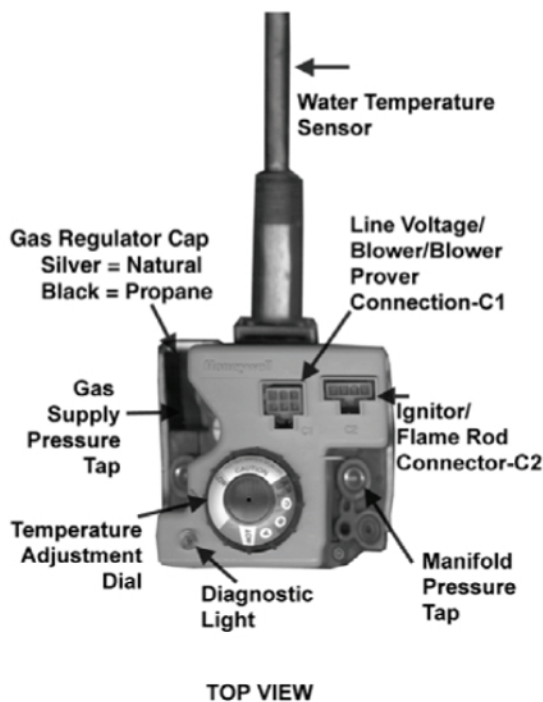
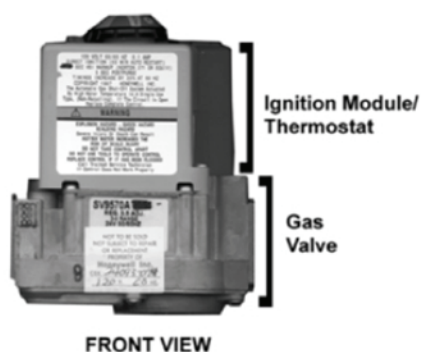


Residential, And Light Commercial, Power Vented
Gas Products Service Handbook

HONEYWELL SMARTVALVE™ INFORMATION

SmartValve™ Product Information:

The SmartValve™ combines gas valve, thermostat, and ignition module functions into one control. It requires 115-125 VAC with correct polarity and a proper earth ground. AOS SmartValve™ equipped heaters will draw approximately 7.5 amps with the blower and igniter energized. **SmartValve™ equipped heaters should be on their own dedicated circuit breaker. GFI (Ground Fault Interruption) circuit breakers can cause erratic operation, for this reason use non GFI circuit breakers.**



SmartValve™ Control				
Heater	Fuel		Shank	Threads
FPSH/FPD 40/50	Natural		1.40"	Right
	Propane		1.40"	Left
FPST-50 FPCR-40/50	Natural		2.50"	Right
	Propane		2.50"	Left
FPSE-75 FPSH-75	Natural		2.06"	Right
	Propane		2.06"	Left
BTF-75 BTI-80/100	Natural		2.06"	Right
	Propane		2.06"	Left

Ignition Module Portion:

Activity	Time	Accumulated Time
Pre Purge	5 Sec	16 Seconds 1 st try 21 Seconds 2 nd - 4 th try
HSI Warm Up	7 Sec 1 st try, 12 Sec	
Ignition Act. Period	3 Sec	
Flame Recognition	1 Sec	
Ignition Trial	4 Sec	
Interpurge	30 Sec	
Post Purge	5 Sec	
Retries	3 (after initial trial)	
Auto Reset from Lockout	1 hour	
Has service L.E.D. to aid troubleshooting		

Approximate Temperature:

Thermostat Setting	Residential Products	Commercial Products
Setting	Temp, (\pm - 4°)	
Very Hot	160°	180°
“C”	150°	163°
“B”	140°	145°
“A”	130°	127°
Hot	120°	110°
Low	80°	80°

Approximately a 12° drop in temperature reactivates thermostat. Recommended starting set point is 120°F. Settings below 120° may result in excessive condensation and a minimal amount of hot water available for use. If higher settings are desired, increase setting in small amounts.

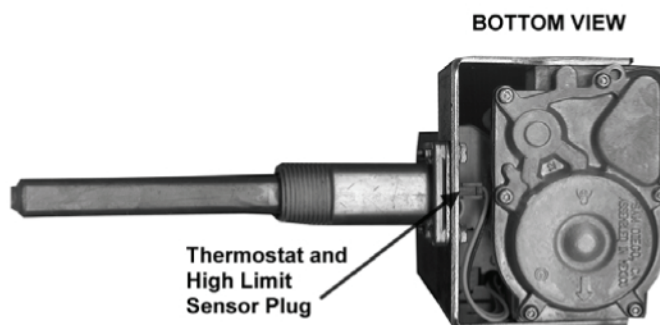
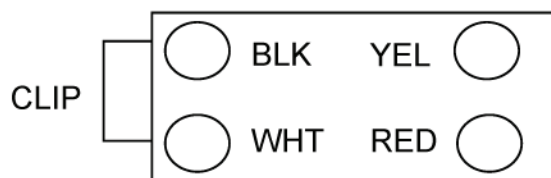
Temperature Sensor Portion:

The sensor is a thermistor, which plugs into the base of the valve from the temperature probe.

Thermistors are very reliable. A change in water temperature changes the Ohms resistance of the thermistor. The thermostat interprets this and the thermostat reacts.

One or four flash sequence would indicate a malfunction with these sensors.

Red and Yellow = Thermistor Sensor
White and Black = E.C.O.



High Limit (E.C.O.) Portion:

- One Time Operation
- Opens at 188°F on Residential valves and 199°F on Commercial
- Replace entire valve if activated

Gas Valve Portion:

Electrical – 120VAC:50/60 Hz				
Connections		Gas Press – Inches W.C.		
Inlet ½” NPT	Outlet * ½ Inverter Flare	Supply		Manifold
		Min.	Max.	Non – Adjustable
		4.5 N	10.5 N	3.5 N
		11.0 P	13.0 P	10.0 P

Propane valves will be noted in the label text and have a red temperature knob and a black cover screw over the regulator..

Natural valves will be noted in the label text and have a black temperature knob and a silver cover screw over the regulator.

*Natural gas models have right hand threads for burner tube attachment. Propane Gas models have left hand threads.

See troubleshooting section for flashing LED error code information.