

ASME B40.3* STANDARD ACCURACIES:

Example #1: Range 0/250°F Grade A
 Span = 250-0 = 250°F
 Accuracy at 20% of span (50°F) = $\pm 1\%$ = $\pm 2.5^\circ\text{F}$
 Accuracy at 50% of span (125°F) = $\pm 1\%$ = $\pm 2.5^\circ\text{F}$
 Accuracy at 100% of span (250°F) = $\pm 1\%$ = $\pm 2.5^\circ\text{F}$

Example #2: -40/160°F Grade E
 Span = 160-(-40) = 200°F
 Accuracy at 20% of span (0°F) = $\pm 3.4\%$ = $\pm 6.8^\circ\text{F}$
 Accuracy at 50% of span (60°F) = $\pm 1\%$ = $\pm 2.0^\circ\text{F}$
 Accuracy at 100% of span (160°F) = $\pm 5\%$ - $\pm 10.0^\circ\text{F}$

Example #3: Range 50/300°F Grade AA
 Span = 300-(-50) = 250°F
 Accuracy at 0% of span (50°F) = $\pm 1\%$ = $\pm 2.5^\circ\text{F}$
 Accuracy at 50% of span (175°F) = $\pm 0.5\%$ = $\pm 1.25^\circ\text{F}$
 Accuracy at 70% of span (225°F) = $\pm 0.7\%$ = $\pm 1.75^\circ\text{F}$

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

