PLEASE – BEFORE YOU TRY IT YOUR WAY, TRY IT OURS!

HYTAC Insert Installation Guide

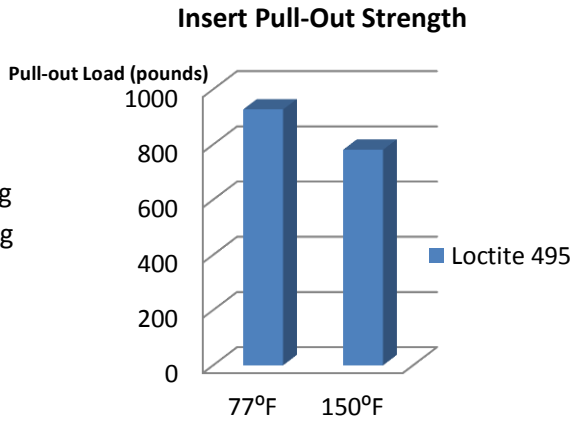
Innovative Tooling Materials for Thermoforming

CGP Europe recommends the use of bonded inserts for ease of plug attachment to a supporting base structure. Following the guidelines listed below will improve surface quality of the finished plug and ensure consistency in plug performance.

These guidelines were established using CGP scored aluminum inserts. If using alternative inserts, depth calculations must be performed to ensure installation flush with the surface of the plug and ID clearance calculations to ensure proper bond strength of the insert to the plug wall.

1. DO NOT USE COOLANT. Coolant will affect adhesive bond strength.
2. Face mill bottom surface of plug.
3. For US size inserts with ¼-20 internal thread (CGP part number "INSERT STD THREAD")
    a. Drill 0.3125" diameter hole to 0.750" depth at insert locations.
    b. Cut 0.500" diameter hole with a finish end mill to 0.490" depth at insert locations.
4. For Metric size inserts with 6 mm internal thread(CGP part number "INSERT METRIC THREAD")
    a. Drill 8 mm diameter hole to 19 mm depth at insert locations.
    b. Cut 12 mm diameter hole with a finish end mill to 11.75 mm depth at insert locations.
5. Thread a screw into the dot side of inserts to facilitate adhesive application and insertion into hole.
6. Apply Loctite 495 (instant cure cyanoacrylate adhesive, www.loctite.com) to the outer surface of insert.
7. Immediately push insert to the bottom of hole with dot facing up/out and ensure insert is installed to bottom of hole. The adhesive will begin to cure within 5 - 15 seconds of application to the insert.
8. Remove screw.
9. Repeat steps 5 – 8 for all inserts.
10. Face mill bottom of plug making sure insert and bottom of plug are flush.

KEY SUCCESS FACTORS for this simple process include the elimination of coolant during cutting (for proper adhesive bonding) and face milling the bottom of the plug after insert installation (to ensure a flush mating surface for the plug to the base is created). Pull out tests performed after a 24-hour period are shown in the chart to the right.



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