FACEPLATE FASTENING SOLUTIONS

Advanced TCA® specifications for telecom rack systems require two clinching fasteners: a self-clinching alignment pin and a captivated screw.

The PEM® Type TPXS™ pin meets the ATCA PICMG 3.0 specification for a 3mm alignment pin. The 15° tapered point makes engaging the mating hole easy.

PEM® captive floating retention screws, with M3 threads and 0.51 mm of radial float, offer an ATCA style mounting solution. These thumb screws provide the added advantage of an anti cross-thread feature making thread engagement quick and easy. Types PF11M and PF12M provide retainer shoulder for enhanced visual verification of installation.
TYPE TPX™ SELF-CLINCHING ALIGNMENT PIN

Meets the ATCA PICMG 3.0 specification.

Min. Sheet Thickness: 1 mm
Hole Size in Sheet: 3.5 mm ± 0.08
Min. Dist. Hole C.L. To Edge: 8.4 mm
Fastener Material: 300 series stainless steel
For Use In Sheet Hardness: 70 or less on the Rockwell "B" scale

All dimensions are in millimeters. (1) Pin diameter may exceed max. in this region.

TPX S - 3mm - 16

Length Code
Pin Dia. Code
Material
Type

PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Material</th>
<th>Test Sheet Material</th>
<th>Sheet Hardness HRB</th>
<th>Installation (kN)</th>
<th>Pullout (kN)</th>
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<tbody>
<tr>
<td>Aluminum</td>
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<tr>
<td>Steel</td>
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<td>22</td>
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</table>

INSTALLATION

Punch or drill properly sized mounting hole in sheet. Do not perform any secondary operations such as deburring. Insert pin through mounting hole of sheet and into anvil hole. With punch and anvil surfaces parallel, apply only enough squeezing force to embed the pin's head flush in the sheet.

Recommended tooling for:
- Sheet thickness 1 to 3.7 mm:
  - 3.11 mm ± 0.05
  - 3.80 mm ± 0.05
- Sheet thickness over 3.7 mm:
  - 19.18 mm Min.
CAPTIVE FLOATING RETENTION SCREWS

Provides 0.61 mm total float. Available with or without retainer “positive stop” shoulder. Available with or without MATThread® anti-cross-threading feature.

Min. Sheet Thickness: 0.92 mm
Hole Size In Sheet: 5.56 mm ±0.08
Min. Dist. Hole C/I To Edge: 7.11 mm
Threads: M3, ANSI/ASME B1.13M, 6g
For Use In Sheet Hardness: 80 or less on the Rockwell “B” scale

PF 11 P M - M3 - 0
Screw Length Code
Thread Size
With MATThread Feature
With Phillips Drive
With Retainer Shoulder (13 designates without)
Panel Fastener

PF Thread

MATThread® technology allows mating threads to more easily self-align, eliminating any anti-cross-threading issues. MATThread® is a registered trademark of MATThread Inc.

PennEngineering offers a complete assortment of captive screws and panel fasteners for a variety of applications. To view the complete line, you can refer to PEM Bulletin PF.

PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread</th>
<th>Installation (KN)</th>
<th>Punchout (N)</th>
<th>Installation (KN)</th>
<th>Pushout (N)</th>
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</table>

INSTALLATION

Punch or drill properly sized mounting hole in sheet. Do not perform any secondary operations such as deburring. Place fastener into recessed anvil, and place workpiece over shank of fastener. With punch and anvil surfaces parallel, apply squeezing force until the shoulder of the retainer comes in contact with the sheet material.

ReoHS compliance information can be found on our website.

Specifications subject to change without notice. Check our website for the most current version of this bulletin.

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