COX INSTRUMENTS
FLOW MEASUREMENT
Proven Performance for Over 50 Years

COX TECHNICAL TIP: Operating Temperature Range vs. Turbine Meter Costs

When specifying the temperature range for your precision turbine flowmeter application, a more detailed description may reduce the cost of the meter and/or its calibration.

The specified temperature range for a turbine flowmeter application may determine how the unit is packaged (e.g., integral or remote electronics) and/or how it is calibrated. For example, an unnecessarily wide temperature range may cause the manufacturer to recommend multiple fluid calibrations when a less expensive, single fluid calibration will suffice. Following are some tips for specifying the temperature range:

- If they are not the same, differentiate between the temperature range of the fluid and the temperature range of the environment around the flowmeter.
- If applicable, differentiate between the full temperature range and the range for which accuracy is required. For both fluid and environmental temperatures, there may be one range that the flowmeter must survive and another over which it must be accurate. For example, a test may begin in a cold soak condition with the fluid quickly warming to a higher temperature. If the flow rate data of interest is at the higher temperature, the calibration may be less complex.
- If known, describe the temperature profile (temperature versus time) of the application. For example, it may be important to know that the meter will be exposed to the extreme temperatures for a brief time rather than continuously.

Providing a detailed description of the temperature specifications for your flowmeter application will ensure you receive the most appropriate product at the most economical price.

Read related Flow Measurement white papers.

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