-1005
	Seal Cap Kit Consists of:		70-1075
21	Seal Cap	1	75-0798
14b	Seal Cap O-ring	1	70-0011
	Strainer Screen Kit Consists of:		78-1001
22	Screen Assembly, 100 mesh	1	78-0005
23	Strainer Cap Gasket	1	78-0016
	Bolt and Nut Kit		
	For HS8A less Strainer (a)		70-1006
	For HS8A with Strainer (b)		70-1007
	Consists of:		
25	Nut, 7/16-14	2	70-0055
26a	Bolt, 7/16-14 x 3 3/4	2	70-0073
26b	Bolt, 7/16-14 x 5 1/2	2	70-0076
24	Strainer Cap	1	78-0002
27	Assembled Body Replacement Kit Complete Valve less Coil Kit and Flanges		HS8A/1
28	Assembled Strainer Replacement Kit		78-1002
29	Flange Kit (FPT,SW,WN,ODS) Includes (2) Flanges only; Specify Style and Size		FACTORY

*NOTE: All parts also fit HS8.

PARTS LIST

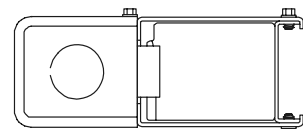
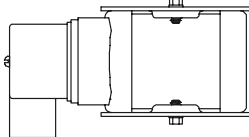
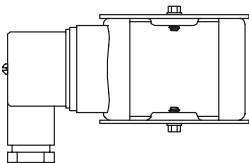


Standard 1/2" Coil Fitting shown above. Other coil options also available are:

DIN Plug Coil

Quick Disconnect Coil

Coil with Junction Box



SERVICE AND MAINTENANCE

Failure to open: Wrong coil voltage; low line voltage; electric controlling device is not switching; coil is burned-out; inlet/outlet pressure differential is too high; piston or solenoid coil plunger is jammed closed with dirt.

Failure to close: Electric controlling device is not switching; manual-opening stem is turned in; piston or solenoid coil plunger is jammed open by dirt; damage or dirt at main valve seat or pilot valve seat.

Before opening the valve for service, be sure it is isolated from the system and all refrigerant is pumped out to zero pressure. Disconnect electrical power from the coil (1). To remove the coil (1), unscrew the coil nut (4) and remove the washer (3). Then, remove the coil (1) from the solenoid tube (6). To remove internal parts, use a large wrench to slowly unscrew the bonnet cartridge (15), proceeding cautiously to detect any remaining refrigerant inside the valve. Then, remove the closing spring (17) and piston (16). Check for dirt on the piston (16), Teflon piston seal, and seat. Clean and reinstall or install new parts. Check the upper (9) and lower (10) body O-rings and replace if necessary. Use refrigerant oil or grease when installing the O-rings.

To check the pilot section of the valve, first loosen the four solenoid tube screws (8). Then, break the seal between the solenoid tube (6) and bonnet cartridge (15), being careful to avoid any refrigerant which may remain. Check the face of the Teflon seat in the plunger (5), the plunger spring, and the pilot seat orifice on the bonnet cartridge (15). Clean, polish, or replace parts as necessary. The pilot seat is integral with the bonnet cartridge. Install a new solenoid tube gasket (7) and oil lightly. Reassemble the bonnet cartridge (15) to the valve body (27), using 75 ft-lbs (102 N-m) torque to tighten the secondary, metal, knife-edge seal. Carefully check the valve for leaks before restoring to service.

CAUTION

Hansen valves are for refrigeration systems only. These instructions must be read completely and understood before selecting, using, or servicing these valves. Only knowledgeable, trained refrigeration technicians should install, operate, or service these valves. Stated temperature and pressure limits should not be exceeded. Bonnets, solenoid tubes, etc., should not be removed from valves unless the system 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 refrigerant can cause injury, especially to the eyes and lungs.

WARRANTY

Hansen valves are warranted against defects in workmanship and materials for a period of one year F.O.B. our plant. No consequential damages or field labor is included.

ORDERING INFORMATION, HS8A SOLENOID VALVE

FLANGE CONNECTION STYLE & SIZES		
FPT, SW, WN		ODS
STD	ALSO	STD
1/2"	3/4", 3/8"	5/8"

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

Standard encapsulated solenoid coil is included for 115V, 230V, or 24V; 50/60Hz; other voltages are available. Standard coil connection is a 1/2" fitting (NPSM). Coils with DIN plug, quick disconnect, or junction box are available. Pilot lights are also available. Contact the factory.

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

TYPICAL SPECIFICATIONS

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

OTHER PRODUCTS

Modular Pressure Regulators
Solenoid Valves
Gas-Powered Valves
Shut-Off Valves, 3/8" to 16"
Hand Expansion Valves (Regulators)
Level Pulse Control Systems (Pulse Width Valves)
Thermostatic Expansion Valves (TXV)
Inline and Piston-Type Check Valves
Gauge, Purge, and Needle Valves
Strainers and Filter Systems
AUTO-PURGER[®]s
Liquid Refrigerant Pumps
Float Drain Regulators
Vari-Level[®] Adjustable Level Controls
Techni-Level[®] Transducer Probes
Float Switches
SEE-LEVEL[®] Liquid Indicators
Frost Master[®] Defrost Controllers
Pressure-Relief Valves
Rupture Disc Assemblies

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