



TEMPERATURE CONTROLLERS

INDIRECT SNAP THERMOSTAT

ACTION:

Indirect snap; Pilot Output Pressure “snaps off” with temperature rise.

APPLICATION:

Used to control temperature in indirect and direct heaters, emulsion treaters, reboilers, steam generators, heat exchangers, cooler shutter controls, and salt bath heaters.

WORKING PRESSURE (sensing element):

psig	kg/cm ²	
500	35.15 max.	without Separable Socket
4000	281.23 max.	with Separable Socket
7000	492.15 max.	with Special Separable Socket

Separable Socket is an extra price item and must be ordered separately, if desired. To order Separable Sockets refer to Table of Contents.

TEMPERATURE RANGE:

-30°F minimum to 400°F maximum
 -34°C minimum to 204°C maximum

OPERATION:

This Thermostat consists of a Direct Acting Semi-throttle Base Assembly which is connected to a 3 PS Pilot producing an Indirect Snap Output Signal. The 3 PS Pilot also acts as an amplifier increasing the sensitivity of the Base Assembly.






Assume the set temperature of the Thermostat is above that of the system being controlled and Pilot Output Pressure (Yellow) is being sent to any Pilot or Motor Valve. As the system temperature rises, the STAINLESS TUBE increases in length to move the Thermostat Diaphragm Assembly in a direction to first close the seat at BALL 1 (Orange to Atmosphere) and open the seat at BALL 2 (Violet to Orange). As Variable Pressure (Orange) increases, the 3 PS Pilot Diaphragm Assembly moves downward to close the seat at BALL 3 (Violet to Yellow) and open the seat at BALL 4 (Yellow to Atmosphere).

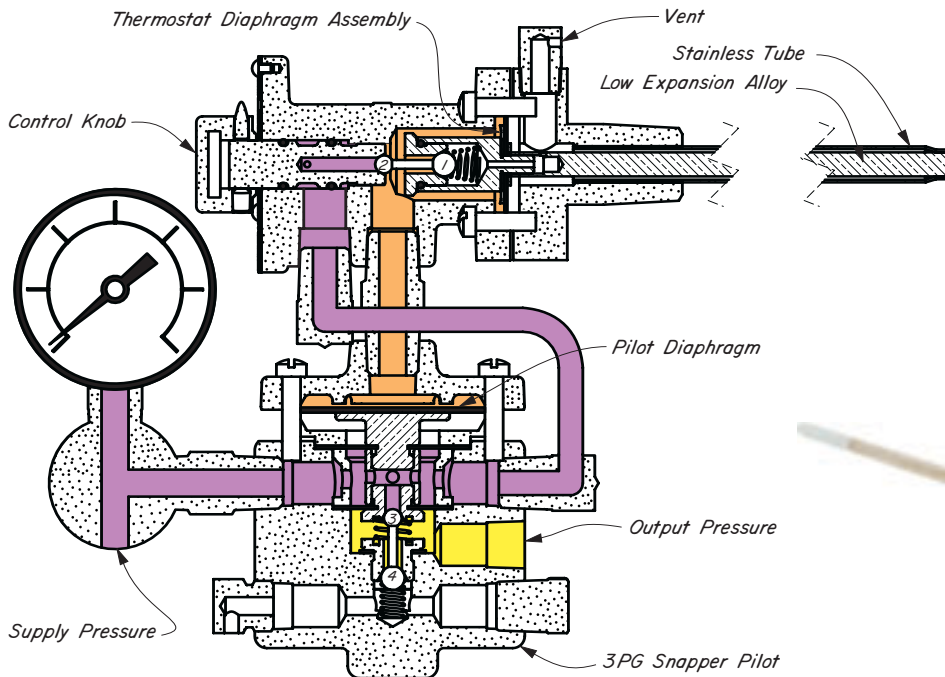
Venting of Pilot Output Pressure (Yellow) helps move the 3 PS Pilot Diaphragm Assembly downward and thereby produces a “snap off” action of the pilot to cause the desired Pilot or Motor Valve action.

As Variable Pressure (Orange) decreases due to decreasing system temperature, the Pilot Diaphragm Assembly is forced upward to close the seat at BALL 4 (Yellow to Atmosphere) and open the seat at BALL 3 (Violet to Yellow). Increasing Pilot Output Pressure (Yellow) permits the Pilot Diaphragm Assembly to move upward more rapidly, producing a “snap on” pilot action. This action allows a Motor Valve to open fully.

SUPPLY PRESSURE:

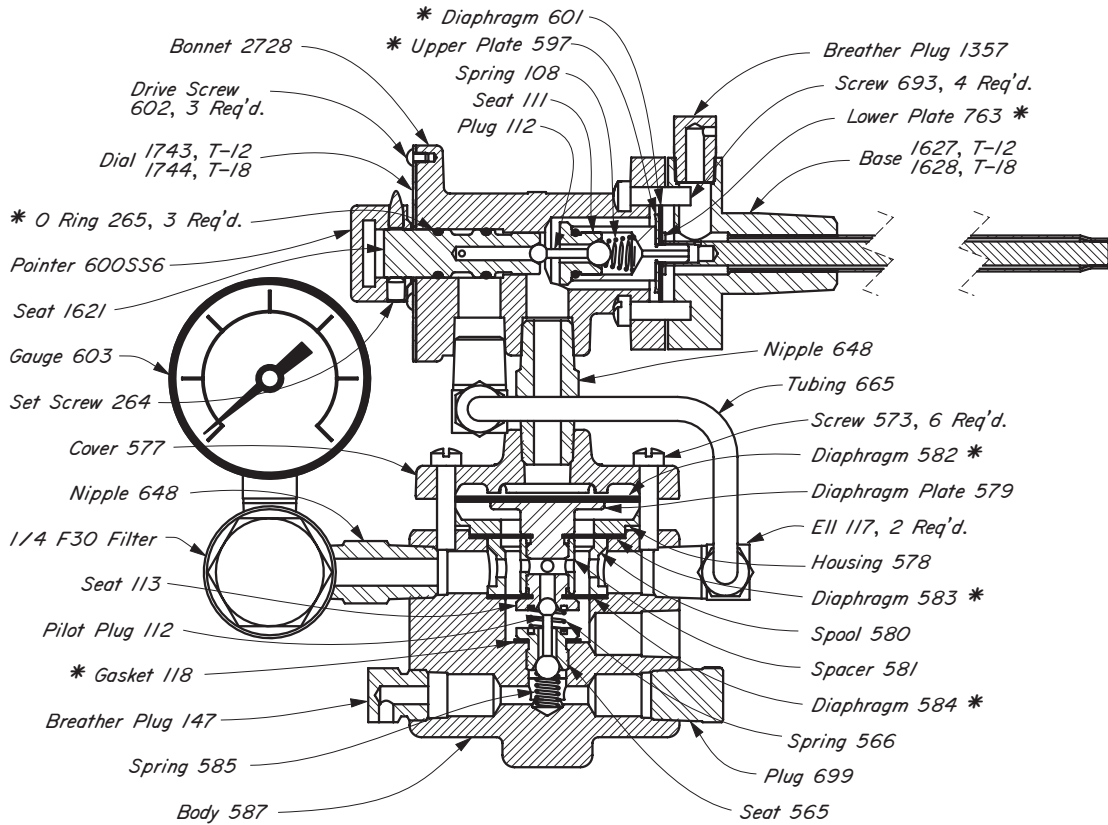
5 to 30 psig
 .35 to 2.11 kg/cm²

-  Thermostat Diaphragm Assembly
-  3PS Pilot Diaphragm Assembly
-  Variable Pressure
-  Supply Pressure
-  Pilot Output Pressure

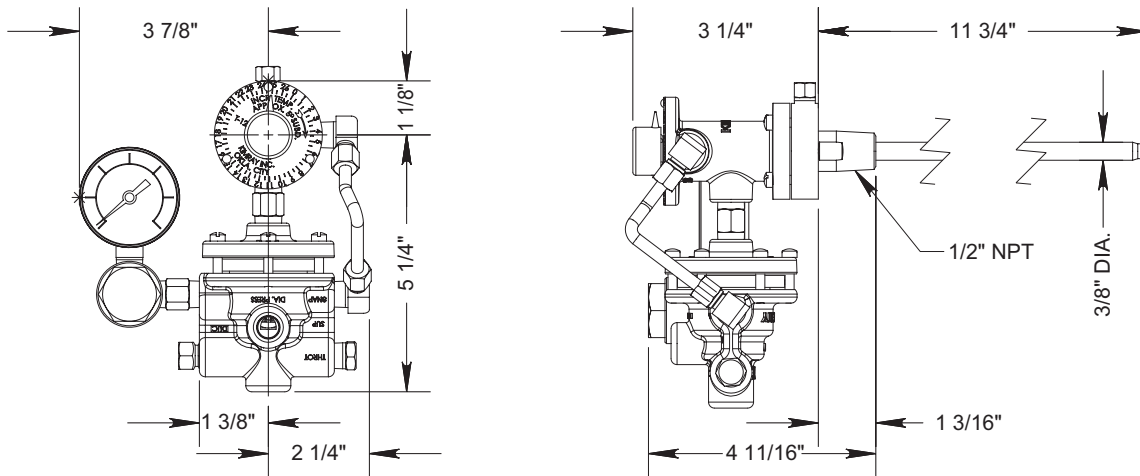


TEMPERATURE CONTROLLERS

INDIRECT SNAP THERMOSTAT CAST IRON



DIMENSIONS



ALL TAPPED OPENINGS ARE 1/4" NPT EXCEPT AS NOTED.

THERMOSTATS AVAILABLE:

CAT. NO.	BASE ASSEMBLY	MAX. TEMP. °F	MAX. TEMP. °C	REPAIR KIT
HAU	T 12 DAS	400	204	RLN
HAX	T 18 DAS	400	204	RLN

NOTES:

*These are recommended spare parts and are stocked as repair kits.

Separable Sockets are available at extra cost, refer to Table of Contents for ordering.