

Pressure

United Sensor Pressure and / or Temperature Rakes measure a cross-section of total pressure, static pressure and / or total temperature of a moving fluid. Rakes offer the advantage of providing many separate readings simultaneously or a simple average of many readings.

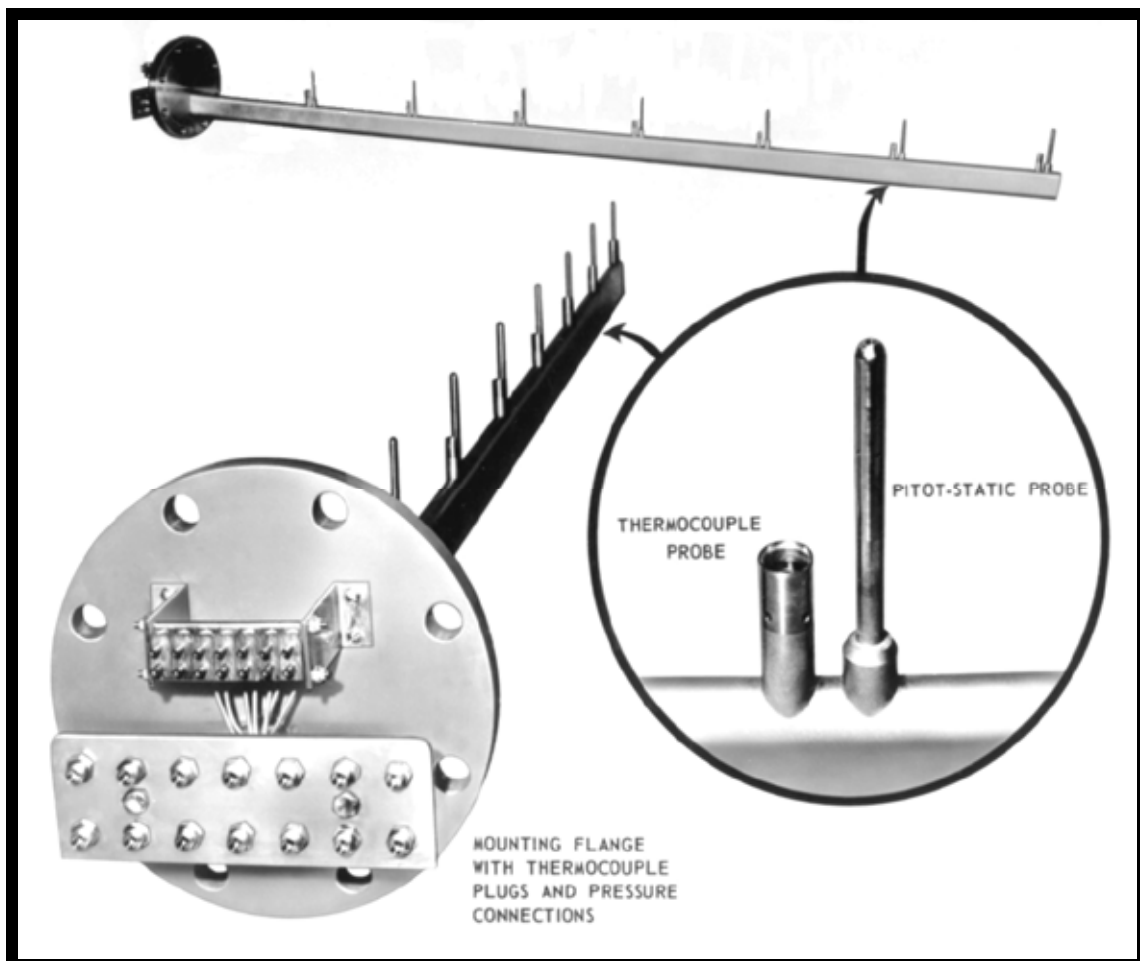
Temperature

Every United Sensor Rake is custom designed and constructed to match the flow conditions of its particular application. Overall Rake length may vary from fractions of an inch to twenty feet or more, incorporating two to several dozen individual measuring elements. The design of a given Rake is determined by many factors, including fluid velocity and temperature, flow angle variation, the type of measurement required and the physical dimensions of the flow passage. Materials are stainless steel or inconel, unless otherwise specified.

Combination

Any United Sensor Fluid Flow or Temperature Probe may be incorporated into a Rake; however, specially designed elements are more convenient and lower in cost. To determine which Rake design is best suited to a particular application, see Rake Specification Check List (reverse).

Rakes



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Rake Specification Check List

United Sensor will recommend the most economical and effective Rake design based upon the following information:

1. Type of measurements required

Total Pressure _____
Static Pressure _____
Total Temperature _____
Other (please specify) _____

2. Measurements of individual elements

Individual Readout _____
Averaged _____

3. Approximate Operating Conditions

Maximum Temperature _____
Maximum Velocity _____
Minimum Velocity _____
Flow angle variation \pm ___ ° from axes of measurement impact holes
Type of Fluid being measured _____

4. Size and shape of Flow Passage (please include sketch if irregular shape) showing desired points of cross section to be measured and type of measurement at each point.

5. Flange Size and Shape (sketch if necessary) _____

6. Maximum access hole size _____

6A. Flow passage wall thickness (sketch if necessary) _____

7. Take-off type size limits, and direction of take-off (if important)

For pressure measurement

Straight tubes (adequate for lower temperatures and pressures)

_____ Compression Fitting (Recommend for higher temperatures / pressures)

For Temperature Measurement

T/C extension wire _____

T/C plug _____

Other connector _____

(please specify)

8. Type of readout (Manometer, Transducer, etc.) _____



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