

# FLUID HEAT TRANSFER SYSTEMS

## SATELLITE OR SS SERIES

### SPECIFICATIONS

- Hot oil heated
- Centrifugal pump
- 150 lb. flanged construction for temperatures up to 550°F
- 300 lb. flanged construction for temperatures up to 750°F
- NEMA 12, 4 or 7

### DESCRIPTION

Satellite or secondary pumping heat transfer systems are designed for recirculating sub-loop temperature control to independent users by utilizing heat from a central heat transfer system. The central system can be an existing or a new system from HEAT, Inc. Most centralized heat transfer systems control the temperature of individual users by modulating the amount of flow through each user. However, this approach is limited to applications where all users require heating only and at roughly the same temperature. Satellite systems offer the best alternative for applications which require flow rates higher than available from the central fluid system or require both heating and cooling operations. The systems are pre-piped packaged units that contain proportional oil control valves, centrifugal circulation pump, optional cooling exchanger and a complete control center all mounted on a drip proof base. Units are furnished completely wired, insulated and factory tested prior to shipment. The satellite system is available with a wide range of options.

### APPLICATIONS

- REACTORS
- KETTLES
- DRYERS
- PLATENS
- MOLDS
- DIES
- EXTRUDERS
- TANKS
- EXCHANGERS
- LINE TRACING
- ROLLS
- PRESSES



### FEATURES

- Utilizes heat from a central fluid system
- Available for heating only or heating/cooling applications
- All welded and flanged construction
- Closed cell insulation with a metal jacket on internal piping
- Mechanical seal on pump
- Drip-proof base under system
- No expansion tank required
- Temperature control via proportional flow valves
- Central heat transfer system available

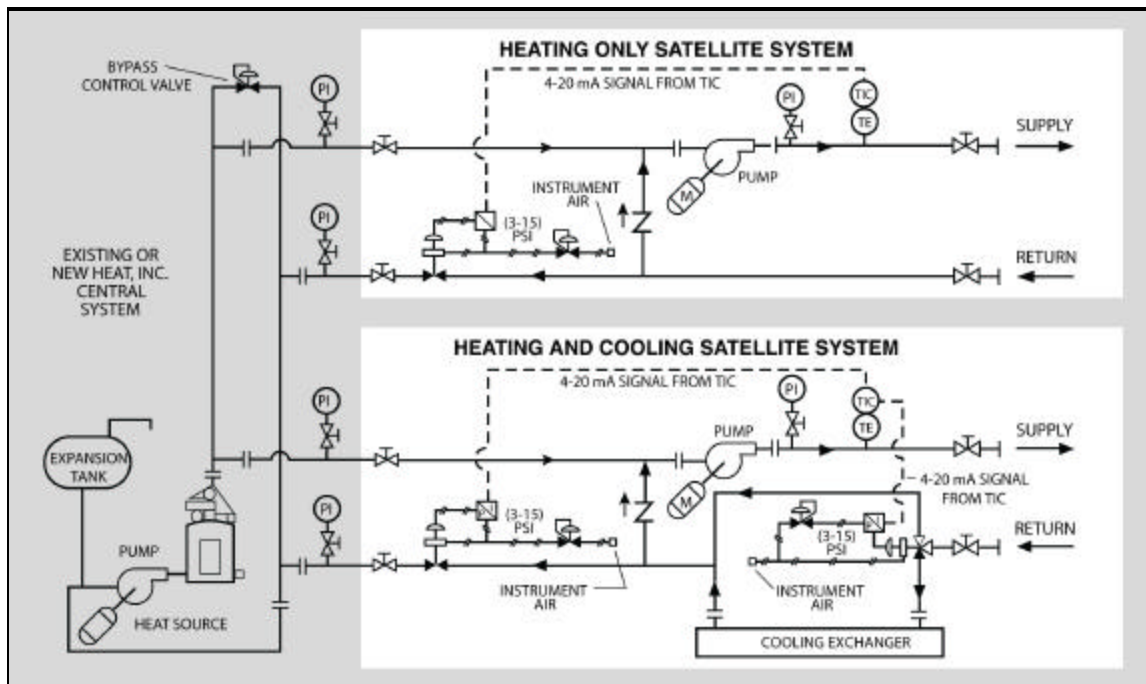


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## SATELLITE OR SS SERIES

# TYPICAL PIPING & INSTRUMENT DIAGRAM



SS systems are custom designed and built to order. Designs are based on BTU/HR heat load, operating temperature, flow rate required and available hot oil supply. The above diagram is typical and contains most of the commonly used components. The centrifugal pump is equipped with a mechanical seal and TEFC motor. Other mechanical components include

proportional control valve, check valve, pressure gauges and supply/return shut off valves. The heat exchanger used for the cooling cycle is constructed with stainless steel tubes and a carbon steel shell and can be ASME Code stamped for the proper pressure and temperature ratings. Many options are available. The more popular ones are listed below.

## OPTIONS

- **SIDE ENCLOSURES** with sheet metal panels (not shown on diagram) which are removable for access.
- **PUMP SELECTION** special pumps are available, including choice of brand and pump type sealess (canned or magnetic driven), centrifugal, turbine or positive displacement.
- **CONTROL VALVE SELECTION** can be your choice of brand or style (Globe, ball or plug).
- **HIGH PRESSURE ALARM** automatically shuts the system down and turns an alarm light "ON" if the system's pressure rises above the desired level.
- **HEAT TRANSFER FLUID LOW FLOW ALARM** automatically turns the heater "OFF" and turns an alarm light "ON" if the heat transfer fluid flow drops below the alarm limit.
- **HAZARDOUS AREA DESIGNS** are available using a cast NEMA-7 enclosure or with an air purge which is normally less expensive. X purge is used in Division 1 areas. Z purge is used in Division 2 areas.
- **MODEL PFS-1 PORTABLE PUMPING AND FILTERING OIL SYSTEM** is a compact, self contained, portable unit. It is equipped with high efficiency, high capacity disposable elements capable of removing both particulate contaminants and water from oils. Maximum fluid temperature is 200°F. Request Bulletin SO-1.
- **COOLING** can be used to lower the temperature at the end of the production run or to remove excess heat generated by friction or an exothermic reaction.
- **RETURN LINE STRAINER** will remove coarse particles of rust, millscale and organic debris.
- **CUSTOM DESIGNS** for special applications are available.