

9. The new diameter is

$$D = D_0(1 + \alpha_{Al}\Delta T) = (2.725 \text{ cm})[1 + (23 \times 10^{-6} / \text{C}^\circ)(100.0^\circ\text{C} - 0.000^\circ\text{C})] = 2.731 \text{ cm}.$$