

ASME B40.3* STANDARD ACCURACIES:

Example #1: Range 0/250°F Grade A

Span = 250-0 = 250°F

Accuracy at 20% of span $(50^{\circ}F) = \pm 1\% = \pm 2.5^{\circ}F$ Accuracy at 50% of span $(125^{\circ}F) = \pm 1\% = \pm 2.5^{\circ}F$

Accuracy at 100% of span $(250^{\circ}F) = \pm 1\% = \pm 2.5^{\circ}F$

Example #2: -40/160°F Grade E

Span = 160-(-40) = 200°F

Accuracy at 20% of span $(0^{\circ}F) = \pm 3.4\% = \pm 6.8^{\circ}F$ Accuracy at 50% of span $(60^{\circ}F) = \pm 1\% = \pm 2.0^{\circ}F$ Accuracy at 100% of span $(160^{\circ}F) = \pm 5\% - \pm 10.0^{\circ}F$

Example #3: Range 50/300°F Grade AA

 $Span = 300-(-50) = 250^{\circ}F$

Accuracy at 0% of span $(50^{\circ}F) = \pm 1\% = \pm 2.5^{\circ}F$ Accuracy at 50% of span $(175^{\circ}F) = \pm 0.5\% = \pm 1.25^{\circ}F$ Accuracy at 70% of span $(225^{\circ}F) = \pm 0.7\% = \pm 1.75^{\circ}F$

ACCURACY:

Thermometer accuracy is graded as shown in the table below. Adjustment of the case of a thermometer, with an adjustable angle connection, may affect its accuracy. This effect should not exceed 0.5% of span .

*ASME B40.3 may be ordered from: American Society of Mechanical Engineers Three Park Avenue New York, NY 10016



