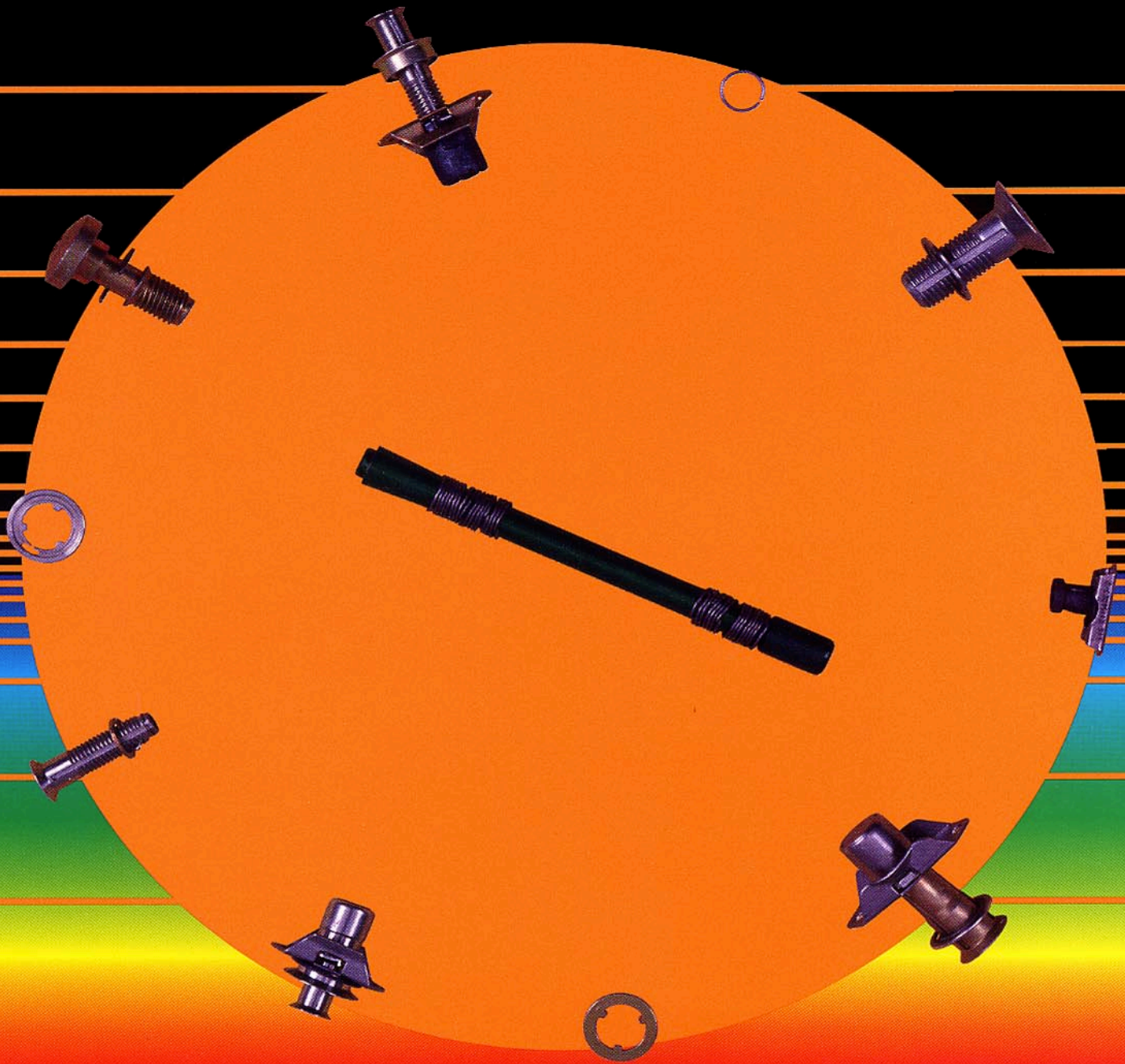


STRUCTURAL PANEL FASTENERS



AVIBANK
MFG., INC.

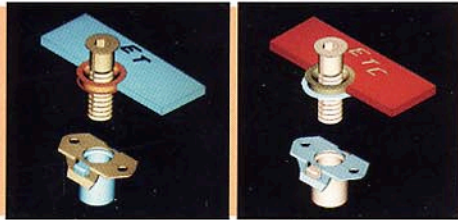
AVIBANK'S LINE OF PRODUCTS

ADJUSTABLE DIAMETER FASTENERS



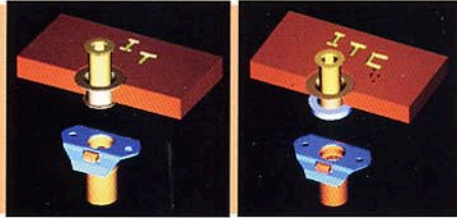
QUICK RELEASE PINS AND ACCESSORIES

SELF-RETAINING BOLTS AND ACCESSORIES



ET/ETC Pages 4-11

Eternally threaded with internally captivated and un-exposed retaining ring eliminates damage. Grommet design eliminates wear and elongation of the panel hole.



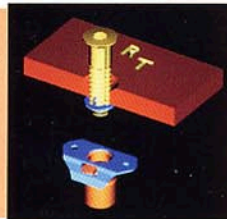
IT/ITC Pages 12-19

Internally threaded with flared grommet prevents damage to material such as composites. Hold out feature for easy installation of curved panels.



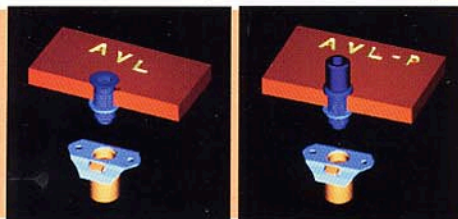
MT Pages 20-27

Internally threaded with dual lead threads for quick installation. Tapered shank eliminates damage to the threads or panel during installation.



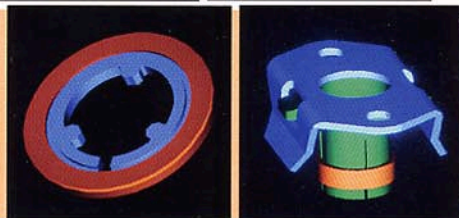
RT Pages 28-35

Externally threaded fastener. Three-pronged high strength retaining washer and ring system prevents foreign object damage (FOD).



AVL Pages 36-39

AVILOK® structural panel fasteners have a unique ratchet design with quad lead threads which provides for quick installation and removal, while at the same time, a positive lock without fear of release under severe vibration.

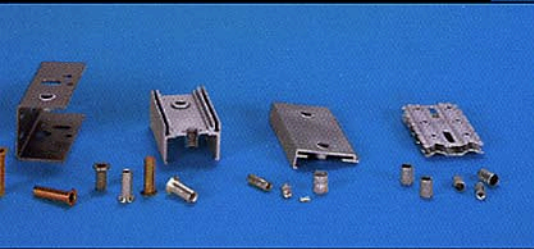


FLEX WASHER & FLEX NUT™ ... Pages 40-41

Flex washers are high strength retaining washers that have high reusable cycles and can be installed without the use of a tool. Flex nuts assemblies provide radial float for misalignment with a high reusable cycle and an easily replaced nut.

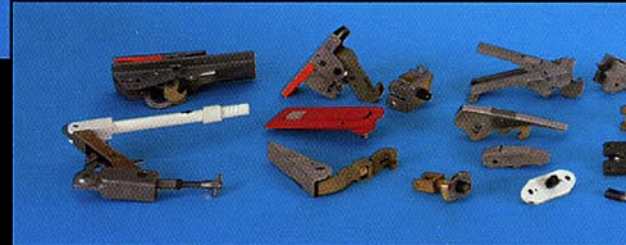
Send us your special requirements for review.

THREADED INSERTS



STRUTS/HOLD-OPEN RODS

LATCHES AND KEEPER ASSEMBLIES



STRUCTURAL PANEL FASTENERS™

FEATURES

- ◆ EXTERNAL OR INTERNAL THREADS
- ◆ NON-EXPOSED WORKING COMPONENTS
- ◆ ELIMINATES FOREIGN OBJECT DAMAGE (FOD)
- ◆ POSITIVELY CAPTIVE TO PANEL
- ◆ HOLD OUT FEATURE
- ◆ PRE-ASSEMBLED BOLT AND GROMMET
- ◆ SELF-LOCKING RECEPTACLE
- ◆ EASY REPLACEMENT OF RECEPTACLE NUT
- ◆ MANUAL AND PNEUMATIC TOOLS FOR INSTALLATION OR REMOVAL
- ◆ INSTALL IN METAL OR COMPOSITE MATERIAL
- ◆ AVAILABLE IN METRIC SIZES

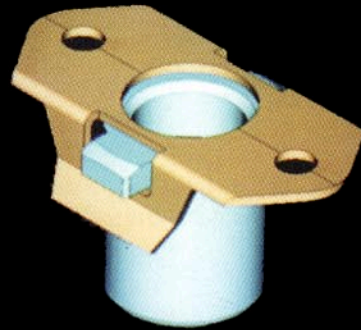
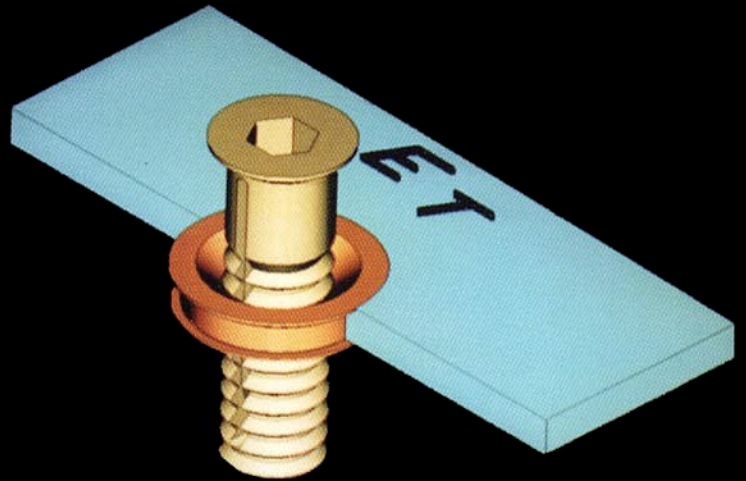
APPLICATIONS

- ◆ AIRCRAFT EXTERIOR PANELS
- ◆ RPV'S
- ◆ MISSILE DOORS
- ◆ AIRCRAFT CEILINGS
- ◆ ELECTRONIC BOXES ACCESS DOORS
- ◆ STEALTH AIRCRAFT OUTER SKIN

SEE INSIDE BACK COVER FOR APPLICATION DESIGN FORM

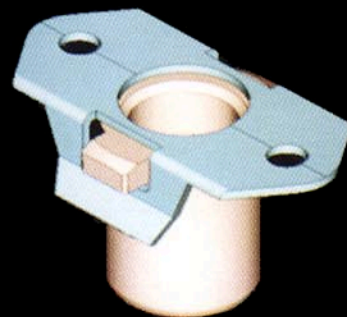
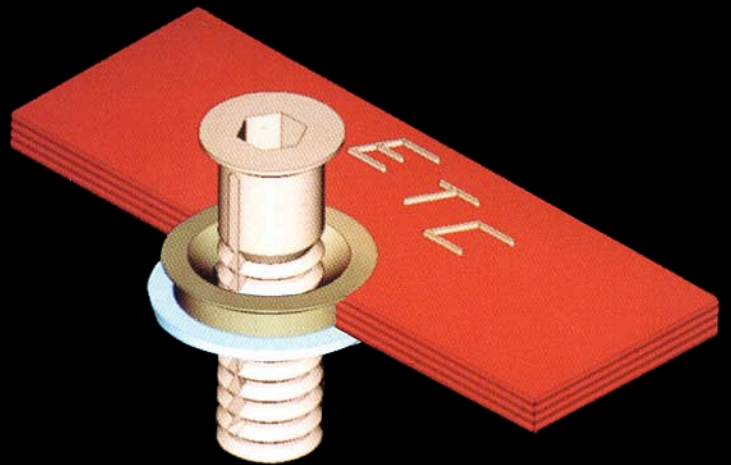
ET

—For Use
in Steel
and
Aluminum



ETC

—For
Use in
Composite
Material



EXTERNALLY THREADED PANEL FASTENERS

ET/ETC Features

THIS FASTENING SYSTEM OFFERS A UNIQUE INTERNAL-RING DESIGN THAT FEATURES:

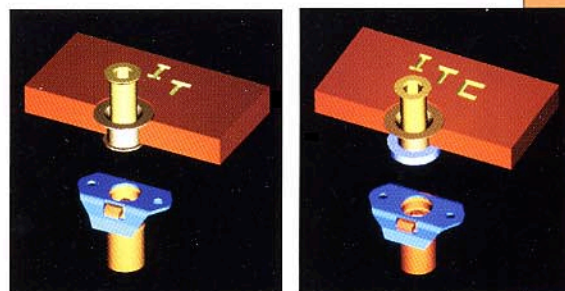
- ◆ Non-exposed working components eliminate foreign object damage (FOD).
- ◆ Internal captivated/non-exposed retaining ring eliminates retaining ring damage:
 - during installation of the Stud-Bolt in the panel.
 - during engagement of the Stud-Bolt with the receptacle.
- ◆ Positively-captive to prevent the Stud-Bolt from coming off the panel.
- ◆ Stud-Bolt holdout feature that allows easy panel installation on both curved and flat surfaces.
- ◆ Pre-assembled Stud-Bolt & Grommet reduces installation cost and the number of components purchased.
- ◆ Grommet design eliminates wear and elongation of the fastener holes in the panel.
- ◆ Self locking receptacle nut feature allows a minimum of 500 reusable cycles and eliminates galling and removal of plating from the Stud-Bolt.
- ◆ Removal and replacement of the receptacle nut without removal of the mounting basket.
- ◆ Installation can be made with manual or pneumatic tools.
- ◆ Pneumatic tool installs Stud-Bolt and grommet assemblies in 3 seconds.

OTHER AVIBANK STRUCTURAL PANEL FASTENERS AVAILABLE

IT

INTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

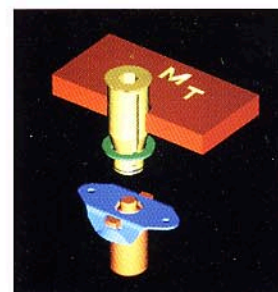
SEE PAGES 12-19.



MT

INTERNALLY THREADED FASTENER WITH TAPERED SLEEVE BOLT AND INTERNAL DETENT RING.

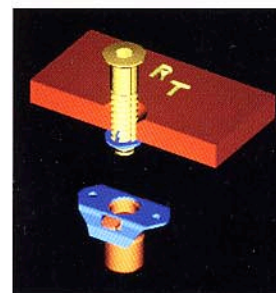
SEE PAGES 20-27.



RT

EXTERNALLY THREADED PANEL FASTENER WITH UNIQUE RETAINING WASHER AND RING SYSTEM.

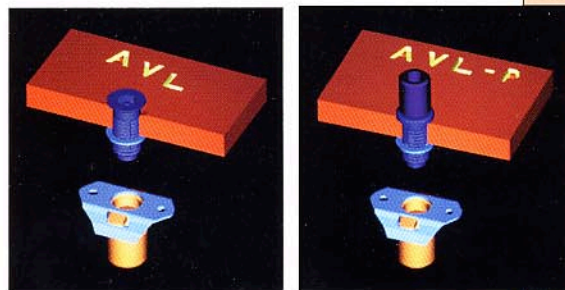
SEE PAGES 28-35.



AVL

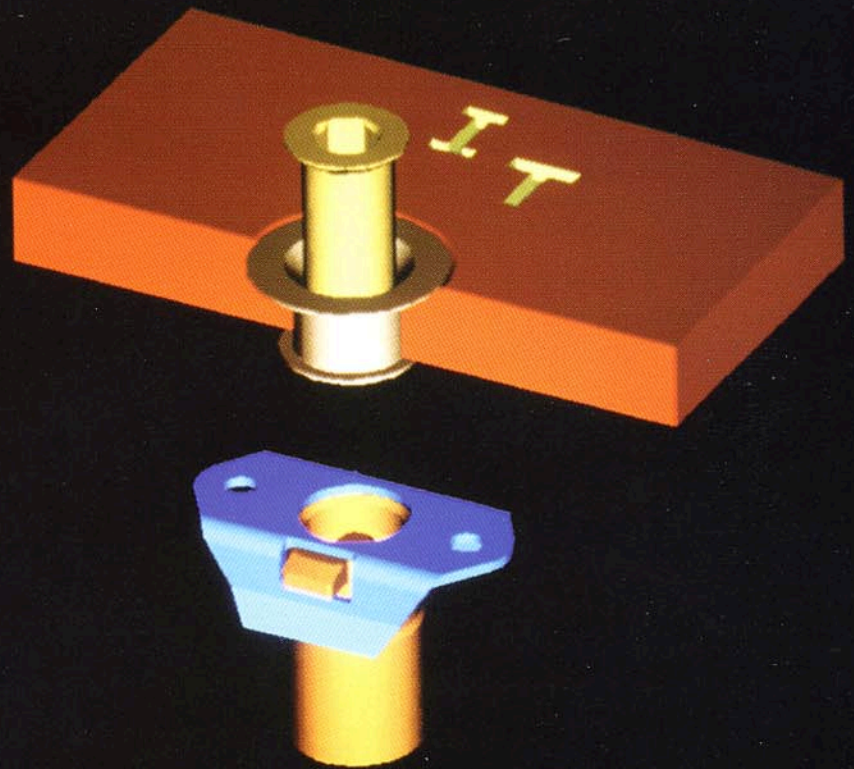
AVILOK® OFFERS A UNIQUE RACHET DESIGN FOR INADVERTENT RELEASE UNDER SEVERE VIBRATION.

SEE PAGES 36-39.



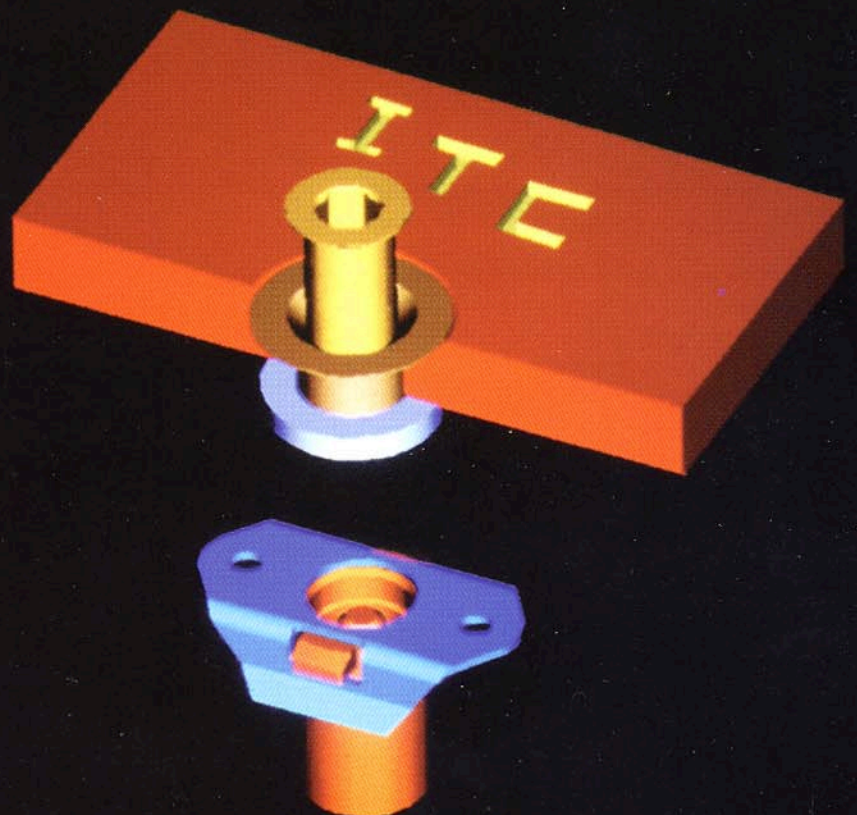
IT

—For Use
in Steel
and
Aluminum



ITC

—For
Use in
Composite
Material



INTERNALLY THREADED PANEL FASTENERS

IT/ITC Features

THIS FASTENING SYSTEM OFFERS A UNIQUE INTERNAL-THREAD DESIGN WITH DUAL LEAD THREADS THAT FEATURES:

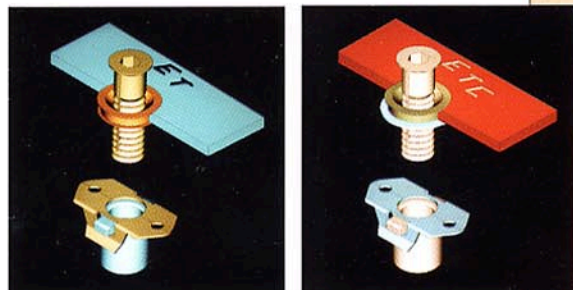
- ◆ Non-exposed working components eliminate foreign object damage (FOD).
- ◆ Internally captivated/non-exposed retaining ring eliminates retaining ring damage:
 - during installation of the sleeve bolt on the panel.
 - during engagement of the sleeve bolt with the receptacle.
- ◆ Positively-captive to prevent the sleeve bolt from coming off the panel.
- ◆ Sleeve bolt hold out feature that allows easy panel installation on both curved and flat surfaces.
- ◆ Pre-assembled sleeve bolt & grommet reduces installation cost and the number of components required.
- ◆ Grommet design eliminates wear and elongation of the fastener holes in the panel.
- ◆ Self-locking receptacle nut feature allows a minimum of 500 reusable cycles and eliminates galling and removal of plating from the sleeve bolt.
- ◆ Removal and replacement of the receptacle nut without removal of the mounting basket.
- ◆ Installation can be made with manual or pneumatic tools.
- ◆ Pneumatic tool installs sleeve bolt and grommet assemblies in 3 seconds.
- ◆ Installation method ensures flushness of the fastener to the panel surface for smooth aerodynamic outer skin of aircraft.
- ◆ ITC protects composite panel from delamination or fracture by flaring grommet to the washer not the panel during installation.

OTHER AVIBANK STRUCTURAL PANEL FASTENERS AVAILABLE

ET

EXTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

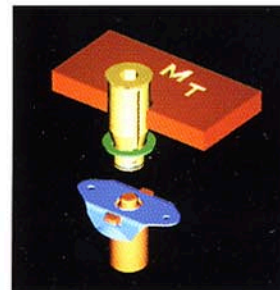
SEE PAGES 4-11.



MT

INTERNALLY THREADED FASTENER WITH TAPERED SLEEVE BOLT AND INTERNAL DETENT RING.

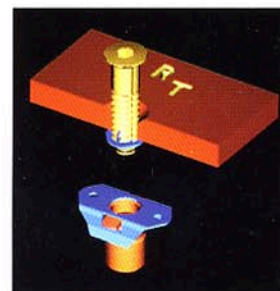
SEE PAGES 20-27.



RT

EXTERNALLY THREADED PANEL FASTENER WITH UNIQUE RETAINING WASHER AND RING SYSTEM.

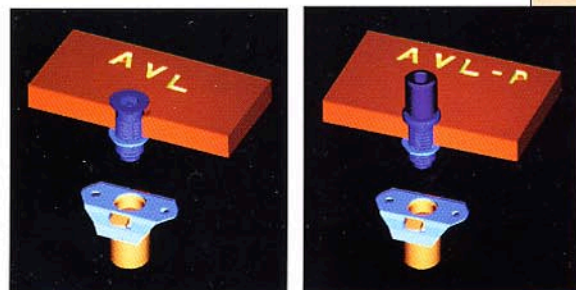
SEE PAGES 28-35.



AVL

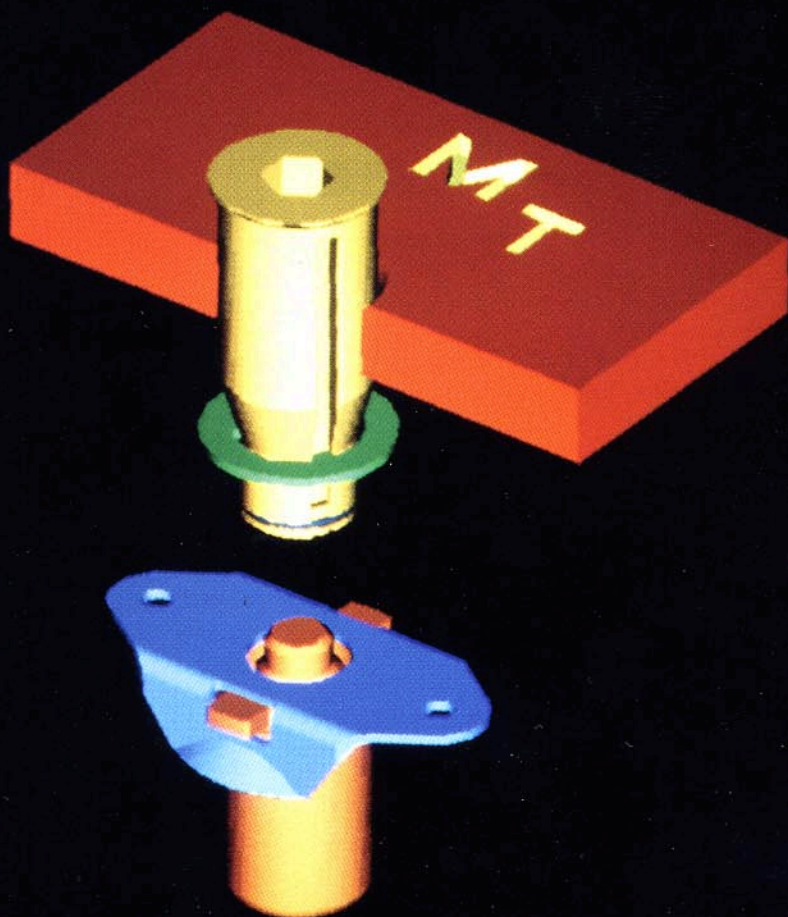
AVILOK® OFFERS A UNIQUE RACHET DESIGN FOR INADVERTENT RELEASE UNDER SEVERE VIBRATION.

SEE PAGES 36-39.



MT

**—For Use
in Steel,
Aluminum
and
Composite
Materials**



TAPERED SHANK PANEL FASTENERS

MT Features

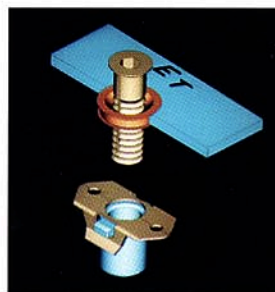
- ◆ Tapered shank with internal dual lead threads for quick installation.
- ◆ Tapered shank improves alignment capabilities and minimizes hole wear.
- ◆ Internally threaded sleeve bolt eliminates damage to the sleeve bolt threads or panel during installation.
- ◆ High strength washer and retaining ring prevents loss of the sleeve bolt and retaining ring for the panel, thus eliminating foreign object damage (FOD).
- ◆ Pre-assembled internal detent ring permits positive hold-out of the sleeve bolt when used with a shim. This ensures fast and easy installation of curved or misaligned access panels.
- ◆ High strength retaining washer slides smoothly in the sleeve bolts slots. Washer does not expand and contract or bend, causing it to fatigue or break, thereby it eliminates FOD problems.
- ◆ Receptacle nut floats radially in basket to accommodate misalignment during installation of the sleeve bolt.
- ◆ Receptacle nut may be replaced without removal of the riveted basket.
- ◆ Sleeve bolt meets the torque requirements of MIL-N-25027, and provides a minimum of 500 reusable cycles.
- ◆ Installs into existing panel and substructure mounting holes of similar panel fastener designs.
- ◆ Sleeve bolt mates with similar designed receptacles, and the MT receptacle mates with similar designed sleeve bolts.

OTHER AVIBANK STRUCTURAL PANEL FASTENERS AVAILABLE

ET

EXTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

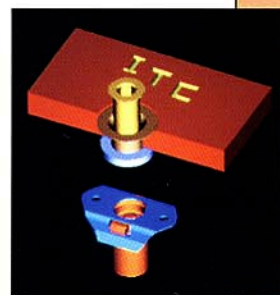
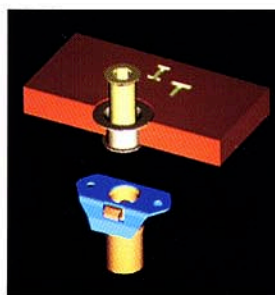
SEE PAGES 4-11.



IT

INTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

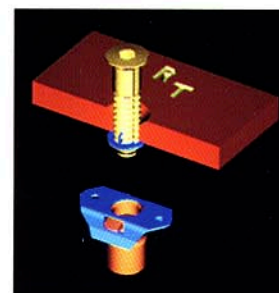
SEE PAGES 12-19.



RT

EXTERNALLY THREADED PANEL FASTENER WITH UNIQUE RETAINING WASHER AND RING SYSTEM.

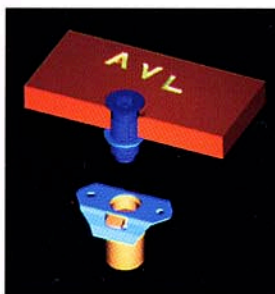
SEE PAGES 28-35.



AVL

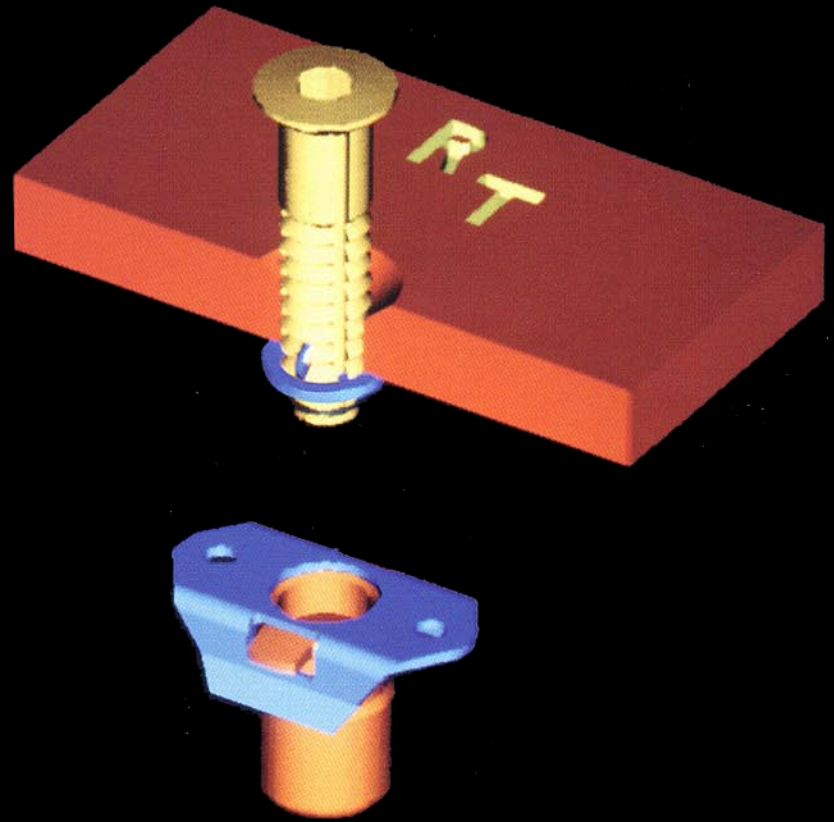
AVILOK® OFFERS A UNIQUE RACHET DESIGN FOR INADVERTENT RELEASE UNDER SEVERE VIBRATION.

SEE PAGES 36-39.



RT

**—For Use
in Steel,
Aluminum
and
Composite
Materials**



RING TYPE PANEL FASTENERS

RT Features

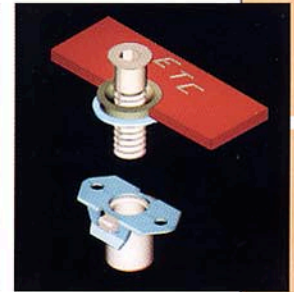
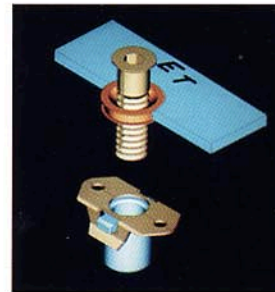
- ◆ Stud-bolt has external dual lead threads to speed up operation.
- ◆ High strength retaining washer and ring system prevents loss of the fastener components, thus eliminating Foreign Object Damage (FOD).
- ◆ Three pronged retaining washer provides higher load capabilities and proper orientation during installation and removal.
- ◆ Optional positive stud-bolt hold-out feature facilitates installation and removal of curved or hinged panels.
- ◆ Unique grommet designs help to eliminate wear and elongation of the fastener holes in either metallic or composite type panels.
- ◆ Unique two piece grommet provides:
 - Compensation for variation in composite type panel thickness.
 - Protection to composite type panels from fracturing or delamination. Grommet is flared onto the washer and not directly onto the composite panel.
 - Grommet washer protects composite panel from fracturing during removal of the grommet.
 - Flush aerodynamic smoothness of the fastener.
- ◆ Receptacle nut provides a minimum 500 reusable cycles and eliminates galling and removal of the stud-bolt plating.
- ◆ Receptacle nut meets or exceeds the torque requirements of MIL-N-25027.
- ◆ Receptacle nut floats radially in basket to accommodate misalignment and may be replaced without removal of the riveted basket.
- ◆ Installation of the grommets by either manual or pneumatic tools.

OTHER AVIBANK STRUCTURAL PANEL FASTENERS AVAILABLE

ET

EXTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

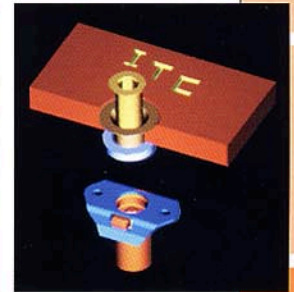
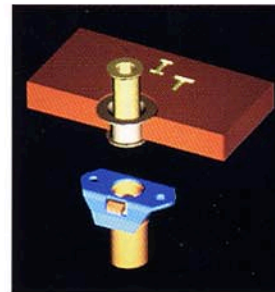
SEE PAGES 4-11.



IT

INTERNALLY THREADED PANEL FASTENER FOR EITHER METAL OR COMPOSITE ACCESS PANELS.

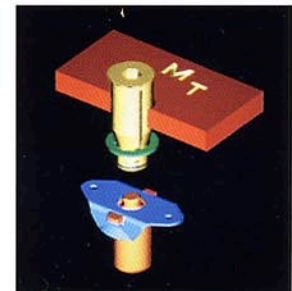
SEE PAGES 12-19.



MT

INTERNALLY THREADED FASTENER WITH TAPERED SLEEVE BOLT AND INTERNAL DETENT RING.

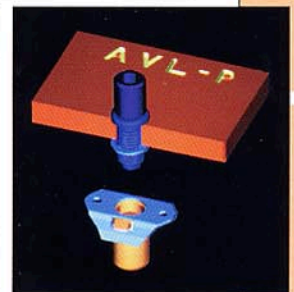
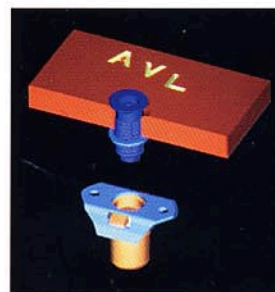
SEE PAGES 20-27.



AVL

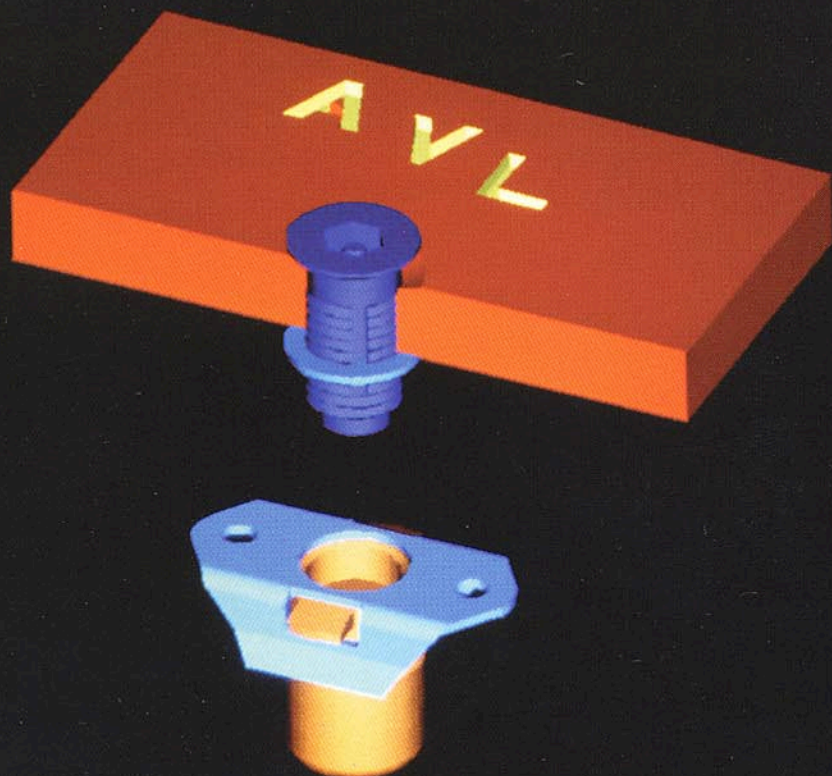
AVILOK® OFFERS A UNIQUE RACHET DESIGN FOR INADVERTENT RELEASE UNDER SEVERE VIBRATION.

SEE PAGES 36-39.



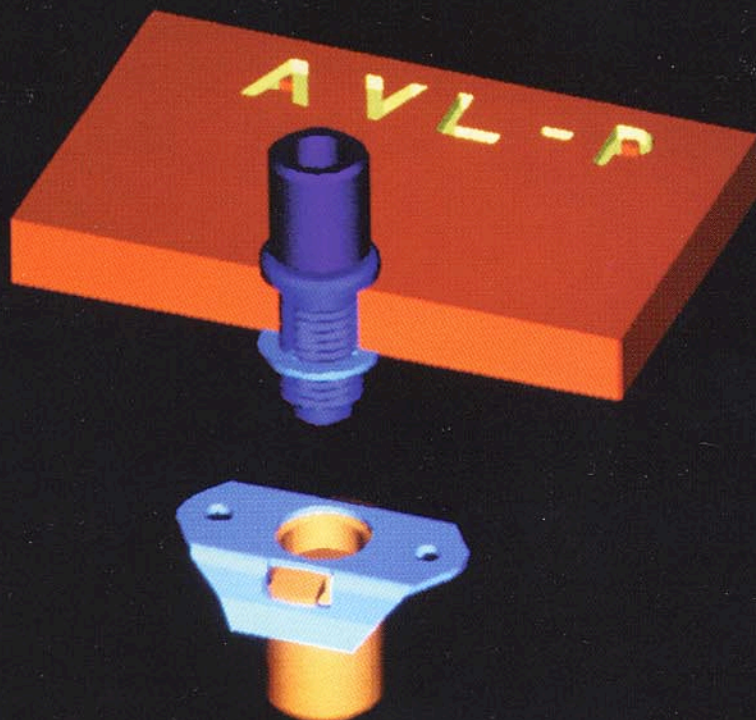
AVILOK®

Flush Head



AVILOK®

Protruding Head



POSITIVE LOCK PANEL FASTENERS

AVILOK® Features

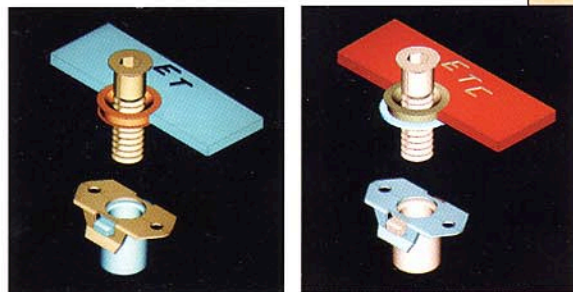
- ◆ Unique ratchet design using quad lead threads provides quick installation and removal while at the same time a positive lock without fear of inadvertent release under severe vibration.
- ◆ Self locking ratchet and release system allows for minimum use of 5,000 cycles.
- ◆ Floating receptacle permits mis-alignment of up to .030 in any direction.
- ◆ Multiple springs in receptacle assure against accidental release under high vibration.
- ◆ Flush headed design releases with the use of standard Allen wrenches.
- ◆ Washer can easily be replaced without also replacing the stud.
- ◆ Meets vibration requirements of MIL-F-22978.
- ◆ Test reports available upon request.
- ◆ Choice of 1/4 inch and 3/8 inch nominal stud diameters with both flush and protruding heads. Special sizes available upon request.
- ◆ Protruding head design allows positive lock without use or need of tools. Operates entirely by hand.

OTHER AVIBANK STRUCTURAL PANEL FASTENERS AVAILABLE

ET

EXTERNALLY
THREADED PANEL
FASTENER FOR
EITHER METAL
OR COMPOSITE
ACCESS PANELS.

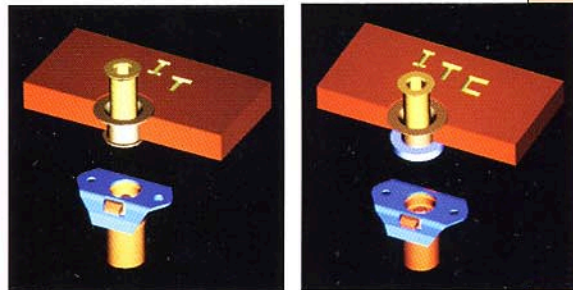
SEE PAGES 4-11.



IT

INTERNALLY
THREADED PANEL
FASTENER FOR
EITHER METAL
OR COMPOSITE
ACCESS PANELS.

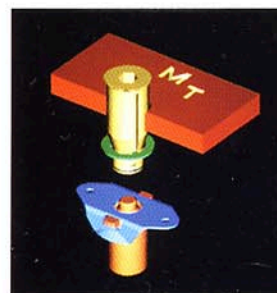
SEE PAGES 12-19.



MT

INTERNALLY
THREADED FASTENER
WITH TAPERED
SLEEVE BOLT
AND INTERNAL
DETENT RING.

SEE PAGES 20-27.



RT

EXTERNALLY
THREADED PANEL
FASTENER WITH
UNIQUE RETAINING
WASHER AND
RING SYSTEM.

SEE PAGES 28-35.

