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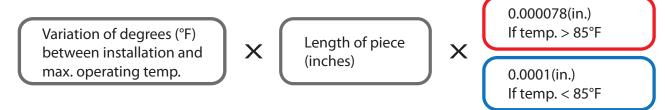
TECH NOTE

ISO 9001:2008 ISO 14001

EFFECTS OF THERMAL EXPANSION & CONTRACTION ON MACHINING / WORKING WITH UMHW-PE

UHMW-PE is an excellent wear material. But it is affected by temperature fluctuations, which must be considered when cutting and machining to size.

The best procedure is to cut UHMW-PE at a temperature of 75°F. If you must consider actual operating temperature, here is a working formula to help you to accommodate for thermal effect:



Examples:

A) Expansion Example:

Installing at 78°F ; the maximum operating temperature will reach 150°F ; piece is120" long

 $150^{\circ}F - 78^{\circ}F = 72^{\circ}F$ of temperature change

72 x 120 x .0001 = 0.864" of expansion

B) Contraction Example:

Installing at 78°F ; the lowest operating temperature could reach -200°F ;

EST.1911

piece is 120" long

 $78^{\circ}F + 20^{\circ}F = 98^{\circ}F$ of temperature change

98 x 120 x .000078 = 0.917" of contraction

Follow these simple guidelines - it will make your life much easier !

Contact Robco for additional technical information at info@robco.com Thank you !

Your Robco Technical Team