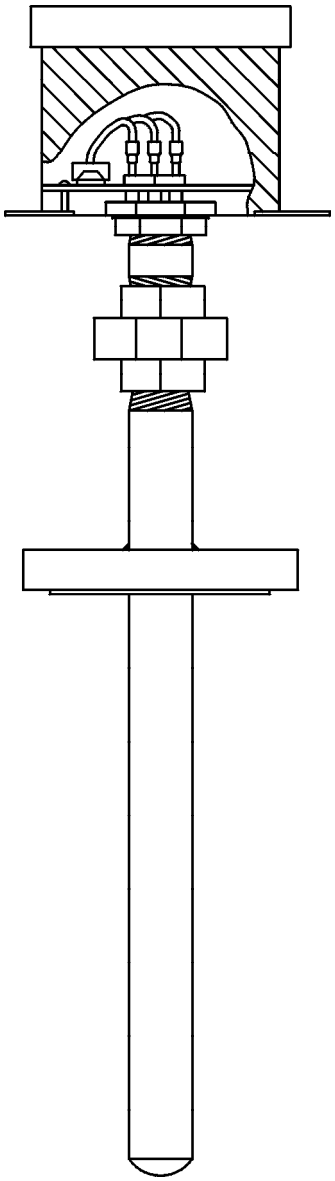
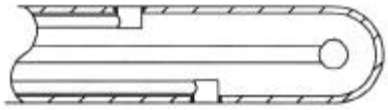
Temperature profiling is important whenever multiple points of measurement are required over a broad measuring range. Multiple Sensor Assemblies or Multipoints as they are commonly referred to can be designed with using either thermocouples or RTDs and in some cases both. As illustrated above, secondary seals can be supplied for even greater safety assurance. These seals prevent process fluids or gasses from escaping in the event of a process upset. In critical applications component testing is recommended. Dye penetrated, X-ray, and hydrostatic testing are standard available tests.

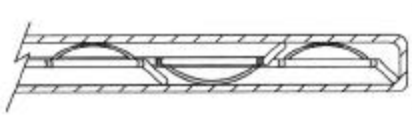


In order to be effective these assemblies must be able to provide temperature point location with a tolerance of plus or minus .25 inches and comparable sensor accuracy throughout the entire measuring range. Our unique cross calibration method and positive point identification assures like sensor accuracy and accurate and safe performance.

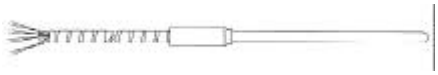
**Guide Tube and Blocks Thermocouple - Type 2020**
Sensors are installed into guide tubes which are terminated at the hot end into heat transfer blocks. These blocks are welded into the wall of the protection tube at the required points along the well. This facilitates faster response time, improved accuracy and positive point identification. Individual sensors can be removed while the unit is operating and without disrupting the process. This design lends itself to insertion in a secondary seal construction.



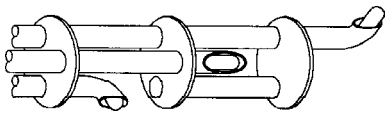
**Positive Contact Thermocouple or RTD - Type 2030**
This design maintains positive sensor contact to the inside wall of the protection tube for improved accuracy and response time. The sensors can be installed as a bundle with a support strip or individually. Sensors can be individually replaced.



**Miniature Multi Thermocouple or RTD - Type 2040**
Several sensors are accurately positioned in a stainless steel tube and each sensor is transitioned to flexible leads. This construction does not require a protection tube.



**Retractable Thermocouple - Type 2050**
Each sensor is inserted into a guide tube and is individually spring loaded to provide good metal to metal contact with the measuring location. Sensors are easily removed without process shutdown.



### To Order

Provide a sketch with the following information:

- Specify Thermocouple Calibration
- Specify Thermocouple Junction – Grounded or Ungrounded
- Specify RTD Type
- Number of Sensors
- Length of each Sensor (measured from the process connection to its measuring point in the pipe well)
- Tube OD
- Tube Material
- Tube Length
- Process Connection
- Lead Length of Sensor
- Lead Insulation
- Lead Termination