

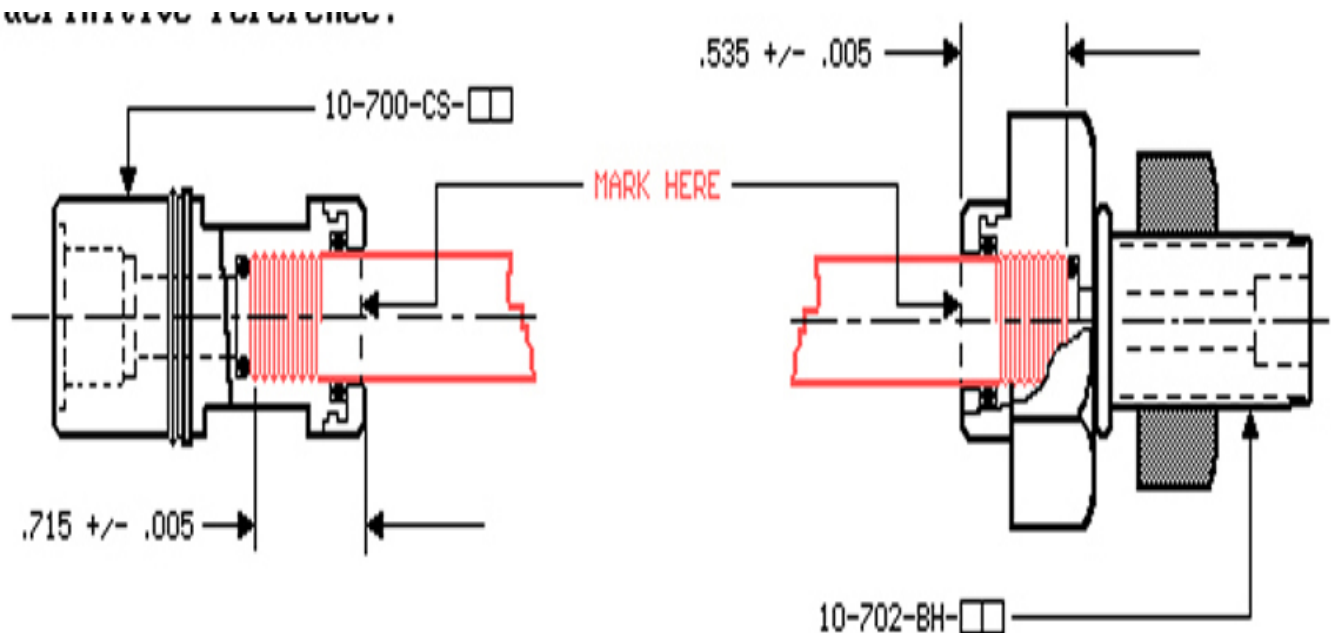
TECH NOTE

TN-103 – Nipple End Seal Integrity

ERECTA SWITCH accessories designed to connect to 1/8 pipe nipples incorporate two O-ring seals. The larger of the two seals is on its diameters. The smaller O-ring seals on its faces. This is a redundant sealing scheme intended to maximize leak-tight integrity and, at the same time, permit hand-tight assembly. Either O-ring, correctly assembled, is sufficient to effect a positive seal. When both seals are engaged, seal integrity is maximized by redundancy. This technique transcends the uncertainties characteristic of thread seals.

Nipple penetration into ERECTA SWITCH connectors must be sufficient to engage the face seal O-ring. There is no visual reference on the nipple to control penetration. Engaging the face seal is usually determined by "feel" as the nipple is bottomed. Lubricating the nipple's threads by scoring the threads with a bar of hand soap enhances the ability to "feel" the bottom.

However, when maximum reliability is the objective, a more definitive method to determine engagement should be used. Marking the diameter of the nipple at the correct distance from the end face provides a definitive reference.



Cross-section showing mark location on nipple for face seal engagement. Left: 10-700-CS-□ connector. Right: 10-702-BH-□ bulkhead fitting. Mark nipple at $.535 \pm .005$ from end face; connector accepts nipple to $.715 \pm .005$.

Installation Tip

Scoring the nipple threads with hand soap before assembly lubricates the threads, reduces friction, and makes it easier to feel when the nipple has bottomed and the face seal O-ring is fully engaged.