

Armstrong Precision Components can produce special inserts to customer designs.

Our Technical staff are available to assist in the selection and design of the insert.



Design Guidelines

INSTALLATION METHODS

- Moulded-in. For maximum strength.
- Ultrasonic. Fast, high strength post moulded installation but equipment cost high.
- Heat. Good post moulded strength with less expensive equipment.
- Cold. Lower moulded strength relying on friction retention but minimal equipment cost.

INSERT DESIGN

- Class of thread. 6H for Metric
3B for Unified
- Diamond Knurled Body to prevent rotation.
- Undercuts for good pull-out resistance.
- Knife-edge vanes for pull-out in harder materials.
- Pilot ends for location in the hole reducing alignment problems.
- Threads counter-bored at each end for ultrasonic installation (threads can be riveted over during installation).
- Cold or heat inserts have countersinks for improved screw engagement.

IMPROVING PERFORMANCE

- Cold installation will not benefit from undercuts (solid plastic cannot flow into grooves).
- Diamond knurls will resist rotation (torque) and pull-out.
- Increasing the coarseness of the knurl may not increase the performance. The softened plastic will not always flow completely to fill the valleys of the knurl.
- Additional heat or dwell time during installation can reduce the strength properties of the plastic.
- Straight knurls will give maximum resistance to torque but no resistance to pull-out.
- Undercuts give maximum resistance to pull-out but no resistance to rotation.
- The best compromise is a combination of diamond knurls and undercut(s).
- Deeper or wider undercuts may not improve the performance as the displaced plastic cannot completely fill the voids.