



Multipoint Thermocouple

Introduction:

Multipoint Thermocouple are used to measure temperature at multiple points through a single entry. These thermocouple have multiple temperature inputs along the length of the sensor to measure accurate temperature profile. These sensors can be equipped up to 60 points along the length with a single penetration point. These sensors are mostly used In Chemical and Petrochemical Industries for temperature profiling of Reactors, Crackers and Liquefied Gas in tanks.

Features:

- Multiple sensing points with only a single Insertion point.
- Efficiently measures Temperature Profile of various applications.
- Individual Sensors can be replaced without affecting the whole assembly.
- Cost efficient as compare to placing individual sensors.
- Customizable according to different applications and processes.



Specifications:

- Temperature range: 0 - 1150°C (Acc. To Element).
- Number of Sensors: upto 60 points.
- Standard Sheath Materials: SS316, SS310 & Inconel™ 600.
- Process connection: As per requirement.

Common Applications:

- Reactors:
 - Multipoint Temperature Sensors are used In Chemical reactors for monitoring and control of reaction process.
- Distillation Fractionators:
 - Distillation columns In Crude Oil distillations plants possess a Temperature Gradient with High temperature at the bottom and vice versa, so for the temperature profiling of such Fractionators Multipoint Temperature sensors are used.

Sensor Arrangements:



- **Spring Loaded:**

- Each Sensor is equipped with a leaf spring so that there is always a positive contact between the sensor and the inner wall.



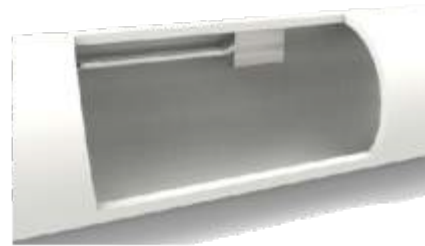
- **With Guiding Tube:**

- Guide tubes are provided for each sensor so that accurate positioning of the sensor can be ensured. These guide tubes can be spring loaded to make sure the sensor is in contact with inner wall.



- **With Heat Transfer Blocks:**

- For further ensuring proper contact of sensor tip a metal block can be placed and welded to the sensor tip and to the inner wall.



- **Freely Suspended:**

- Freely suspended sensors are also provided so that individual sensors can be routed according to application requirements.



- **Radial Arrangement:**

- Sensors can be arranged in a radial pattern to fit any cylindrical chamber across the inner surface.

