

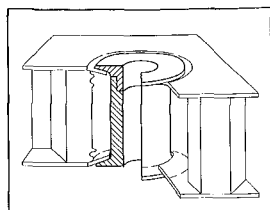


Shur-Lok

Fasteners for Sandwich Structure Catalog

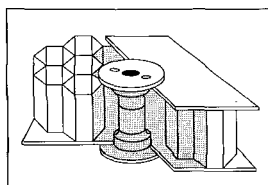
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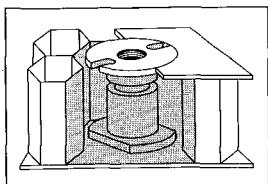
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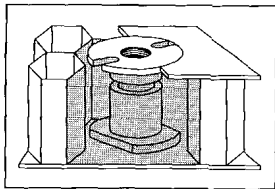


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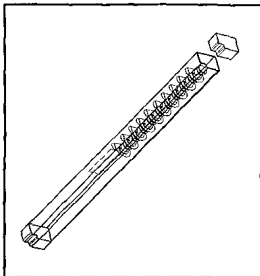
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INTRODUCTION

WHAT IS SANDWICH STRUCTURE?

Sandwich structure consists of top and bottom face sheets attached to a low-density inner-core material. Among the many types of core material is honeycomb, the principal form of sandwich structure. Honeycomb core is made of hexagonal cells with walls perpendicular to the face sheets. A wide variety of materials can be used in the construction of sandwich core. These materials range from aluminum, steel, high-temperature alloys to paper, wood, foam, and plastic syntactic.

Typical applications for sandwich structure are:

Aircraft Industry

- Floor and Ceiling Panels
- Interior Panels
- Food Handling Galleys
- Control Surfaces
- Baggage Overhead Racks
- Thrust Deflector Assemblies
- Speed Brakes
- Ground Spoilers
- Radomes
- Rotor Blades
- Pressure Bulkheads

Aerospace

- Capsule Panels
- Ablative Shields for Nose Cones
- Instrumentation Enclosures and Shelves
- Bulkhead Panels

Electronics Industry

- Electronics Radome Construction
- Large Antenna or Dish Reflectors
- Military Electronic Instrumentation Shelters
- Shipboard Electronic Deck Shelters

DESIGN CRITERIA

By its very nature, sandwich structure material cannot carry concentrated loading due to its breakable face skins. Selecting the method for transmitting loads into and out of the material becomes a key factor to the successful utilization of sandwich structure. Shur-Lok has developed a wide range of fasteners that are

capable of distributing these loads within the panel thereby avoiding localized panel damage.

When choosing a fastener for sandwich panels, three primary modes of loading must be considered. They are shear, tension, and torsion (see Illustration 1).

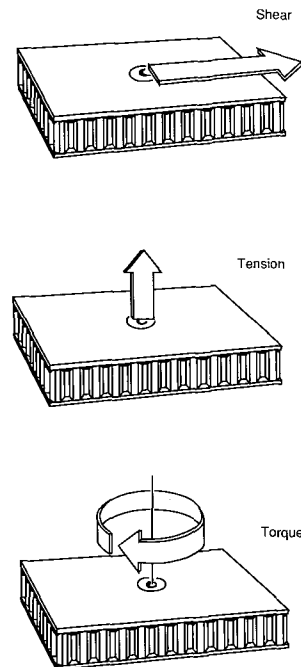
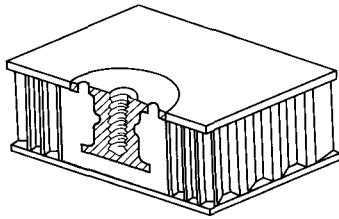


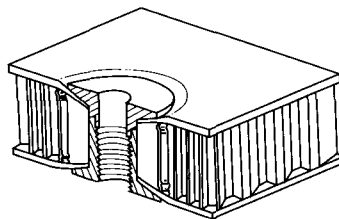
Illustration 1 – Typical Load Forms

TYPES OF FASTENERS FOR SANDWICH STRUCTURE

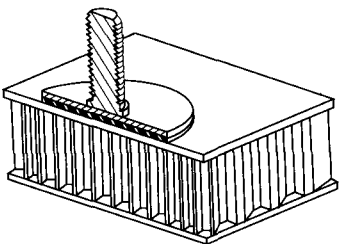
Basically, there are three types of fasteners for sandwich structure applications. The molded-in (potted) type and the mechanical type are all shown in Illustration 2. The third type, surface bonded, will not be addressed here, but is discussed in the Fasteners for Advanced Composites catalog.



Molded-in



Mechanical



Bonded-on

Illustration 2 – Fasteners for Sandwich Structure

Sandwich Structure Panel

- Overall thickness of panel?
- Face skin thickness?
- Type of core?
- Material of core and face skins?
- Flat or tapered surface?
- Type of potting compound?

Fastener (Illustration 3 has several examples)

- What size thread or clearance hole?
- Is fastener to be through or blind type?
- Must installation be flush with surface of face skin?
- Is a standoff thread required on either end? What diameter? How thick?
- What are the torque requirements of threaded type?
- Thread lock?
- Would a floating nut element be appropriate?
- What material is required for fastener?
- Operating temperatures?
- Design load requirements?
- Potted or mechanical?
- Material compatibility of mating structure?

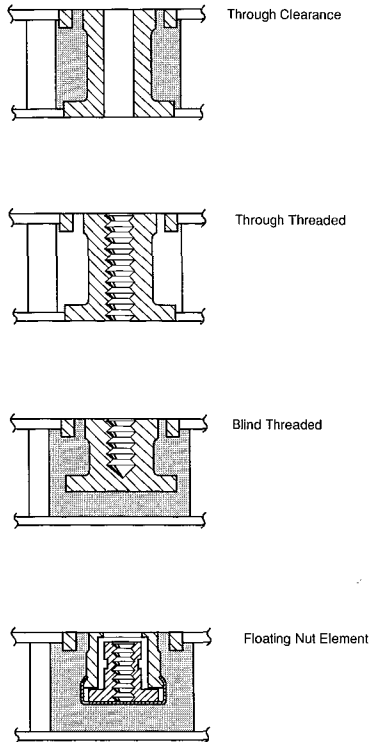
While all information may not initially be known when choosing a fastener, Shur-Lok's technical staff can help by offering expertise in designing a fastener for a specific application. Shur-Lok's Engineering Lab can help evaluate fastener designs and applications.

The molded-in type can be installed in all types of panel and is available in both metallic and nonmetallic materials. They are retained in the panel by encapsulating the fastener within the panel. The mechanical type is generally limited to use with a metal structure. These are retained in the structure by a compression/clamping action that captures the face skins, often resulting in a slight deformation of the face skin material.

WHAT TO CONSIDER WHEN CHOOSING THE PROPER FASTENER

The designer must consider both the panel and fastener to achieve joint integrity. The following questions will aid the design process.

Fastener Styles



Head Styles

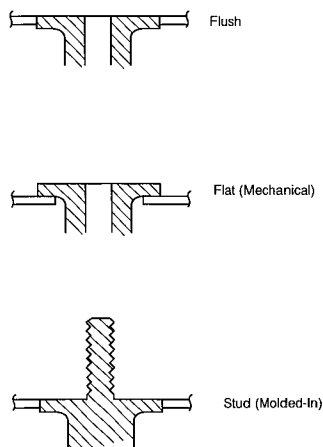


Illustration 3 – Fastener Considerations

INSTALLATION METHODS

Molded-in (Potted) Inserts

With molded-in inserts, several design considerations need to be addressed prior to installation of the fastener. Important criteria include the selection of a head diameter which provides sufficient bearing area in the face skin for the size of bolt or screw to be used, and the determination of fastener length for maximum strength. The minimum recommended insert length provides $1\frac{1}{2}$ diameters of thread engagement. When selecting a blind threaded fastener, it is important to allow at least .040 inch of clearance between the bottom of the fastener and the opposite face skin. This ensures that the potting compound will flow properly (see Illustration 4).

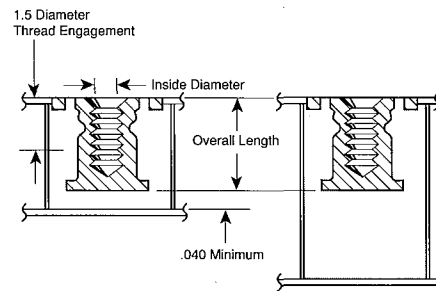


Illustration 4 – Dimension Considerations

Most potted insert applications require the fastener to be installed flush with the face skin. Shur-Lok developed the Shur-Tab® system to facilitate positioning while potting and maintaining that position during the cure cycle. The Shur-Tab® is a simple pressure-sensitive adhesive-backed tab with holes provided for potting that is easily applied to the fastener prior to installation and is easily removed after the potting compound has cured. Potting compound is injected through one of the holes with a sealant gun, which permits venting through the other hole, thus ensuring a completely uniform fill (see Illustration 5).

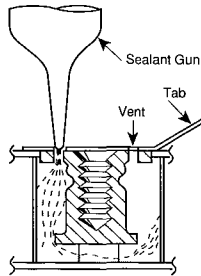


Illustration 5 – Shur-Tab Potting Operation

Occasionally, in order to maximize strength of a molded-in insert, it may be necessary to undercut the core to provide a larger volume of potting compound to be injected within the panel corespace resulting in a larger installed fastener "footprint" (see Illustration 6).

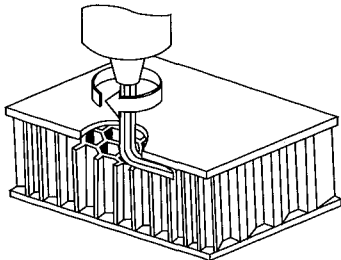


Illustration 6 – Typical Core Undercut for Molded-in Insert

Mechanical Inserts

For metallic sandwich structure and light loading conditions, a simple mechanical insert such as the Shur-Lok SL101 series is recommended. These inserts require only a through hole for installation, and when flush mounting is required, the head style provides the advantage of automatic dimpling of the face skins during installation (see Illustration 7).

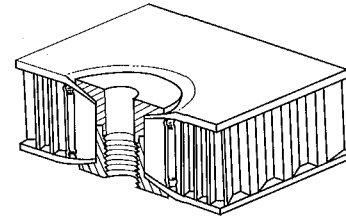


Illustration 7 – Simple Mechanical Insert

When a higher load-carrying capability is required in combination with metallic sandwich structure, Shur-Lok has developed and produced high-strength mechanical inserts that trap both top and bottom face skins, thereby making them integral with the structure (see Illustration 8). This product is not listed in this catalog, please contact Shur-Lok for additional information.

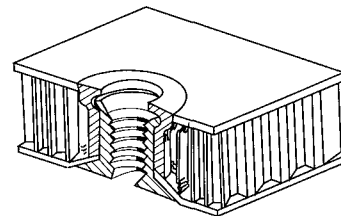
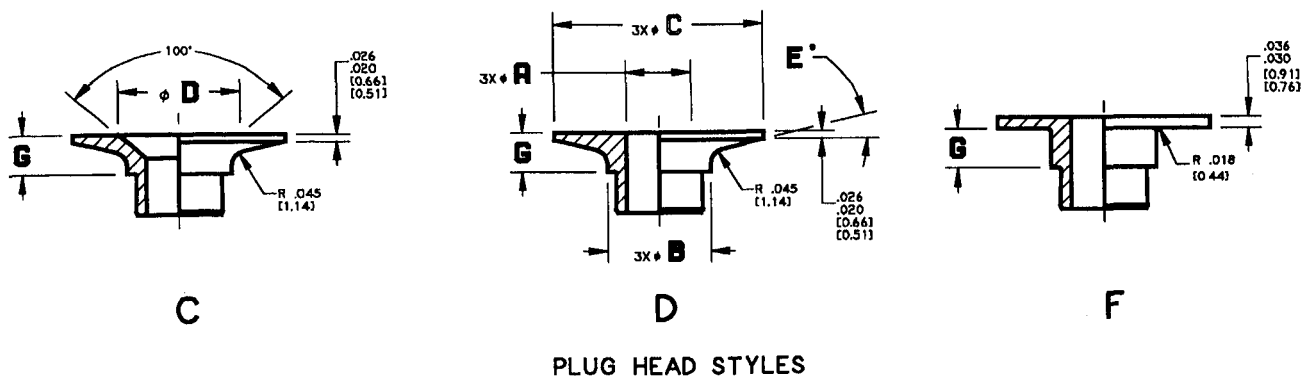


Illustration 8 – Shur-Torq Self-Retaining Mechanical Insert

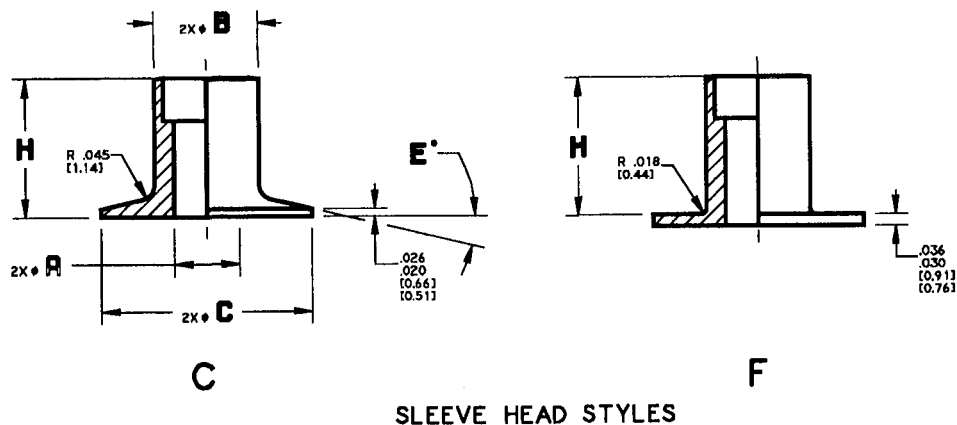
SUMMARY

This catalog is intended to familiarize the potential user with the styles, methods and specifics regarding a limited number of Shur-Lok fasteners. We wish to emphasize that this presentation is literally backed by thousands of part numbers and applications. Shur-Lok has a complete technical and engineering staff to fully service our customers. Please consult the Technical Service Department regarding any questions or strengths, materials, configurations, or new designs. Shur-Lok has Sandwich Panel Structure Design Manuals and test data available upon request.

INSERTS FOR METALLIC FACE SKIN PANEL



PLUG HEAD STYLES



SLEEVE HEAD STYLES

TABLE II

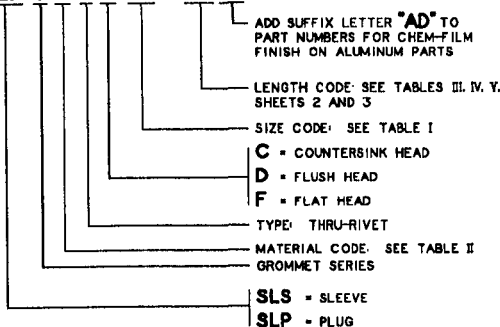
MATL CODE	MATERIAL	FINISH
0	AL. ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I CLASS 1
6	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
9	CARBON STEEL PER ASTM A108	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2

TABLE I

SIZE CODE	ϕ A +.002 [0.05] -.003 [0.08]	ϕ B +.002 [0.05]	ϕ C	ϕ D +.003 [0.08] -.004 [0.10]	E'
12	.133 [3.38]	.278 [7.06]	.500 [12.70]	.233 [5.92]	13'
15	.168 [4.27]	.278 [7.06]	.500 [12.70]	.295 [7.49]	13'
18	.194 [4.93]	.309 [7.85]	.625 [15.88]	.362 [9.19]	13'
23	.256 [6.50]	.372 [9.45]	.750 [19.05]	.486 [12.34]	14'
28	.289 [7.34]	.403 [10.24]	.812 [20.62]	.501 [12.72]	14'
31	.318 [8.08]	.466 [11.84]	.875 [22.22]	.574 [14.58]	14'
37	.381 [9.68]	.622 [15.80]	1.000 [25.40]	.704 [17.88]	14'

EXAMPLE OF PART CODING

SLEEVE = SLS 1 0 1 F 12 - 08 AD
PLUG = SLP 1 0 1 F 12 - 1 AD



APPLICATION

A MECHANICAL SPACER FOR USE IN PANELS WITH METAL FACE SKINS. INSTALLATION TO BE MADE FROM BOTH SIDES OF PANEL.

NOTES



SIZE .25 SLEEVES USED ON .187 PANEL THICKNESS WILL BE SINGLE THRU HOLE.

2 ANY COMBINATION OF SLEEVE AND PLUG MAY BE USED.

3 "C" HEAD STYLE STANDARD IN PLUG SECTION ONLY.

4 SEE SHEETS 2 AND 3 FOR SELECTION OF SLEEVE-PLUG COMBINATIONS FOR GIVEN PANEL THICKNESSES.

5 REFER TO SLD100 DATA SHEET FOR INSTALLATION PROCEDURE.

6 FASTENERS FOR THICKER PANELS ARE AVAILABLE UPON REQUEST.

7 TOLERANCES: .XXX ± .005 [0.13] ANGLES ± 1°

REVISION 6 13 SEPTEMBER 1999

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [XX] [X.XX]
±.03 ±.010 2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-92.07.11

**INSERT, GROMMET TYPE,
THRU-RIVET**

SL101

SHEET 1 OF 3

INSERTS FOR METALLIC FACE SKIN PANEL



TABLE III

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS101D SLS101F	12 15 18	03	.103 (2.62)	SLP101C SLP101D SLP101F	12 15 18	X	.085 (2.16)	.187 (4.75)
SLS101D SLS101F	12 15 18	04	.163 (4.19)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.250 (6.35)
						1	.116 (2.95)	.281 (7.14)
						2	.147 (3.73)	.312 (7.92)
						3	.179 (4.55)	.343 (8.71)
SLS101D SLS101F	12 15 18	06	.290 (7.37)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.375 (9.52)
						1	.116 (2.95)	.406 (10.31)
						2	.147 (3.73)	.437 (11.10)
						3	.179 (4.55)	.468 (11.89)
SLS101D SLS101F	12 15 18	08	.415 (10.54)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.500 (12.70)
						1	.116 (2.95)	.531 (13.49)
						2	.147 (3.73)	.562 (14.27)
						3	.179 (4.55)	.593 (15.06)
SLS101D SLS101F	12 15 18	10	.540 (13.72)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.625 (15.88)
						1	.116 (2.95)	.656 (16.66)
						2	.147 (3.73)	.687 (17.45)
						3	.179 (4.55)	.718 (18.24)
SLS101D SLS101F	12 15 18	12	.665 (16.89)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.750 (19.05)
						1	.116 (2.95)	.781 (19.84)
						2	.147 (3.73)	.812 (20.62)
						3	.179 (4.55)	.843 (21.41)
SLS101D SLS101F	12 15 18	14	.790 (20.07)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	.875 (22.23)
						1	.116 (2.95)	.906 (23.01)
						2	.147 (3.73)	.937 (23.80)
						3	.179 (4.55)	.968 (24.59)
SLS101D SLS101F	12 15 18	16	.915 (23.24)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	1.000 (25.40)
						1	.116 (2.95)	1.031 (26.19)
						2	.147 (3.73)	1.062 (26.97)
						3	.179 (4.55)	1.093 (27.76)
SLS101D SLS101F	12 15 18	18	1.040 (26.42)	SLP101C SLP101D SLP101F	12 15 18	0	.085 (2.16)	1.025 (26.03)
						1	.116 (2.95)	1.156 (29.36)
						2	.147 (3.73)	1.187 (30.15)
						3	.179 (4.55)	1.219 (30.96)

TABLE IV

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS101D SLS101F	25 28	03	.067 (1.70)	SLP101C SLP101D SLP101F	25 28	X	.120 (3.05)	.187 (4.75)
SLS101D SLS101F	25 28	04	.130 (3.30)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.250 (6.35)
						1	.151 (3.84)	.281 (7.14)
						2	.183 (4.65)	.312 (7.92)
						3	.214 (5.44)	.343 (8.71)
SLS101D SLS101F	25 28	06	.255 (6.48)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.375 (9.52)
						1	.151 (3.84)	.406 (10.31)
						2	.183 (4.65)	.437 (11.10)
						3	.214 (5.44)	.468 (11.89)
SLS101D SLS101F	25 28	08	.380 (9.65)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.500 (12.70)
						1	.151 (3.84)	.531 (13.49)
						2	.183 (4.65)	.562 (14.27)
						3	.214 (5.44)	.593 (15.06)
SLS101D SLS101F	25 28	10	.505 (12.83)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.625 (15.88)
						1	.151 (3.84)	.656 (16.66)
						2	.183 (4.65)	.687 (17.45)
						3	.214 (5.44)	.718 (18.24)
SLS101D SLS101F	25 28	12	.630 (16.00)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.750 (19.05)
						1	.151 (3.84)	.781 (19.84)
						2	.183 (4.65)	.812 (20.62)
						3	.214 (5.44)	.843 (21.41)
SLS101D SLS101F	25 28	14	.755 (19.18)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	.875 (22.23)
						1	.151 (3.84)	.906 (23.01)
						2	.183 (4.65)	.937 (23.80)
						3	.214 (5.44)	.968 (24.59)
SLS101D SLS101F	25 28	16	.880 (22.35)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	1.000 (25.40)
						1	.151 (3.84)	1.031 (26.19)
						2	.183 (4.65)	1.062 (26.97)
						3	.214 (5.44)	1.093 (27.76)
SLS101D SLS101F	25 28	18	1.005 (25.53)	SLP101C SLP101D SLP101F	25 28	0	.120 (3.05)	1.125 (28.57)
						1	.151 (3.84)	1.156 (29.36)
						2	.183 (4.65)	1.187 (30.15)
						3	.214 (5.44)	1.219 (30.96)

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SHUR-LOK

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, GROMMET TYPE,
THRU-RIVET**

SL101

SHEET 2 OF 3



INSERTS FOR METALLIC FACE SKIN PANEL

TABLE IV CONT'D

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS101D SLS101F	25 28	20	1.130 [28.70]	SLP101C SLP101D SLP101F	25 28	0	.120 [3.05]	1.250 [31.75]
						1	.151 [3.84]	1.281 [32.54]
						2	.183 [4.65]	1.312 [33.32]
						3	.214 [5.44]	1.344 [34.14]
SLS101D SLS101F	25 28	22	1.255 [31.88]	SLP101C SLP101D SLP101F	25 28	0	.120 [3.05]	1.375 [34.92]
						1	.151 [3.84]	1.406 [35.71]
						2	.183 [4.65]	1.438 [36.53]
						3	.214 [5.44]	1.469 [37.31]

TABLE IV

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS101D SLS101F	31	06	.185 [4.70]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	.375 [9.52]
						1	.221 [5.61]	.406 [10.31]
						2	.252 [6.40]	.437 [11.10]
						3	.283 [7.19]	.468 [11.89]
SLS101D SLS101F	31	08	.310 [7.87]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	.500 [12.70]
						1	.221 [5.61]	.531 [13.49]
						2	.252 [6.40]	.562 [14.27]
						3	.283 [7.19]	.593 [15.06]
SLS101D SLS101F	31	10	.435 [11.05]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	.625 [15.88]
						1	.221 [5.61]	.656 [16.66]
						2	.252 [6.40]	.687 [17.45]
						3	.283 [7.19]	.718 [18.24]
SLS101D SLS101F	31	12	.560 [14.22]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	.750 [19.05]
						1	.221 [5.61]	.781 [19.84]
						2	.252 [6.40]	.812 [20.62]
						3	.283 [7.19]	.843 [21.41]
SLS101D SLS101F	31	14	.685 [17.40]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	.875 [22.23]
						1	.221 [5.61]	.906 [23.01]
						2	.252 [6.40]	.937 [23.80]
						3	.283 [7.19]	.968 [24.59]
SLS101D SLS101F	31	16	.810 [20.57]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	1.000 [25.40]
						1	.221 [5.61]	1.031 [26.19]
						2	.252 [6.40]	1.062 [26.97]
						3	.283 [7.19]	1.093 [27.76]
SLS101D SLS101F	31	18	.935 [23.75]	SLP101C SLP101D SLP101F	31	0	.190 [4.83]	1.125 [28.57]
						1	.221 [5.61]	1.156 [29.36]
						2	.252 [6.40]	1.187 [30.15]
						3	.283 [7.19]	1.219 [30.96]

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PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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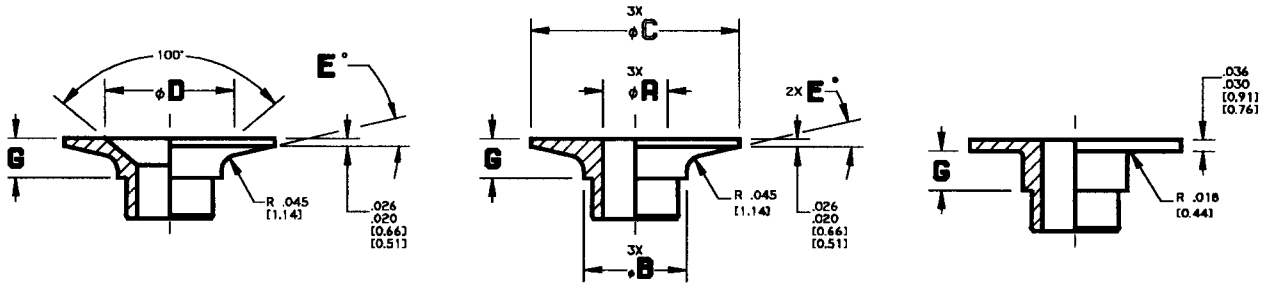
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**INSERT, GROMMET TYPE,
THRU-RIVET**

SL101

SHEET 3 OF 3

INSERTS FOR METALLIC FACE SKIN PANEL

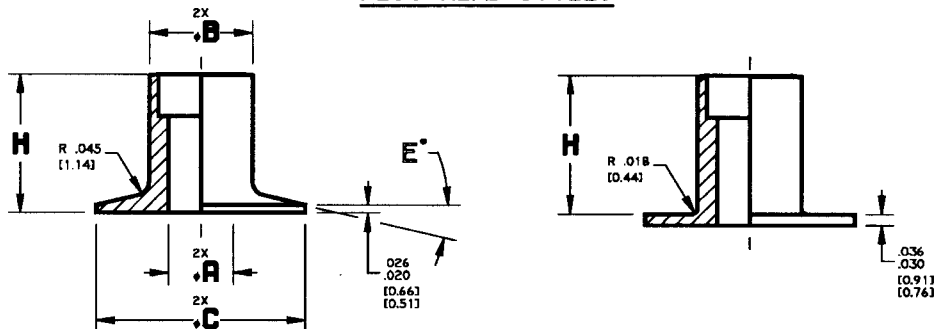


C

D

F

PLUG HEAD STYLES



D

F

SLEEVE HEAD STYLES

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
0	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE 1, CLASS 1
6	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
7	TITANIUM PER AMS4928	NONE
9	CARBON STEEL PER ASTM A108	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2

EXAMPLE OF PART CODING

SLS 1 0 2 F 10 - 08 AD (INCH)
SLP 1 0 2 C 10 - 1 AD (INCH)
SLS 1 0 2 F M5 - 08 AD (METRIC)
SLP 1 0 2 C M5 - 1 AD (METRIC)

ADD SUFFIX LETTERS "AD" TO PLUG AND SLEEVE PART NUMBERS FOR CHEM FILM FINISH ON ALUMINUM PARTS

LENGTH CODE: SEE TABLES III, IV, V, SHEETS 2 AND 3

SIZE CODE: SEE TABLE I

C = COUNTERSUNK HEAD

D = FLUSH HEAD

F = FLAT HEAD

TYPE: THRU-BOLT

MATERIAL CODE: SEE TABLE II

GROMMET SERIES

SLS = SLEEVE

SLP = PLUG

APPLICATION

A MECHANICAL SPACER FOR USE IN PANELS WITH METAL FACE SKINS. INSTALLATION TO BE MADE FROM BOTH SIDES OF PANEL.

TABLE I

SIZE CODE	.A +.002 [0.05] -.003 [0.08]	.B ± .002 [0.05]	.C	.D +.003 [0.08] -.004 [0.10]	E°
4	.116 [2.95]	.216 [5.49]	.375 [9.52]	.229 [5.82]	13°
6	.142 [3.61]	.278 [7.06]	.500 [12.70]	.285 [7.24]	13°
M3	.122 [3.10]	.278 [7.06]	.500 [12.70]	.236 [6.00]	13°
8	.168 [4.27]	.278 [7.06]	.500 [12.70]	.332 [8.43]	13°
M4	.161 [4.10]	.309 [7.85]	.625 [15.88]	.315 [8.00]	13°
10	.194 [4.93]	.309 [7.85]	.625 [15.88]	.385 [9.78]	13°
M5	.205 [5.20]	.372 [9.45]	.750 [19.05]	.394 [10.00]	14°
25	.256 [6.50]	.372 [9.45]	.750 [19.05]	.507 [12.88]	14°
M6	.244 [6.20]	.466 [11.84]	.875 [22.28]	.472 [12.00]	14°
31	.318 [8.08]	.466 [11.84]	.875 [22.28]	.600 [15.24]	14°
M8	.323 [8.20]	.622 [15.80]	1.062 [26.97]	.630 [16.00]	14°
37	.381 [9.68]	.622 [15.80]	1.062 [26.97]	.767 [19.78]	14°
M10	.406 [10.30]	.622 [15.80]	1.062 [26.97]	.787 [20.00]	14°

NOTES

- SIZE -25 SLEEVES USED ON .187 PANEL THICKNESS WILL BE SINGLE THRU HOLE.
- ANY COMBINATION OF SLEEVE AND PLUG MAY BE USED.
- "C" HEAD STYLE STANDARD IN PLUG SECTION ONLY.
- SEE SHEETS 2 AND 3 FOR SELECTION OF SLEEVE-PLUG COMBINATIONS FOR GIVEN PANEL THICKNESSES.
- REFER TO SLD100 DATA SHEET FOR INSTALLATION PROCEDURE.
- FASTENERS FOR THICKER PANELS ARE AVAILABLE UPON REQUEST.
- TOLERANCES: .XXX ± .005 [0.13]
ANGLES ± 1°

REVISION L 20 OCTOBER 1999

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TOLERANCES
XX .XXX
±.03 ±.010
DIMENSIONS IN [] ARE MILLIMETERS

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SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
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INSERT, GROMMET TYPE.
THRU-BOLT

SL102

SHEET 1 OF 3

INSERTS FOR METALLIC FACE SKIN PANEL



TABLE III

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS102D SLS102F	4 6 8 10 M3 M4 M5	03	103 [2.62]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	X	.085 [2.16]	.187 [4.75]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	04	165 [4.19]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.250 [6.35]
						1	.116 [2.95]	.281 [7.14]
						2	.147 [3.73]	.312 [7.92]
						3	.179 [4.55]	.343 [8.71]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	06	290 [7.37]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.375 [9.52]
						1	.116 [2.95]	.406 [10.31]
						2	.147 [3.73]	.437 [11.10]
						3	.179 [4.55]	.468 [11.89]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	08	415 [10.54]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.500 [12.70]
						1	.116 [2.95]	.531 [13.49]
						2	.147 [3.73]	.562 [14.27]
						3	.179 [4.55]	.593 [15.06]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	10	540 [13.72]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.625 [15.88]
						1	.116 [2.95]	.656 [16.66]
						2	.147 [3.73]	.687 [17.45]
						3	.179 [4.55]	.718 [18.24]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	12	665 [16.89]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.750 [19.05]
						1	.116 [2.95]	.781 [19.84]
						2	.147 [3.73]	.812 [20.62]
						3	.179 [4.55]	.843 [21.41]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	14	790 [20.07]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	.875 [22.22]
						1	.116 [2.95]	.906 [23.01]
						2	.147 [3.73]	.937 [23.80]
						3	.179 [4.55]	.968 [24.59]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	16	915 [23.24]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	1.000 [25.40]
						1	.116 [2.95]	1.031 [26.19]
						2	.147 [3.73]	1.062 [26.97]
						3	.179 [4.55]	1.093 [27.76]
SLS102D SLS102F	4 6 8 10 M3 M4 M5	18	1 040 [26.42]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	1.125 [28.57]
						1	.116 [2.95]	1.156 [29.36]
						2	.147 [3.73]	1.187 [30.15]
						3	.179 [4.55]	1.218 [30.94]

TABLE III CONT'D

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS102D SLS102F	4 6 8 10 M3 M4 M5	20	1.165 [29.59]	SLP102C SLP102D SLP102F	4 6 8 10 M3 M4 M5	0	.085 [2.16]	1.250 [31.75]
						1	.116 [2.95]	1.281 [32.54]
						2	.147 [3.73]	1.312 [33.32]
						3	.179 [4.55]	1.344 [34.14]

TABLE IV

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS102D SLS102F	25 M6	03	.067 [1.70]	SLP102C SLP102D SLP102F	25 M6	X	.120 [3.05]	.187 [4.75]
						0	.120 [3.05]	.250 [6.35]
						1	.151 [3.84]	.281 [7.14]
						2	.183 [4.65]	.312 [7.92]
SLS102D SLS102F	25 M6	04	.130 [3.30]	SLP102C SLP102D SLP102F	25 M6	3	.214 [5.44]	.343 [8.71]
						0	.120 [3.05]	.375 [9.52]
						1	.151 [3.84]	.406 [10.31]
						2	.183 [4.65]	.437 [11.10]
SLS102D SLS102F	25 M6	06	.255 [6.48]	SLP102C SLP102D SLP102F	25 M6	3	.214 [5.44]	.468 [11.89]
						0	.120 [3.05]	.500 [12.70]
						1	.151 [3.84]	.531 [13.49]
						2	.183 [4.65]	.562 [14.27]
SLS102D SLS102F	25 M6	08	.380 [9.65]	SLP102C SLP102D SLP102F	25 M6	3	.214 [5.44]	.593 [15.06]
						0	.120 [3.05]	.625 [15.88]
						1	.151 [3.84]	.656 [16.66]
						2	.183 [4.65]	.687 [17.45]
SLS102D SLS102F	25 M6	10	.505 [12.83]	SLP102C SLP102D SLP102F	25 M6	3	.214 [5.44]	.718 [18.24]
						0	.120 [3.05]	.750 [19.05]
						1	.151 [3.84]	.781 [19.84]
						2	.183 [4.65]	.812 [20.62]

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TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±.2° ±[0.8] ±[0.25]
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**INSERT, GROMMET TYPE.
THRU-BOLT**

SL102

SHEET **2** OF **3**

REVISION (L) 20 OCTOBER 1999

INSERTS FOR METALLIC FACE SKIN PANEL



TABLE IV CONT'D

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS102D SLS102F	25 M6	12	.630 [16.00]	SLP102C SLP102D SLP102F	25 M6	0	.120 [3.05]	.750 [19.05]
						1	.151 [3.84]	.781 [19.84]
						2	.183 [4.65]	.812 [20.62]
						3	.214 [5.44]	.843 [21.41]
SLS102D SLS102F	25 M6	14	.755 [19.18]	SLP102C SLP102D SLP102F	25 M6	0	.120 [3.05]	.875 [22.22]
						1	.151 [3.84]	.906 [23.01]
						2	.183 [4.65]	.937 [23.80]
						3	.214 [5.44]	.968 [24.59]
SLS102D SLS102F	25 M6	16	.880 [22.35]	SLP102C SLP102D SLP102F	25 M6	0	.120 [3.05]	1.000 [25.40]
						1	.151 [3.84]	1.031 [26.19]
						2	.183 [4.65]	1.062 [26.97]
						3	.214 [5.44]	1.093 [27.76]
SLS102D SLS102F	25 M6	18	1.005 [25.53]	SLP102C SLP102D SLP102F	25 M6	0	.120 [3.05]	1.125 [28.57]
						1	.151 [3.84]	1.156 [29.36]
						2	.183 [4.65]	1.187 [30.15]
						3	.214 [5.44]	1.218 [30.94]
SLS102D SLS102F	25 M6	20	1.130 [28.70]	SLP102C SLP102D SLP102F	25 M6	0	.120 [3.05]	1.250 [31.75]
						1	.151 [3.84]	1.281 [32.54]
						2	.183 [4.65]	1.312 [33.32]
						3	.214 [5.44]	1.344 [34.14]

TABLE V

SLEEVE				PLUG				PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS102D SLS102F	31 M8	06	.185 [4.70]	SLP102C SLP102D SLP102F	31 M8	0	.190 [4.83]	.375 [9.52]
						1	.221 [5.61]	.406 [10.31]
						2	.252 [6.40]	.437 [11.10]
						3	.283 [7.19]	.468 [11.89]
SLS102D SLS102F	31 37 M8 M10	08	.310 [7.87]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	.500 [12.70]
						1	.221 [5.61]	.531 [13.49]
						2	.252 [6.40]	.562 [14.27]
						3	.283 [7.19]	.593 [15.06]
SLS102D SLS102F	31 37 M8 M10	10	.435 [11.05]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	.625 [15.88]
						1	.221 [5.61]	.656 [16.66]
						2	.252 [6.40]	.687 [17.45]
						3	.283 [7.19]	.718 [18.24]
SLS102D SLS102F	31 37 M8 M10	12	.560 [14.22]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	.750 [19.05]
						1	.221 [5.61]	.781 [19.84]
						2	.252 [6.40]	.812 [20.62]
						3	.283 [7.19]	.843 [21.41]
SLS102D SLS102F	31 37 M8 M10	14	.685 [17.40]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	.875 [22.22]
						1	.221 [5.61]	.906 [23.01]
						2	.252 [6.40]	.937 [23.80]
						3	.283 [7.19]	.968 [24.59]
SLS102D SLS102F	31 37 M8 M10	16	.810 [20.57]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	1.000 [25.40]
						1	.221 [5.61]	1.031 [26.19]
						2	.252 [6.40]	1.062 [26.97]
						3	.283 [7.19]	1.093 [27.76]
SLS102D SLS102F	31 37 M8 M10	18	.935 [23.75]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	1.125 [28.57]
						1	.221 [5.61]	1.156 [29.36]
						2	.252 [6.40]	1.187 [30.15]
						3	.283 [7.19]	1.218 [30.94]
SLS102D SLS102F	31 37 M8 M10	20	1.060 [26.92]	SLP102C SLP102D SLP102F	31 37 M8 M10	0	.190 [4.83]	1.250 [31.75]
						1	.221 [5.61]	1.281 [32.54]
						2	.252 [6.40]	1.312 [33.32]
						3	.283 [7.19]	1.344 [34.14]

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DIMENSIONS IN [] ARE MILLIMETERS

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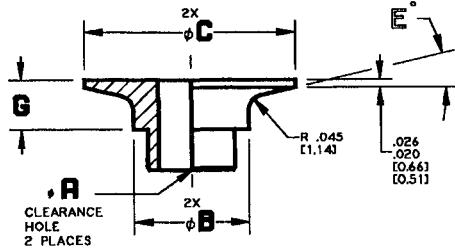
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**INSERT, GROMMET TYPE.
THRU-BOLT**

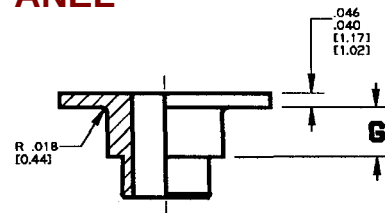
SL102

SHEET **3** OF **3**

INSERTS FOR METALLIC FACE SKIN PANEL

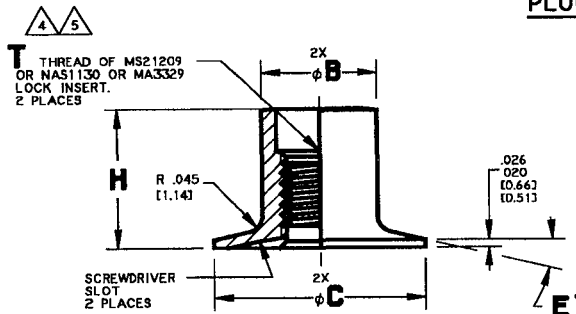


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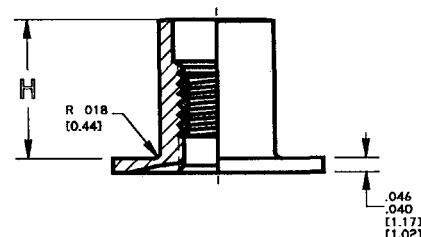


F

PLUG HEAD STYLES



D



F

SLEEVE HEAD STYLES

TABLE II

MATL. CODE	MATERIAL	STANDARD FINISH
0	AL. ALLOY 2024-T4 PER AMS-QQ-A-225/6	CHEM FILM PER MIL-C-5541, CLASS 1A
3	CRES 13-8Mo	PASSIVATE PER AMS-QQ-P-35
6	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
9	CARBON STEEL PER ASTM A108	CADMIUM PLATE PER QQ-P-416, TYPE II, CL 2

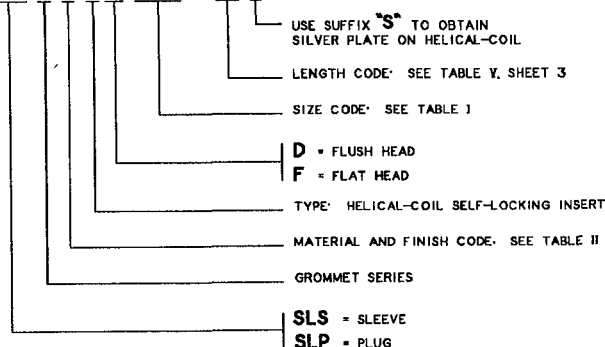
TABLE I

PLUG SIZE CODE	SLEEVE SIZE CODE	T THREAD	A +.002 -.003 +0.051 -0.081	B ±.002 ±0.051	C 500 [12.70]	E 13"
6	632	1380-32UNC-3B	.142 [3.61]	.309 [7.85]	500 [12.70]	13"
M3	M3	M3X0.5-4H6H	.168 [4.27]	.309 [7.85]	500 [12.70]	13"
8	832	1640-32UNC-3B	.194 [4.93]	.341 [8.66]	625 [15.88]	13"
M4	M4	M4X0.7-4H6H	.256 [6.50]	.403 [10.24]	750 [19.05]	14"
10	1032	1900-32UNF-3B	.318 [8.08]	.497 [12.62]	875 [22.22]	14"
M5	M5	M5X0.8-4H6H				
25	428	2500-28UNF-3B				
M6	M6	M6X1-4H5H				
31	524	3125-24UNF-3B				
M8	M8	M8X1.25-4H5H				

EXAMPLE OF PART CODING

SLEEVE = SLS 1 0 6 F 1032 - 08 S (INCH)
PLUG = SLP 1 0 6 D 10 - 1 (INCH)

SLEEVE = SLS 1 0 6 F M5 - 08 S (METRIC)
PLUG = SLP 1 0 6 D M5 - 1 (METRIC)



APPLICATION:

A MECHANICAL SPACER FOR USE IN PANELS WITH METAL FACE SKINS. INSTALLATION TO BE MADE FROM BOTH SIDES OF PANEL.

NOTES:

- ANY COMBINATION OF SLEEVE AND PLUG MAY BE USED.
- REFER TO TABLE V, SHEET 3 FOR SELECTION OF SLEEVE/PLUG COMBINATIONS FOR STANDARD PANEL CONFIGURATION.
- REFER TO SLD100 DATA SHEET FOR INSTALLATION PROCEDURE.
- LOCKING INSERT:
MS21209 OR NAS1130 = INCH SERIES
MA3329 = METRIC SERIES
INSTALL PER MS33537 (INCH)
MA1567 (METRIC)
- THREADED SLEEVE CAN BE USED WITH UN OR UNJ (INCH) OR M OR MJ (METRIC) EXTERNAL THREADS.
- TOLERANCES: .XXX ± .005 [0.13]
ANGLES: ± 1°

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**INSERT, GROMMET TYPE, SELF-LOCKING.
HELICAL-COIL, STANDARD PANEL**

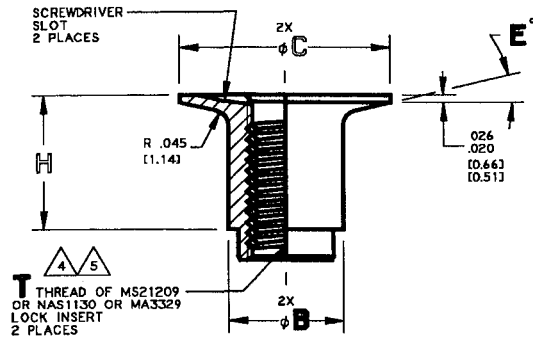
SL106

SHEET 1 OF 3

REVISION J 18 OCTOBER 1999

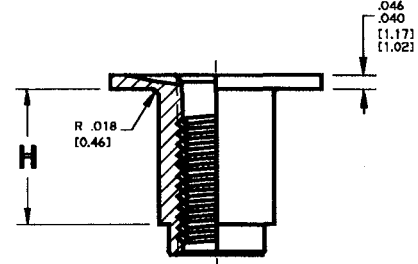


INSERTS FOR METALLIC FACE SKIN PANEL

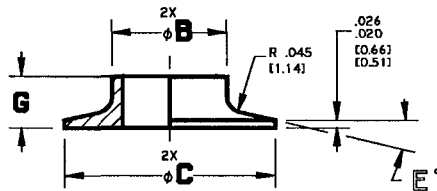


D

PLUG HEAD STYLES

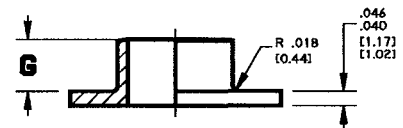


F



D

SLEEVE HEAD STYLES



F

TABLE IV

MATL CODE	MATERIAL	STANDARD FINISH
0	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	CHEM FILM PER MIL-C-5541, CLASS 1A
3	CRES 13-8M	PASSIVATE PER AMS-QQ-P-35
4	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
9	CARBON STEEL PER ASTM A108	CADMIUM PLATE PER QQ-P-416, TYPE II, CL 2

TABLE III

SLEEVE SIZE CODE	PLUG SIZE CODE	T THREAD	.B ±.002 ±.005	.C ±.002 ±.005	E
6	632	.1380-32UNC-3B	.309 (7.85)	.500 (12.70)	13"
M3	M3	M3X0.5-4H6H			
8	832	.1640-32UNC-3B	.309 (7.85)	.500 (12.70)	13"
M4	M4	M4X0.7-4H6H			
10	1032	.1900-32UNF-3B	.341 (8.66)	.625 (15.88)	13"
M5	M5	M5X0.8-4H6H			
25	428	.2500-28UNF-3B	.403 (10.24)	.750 (19.05)	14"
M6	M6	M6X1-4H5H			
31	524	.3125-24UNF-3B	.497 (12.62)	.875 (22.22)	14"
M8	M8	M8X1.25-4H5H			

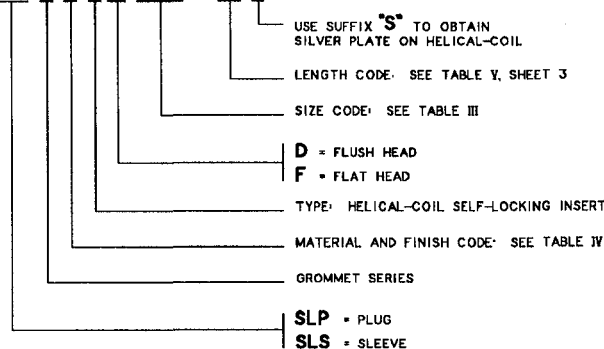
EXAMPLE OF PART CODING

PLUG = SLP 1 0 6 F 1032 - 08 S (INCH)

SLEEVE = SLS 1 0 6 D 10 - 1 (INCH)

PLUG = SLP 1 0 6 F M5 - 08 S (METRIC)

SLEEVE = SLS 1 0 6 D M5 - 1 (METRIC)



APPLICATION:

A MECHANICAL SPACER FOR USE IN PANELS
WITH METAL FACE SKINS. INSTALLATION TO
BE MADE FROM BOTH SIDES OF PANEL.

NOTES:

- ANY COMBINATION OF SLEEVE AND PLUG MAY BE USED.
- REFER TO TABLE VI, SHEET 3, FOR SELECTION OF PLUG/SLEEVE COMBINATIONS FOR THIN PANEL CONFIGURATION.
- REFER TO SLD100 DATA SHEET FOR INSTALLATION PROCEDURE.
- LOCKING INSERT:
MS21209 OR NAS1130 = INCH SERIES
MA3329 = METRIC SERIES
INSTALL PER MS33537 (INCH)
MA1567 (METRIC)
- THREADED PLUG CAN BE USED WITH UN OR UNJ (INCH) OR M OR MJ (METRIC) EXTERNAL THREADS.
- TOLERANCES: XXX ± .005 [0.13]
ANGLES: ± 1°

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, GROMMET TYPE, SELF-LOCKING,
HELICAL-COIL, THIN PANEL**

SL106

SHEET 2 OF 3

INSERTS FOR METALLIC FACE SKIN PANEL



TABLE V SLEEVE/PLUG COMBINATIONS FOR STANDARD PANEL

SLEEVE				PLUG				STANDARD PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS106D SLS106F	632 832 1032 M3 M4 M5	08	.415 [10.54]	SLP106D SLP106F	6 8 10 M3 M4 M5	0	.085 [2.16]	.500 [12.70]
						1	.116 [2.95]	.531 [13.49]
						2	.147 [3.73]	.562 [14.27]
						3	.179 [4.55]	.593 [15.06]
SLS106D SLS106F	632 832 1032 428 M3 M4 M5 M6	10	.540 [13.72]	SLP106D SLP106F	6 8 10 25 M3 M4 M5 M6	0	.085 [2.16]	.625 [15.88]
						1	.116 [2.95]	.656 [16.66]
						2	.147 [3.73]	.687 [17.45]
						3	.179 [4.55]	.718 [18.24]
SLS106D SLS106F	632 832 1032 428 M3 M4 M5 M6	12	.665 [16.89]	SLP106D SLP106F	6 8 10 25 M3 M4 M5 M6	0	.085 [2.16]	.750 [19.05]
						1	.116 [2.95]	.781 [19.84]
						2	.147 [3.73]	.812 [20.62]
						3	.179 [4.55]	.843 [21.41]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	14	.790 [20.07]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	.875 [22.22]
						1	.116 [2.95]	.906 [23.01]
						2	.147 [3.73]	.937 [23.80]
						3	.179 [4.55]	.968 [24.59]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	16	.915 [23.24]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.000 [25.40]
						1	.116 [2.95]	1.031 [26.19]
						2	.147 [3.73]	1.062 [26.97]
						3	.179 [4.55]	1.093 [27.76]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	18	1.040 [26.42]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.125 [28.57]
						1	.116 [2.95]	1.156 [29.36]
						2	.147 [3.73]	1.187 [30.15]
						3	.179 [4.55]	1.218 [30.94]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	20	1.165 [29.59]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.250 [31.75]
						1	.116 [2.95]	1.281 [32.54]
						2	.147 [3.73]	1.312 [33.32]
						3	.179 [4.55]	1.343 [34.11]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	22	1.290 [32.77]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.375 [34.92]
						1	.116 [2.95]	1.406 [35.71]
						2	.147 [3.73]	1.437 [36.50]
						3	.179 [4.55]	1.469 [37.31]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	24	1.415 [35.94]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.500 [38.10]
						1	.116 [2.95]	1.531 [38.89]
						2	.147 [3.73]	1.562 [39.67]
						3	.179 [4.55]	1.594 [40.49]

TABLE V CONTD

SLEEVE				PLUG				STANDARD PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	26	1.540 [39.12]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.625 [41.27]
						1	.116 [2.95]	1.656 [42.06]
						2	.147 [3.73]	1.687 [42.85]
						3	.179 [4.55]	1.719 [43.66]
SLS106D SLS106F	632 832 1032 428 524 M3 M4 M5 M6 M8	28	1.665 [42.29]	SLP106D SLP106F	6 8 10 25 31 M3 M4 M5 M6 M8	0	.085 [2.16]	1.750 [44.45]
						1	.116 [2.95]	1.781 [45.24]
						2	.147 [3.73]	1.812 [46.02]
						3	.179 [4.55]	1.844 [46.84]

TABLE VI PLUG/SLEEVE COMBINATIONS FOR THIN PANEL

PLUG				SLEEVE				STANDARD PANEL THICKNESS
TYPE & HEAD	SIZE CODE	LENGTH CODE	H	TYPE & HEAD	SIZE CODE	LENGTH CODE	G	
SLP106D SLP106F	632 832 1032 M3 M4 M5	04	.151 [3.84]	SLS106D SLS106F	6 8 10 M3 M4 M5	0	.094 [2.39]	.250 [6.35]
						1	.125 [3.17]	.281 [7.14]
						2	.156 [3.96]	.312 [7.92]
						3	.187 [4.75]	.343 [8.71]
SLP106D SLP106F	632 832 1032 428 M3 M4 M5 M6	06	.281 [7.14]	SLS106D SLS106F	6 8 10 25 M3 M4 M5 M6	0	.094 [2.39]	.375 [9.53]
						1	.125 [3.17]	.406 [10.31]
						2	.156 [3.96]	.437 [11.10]
						3	.187 [4.75]	.468 [11.89]
SLP106D SLP106F	428 524 M6 M8	08	.401 [10.19]	SLS106D SLS106F	25 31 M6 M8	0	.094 [2.39]	.500 [12.70]
						1	.125 [3.17]	.531 [13.49]
						2	.156 [3.96]	.562 [14.27]
						3	.187 [4.75]	.593 [15.06]
SLP106D SLP106F	524 M8	10	.526 [13.36]	SLS106D SLS106F	31 M8	0	.094 [2.39]	.625 [15.88]
						1	.125 [3.17]	.656 [16.66]
						2	.156 [3.96]	.687 [17.45]
						3	.187 [4.75]	.718 [18.24]
SLP106D SLP106F	524 M8	12	.651 [16.54]	SLS106D SLS106F	31 M8	0	.094 [2.39]	.750 [19.05]
						1	.125 [3.17]	.781 [19.84]
						2	.156 [3.96]	.812 [20.62]
						3	.187 [4.75]	.843 [21.41]

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
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FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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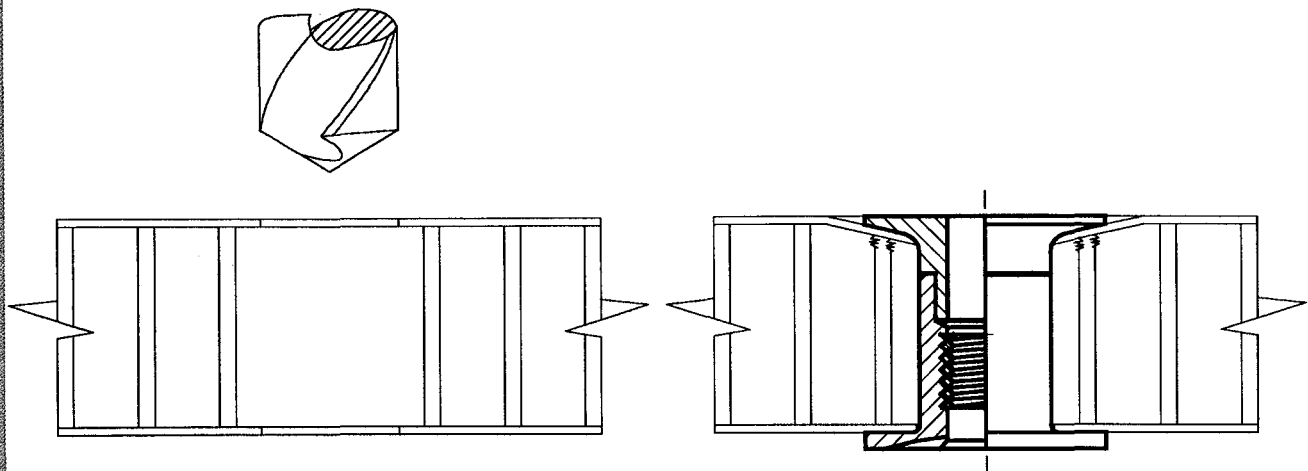
**INSERT, GROMMET TYPE, SELF-LOCKING,
HELICAL-COIL, SELECTION TABLES**

SL106

SHEET **3** OF **3**

REVISION (J) 18 OCTOBER 1999

INSERTS FOR METALLIC FACE SKINS

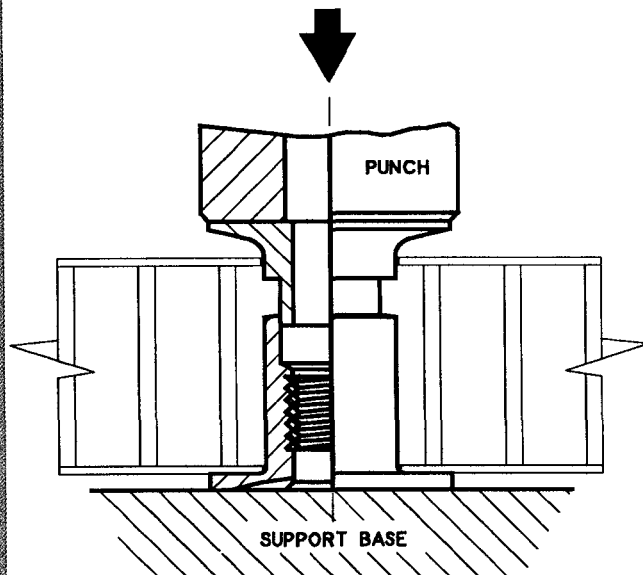


1. PANEL PREPARATION

THE SHUR-LOK SL100 SERIES REQUIRES ONLY A SINGLE DIAMETER HOLE DRILLED THROUGH THE ENTIRE PANEL. THE DIAMETER OF THIS HOLE IS COMPARABLE TO THE BODY DIAMETER OF THE FASTENER. INFORMATION REGARDING RECOMMENDED DRILL SIZES MAY BE FOUND IN TABLE I FOR IDENTIFICATION OF TYPES AND SIZES REFER TO EACH SL100 SERIES DRAWING. EXCESSIVE BURRS SHOULD BE REMOVED FOR SATISFACTORY INSTALLATION RESULTS.

3. COMPLETED INSTALLATION

PERMANENTLY INSTALLED AT SUB-ASSEMBLY, THE SL100 SERIES FASTENERS ARE SELF-RETAINED THROUGH A TELESCOPIC PRESS FIT, A FUNCTION OF THE SLEEVE AND PLUG SECTIONS. THE USE OF THREADED OR THREADED SELF-LOCKING TYPE SL100 SERIES FASTENERS PERMIT THE ATTACHMENT OF COMPONENTS WITHOUT THE USE OF ADDITIONAL LOCKNUTS. WHEN EXTREMELY HEAVY SHEETS ARE EMPLOYED, THE SPRING BACK MAY FORCE THE HEAD OF THE FASTENER SLIGHTLY ABOVE A FLUSH CONDITION. HOWEVER, WHEN THE COMPONENT IS BOLTED DOWN TO THE PANEL, THE FASTENER WILL AGAIN BECOME FLUSH WITH THE COVER SHEET SURFACE.



2. FASTENER INSTALLATION

THERE ARE SEVERAL METHODS OF APPLYING THE NECESSARY PRESSURE TO COMPLETE THE INSTALLATION. THE MOST COMMON IS SHOWN ABOVE. CONSULT SHUR-LOK TECHNICAL SERVICES DEPARTMENT FOR VARIOUS RECOMMENDED TOOLS TO ASSURE GOOD ALIGNMENT, AS WELL AS DIRECTING THE PRESSURE TO THE HEAD OF THE FASTENER ONLY. ALIGNMENT TOOLS CAN BE MANUFACTURED TO SUIT INSTALLATION EQUIPMENT.

TABLE I

TYPES AND SIZES			INSTALLATION DRILL DIA
SL101	SL102	SL106	
	4		.228 [5.79]
12	6		.290 [7.37]
15	8		.290 [7.37]
18	10	632	.323 [8.20]
		832	.323 [8.20]
		1032	.358 [9.09]
25	25		.390 [9.91]
28		428	.421 [10.69]
31	31		.484 [12.29]
		524	.515 [13.08]
37	37		.640 [16.26]

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX [X.X] [X.XX]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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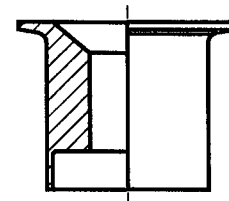
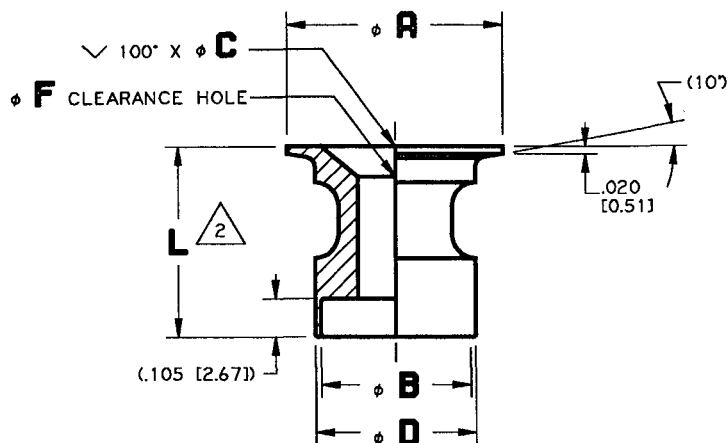
**INSTALLATION TOOLS
AND PROCEDURE**

SLD100 DATA

SHEET 1 OF 1

REVISION (H) 14 OCTOBER 1999

INSERTS FOR METALLIC FACE SKINS



ALTERNATE CONFIGURATION
AS GOVERNED BY SHORTER
SPACER LENGTHS

TABLE I

SIZE CODE	φ A	φ B ±.003 [0.08]	φ C	φ D MAX	φ F +.004 [0.10] -.001 [0.03]	INSTALLATION HOLE SIZE
06	.562 [14.27]	.389 [9.88]	.280 [7.11]	.421 [10.69]	.140 [3.56]	.421 - .425 [10.69] - [10.80]
08	.562 [14.27]	.389 [9.88]	.332 [8.43]	.421 [10.69]	.169 [4.29]	.421 - .425 [10.69] - [10.80]
3	.562 [14.27]	.389 [9.88]	.385 [9.78]	.421 [10.69]	.192 [4.88]	.421 - .425 [10.69] - [10.80]
4	.750 [19.05]	.484 [12.29]	.507 [12.88]	.531 [13.49]	.257 [6.53]	.531 - .535 [13.49] - [13.59]

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 6061-T6 PER AMS-QQ-A-225/8	ANODIZE PER MIL-A-8625, TYPE I, CLASS 1
C	CRES 17-4PH PER AMS 5643	PASSIVATE PER AMS-QQ-P-35

EXAMPLE OF PART CODING

SL5069 A 3 P 400

- PANEL THICKNESS (IN THOUSANDTHS OF INCH)
- P INDICATES PRIMER PER BMS10-11H,
TYPE I, OVER ANODIZE
(ALUMINUM PARTS ONLY)
- INDICATES FINISH AS SHOWN IN TABLE II
- SIZE CODE (SEE TABLE I)
- MATERIAL CODE (SEE TABLE II)
- BASIC PART NUMBER

NOTES:

- REFER TO SLD5069 DATA SHEET
FOR INSTALLATION PROCEDURE.
-  L DIMENSION IS PANEL
THICKNESS PLUS .070 [1.78].

APPLICATION:

CLEARANCE HOLE MECHANICAL FASTENER
FOR USE IN PANELS WITH METAL FACE SKINS.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

**SPACER,
FLOOR PANEL**

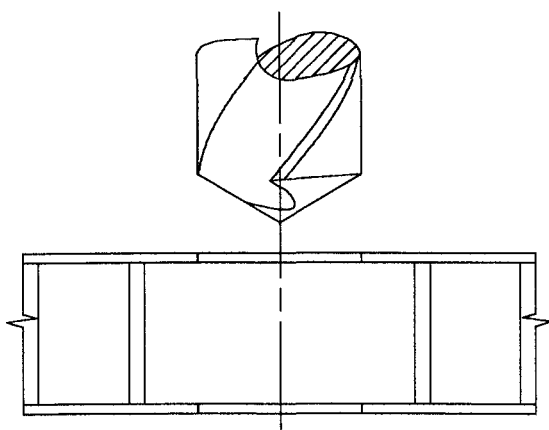
SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

SL5069

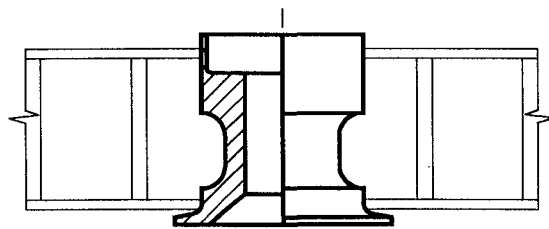
SHEET 1 OF 1

REVISION F 12 OCTOBER 1999

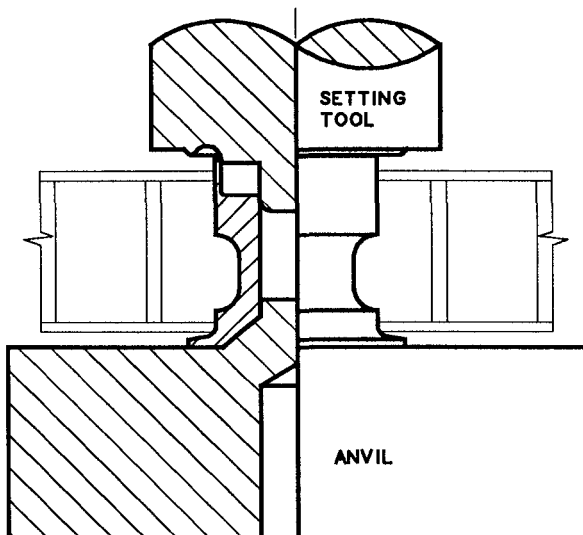
INSERTS FOR METALLIC FACE SKINS



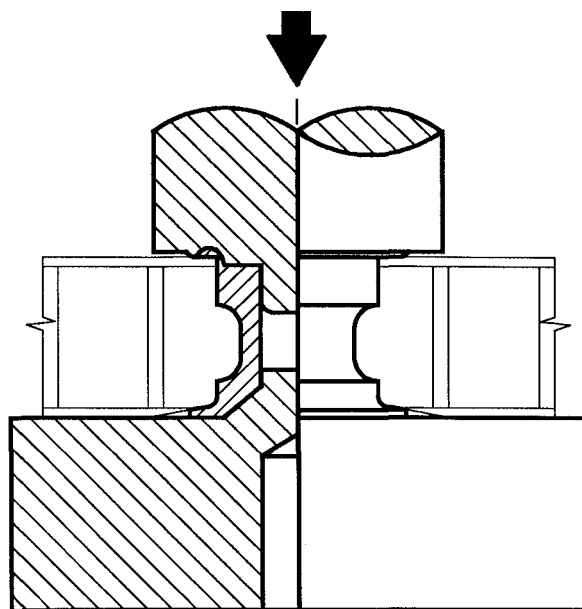
1. DRILL INSTALLATION HOLES USING DRILL PRESS OR HAND TOOLS. REFER TO INDIVIDUAL SERIES FOR PROPER HOLE SIZES.



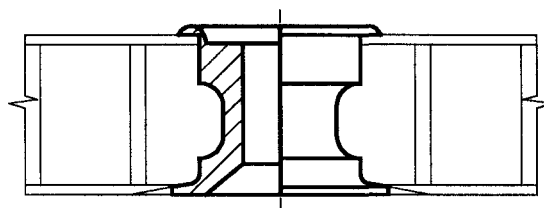
2. POSITION SPACER IN SANDWICH PANEL AS SHOWN USING HAND PRESSURE.



3. POSITION ANVIL AND SETTING TOOL AS SHOWN.



4. APPLIED PRESSURE IN DIRECTION OF ARROW WILL ROLL OVER SPACER LIP. CONTINUE PRESSURE UNTIL TOOL FACE IS FLUSH WITH FACE SKIN. THIS ALLOWS FOR SPRING BACK.



5. COMPLETED INSTALLATION.

INSTALLATION TOOLS

SIZE CODE	INSTALLATION HOLE SIZE	ANVIL PART NO.	SETTING TOOL PART NO.
-06	.421 - .425 [10.69] - [10.79]	SLT5069-06A	SLT5069-06P
-08	.421 - .425 [10.69] - [10.79]	SLT5069-08A	SLT5069-08P
-3	.421 - .425 [10.69] - [10.79]	SLT5069-3A	SLT5069-3P
-4	.531 - .535 [13.49] - [13.59]	SLT5069-4A	SLT5069-4P

UNLESS OTHERWISE SPECIFIED,
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES
 .XX .XXX ANGLES [X.X] [X.X X]
 ±.03 ±.010 ±2° ±[0.8] ±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
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SHUR-LOK

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INSTALLATION PROCEDURE, SL5069 SPACER

SLD5000 DATA

SHEET 1 OF 1

REVISION A 14 OCTOBER 1999



ADJUSTABLE SPACERS FOR ALL TYPE PANELS

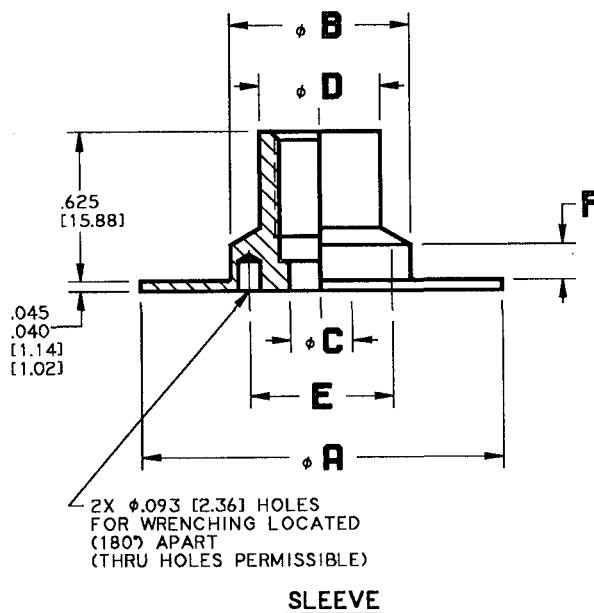
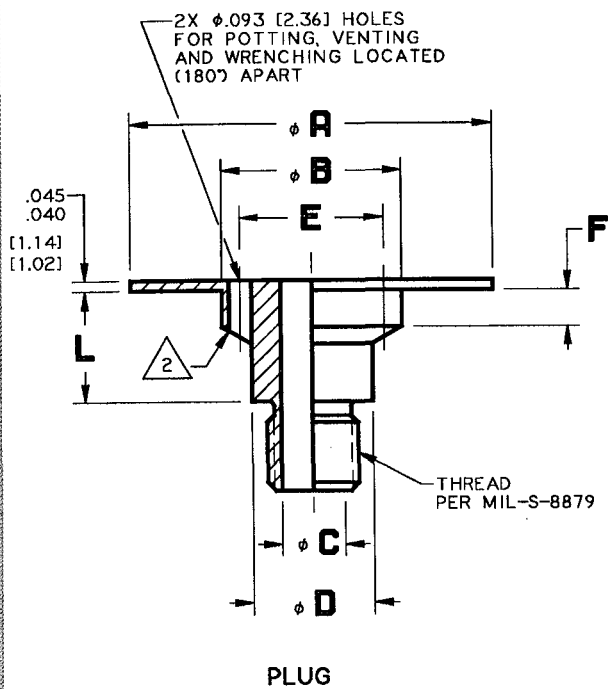


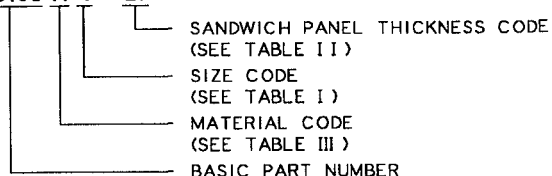
TABLE I

SIZE CODE	ϕ A	ϕ B MAX	ϕ C	ϕ D	E	F	INSTALLATION HOLE SIZE
4	1.500 [38.10]	.748 [19.00]	.257 [6.53]	.500 [12.70]	.593 [15.06]	.150 [3.81]	.749 - .755 [19.02] - [19.18]
5	1.450 [36.83]	.810 [20.57]	.316 [8.03]	.562 [14.27]	.656 [16.66]	.240 [6.10]	.811 - .817 [20.60] - [20.75]
6	1.500 [38.10]	.873 [22.17]	.377 [9.58]	.625 [15.88]	.718 [18.24]	.240 [6.10]	.874 - .890 [22.20] - [22.61]
8	1.500 [38.10]	.998 [25.35]	.515 [13.08]	.750 [19.05]	.843 [21.41]	.240 [6.10]	.995 - 1.005 [25.27] - [25.53]

EXAMPLE OF PART CODING

SLEEVE = SLS5163 A 4

PLUG = SLP5163 A 4 - 27



NOTES

- REFER TO SLD5160 DATA SHEET FOR INSTALLATION PROCEDURE.
- BURRS PERMISSIBLE UNDER POTTING HOLES AS LONG AS HOLES ARE NOT RESTRICTED.

APPLICATION:

A PLUG AND SLEEVE WITH BOLT CLEARANCE HOLE AND EXTERNAL THREADS ON PLUG FOR ADJUSTMENT TO PANEL THICKNESS VARIATION.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**ADJUSTABLE SLEEVE AND PLUG,
CLEARANCE HOLE**

SL5163

SHEET 1 OF 2

REVISION (F) 09 OCTOBER 1999



ADJUSTABLE SPACERS FOR ALL TYPE PANELS

TABLE II

SANDWICH PANEL THICKNESS CODE	SANDWICH PANEL THICKNESS RANGE	L
16	.970 - 1.029 [24.64] - [26.14]	.345 [8.76]
17	1.030 - 1.089 [26.16] - [27.66]	.405 [10.29]
18	1.090 - 1.149 [27.69] - [29.18]	.465 [11.81]
19	1.150 - 1.209 [29.21] - [30.71]	.525 [13.34]
20	1.210 - 1.269 [30.73] - [32.23]	.585 [14.86]
21	1.270 - 1.329 [32.26] - [33.76]	.645 [16.38]
22	1.330 - 1.389 [33.78] - [35.28]	.705 [17.91]
23	1.390 - 1.449 [35.31] - [36.80]	.765 [19.43]
24	1.450 - 1.509 [36.83] - [38.33]	.825 [20.96]
25	1.510 - 1.569 [38.35] - [39.85]	.885 [22.48]
26	1.570 - 1.629 [39.88] - [41.38]	.945 [24.00]
27	1.630 - 1.689 [41.40] - [42.90]	1.005 [25.53]

SANDWICH PANEL THICKNESS CODE	SANDWICH PANEL THICKNESS RANGE	L
28	1.690 - 1.749 [42.93] - [44.42]	1.065 [27.05]
29	1.750 - 1.809 [44.45] - [45.95]	1.125 [28.58]
30	1.810 - 1.869 [45.97] - [47.47]	1.185 [30.10]
31	1.870 - 1.929 [47.50] - [49.00]	1.245 [31.62]
32	1.930 - 1.989 [49.02] - [50.52]	1.305 [33.15]
33	1.990 - 2.049 [50.55] - [52.04]	1.365 [34.67]
34	2.050 - 2.109 [52.07] - [53.57]	1.425 [36.20]
35	2.110 - 2.169 [53.59] - [55.09]	1.485 [37.72]
36	2.170 - 2.229 [55.12] - [56.62]	1.545 [39.24]
37	2.230 - 2.289 [56.64] - [58.14]	1.605 [40.77]
38	2.290 - 2.349 [58.17] - [59.66]	1.665 [42.29]

TABLE III

MATL CODE	MATERIAL	FINISH
A	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I CLASS OPTIONAL

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

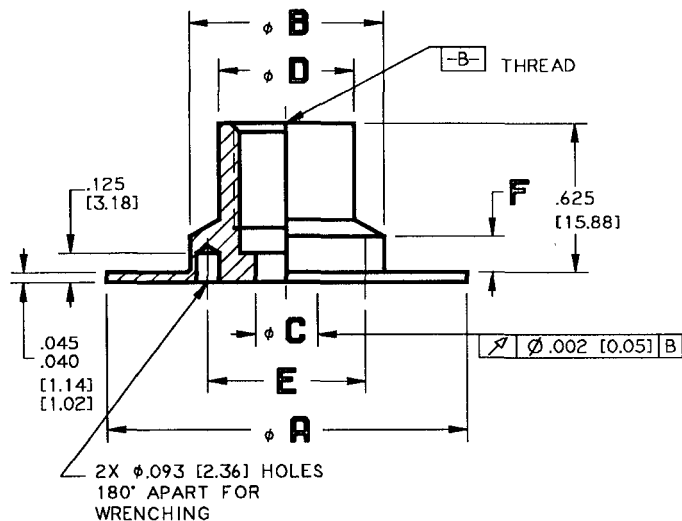
SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 57-32.07.11

**ADJUSTABLE SLEEVE AND PLUG,
CLEARANCE HOLE**

SL5163

SHEET **2** OF **2**

REVISION F 09 OCTOBER 1999



SIZE CODE	T THREAD 	φ A	φ B MAX	φ C	φ D	E	F	INSTALLATION HOLE SIZE
4	.2500-28UNF-3B	1.500 [38.10]	.810 [20.57]	.257 [6.53]	.562 [14.27]	.656 [16.66]	.150 [3.81]	.811 - .817 [20.60] - [20.75]
M6	M6X1 4H5H							
6	.3750-24UNF-3B	1.500 [38.10]	.935 [23.75]	.377 [9.58]	.687 [17.45]	.781 [19.84]	.240 [6.10]	.936 - .942 [23.77] - [23.93]
M10	M10X1.25 4H5H							
8	.5000-20UNF-3B	1.625 [41.28]	1.060 [26.92]	.515 [13.08]	.812 [20.62]	.906 [23.01]	.240 [6.10]	1.061 - 1.067 [26.95] - [27.10]
M12	M12X1.25 4H5H							

Diagram illustrating the structure of a 10-digit part number, with leader lines pointing to each digit's meaning:

- Digit 1: SANDWICH PANEL THICKNESS CODE FOR PLUG ONLY (SEE TABLE II)
- Digit 2: SIZE CODE (SEE TABLE I)
- Digit 3: MATERIAL CODE (SEE TABLE III)
- Digit 4: BASIC PART NO.

1. MINIMUM FULL THREAD WHERE LENGTH PERMITS SHALL BE TWO DIAMETERS OF THREAD.
2. REFER TO SLD5160 DATA SHEET FOR INSTALLATION PROCEDURE.
3. BURRS PERMISSIBLE UNDER POTTING HOLES AS LONG AS HOLES ARE NOT RESTRICTED.
4. LOCKING INSERT:
MS21209 OR NAS1130 = INCH SERIES
MA3329 = METRIC SERIES
INSTALL PER: MS33537 (INCH)
MA1567 (METRIC)

REVISION (D) 09 OCTOBER 1999

SHEET **1** OF **2**



ADJUSTABLE SPACERS FOR ALL TYPE PANELS

TABLE II

SANDWICH PANEL THICKNESS CODE	SANDWICH PANEL THICKNESS RANGE	L
16	.970 - 1.029 [24.64] - [26.14]	.345 [8.76]
17	1.030 - 1.089 [26.16] - [27.66]	.405 [10.29]
18	1.090 - 1.149 [27.69] - [29.18]	.465 [11.81]
19	1.150 - 1.209 [29.21] - [30.71]	.525 [13.34]
20	1.210 - 1.269 [30.73] - [32.23]	.585 [14.86]
21	1.270 - 1.329 [32.26] - [33.76]	.645 [16.38]
22	1.330 - 1.389 [33.78] - [35.28]	.705 [17.91]
23	1.390 - 1.449 [35.31] - [36.80]	.765 [19.43]
24	1.450 - 1.509 [36.83] - [38.33]	.825 [20.96]
25	1.510 - 1.569 [38.35] - [39.85]	.885 [22.48]
26	1.570 - 1.629 [39.88] - [41.38]	.945 [24.00]
27	1.630 - 1.689 [41.40] - [42.90]	1.005 [25.53]
28	1.690 - 1.749 [42.93] - [44.42]	1.065 [27.05]
29	1.750 - 1.809 [44.45] - [45.95]	1.125 [28.57]

TABLE III

MATL CODE	MATERIAL	FINISH
A	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625
C	CRES 303 PER ASTM-A-582	PASSIVATE PER AMS-QQ-P-35
S	CARBON STEEL PER ASTM A108	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 97-32.07.11

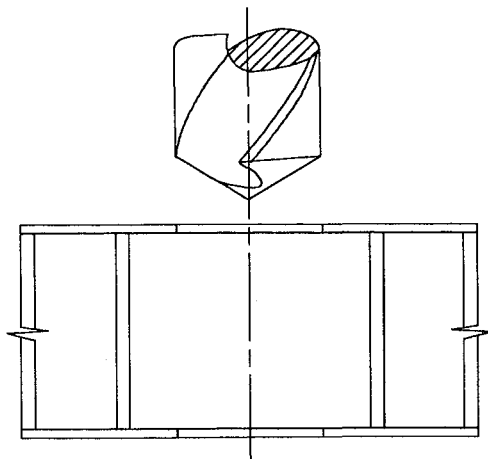
**ADJUSTABLE SLEEVE AND PLUG,
THREADED**

SL5169

SHEET **2** OF **2**

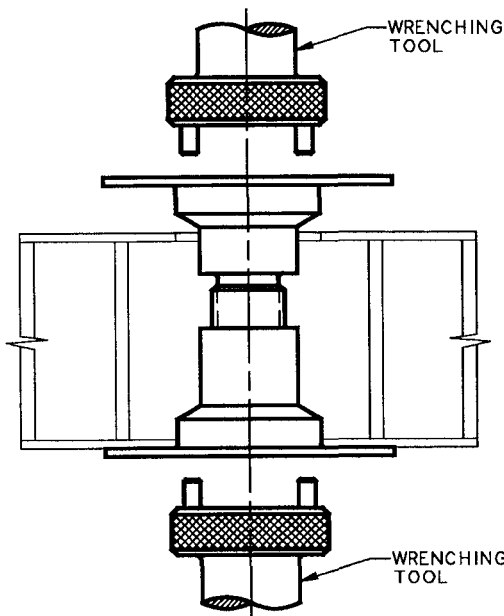
REVISION D 09 OCTOBER 1999

ADJUSTABLE SPACERS FOR ALL TYPE PANELS



1. PANEL PREPARATION

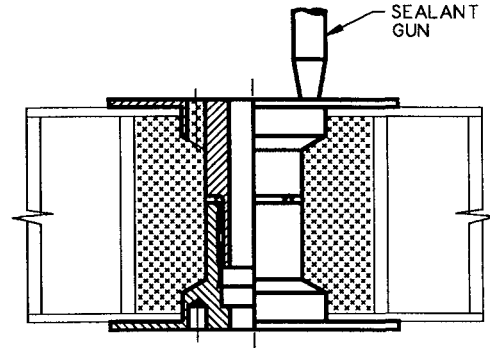
DRILL INSTALLATION HOLE THROUGH BOTH FACE SKINS. REFER TO TABLE I ON INDIVIDUAL SERIES CATALOG PAGE FOR PROPER INSTALLATION HOLE SIZES



2. FASTENER INSTALLATION

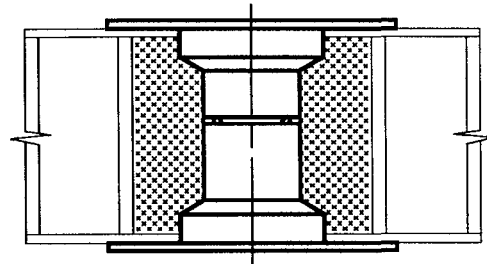
WRENCH PLUG AND SLEEVE TOGETHER USING WRENCHING TOOL UNTIL BOTH FLANGES ARE SNUG AGAINST FACE SKINS.

TOOL INFORMATION IS FOR REFERENCE ONLY.
TOOL DIMENSIONS ARE PROVIDED TO FACILITATE
MANUFACTURE OF REQUIRED TOOLS.

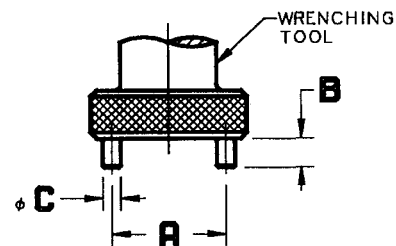


3. FASTENER POTTING

INJECT EPOXY INTO POTTING HOLE WITH A SEALANT GUN. WHEN THE CAVITY IS FILLED, EPOXY WILL APPEAR IN VENTING HOLE.



4. COMPLETED INSTALLATION OF ADJUSTABLE PLUG AND SLEEVE



SLEEVE/PLUG PART NUMBER	A	B	φ C
SL55163A4 SLP5163A4()	.593 [15.06]	.150 [3.81]	.092 [2.34]
SL55163A5 SLP5163A5() SL55169A4 SLP5169A4()	.656 [16.66]	.250 [6.35]	.092 [2.34]
SL55163A6 SLP5163A6() SL55169A5 SLP5169A5()	.718 [18.24]	.250 [6.35]	.092 [2.34]
SL55163A8 SLP5163A8()	.843 [21.41]	.250 [6.35]	.092 [2.34]
SL55169A8 SLP5169A8()	.906 [23.01]	.250 [6.35]	.092 [2.34]

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
.XX .XXX ANGLES (X.X) (X.X X)
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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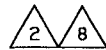
INSTALLATION PROCEDURE, SL5163 AND SL5169 ADJUSTABLE SLEEVE AND PLUG

SLD5100 DATA

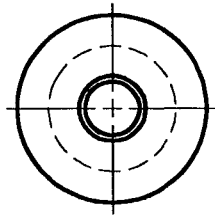
SHEET 1 OF 1

REVISION (F) 08 JULY 1999

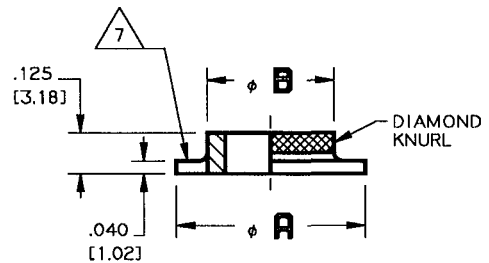
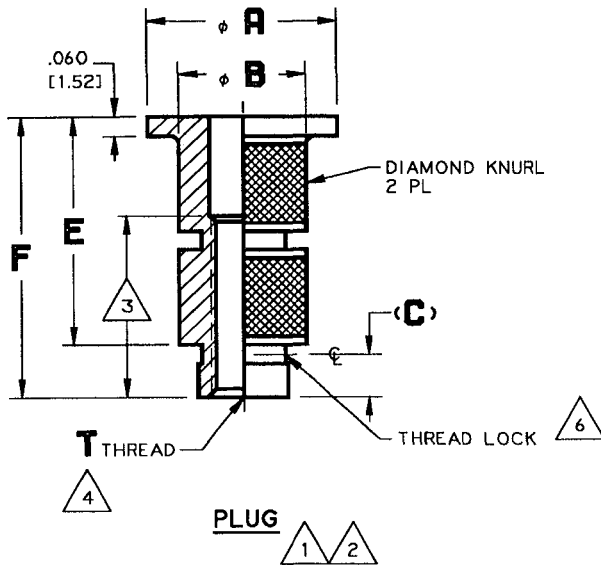
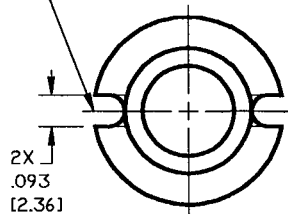
ADJUSTABLE SPACERS FOR ALL TYPE PANELS



SHUR - TAB



2X RADIUS OR SQUARE SLOTS
FOR POTTING AND VENTING
LOCATED 180° APART



SLEEVE



NOTES-

- 1 PLUG AND SLEEVE WHEN ASSEMBLED WILL HAVE A SLIP FIT.
- 2 A SHUR-TAB MASK SUPPORT IS FURNISHED WITH EACH SLEEVE AND PLUG. IT IS NOT SOLD AS A COMPONENT.
- 3 MINIMUM FULL THREAD SHALL BE TWO DIAMETERS WHERE LENGTH PERMITS.
- 4 INCH THREAD PER MIL-S-8879
METRIC THREAD PER ISO5855 OR
FED-STD-H28/21.
- 5 REFER TO SLD6200 DATA SHEET FOR
INSTALLATION PROCEDURE.
- 6 LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NA00009
SELF LOCKING CORROSION RESISTANT
STEEL INSERT WITHOUT PLATING OR
LUBRICANT SHALL BE TESTED WITH
SILVER PLATED BOLT OR SCREW.
- 7 BURRS PERMISSIBLE UNDER POTTING
SLOTS AS LONG AS SLOTS ARE NOT
RESTRICTED.
- 8 REFER TO TABLE I FOR SHUR TAB AND
GUIDE TOOL.

EXAMPLE OF PART CODING

SLEEVE = SLS6277 C 3 (INCH)
SLS6277 C - M5 (METRIC)
PLUG = SLP6277 C 3 - 12 S (INCH)
SLP6277 C - M5 - 12 S (METRIC)

SPECIAL FINISH (SEE TABLE III)
LENGTH CODE (SEE TABLE IV)
"T" INDICATES THREAD LOCK
"N" INDICATES NO THREAD LOCK
SIZE CODE (SEE TABLE I)
MATERIAL CODE (SEE TABLE II)
BASIC PART NUMBER

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]

TOLERANCES ALL SURFACES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
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SHUR-LOK

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**ADJUSTABLE SLEEVE AND PLUG,
THREADED**

SL6277

SHEET 1 OF 3

REVISION (B) 14 OCTOBER 1999

ADJUSTABLE SPACERS FOR ALL TYPE PANELS



TABLE I

SIZE CODE	T THREAD 	φ A +.000 -.010 +[0.00] -[0.25]	φ B	C REF	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
06	.1380-32 UNJC-3B	.560	.375	.13	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M3	MJ3X0.5 4H6H	[14.22]	[9.52]	[3.3]	[14.25] - [14.38]		
08	.1640-32 UNJC-3B	.560	.375	.13	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M4	MJ4X0.7 4H6H	[14.22]	[9.52]	[3.3]	[14.25] - [14.38]		
3	.1900-32 UNJF-3B	.560	.375	.13	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M5	MJ5X0.8 4H6H	[14.22]	[9.52]	[3.3]	[14.25] - [14.38]		
4	.2500-28 UNJF-3B	.685	.500	.12	.686 - .691	SLT600T9 OR SLT600T9P	SLT600G9
M6	MJ6X1 4H5H	[17.40]	[12.70]	[3.0]	[17.42] - [17.55]		
5	.3125-24 UNJF-3B	.685	.500	.11	.686 - .691	SLT600T9 OR SLT600T9P	SLT600G9
M8	MJ8X1 4H5H	[17.40]	[12.70]	[2.8]	[17.42] - [17.55]		
6	.3750-24 UNJF-3B	.841	.562	.11	.842 - .847	SLT600T11 OR SLT600T11P	SLT600G11
M10	MJ10X1.25 4H5H	[21.36]	[14.27]	[2.8]	[21.39] - [21.51]		

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625
C	CRES 303 PER ASTM-A-581 OR ASTM-A-582	PASSIVATE PER AMS-QQ-P-35
-	CARBON STEEL PER ASTM-A-108	CAD PLATE PER QQ-P-416
T	TITANIUM AL6-4V PER MIL-T-9047	NONE

TABLE III

FINISH CODE	SPECIAL FINISH
M	DRY-FILM LUBE PER AS5272, TYPE I, IN THREAD AREA ONLY
C	CAD PLATE PER QQ-P-416, TYPE II, CL.2, ON CRES SLEEVE
S	SILVER PLATE PER AMS 2410

UNLESS OTHERWISE SPECIFIED
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PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES

TOLERANCES
 .XX .XXX ANGLES [X.X] [X.X X]
 ±.03 ±.010 ±2° ±[0.8] ±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**ADJUSTABLE SLEEVE AND PLUG,
THREADED**

SL6277

SHEET **2** OF **3**

REVISION B 14 OCTOBER 1999

ADJUSTABLE SPACERS FOR ALL TYPE PANELS



TABLE IV

LENGTH CODE	NOMINAL SANDWICH PANEL THICKNESS	SANDWICH PANEL THICKNESS RANGE	E	F	LENGTH CODE	NOMINAL SANDWICH PANEL THICKNESS	SANDWICH PANEL THICKNESS RANGE	E	F
04	_____	_____	_____	_____	21	1.312 [33.32]	1.343 - 1.281 [34.11] - [32.54]	1.125 [28.58]	1.281 [32.54]
05	_____	_____	_____	_____	22	1.375 [34.92]	1.406 - 1.343 [35.71] - [34.11]	1.187 [30.15]	1.343 [34.11]
06	.375 [9.52]	.406 - .343 [10.31] - [8.71]	.187 [4.75]	.343 [8.71]	23	1.437 [36.50]	1.468 - 1.406 [37.29] - [35.71]	1.250 [31.75]	1.406 [35.71]
07	.437 [11.10]	.468 - .406 [11.89] - [10.31]	.250 [6.35]	.406 [10.31]	24	1.500 [38.10]	1.531 - 1.468 [38.89] - [37.29]	1.312 [33.32]	1.468 [37.29]
08	.500 [12.70]	.531 - .468 [13.49] - [11.89]	.312 [7.92]	.468 [11.89]	25	1.562 [39.67]	1.593 - 1.531 [40.46] [38.89]	1.375 [34.92]	1.531 [38.89]
09	.562 [14.27]	.593 - .531 [15.06] - [13.49]	.375 [9.52]	.531 [13.49]	26	1.625 [41.28]	1.656 - 1.593 [42.06] - [40.46]	1.437 [36.50]	1.593 [40.46]
10	.625 [15.88]	.656 - .593 [16.66] - [15.06]	.437 [11.10]	.593 [15.06]	27	1.687 [42.85]	1.718 - 1.656 [43.64] - [42.06]	1.500 [38.10]	1.656 [42.06]
11	.687 [17.45]	.718 - .656 [18.24] - [16.66]	.500 [12.70]	.656 [16.66]	28	1.750 [44.45]	1.781 - 1.718 [45.24] - [43.64]	1.562 [39.67]	1.718 [43.64]
12	.750 [19.05]	.781 - .718 [19.84] - [18.24]	.562 [14.27]	.718 [18.24]	29	1.812 [46.02]	1.843 - 1.781 [46.81] - [45.24]	1.625 [41.28]	1.781 [45.24]
13	.812 [20.62]	.843 - .781 [21.41] - [19.84]	.625 [15.88]	.781 [19.84]	30	1.875 [47.62]	1.906 - 1.843 [48.41] - [46.81]	1.687 [42.85]	1.843 [46.81]
14	.875 [22.22]	.906 - .843 [23.01] - [21.41]	.687 [17.45]	.843 [21.41]	31	1.937 [49.20]	1.968 - 1.906 [49.99] - [48.41]	1.750 [44.45]	1.906 [48.41]
15	.937 [23.80]	.968 - .906 [24.59] - [23.01]	.750 [19.05]	.906 [23.01]	32	2.000 [50.80]	2.031 - 1.968 [51.59] - [49.99]	1.812 [46.02]	1.968 [49.99]
16	1.000 [25.40]	1.031 - .968 [26.19] - [24.59]	.812 [20.62]	.968 [24.59]	33	2.062 [52.37]	2.093 - 2.031 [53.16] - [51.59]	1.875 [47.62]	2.031 [51.59]
17	1.062 [26.97]	1.093 - 1.031 [27.76] - [26.19]	.875 [22.22]	1.031 [26.19]	34	2.125 [53.98]	2.156 - 2.093 [54.76] - [53.16]	1.937 [49.20]	2.093 [53.16]
18	1.125 [28.58]	1.156 - 1.093 [29.36] - [27.76]	.937 [23.80]	1.093 [27.76]	35	2.187 [55.55]	2.219 - 2.156 [56.36] - [54.76]	2.000 [50.80]	2.156 [54.76]
19	1.187 [30.15]	1.219 - 1.156 [30.96] - [29.36]	1.000 [25.40]	1.156 [29.36]	36	2.250 [57.15]	2.281 - 2.219 [57.94] - [56.36]	2.062 [52.37]	2.219 [56.36]
20	1.250 [31.75]	1.281 - 1.219 [32.54] - [30.96]	1.062 [26.98]	1.219 [30.96]	37	2.312 [58.72]	2.343 - 2.281 [59.51] - [57.94]	2.125 [53.98]	2.281 [57.94]

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES
XX .03 ANGLES .XX [X.X] [X.X X]
XXX .010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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TELEPHONE: (949) 474-6000

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TELEPHONE: (32) 87-32.07.11

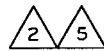
**ADJUSTABLE SLEEVE AND PLUG,
THREADED**

SL6277

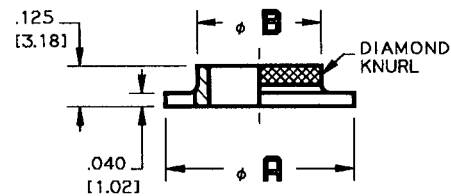
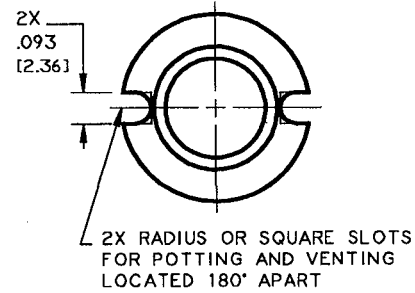
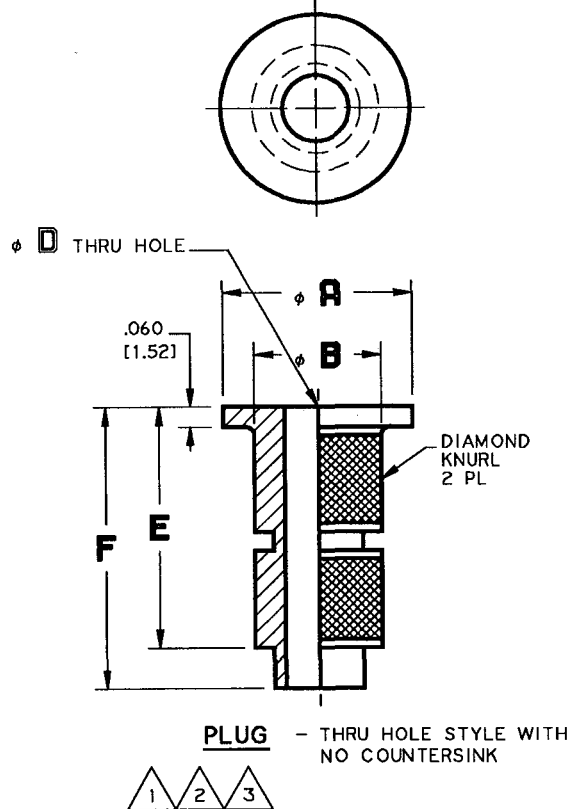
SHEET **3** OF **3**

REVISION B 14 OCTOBER 1999

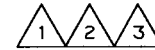
ADJUSTABLE SPACERS FOR ALL TYPE PANELS



SHUR - TAB



SLEEVE



EXAMPLE OF PART CODING

SLEEVE = SL6279 C 3

PLUG = SLP6279 C 3 - 12

- LENGTH CODE (SEE TABLE III)
- "-" INDICATES PLUG STYLE WITH NO COUNTERSINK
- "K" INDICATES PLUG STYLE WITH COUNTERSINK
- SIZE CODE (SEE TABLE I)
- MATERIAL CODE (SEE TABLE II)
- BASIC PART NUMBER

NOTES:



PLUG AND SLEEVE WHEN ASSEMBLED WILL HAVE A SLIP FIT.



A SHUR-TAB MASK SUPPORT IS FURNISHED WITH EACH SLEEVE AND PLUG. IT IS NOT SOLD AS A COMPONENT.



SAME SLEEVE IS USED FOR BOTH PLUG STYLES AND ALL LENGTHS.



REFER TO SLD6200 DATA SHEET FOR INSTALLATION PROCEDURE.



REFER TO TABLE I FOR SHUR-TAB AND GUIDE TOOL.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

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**ADJUSTABLE SLEEVE AND PLUG,
THRU HOLE**

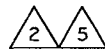
SL6279

SHEET 1 OF 3

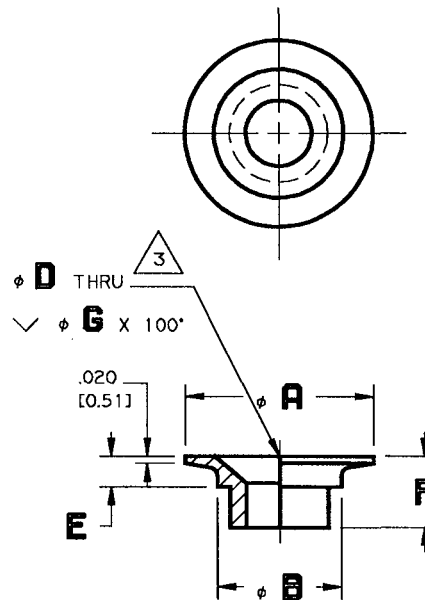
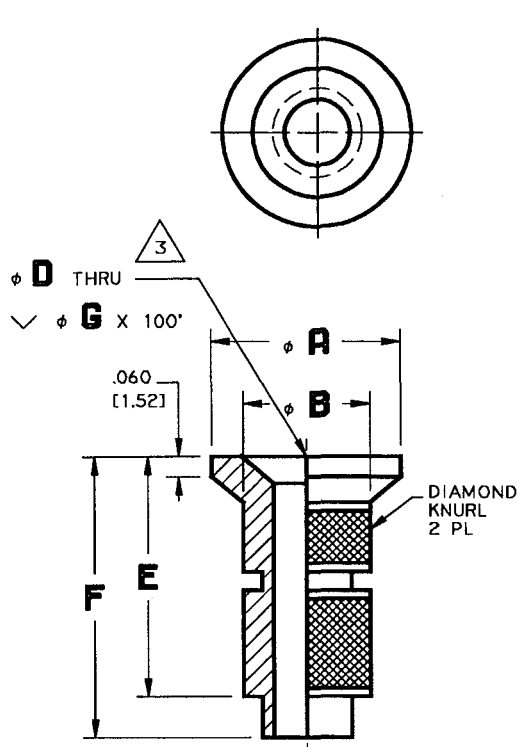
REVISION E 14 OCTOBER 1999



ADJUSTABLE SPACERS FOR ALL TYPE PANELS

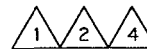


SHUR - TAB



PLUG

- "K" STYLE THRU HOLE WITH
COUNTERSINK FOR 04 THRU 06
LENGTH CODES (SEE TABLE III)
AND 06 THRU 3 SIZE CODES (SEE TABLE I)



PLUG - "K" STYLE THRU HOLE WITH COUNTERSINK
FOR 07 THRU 37 LENGTH CODES (SEE TABLE III)
AND ALL SIZE CODES (SEE TABLE I)

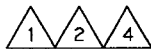


TABLE I

SIZE CODE	ϕA +.000 -.010 +[-0.00] -[-0.25]	ϕB	ϕD	ϕG	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
06	.560 [14.22]	.375 [9.52]	.139 - .145 [3.53] - [3.68]	.280 [7.11]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
08	.560 [14.22]	.375 [9.52]	.168 - .174 [4.27] - [4.42]	.332 [8.43]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
3	.560 [14.22]	.375 [9.52]	.195 - .201 [4.95] - [5.10]	.385 [9.78]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
4	.685 [17.40]	.500 [12.70]	.256 - .263 [6.50] - [6.68]	.507 [12.88]	.686 - .691 [17.42] - [17.55]	SLT600T9 OR SLT600T9P	SLT600G9
5	.685 [17.40]	.500 [12.70]	.315 - .322 [8.00] - [8.18]	.625 [15.88]	.686 - .691 [17.42] - [17.55]	SLT600T9 OR SLT600T9P	SLT600G9
6	.841 [21.36]	.562 [14.27]	.376 - .383 [9.55] - [9.72]	.750 [19.05]	.842 - .847 [21.39] [21.51]	SLT600T11 OR SLT600T11P	SLT600G11

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TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN () ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**ADJUSTABLE SLEEVE AND PLUG,
THRU HOLE**

SL6279

SHEET 2 OF 3

REVISION E 14 OCTOBER 1999

ADJUSTABLE SPACERS FOR ALL TYPE PANELS



TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625
C	CRES 303 PER ASTM-A-581 OR ASTM-A-582	PASSIVATE PER AMS-QQ-P-35
-	CARBON STEEL PER ASTM-A-108	CAD PLATE PER QQ-P-416
T	TITANIUM AL6-4V PER MIL-T-9047	NONE

TABLE III

LENGTH CODE	NOMINAL SANDWICH PANEL THICKNESS	SANDWICH PANEL THICKNESS RANGE	E	F	LENGTH CODE	NOMINAL SANDWICH PANEL THICKNESS	SANDWICH PANEL THICKNESS RANGE	E	F
04	.250 [6.35]	.281 - .218 [7.14] - [5.54]	.093 [2.36]	.218 [5.54]	21	1.312 [33.32]	1.343 - 1.281 [34.1] - [32.54]	1.156 [29.36]	1.281 [32.54]
05	.312 [7.92]	.343 - .281 [8.71] - [7.14]	.156 [3.96]	.281 [7.14]	22	1.375 [34.92]	1.406 - 1.343 [35.71] - [34.11]	1.218 [30.94]	1.343 [34.11]
06	.375 [9.52]	.406 - .343 [10.31] - [8.71]	.218 [5.54]	.343 [8.71]	23	1.437 [36.50]	1.468 - 1.406 [37.29] - [35.71]	1.281 [32.54]	1.406 [35.71]
07	.437 [11.10]	.468 - .406 [11.89] - [10.31]	.281 [7.14]	.406 [10.31]	24	1.500 [38.10]	1.531 - 1.468 [38.89] - [37.29]	1.343 [34.11]	1.468 [37.29]
08	.500 [12.70]	.531 - .468 [13.49] - [11.89]	.343 [8.71]	.468 [11.89]	25	1.562 [39.67]	1.593 - 1.531 [40.46] - [38.89]	1.406 [35.71]	1.531 [38.89]
09	.562 [14.27]	.593 - .531 [15.06] - [13.49]	.406 [10.31]	.531 [13.49]	26	1.625 [41.28]	1.656 - 1.593 [42.06] - [40.46]	1.468 [37.29]	1.593 [40.46]
10	.625 [15.88]	.656 - .593 [16.66] - [15.06]	.468 [11.89]	.593 [15.06]	27	1.687 [42.85]	1.718 - 1.656 [43.64] - [42.06]	1.531 [38.89]	1.656 [42.06]
11	.687 [17.45]	.718 - .656 [18.24] - [16.66]	.531 [13.49]	.656 [16.66]	28	1.750 [44.45]	1.781 - 1.718 [45.24] - [43.64]	1.593 [40.46]	1.718 [43.64]
12	.750 [19.05]	.781 - .718 [19.84] - [18.24]	.593 [15.06]	.718 [18.24]	29	1.812 [46.02]	1.843 - 1.781 [46.81] - [45.24]	1.656 [42.06]	1.781 [45.24]
13	.812 [20.62]	.843 - .781 [21.41] - [19.84]	.656 [16.66]	.781 [19.84]	30	1.875 [47.62]	1.906 - 1.843 [48.41] - [46.81]	1.718 [43.64]	1.843 [46.81]
14	.875 [22.22]	.906 - .843 [23.01] - [21.41]	.718 [18.24]	.843 [21.41]	31	1.937 [49.20]	1.968 - 1.906 [49.99] - [48.41]	1.781 [45.24]	1.906 [48.41]
15	.937 [23.80]	.968 - .906 [24.59] - [23.01]	.781 [19.84]	.906 [23.01]	32	2.000 [50.80]	2.031 - 1.968 [51.59] - [49.99]	1.843 [46.81]	1.968 [49.99]
16	1.000 [25.40]	1.031 - .968 [26.19] - [24.59]	.843 [21.41]	.968 [24.59]	33	2.062 [52.37]	2.093 - 2.031 [53.16] - [51.59]	1.906 [48.41]	2.031 [51.59]
17	1.062 [26.97]	1.093 - 1.031 [27.76] - [26.19]	.906 [23.01]	1.031 [26.19]	34	2.125 [53.98]	2.156 - 2.093 [54.76] - [53.16]	1.968 [49.99]	2.093 [53.16]
18	1.125 [28.58]	1.156 - 1.093 [29.36] - [27.76]	.968 [24.59]	1.093 [27.76]	35	2.187 [55.55]	2.219 - 2.156 [56.36] - [54.76]	2.031 [51.59]	2.156 [54.76]
19	1.187 [30.15]	1.219 - 1.156 [30.96] - [29.36]	1.031 [26.19]	1.156 [29.36]	36	2.250 [57.15]	2.281 - 2.219 [57.94] - [56.36]	2.093 [53.16]	2.219 [56.36]
20	1.250 [31.75]	1.281 - 1.219 [32.54] - [30.96]	1.093 [27.76]	1.219 [30.96]	37	2.312 [58.72]	2.343 - 2.281 [59.51] - [57.94]	2.156 [54.76]	2.281 [57.94]

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FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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TELEPHONE: (949) 474-6000

SHUR-LOK

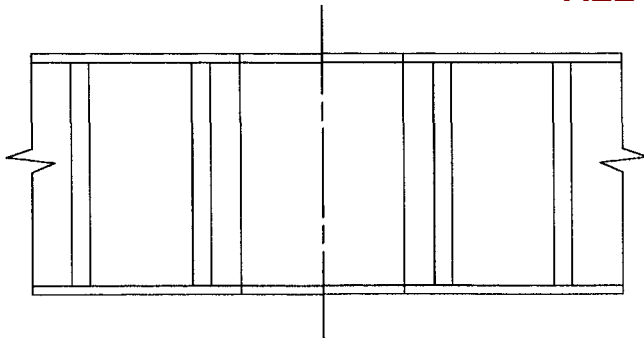
SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
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**ADJUSTABLE SLEEVE AND PLUG,
THRU HOLE**

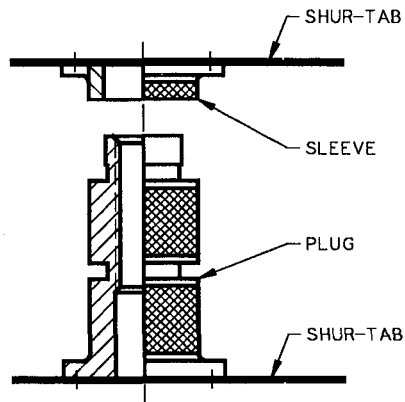
SL6279

SHEET 3 OF 3

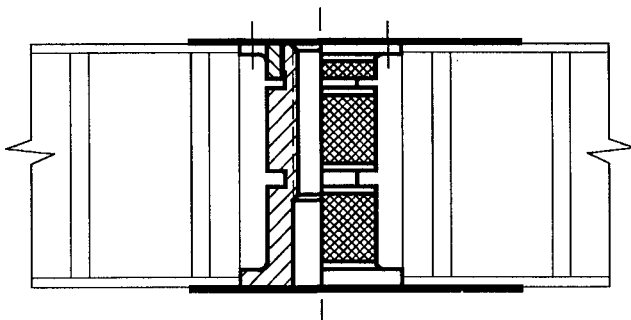
ADJUSTABLE SPACERS FOR ALL TYPE PANELS



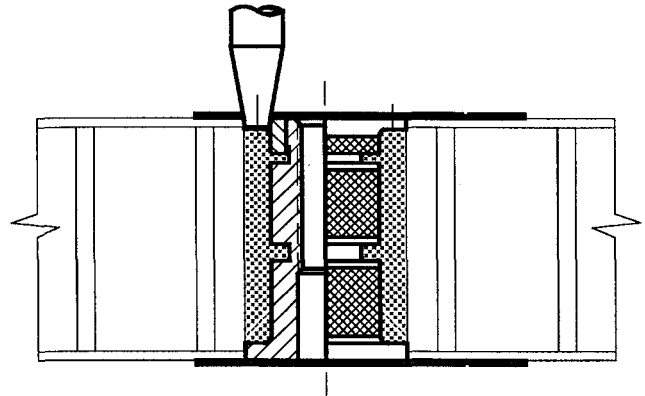
1. DRILL INSTALLATION HOLE THRU PANEL.
(REFER TO CATALOG DWGS SL6277 AND
SL6279 FOR INSTALLATION HOLE SIZE).



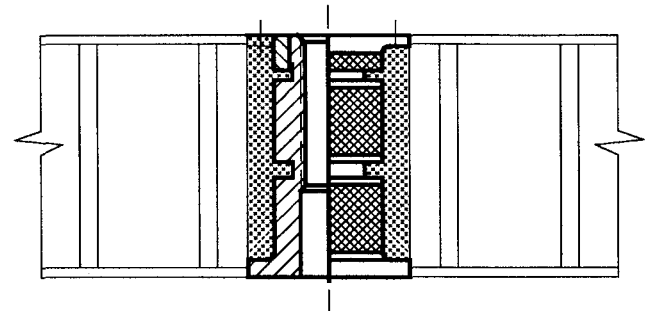
2. REMOVE PAPER BACKING FROM TABS AND
USING ADHESIVE SURFACE BOND TABS TO
FLANGED ENDS OF PLUG AND SLEEVE.
ENSURE THAT POTTING SLOTS IN SLEEVE
ARE ALIGNED WITH HOLES IN TAB.



3. INSERT SLEEVE AND PLUG INTO INSTALLATION
HOLE. APPLY ADEQUATE FORCE TO ENSURE THAT
TABS WILL ADHERE TO FACES OF PANEL.



4. EPOXY MAY BE INJECTED WITH SEALANT
GUN THROUGH POTTING HOLE. CAVITY IS
FILLED WHEN EPOXY APPEARS IN VENT HOLE.
FOR SANDWICH THICKNESSES OVER .50 INCH
(12.7 mm) PREPOTTING IS RECOMMENDED.
FINAL FILL MAY BE MADE WITH SEALANT GUN.



5. COMPLETED INSTALLATION.
TABS SHOULD BE REMOVED WHEN POTTING
COMPOUND HAS SET.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
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PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES	ANGLES	[X.X]	[X.X.X]
.XX	.XXX	±.03	±.010
±.03	±.010	±2°	±[0.8]
			±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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TELEPHONE: (349) 474-6000

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SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSTALLATION PROCEDURE FOR
SL6277 AND SL6279 ADJUSTABLE SPACERS**

SLD6200 DATA

SHEET 1 OF 1

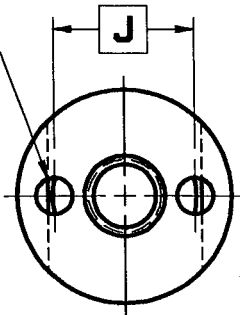
REVISION (B) 08 JULY 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

2X $\phi .092-.097$ [2.34-2.46]
POTTING AND VENT
HOLES

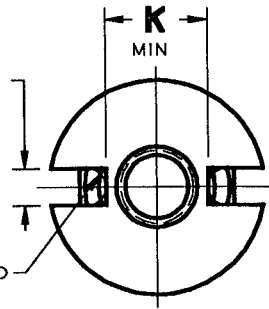
$\phi .020$ [0.51] (M) (A) (M)
TYPICAL ALL STYLES



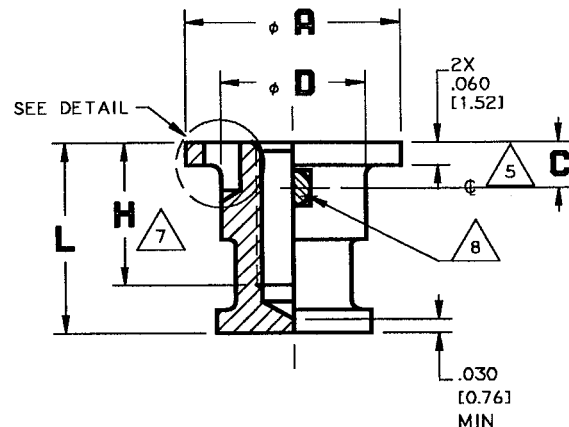
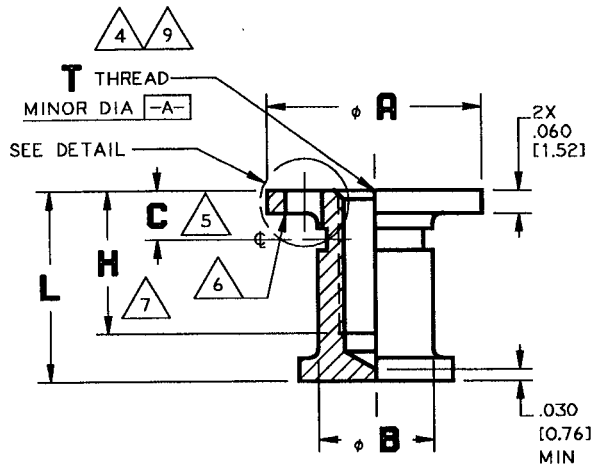
12

2X $\phi .092-.097$ [2.34-2.46]
POTTING AND VENT
SLOTS

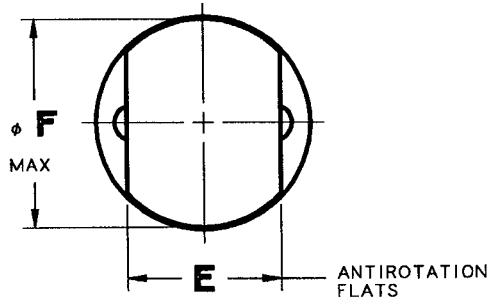
$\phi .020$ [0.51] (M) (A) (M)



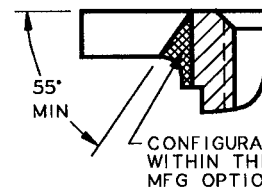
OPTIONAL SLOTS



STANDARD CONFIGURATION FOR ALUMINUM INSERTS,
OPTIONAL FOR STEEL OR CRES INSERTS



STANDARD CONFIGURATION FOR STEEL, CRES
AND NONSELF-LOCKING ALUMINUM INSERTS



DETAIL - FOR OPTIONAL SLOTS.
TYPICAL ALL STYLES

EXAMPLE OF PART CODING

SL601 -3 - 8 C S N (INCH)
SL601 M5 - 25.4 C S N (METRIC)

- NYLON PELLET THREAD LOCK
IN STEEL OR CRES INSERTS
- SPECIAL FINISH CODE
(SEE TABLE III)
- MATERIAL AND FINISH CODE
(SEE TABLE II)
- INCH = LENGTH CODE IN
INCREMENTS OF .125
- METRIC = LENGTH CODE IN
INCREMENTS OF 3.175mm
- INDICATES THREAD LOCK
- N INDICATES NO THREAD LOCK
- SIZE CODE (SEE TABLE I)
- BASIC PART NUMBER

1 2

SHUR-TAB

NOTES:

SEE SHEET 2.

APPLICATION:

AN EPOXY POTTED-IN INSERT FOR
ATTACHMENTS THROUGH ONE FACE OF
SANDWICH PANEL. PROVIDES EXCELLENT
TENSILE AND SHEAR VALUES FOR
STRUCTURAL APPLICATIONS.

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FILM LUBRICANT. 125 [3.2]
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN | ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

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SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

INSERT,
BLIND THREAD

SL601

SHEET 1 OF 3

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE I

SIZE CODE	T THREAD 	ϕ A +.000 -.010 +[0.00] -[0.25]	ϕ B	C REF	ϕ D	E	ϕ F MAX	H 	J BASIC	K MIN	L MIN 	INSTALLATION HOLE SIZE
06	.1380-32UNJC-3B	.560	.300	.12	.375	.400	.560	.25	.367	.260	.37	.561 - .566
M3	M3X0.5-4H6H	[14.22]	[7.62]	[3.0]	[9.52]	[10.16]	[14.22]	[6.4]	[9.32]	[6.60]	[9.5]	[14.25] - [14.38]
08	.1640-32UNJC-3B	.560	.300	.12	.375	.400	.560	.25	.367	.260	.37	.561 - .566
M4	M4X0.7-4H6H	[14.22]	[7.62]	[3.0]	[9.52]	[10.16]	[14.22]	[6.4]	[9.32]	[6.60]	[9.5]	[14.25] - [14.38]
3	.1900-32UNJF-3B	.560	.300	.12	.375	.400	.560	.25	.367	.260	.37	.561 - .566
M5	M5X0.8-4H6H	[14.22]	[7.62]	[3.0]	[9.52]	[10.16]	[14.22]	[6.4]	[9.32]	[6.60]	[9.5]	[14.25] - [14.38]
4	.2500-28UNJF-3B	.685	.375	.14	.440	.520	.685	.31	.467	.360	.50	.686 - .691
M6	M6X1-4H5H	[17.40]	[9.52]	[3.6]	[11.18]	[13.21]	[17.40]	[7.9]	[11.86]	[9.14]	[12.7]	[17.42] - [17.55]
5	.3125-24UNJF-3B	.685	.475	.16	.500	.520	.685	.31	.467	.360	.50	.686 - .691
M8	M8X1.25-4H5H	[17.40]	[12.06]	[4.1]	[12.70]	[13.21]	[17.40]	[7.9]	[11.86]	[9.14]	[12.7]	[17.42] - [17.55]
6	.3750-24UNJF-3B	.841	.500	.22	.550	.560	.841	.37	.591	.484	.62	.842 - .847
M10	M10X1.5-4H5H	[21.36]	[12.70]	[5.6]	[13.97]	[14.22]	[21.36]	[9.4]	[15.01]	[12.29]	[15.9]	[21.39] - [21.51]

NOTES:

1. SHUR-TAB FURNISHED WITH EACH INSERT.
2. REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURES.
4. INCH THREAD PER MIL-S-8879
METRIC THREAD PER LN9163 OR FED-STD-H28
5. LOCKING TORQUE.
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NAO009
SELF-LOCKING CORROSION RESISTANT STEEL INSERT WITHOUT PLATING
OR LUBRICANT SHALL BE TESTED WITH SILVER PLATED BOLT OR SCREW.
6. BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG
AS HOLES OR SLOTS ARE NOT RESTRICTED.
7. MINIMUM THREAD "H" IN SHORT LENGTHS.
MINIMUM THREAD "H" WHERE LENGTH PERMITS SHALL BE 2 DIAMETERS
(SEE TABLE IV).
8. NONMETALLIC THREAD LOCK L-P-410 LOCATED NO CLOSER THAN
10 DEGREES FROM EDGE OF EITHER POTTING HOLE OR SLOT.
9. MINIMUM "GO" THREAD GAGE PENETRATION SHALL BE ONE HALF
REVOLUTION BEFORE LUBRICATION. MINIMUM BOLT THREAD
PENETRATION SHALL BE THREE QUARTER REVOLUTION AFTER
LUBRICATION.
10. MINIMUM LENGTH WHICH MAY BE SPECIFIED.
11. THIS PART MEETS THE REQUIREMENTS OF NAS1832 (INCH ONLY).
12. POTTING AND VENT HOLES OR SLOTS MANUFACTURER'S OPTION.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT,
THROUGH THREADED**

SL601

SHEET **2** OF **3**

REVISION (M) 09 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 OR T351 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I. CLASS OPTIONAL
C	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
S	CARBON STEEL PER ASTM A108 ULTIMATE TENSILE STRENGTH 85 KSI MIN.	CADMIUM PLATE PER QQ-P-416, TYPE II. CLASS 2

TABLE III

FINISH CODE	SPECIAL FINISH
M	SOLID FILM LUBRICANT PER AS5272, TYPE I. INTERNAL THREADS ONLY
C	CADMIUM PLATE PER QQ-P-416 TYPE II. CLASS 2 ON CRES INSERTS
S	SILVER PLATE PER AMS2410 OR AMS2411

TABLE IV

LENGTH CODE	L	H MINIMUM THREAD DEPTH											
		06	M3	08	M4	3	M5	4	M6	5	M8	6	M10
3	.375 [9.52]	.250 [6.35]		.250 [6.35]		.250 [6.35]		—		—		—	
4	.500 [12.70]	.276 [7.01]		.312 [7.92]		.312 [7.92]		.312 [7.92]		.312 [7.92]		.375 [9.52]	
5	.625 [15.88]	.276 [7.01]		.328 [8.33]		.375 [9.52]		.437 [11.10]		.437 [11.10]		.437 [11.10]	
6	.750 [19.05]	.276 [7.01]		.328 [8.33]		.375 [9.52]		.500 [12.70]		.562 [14.27]		.562 [14.27]	
7	.875 [22.22]	.276 [7.01]		.328 [8.33]		.375 [9.52]		.500 [12.70]		.625 [15.88]		.625 [15.88]	
8	1.000 [25.40]	.276 [7.01]		.328 [8.33]		.375 [9.52]		.500 [12.70]		.625 [15.88]		.750 [19.05]	

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT,
BLIND THREADED**

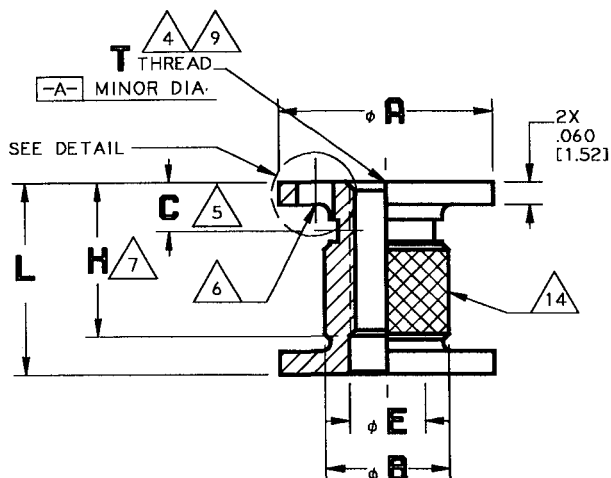
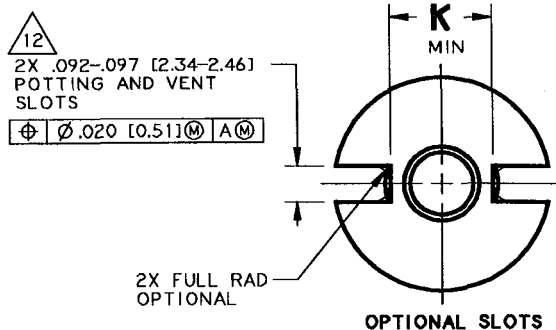
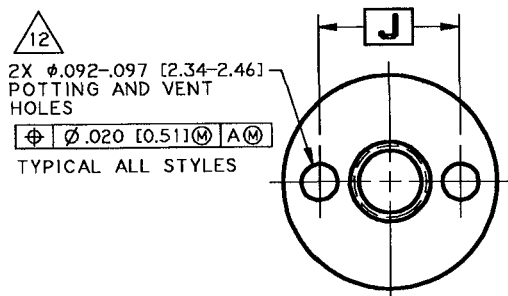
SL601

SHEET **3** OF **3**

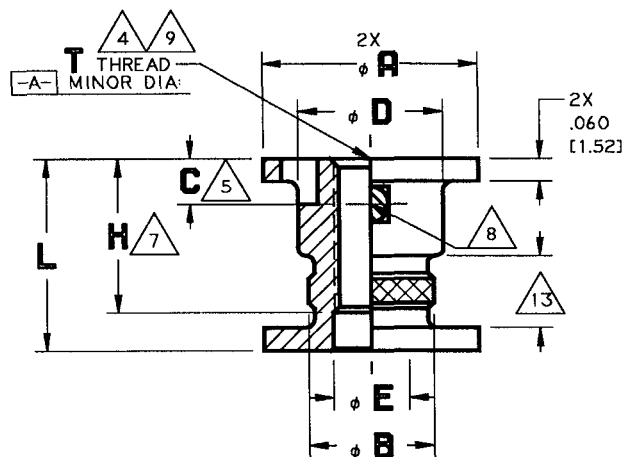
REVISION (M) 09 OCTOBER 1999



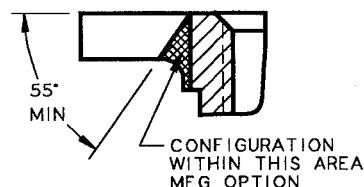
INSERTS FOR ALL TYPE SANDWICH PANELS



ALL STEEL AND CRES SELF-LOCKING, NONSELF-LOCKING
OR NONSELF-LOCKING ALUMINUM STYLE



SELF-LOCKING OR ALTERNATE
NONSELF-LOCKING ALUMINUM STYLE



EXAMPLE OF PART CODING:

SL602 -3 - 500 C S N (INCH)

SL602 M5 - 12.7 C S N (METRIC)

- NYLON PELLET THREAD LOCK IN STEEL OR CRES INSERT
- SPECIAL FINISH CODE (SEE TABLE III)
- MATERIAL AND FINISH CODE (SEE TABLE II)
- INCH = PANEL THKNS IN THOUSANDTHS
METRIC = PANEL THKNS IN MILLIMETERS
- INDICATES THREAD LOCK
N INDICATES NO THREAD LOCK
- SIZE CODE (SEE TABLE I)
- BASIC PART NUMBER

NOTES:
SEE SHEET 2.

APPLICATION:
AN EPOXY POTTED-IN THROUGH THREADED INSERT WITH FLUSH FACES ON BOTH SIDES OF PANEL. INSERT SERVES AS NUT FOR MAKING ATTACHMENTS WITH SCREW OR BOLT.

UNLESS OTHERWISE SPECIFIED:
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32-07-11

**INSERT,
THROUGH THREADED**

SL602

SHEET 1 OF 2

REVISION (J) 08 SEPTEMBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE I

SIZE CODE	T THREAD 	φ A +.000 -.010 [0.0] [0.25]	φ B	C REF	D	φ E	H 	J BASIC	K MIN	L MIN 	INSTALLATION HOLE SIZE
06	.1380-32UNJC-3B	.560	.30	.12	.375	.139-.145	.276	.367	.260	.250	.561-.566
M3	M3X0.5 4H6H	[14.22]	[7.6]	[3.0]	[9.52]	[3.53-3.68]	[7.01]	[9.32]	[6.60]	[6.35]	[14.25-14.38]
08	.1640-32UNJC-3B	.560	.30	.12	.375	.168-.174	.328	.367	.260	.250	.561-.566
M4	M4X0.7 4H6H	[14.22]	[7.6]	[3.0]	[9.52]	[4.27-4.42]	[8.33]	[9.32]	[6.60]	[6.35]	[14.25-14.38]
3	.1900-32UNJF-3B	.560	.30	.12	.375	.195-.201	.380	.367	.260	.250	.561-.566
M5	M5X0.8 4H6H	[14.22]	[7.6]	[3.0]	[9.52]	[4.95-5.11]	[9.65]	[9.32]	[6.60]	[6.35]	[14.25-14.38]
4	.2500-28UNJF-3B	.685	.37	.14	.440	.256-.263	.500	.467	.360	.312	.686-.691
M6	M6X1 4H5H	[17.40]	[9.4]	[3.6]	[11.18]	[6.50-6.68]	[12.70]	[11.86]	[9.14]	[7.92]	[17.42-17.55]
5	.3125-24UNJF-3B	.685	.47	.16	.500	.315-.322	.625	.467	.360	.312	.686-.691
M8	M8X1.25 4H5H	[17.40]	[11.9]	[4.1]	[12.70]	[8.00-8.18]	[15.88]	[11.86]	[9.14]	[7.92]	[17.42-17.55]
6	.3750-24UNJF-3B	.841	.50	.22	.550	.376-.383	.750	.591	.484	.375	.842-.848
M10	M10X1.5 4H5H	[21.36]	[12.7]	[5.6]	[13.97]	[9.55-9.73]	[19.05]	[15.01]	[12.29]	[9.52]	[21.39-21.54]
7	.4375-20UNJF-3B	.873	.62	.25	.687	.452-.459	.875	.718	.611	.437	.874-.880
		[22.17]	[15.7]	[6.4]	[17.45]	[11.48-11.66]	[22.22]	[18.24]	[15.52]	[11.10]	[22.20-22.35]
8	.5000-20UNJF-3B	.935	.68	.25	.750	.514-.523	1.000	.783	.674	.500	.936-.942
		[23.75]	[17.3]	[6.4]	[19.05]	[13.06-13.28]	[25.40]	[19.89]	[17.12]	[12.70]	[23.77-23.93]

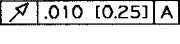
TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 OR T351 PER QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL
C	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
S	CARBON STEEL PER ASTM A108, ULTIMATE TENSILE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416 TYPE II, CLASS 2

TABLE III

FINISH CODE	SPECIAL FINISH
M	SOLID FILM LUBRICANT PER AS5272, TYPE I, THREAD ONLY
S	SILVER PLATE PER AMS2410 OR AMS2411
C	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2, ON CRES INSERTS

NOTES:

-  SHUR-TAB FURNISHED WITH EACH INSERT.
-  REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SL600 DATA SHEET FOR INSTALLATION PROCEDURES.
-  INCH THREAD PER MIL-S-8879 METRIC THREAD PER LN9163 OR FED-STD-H28
-  LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NAO0009
PLATING OR SOLID FILM LUBRICANT IS RECOMMENDED ON SELF-LOCKING CRES INSERTS.
-  BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
-  MIN THREAD SHALL BE 2 DIAMETERS WHERE LENGTH PERMITS. LENGTHS SHORTER THAN 2 DIAMETERS SHALL BE THREADED THE ENTIRE LENGTH (SEE TABLE I).
-  NONMETALLIC THREAD LOCK L-P-410 LOCATED NO CLOSER THAN 10 DEGREES FROM EDGE OF EITHER POTTING HOLE OR SLOT.
-  MINIMUM "GO" THREAD GAGE PENETRATION SHALL BE ONE HALF REVOLUTION BEFORE LUBRICATION. MINIMUM BOLT THREAD PENETRATION SHALL BE THREE QUARTER REVOLUTION AFTER LUBRICATION.
-  MINIMUM LENGTH WHICH MAY BE SPECIFIED.
11. THIS PART SERIES MEETS THE REQUIREMENTS OF NAS1833 (INCH ONLY).
-  POTTING AND VENT HOLES OR SLOTS MANUFACTURER'S OPTION.
-  EXTERNAL CONFIGURATION OPTIONAL IN THIS AREA FOR SHORT LENGTHS THROUGH .375 [9.53].
-  STRAIGHT OR DIAMOND ANTIROTATIONAL KNURL MANUFACTURER'S OPTION.
-  ALL DIAMETERS  .010 [0.25] A

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
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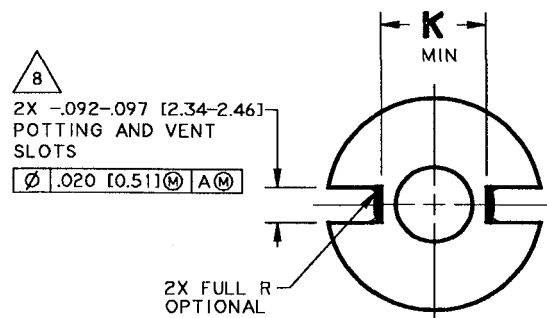
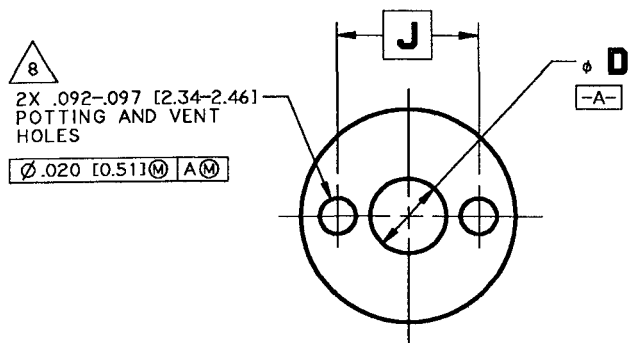
**INSERT,
THROUGH THREADED**

SL602

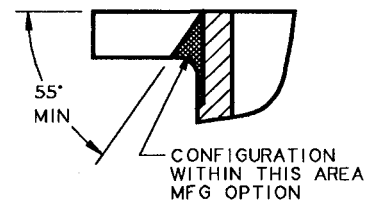
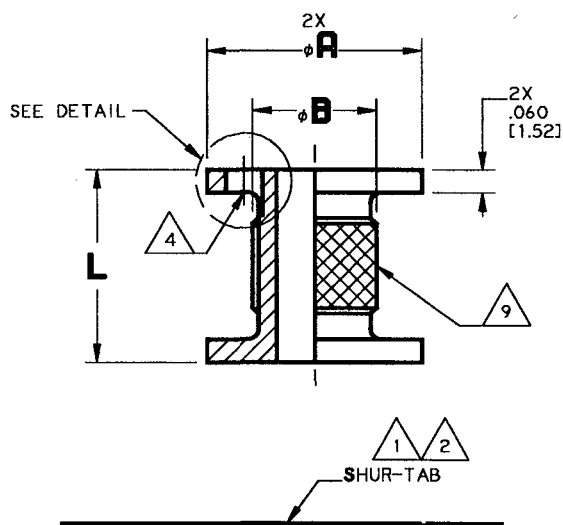
SHEET **2** OF **2**

REVISION J 08 SEPTEMBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



OPTIONAL SLOTS



DETAIL - OPTIONAL SLOTS
TYPICAL ALL STYLES

EXAMPLE OF PART CODING:

SL603 -3 - 500 C S (INCH)
SL603 M5 - 12.7 C S (METRIC)

SPECIAL FINISH CODE
(SEE TABLE III)

MATERIAL CODE (SEE TABLE II)

INCH = PANEL THICKNESS IN
THOUSANDTHS

METRIC = PANEL THICKNESS IN
MILLIMETERS

SIZE CODE (SEE TABLE I)

BASIC PART NUMBER

APPLICATION.

AN EPOXY POTTED-IN INSERT (SPACER) FOR FASTENING TO SANDWICH PANEL WITH BOLT AND NUT. INSERT PREVENTS SANDWICH COLLAPSE OR CRIPPLING OF CORE AT FASTENER POINT.

NOTES:

- SHUR-TAB FURNISHED WITH EACH INSERT.
- REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
- REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURES.
- BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
- MINIMUM LENGTH WHICH MAY BE SPECIFIED.
- THIS PART SERIES MEETS THE REQUIREMENTS OF NAS 1834 (INCH PARTS ONLY). EXCEPT FOR SPECIAL FINISH (SEE TABLE III).
- ALL DIAMETERS $\sqrt{.010 [0.25] A}$
- POTTING AND VENT HOLES OR SLOTS MANUFACTURER'S OPTION.
- STRAIGHT OR DIAMOND ANTIROTATIONAL KNURL MANUFACTURER'S OPTION.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES ALL SURFACES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT,
THRU CLEARANCE HOLE**

SL603

SHEET 1 OF 2

REVISION J 08 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE I

SIZE CODE	φ A +.000 -.010 [0.00] [0.25]	φ B	φ D CLEARANCE HOLE	J BASIC	K MIN	L MIN 	INSTALLATION HOLE SIZE
06	.560 [14.22]	.30 [7.6]	.139-.145 [3.53-3.68]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M3			.122-.127 [3.10-3.23]				
08	.560 [14.22]	.30 [7.6]	.168-.174 [4.27-4.42]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M4			.160-.166 [4.06-4.22]				
3	.560 [14.22]	.30 [7.6]	.195-.201 [4.95-5.11]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M5			.204-.210 [5.18-5.33]				
4	.685 [17.40]	.37 [9.4]	.256-.263 [6.50-6.68]	.467 [11.86]	.360 [9.14]	.312 [7.92]	.686-.691 [17.42-17.55]
M6			.243-.249 [6.17-6.32]				
5	.685 [17.40]	.47 [11.9]	.315-.322 [8.00-8.18]	.467 [11.86]	.360 [9.14]	.312 [7.92]	.686-.691 [17.42-17.55]
M8			.322-.329 [8.18-8.36]				
6	.841 [21.36]	.50 [12.7]	.376-.383 [9.55-9.73]	.591 [15.01]	.484 [12.29]	.375 [9.52]	.842-.847 [21.39-21.51]
M10			.405-.412 [10.29-10.46]				

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 OR T351 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL
C	CRES 303 PER ASTM A582	PASSIVATE PER QQ-P-35
S	CARBON STEEL PER ASTM A108, ULTIMATE TENSILE STRENGTH 85 KSI MINIMUM	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
T	6AL-4V TITANIUM PER AMS 4965	CLEAN PER SHUR-LOK MPS0012

TABLE III

FINISH CODE	SPECIAL FINISH
S	SILVER PLATE PER AMS2410 OR AMS2411
C	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2. (CRES INSERTS ONLY)

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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SHUR-LOK

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**INSERT,
THRU CLEARANCE HOLE**

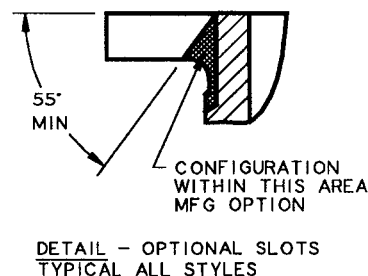
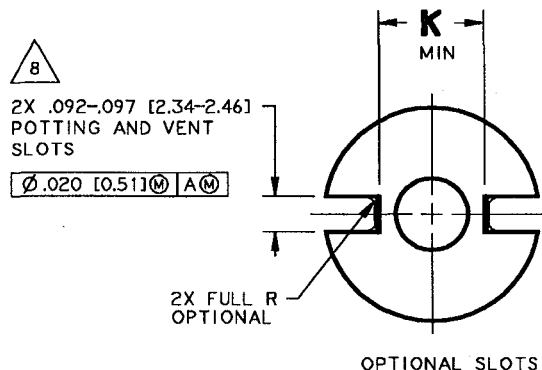
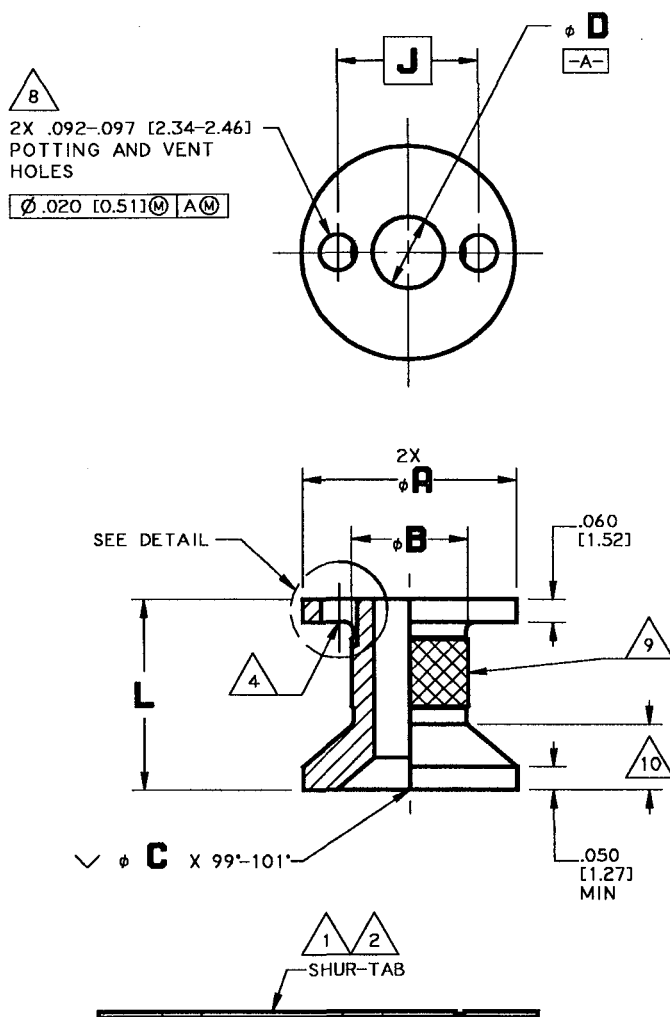
SL603

SHEET **2** OF **2**

REVISION (J) 06 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS



EXAMPLE OF PART CODING:

SL604 -3 - 500 C S (INCH)
SL604 M5 - 12.7 C S (METRIC)

- 1 SPECIAL FINISH CODE (SEE TABLE III)
- 2 MATERIAL AND FINISH CODE (SEE TABLE II)
- 3 SANDWICH PANEL THICKNESS CODE
INCH = PANEL THICKNESS IN THOUSANDTHS
METRIC = PANEL THICKNESS IN MILLIMETERS
- 4 SIZE CODE (SEE TABLE I)
- 5 BASIC PART NUMBER

APPLICATION:

AN EPOXY POTTED-IN INSERT SIMILAR TO SL603 BUT WITH PROVISION TO RECEIVE FLUSH HEAD SCREW.

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
- 3 REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURE.
- 4 BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
- 5 MINIMUM LENGTH WHICH MAY BE SPECIFIED.
- 6 THIS PART MEETS THE REQUIREMENTS OF NAS1834 (INCH PARTS ONLY) EXCEPT FOR SPECIAL FINISH (SEE TABLE III).
- 7 ALL DIAMETERS $\sqrt{.010 [0.25] A}$
- 8 POTTING AND VENT HOLES OR SLOTS MANUFACTURER'S OPTION.
- 9 STRAIGHT OR DIAMOND ANTIROTATIONAL KNURL MANUFACTURER'S OPTION.
- 10 EXTERNAL CONFIGURATION OPTIONAL IN THIS AREA FOR SHORT LENGTHS THROUGH .375.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
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SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

INSERT,
COUNTERSUNK CLEARANCE HOLE

SL604

SHEET 1 OF 2

REVISION F 06 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE I

SIZE CODE	φ A +.000 -.010 [0.00] [0.25]	φ B	φ C	φ D CLEARANCE HOLE	J BASIC	K MIN	L MIN 	INSTALLATION HOLE SIZE
06	.560 [14.22]	.300 [7.62]	.280 [7.11]	.139-.145 [3.53-3.68]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M3			.236 [5.99]	.122-.127 [3.10-3.23]				
08	.560 [14.22]	.300 [7.62]	.332 [8.43]	.168-.174 [4.27-4.42]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M4			.315 [8.00]	.160-.168 [4.06-4.22]				
3	.560 [14.22]	.300 [7.62]	.385 [9.78]	.195-.201 [4.95-5.11]	.367 [9.32]	.260 [6.60]	.250 [6.35]	.561-.566 [14.25-14.38]
M5			.394 [10.01]	.204-.210 [5.18-5.33]				
4	.685 [17.40]	.375 [9.52]	.507 [12.88]	.256-.263 [6.50-6.68]	.467 [11.86]	.360 [9.14]	.312 [7.92]	.686-.691 [17.42-17.55]
M6			.472 [11.99]	.243-.249 [6.17-6.32]				
5	.685 [17.40]	.475 [12.06]	.625 [15.88]	.315-.322 [8.00-8.18]	.467 [11.86]	.360 [9.14]	.312 [7.92]	.686-.691 [17.42-17.55]
M8			.630 [16.00]	.322-.329 [8.18-8.36]				
6	.841 [21.36]	.500 [12.70]	.750 [19.05]	.376-.383 [9.55-9.73]	.591 [15.01]	.484 [12.29]	.375 [9.52]	.842-.847 [21.39-21.51]
M10			.787 [19.99]	.405-.412 [10.29-10.46]				

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 OR T351 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL
C	CRES 303 PER ASTM A582	PASSIVATE PER QQ-P-35
S	CARBON STEEL PER ASTM A108, ULTIMATE TENSILE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
T	6AL-4V TITANIUM PER AMS 4965	CLEAN PER SHUR-LOK MPS0012

TABLE III

FINISH CODE	SPECIAL FINISH
S	SILVER PLATE PER AMS2410 OR AMS2411
C	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2 (CRES INSERT ONLY)

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]

TOLERANCES

XX	XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

ALL SURFACES

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-82.07.11

**INSERT,
COUNTERSUNK CLEARANCE HOLE**

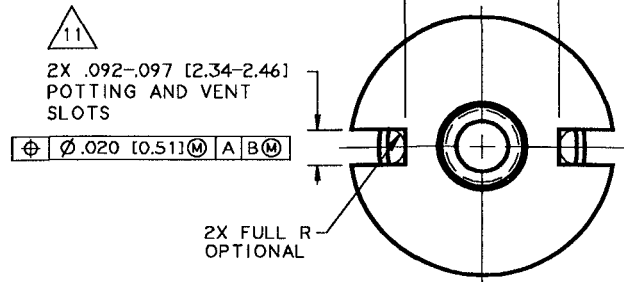
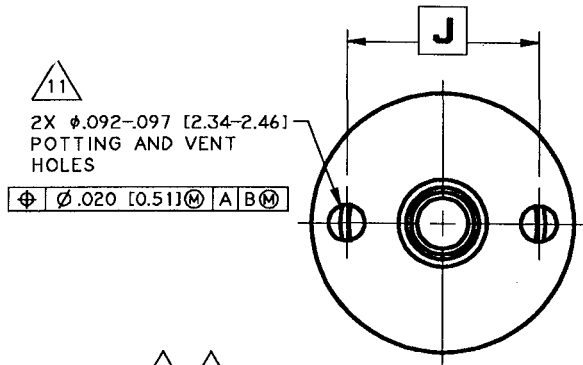
SL604

SHEET **2** OF **2**

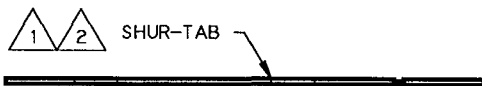
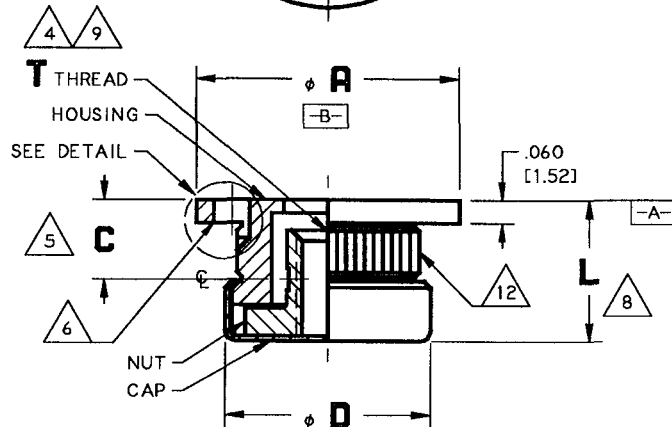
REVISION (F) 06 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS



OPTIONAL SLOTS



NOTES: CONT'D

- 11 POTTING AND VENT HOLES OR SLOTS
MANUFACTURER'S OPTION.
- 12 STRAIGHT OR DIAMOND KNURL
MANUFACTURER'S OPTION.

EXAMPLE OF PART CODING:

SL606	-3	N	C	S	(INCH)
SL606	M5	N	C	S	[METRIC]
					SPECIAL FINISH CODE (SEE TABLE III)
					MATERIAL AND FINISH CODE (SEE TABLE II)
					NO LETTER INDICATES THREAD LOCK 'N' INDICATES NO THREAD LOCK
					SIZE CODE (SEE TABLE I)
					BASIC PART NUMBER

APPLICATION:

AN EPOXY POTTED-IN INSERT FOR
PANEL ATTACHMENTS WHERE BOLT
HOLE MISALIGNMENT REQUIRES A
FLOATING NUT ELEMENT.

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO SLT600 DATA SHEET FOR SHUR-TAB
AND GUIDE TOOL.
- 3 REFER TO SL600 DATA SHEET FOR INSTALLATION
PROCEDURES.
- 4 INCH THREAD PER MIL-S-8879.
METRIC THREAD PER LN9163 OR FED-STD-H28.
- 5 LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NA0009
SELF-LOCKING CORROSION RESISTANT STEEL
INSERTS WITHOUT PLATING OR LUBRICANT
SHALL BE TESTED USING A SILVER PLATED
BOLT OR SCREW.
- 6 BURRS PERMISSIBLE UNDER POTTING HOLES
OR SLOTS AS LONG AS HOLES OR SLOTS
ARE NOT RESTRICTED.
- 7 INSERT NUT MINIMUM RADIAL FLOAT INSIDE
HOUSING IS .032 [0.81]
- 8 FOR MAXIMUM BOLT PENETRATION SEE TABLE I.
- 9 MINIMUM "GO" THREAD GAGE PENETRATION SHALL
BE ONE HALF REVOLUTION BEFORE LUBRICATION.
MINIMUM BOLT THREAD PENETRATION SHALL BE
THREE QUARTER REVOLUTION AFTER LUBRICATION.
- 10 THIS PART SERIES MEETS THE REQUIREMENTS
OF NAS1835 (INCH ONLY).

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-8000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
FLOATING NUT**

SL606

SHEET 1 OF 2

REVISION (M) 28 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE I

SIZE CODE	T THREAD	φ A +.000 -.010 [0.0] [0.25]	C REF	φ D MAX	J BASIC	K MIN	L	INSTALLATION HOLE SIZE	MAXIMUM BOLT PENETRATION
08	.1640-32UNJC-3B	.685	.16	.545	.500	.393	.37	.686 - .691	.350
M4	M4 X 0.7-4H6H	[17.40]	[4.1]	[13.84]	[12.70]	[9.98]	[9.4]	[17.42] - [17.55]	[8.89]
3	.1900-32UNJF-3B	.685	.16	.545	.500	.393	.43	.686 - .691	.410
M5	M5 X 0.8-4H6H	[17.40]	[4.1]	[13.84]	[12.70]	[9.98]	[10.9]	[17.42] - [17.55]	[10.41]
4	.2500-28UNJF-3B	.748	.18	.735	.591	.484	.56	.749 - .755	.540
M6	M6 X 1-4H5H	[19.00]	[4.6]	[18.67]	[15.01]	[12.29]	[14.2]	[19.02] - [19.18]	[13.72]
5	.3125-24UNJF-3B	.810	.20	.800	.655	.548	.75	.811 - .817	.730
M8	M8 X 1.25-4H5H	[20.57]	[5.1]	[20.32]	[16.64]	[13.92]	[19.0]	[20.60] - [20.75]	[18.54]
6	.3750-24UNJF-3B	.873	.22	.865	.718	.611	.81	.874 - .880	.790
M10	M10 X 1.5-4H5H	[22.17]	[5.6]	[21.97]	[18.24]	[15.52]	[20.6]	[22.20] - [22.35]	[20.07]

TABLE II

MATL CODE	ITEM	MATERIAL	STANDARD FINISH
A	NUT	CARBON STEEL PER ASTM A108 ULTIMATE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
	HOUSING	AL ALLOY 2024-T4 OR T351 PER QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE 1 CLASS OPTIONAL
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE 1, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541
C	NUT	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
	HOUSING	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE 1, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541, CLASS 3 OR CLASS 1A
S	NUT	CARBON STEEL PER ASTM A108 ULTIMATE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
	HOUSING	CARBON STEEL PER ASTM A108 ULTIMATE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE 1, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541, CLASS 3 OR CLASS 1A

TABLE III

FINISH CODE	SPECIAL FINISH (NUT ONLY)
M	SOLID FILM LUBRICANT PER AS5272, TYPE I
S	SIVER PLATE PER AMS2410 OR AMS2411
C	CADMIUM PLATE PER QQ-P-416 TYPE II CLASS 2

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.XX]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
FLOATING NUT**

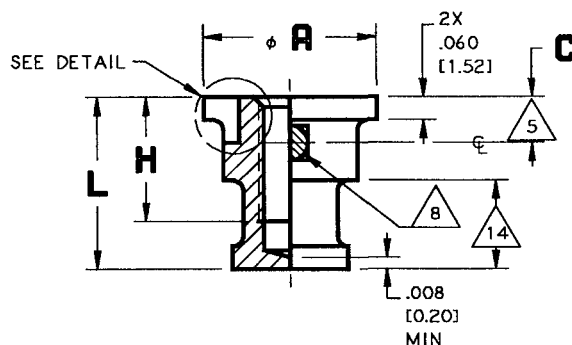
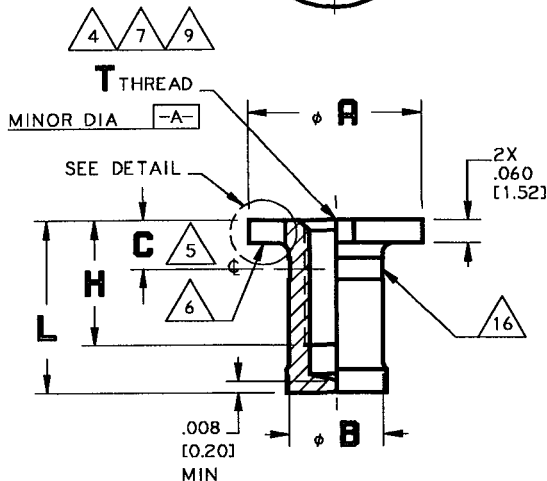
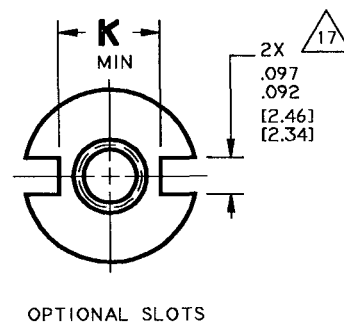
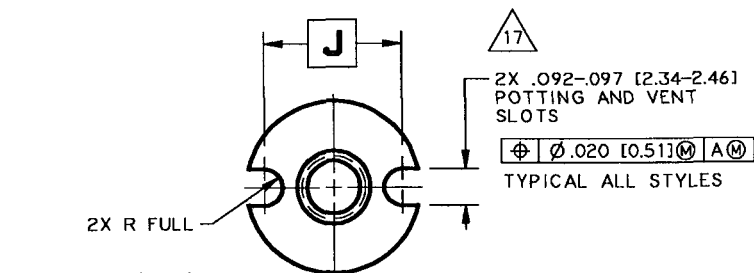
SL606

SHEET **2** OF **2**

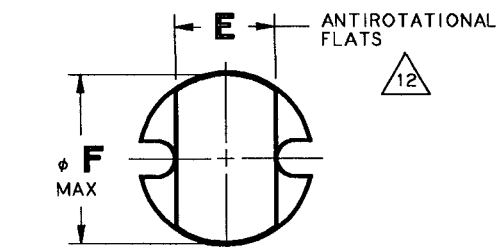
REVISION (M) 09 OCTOBER 1999



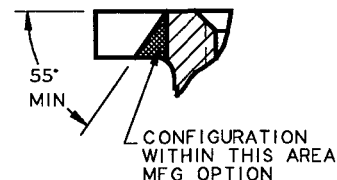
INSERTS FOR ALL TYPE SANDWICH PANELS



STANDARD CONFIGURATION FOR SELF-LOCKING OR
OPTIONAL NONSELF-LOCKING ALUMINUM INSERTS



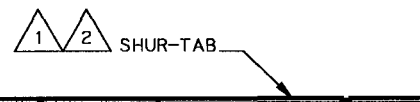
STANDARD CONFIGURATION FOR STEEL, CRES
AND NONSELF-LOCKING ALUMINUM INSERTS



DETAIL - OPTIONAL SLOTS
TYPICAL ALL STYLES

EXAMPLE OF PART CODING:

SL607	-3	-	6	C	S	N	(INCH)
SL607	M5	-	6	C	S	N	[METRIC]
							NYLON PELLET THREAD LOCK IN STEEL OR CRES INSERT
							SPECIAL FINISH CODE (SEE TABLE III)
							MATERIAL CODE (SEE TABLE II)
							LENGTH CODE (SEE TABLE IV)
							- INDICATES THREAD LOCK N INDICATES NO THREAD LOCK
							SIZE CODE (SEE TABLE I)
							BASIC PART NUMBER



NOTES: SEE SHEET 2.

APPLICATION:

A LIGHTWEIGHT, EPOXY POTTED-IN INSERT
FOR ATTACHMENTS TO THIN PANELS OR
WHERE MODERATE LOADS ARE ENCOUNTERED.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
LIGHTWEIGHT**

SL607

SHEET 1 OF 3

REVISION (U) 07 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE I

SIZE CODE	T THREAD	ϕ A +.000 -.010 +0.000 -0.25	ϕ B	C	E	ϕ F MAX	H	J BASIC	K MIN	L MIN	INSTALLATION HOLE SIZE
04	.1120-40UNJC-3B	.451 [11.46]	.250 [6.35]	.12 [3.0]	.260 [6.60]	.45 [11.4]	.187 [4.75]	.358 [9.09]	.251 [6.38]	.217 [5.51]	.452 - .457 [11.48] - [11.61]
06	.1380-32UNJC-3B	.451 [11.46]	.250 [6.35]	.12 [3.0]	.260 [6.60]	.45 [11.4]	.187 [4.75]	.358 [9.09]	.251 [6.38]	.217 [5.51]	.452 - .457 [11.48] - [11.61]
M3	M3X0.5-4H6H										
08	.1640-32UNJC-3B	.451 [11.46]	.250 [6.35]	.12 [3.0]	.260 [6.60]	.45 [11.4]	.187 [4.75]	.358 [9.09]	.251 [6.38]	.217 [5.51]	.452 - .457 [11.48] - [11.61]
M4	M4X0.7-4H6H										
3	.1900-32UNJF-3B	.451 [11.46]	.250 [6.35]	.12 [3.0]	.260 [6.60]	.45 [11.4]	.187 [4.75]	.358 [9.09]	.251 [6.38]	.217 [5.51]	.452 - .457 [11.48] - [11.61]
M5	M5X0.8-4H6H										
4	.2500-28UNJF-3B	.498 [12.65]	.300 [7.62]	.14 [3.6]	.312 [7.92]	.49 [12.4]	.250 [6.35]	.405 [10.29]	.298 [7.57]	.279 [7.09]	.499 - .504 [12.67] - [12.80]
M6	M6X1-4H5H										

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T4 OR T351 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL
C	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
S	CARBON STEEL PER ASTM A108, ULTIMATE TENSILE STRENGTH 85 KSI MIN	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2
N	COPPER-BERYLLIUM ALLOY PER ASTM B196	NONE

TABLE III

FINISH CODE	SPECIAL FINISH
M	SOLID FILM LUBRICANT PER AS5272 ON THREAD AREA ONLY
S	SILVER PLATE PER AMS 2410 OR AMS 2411
C	CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2, ON CRES INSERTS

NOTES:

- SHUR-TAB FURNISHED WITH EACH INSERT.
- REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SL600 DATA SHEET FOR INSTALLATION PROCEDURES.
- INCH THREAD PER MIL-S-8879
METRIC THREAD PER LN9163 OR FED-STD-H28.
- LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NAO009
SELF LOCKING CORROSION RESISTANT STEEL
INSERT WITHOUT PLATING OR LUBRICANT SHALL
BE TESTED WITH SILVER PLATED BOLT OR SCREW.
- BURRS PERMISSIBLE UNDER POTTING SLOTS AS
LONG AS SLOTS ARE NOT RESTRICTED.
- MIN THREAD "H" IN SHORT LENGTHS.
MINIMUM THREAD "H" WHERE LENGTH PERMITS
SHALL BE 2 DIAMETERS (SEE TABLE IV).
- NONMETALLIC THREAD LOCK L-P-410 LOCATED
NO CLOSER THAN 10 DEGREES FROM EDGE
OF EITHER POTTING SLOT.
- MINIMUM "GO" THREAD GAGE PENETRATION SHALL
BE ONE HALF REVOLUTION BEFORE LUBRICATION.
MINIMUM BOLT THREAD PENETRATION SHALL BE
THREE QUARTER REVOLUTION AFTER LUBRICATION.

NOTES: CONT'D

10. THIS PART SERIES MEETS THE REQUIREMENTS
OF NAS1836 (INCH ONLY).
- FOR LENGTHS 3 AND 187, FLANGE THICKNESS IS
.035 [0.09] AND IS NOT AVAILABLE IN ALUMINUM
ALLOY. "C" FOR LENGTH 3, .06 [1.5]. FOR LENGTH
.187, .08 [2.0].
- ORIENTATION OF ANTI-ROTATION FLATS TO
.092-.097 [2.34-2.46] POTTING SLOTS OPTIONAL.
- FOR LONGER LENGTHS PLEASE CONTACT
SHUR-LOK TECHNICAL SERVICES DEPARTMENT.
- EXTERNAL CONFIGURATION OPTIONAL IN THIS AREA
FOR SHORT LENGTHS THROUGH .375 [9.53].
15. SELECT A LENGTH WHICH WILL ALLOW A MINIMUM
.040 [1.02] CLEARANCE BETWEEN BOTTOM OF
INSERT AND INSIDE SURFACE OF BOTTOM SKIN.
- SHANK DEFORMED IN THIS AREA TO PROVIDE
THREAD LOCK WHEN APPLICABLE.
- POTTING AND VENT HOLES OR SLOTS
MANUFACTURER'S OPTION.
18. ALL DIAMETERS
- "L" MINIMUM LENGTH WHICH MAY BE
SPECIFIED PER NAS1836 STANDARD.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES	XX	XXX	ANGLES	[X.X]	[X.X.X]
	±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
LIGHTWEIGHT**

SL607

SHEET **2** OF **3**

REVISION (U) 07 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE IV

LENGTH CODE	NAS SECOND DASH NO.	L	H MINIMUM THREAD DEPTH 7																																
			04	06	M3	08	M4	3	M5	4	M6																								
13 11 11 3	—	.150 [3.81]	.115 [2.92]	.115 [2.92]	.115 [2.92]	.115 [2.92]	.115 [2.92]	—																											
187	—	.187 [4.75]	.136 [3.45]	.136 [3.45]	.136 [3.45]	.136 [3.45]	.136 [3.45]	—																											
4	07	.217 [5.51]	.187 [4.75]	.187 [4.75]	.187 [4.75]	.187 [4.75]	.187 [4.75]	—																											
250	08	.248 [6.30]	.187 [4.75]	.187 [4.75]	.187 [4.75]	.187 [4.75]	.187 [4.75]	—																											
5	09	.279 [7.09]	.200 [5.08]	.200 [5.08]	.200 [5.08]	.200 [5.08]	.200 [5.08]	.200 [5.08]																											
312	10	.310 [7.87]	.224 [5.69]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]																											
6	11	.341 [8.66]	↑	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]																											
375	12	.372 [9.45]		.276 [7.01]	.290 [7.37]	.290 [7.37]	.290 [7.37]	.290 [7.37]																											
7	—	.397 [10.08]		↑	↑	↑	↑	↑	↑	↑																									
406	13	.403 [10.24]									.328 [8.33]	.328 [8.33]	.328 [8.33]	.328 [8.33]																					
437	14	.434 [11.02]									.328 [8.33]	.328 [8.33]	.328 [8.33]	.328 [8.33]																					
8	—	.453 [11.51]									.375 [9.52]	.375 [9.52]	.375 [9.52]	.375 [9.52]																					
468	15	.465 [11.81]									.375 [9.52]	.375 [9.52]	.375 [9.52]	.375 [9.52]																					
9	16	.496 [12.60]									.393 [9.98]	.437 [11.10]	.437 [11.10]	.437 [11.10]																					
531	17	.527 [13.39]									↑	↑	↑	↑	↑	↑	↑																		
10	—	.550 [13.97]																.500 [12.70]	.500 [12.70]	.500 [12.70]															
562	18	.558 [14.17]																↑	↑	↑	↑	↑	↑	↑											
593	19	.589 [14.96]																							↑	↑	↑	↑	↑	↑					
625	20	.620 [15.75]																													↑	↑	↑	↑	↑
656	21	.651 [16.54]																																	
11	22	.682 [17.32]																													↑	↑	↑	↑	↑
718	23	.713 [18.11]																							↑	↑	↑	↑	↑						
750	24	.744 [18.90]	.224 [5.69]	.276 [7.01]	.328 [8.33]	.393 [9.98]	.500 [12.70]																												

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-0000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

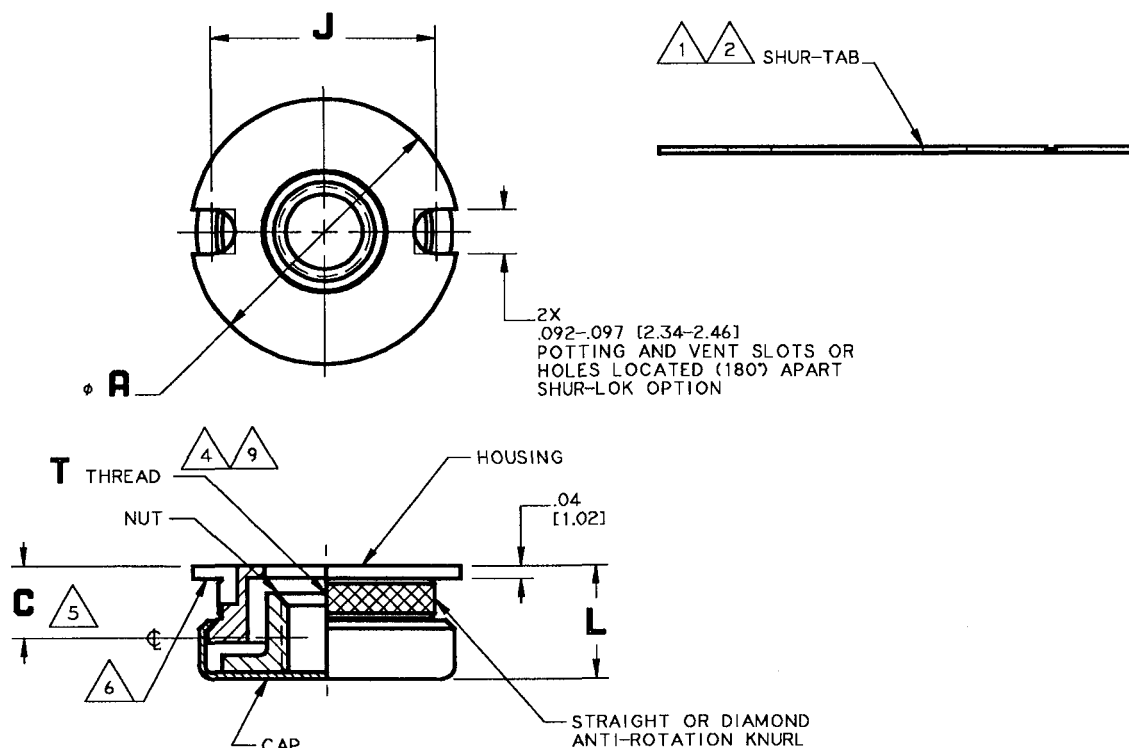
**INSERT, BLIND THREADED,
LIGHTWEIGHT**

SL607

SHEET **3** OF **3**

REVISION (U) 07 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



EXAMPLE OF PART CODING:

SL618 -3 A M (INCH)
SL618 M5 A M (METRIC)

ADD "M" FOR: DRI-FILM LUBE (8)
MATERIAL AND FINISH (SEE TABLE II)
SIZE CODE (SEE TABLE I)
BASIC PART NO

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO TABLE I FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SL600 DATA SHEET FOR INSTALLATION PROCEDURES.
- 4 INCH THREAD PER MIL-S-8879.
METRIC THREAD PER LN9163 OR FED-STD-H28.
- 5 LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027.
METRIC THREAD PER NA0009.
SELF-LOCKING CORROSION RESISTANT STEEL
INSERT WITHOUT PLATING OR LUBRICANT SHALL
BE TESTED WITH SILVER PLATED BOLT OR SCREW.
- 6 BURRS PERMISSIBLE UNDER POTTING SLOTS
OR HOLES AS LONG AS SLOTS OR HOLES
ARE NOT RESTRICTED.
7. INSERT NUT MINIMUM RADIAL FLOAT INSIDE THE
HOUSING IS .032 [0.81].
- 8 DRI-LUBE PER AS5272 TYPE I. (INTERNAL THREAD
OF NUT ELEMENT ONLY)
- 9 MINIMUM "GO" THREAD GAUGE PENETRATION SHALL
BE ONE HALF REVOLUTION BEFORE LUBRICATION.
MINIMUM BOLT THREAD PENETRATION SHALL BE
THREE QUARTER REVOLUTION AFTER LUBRICATION.

APPLICATION:

AN EPOXY POTTED-IN INSERT FOR PANEL
ATTACHMENTS WHERE BOLT HOLE MISALIGNMENT
REQUIRES A FLOATING NUT ELEMENT.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]

TOLERANCES ALL SURFACES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]

DIMENSIONS IN | ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, THIN PANEL, BLIND THREADED,
FLOATING NUT**

SL618

SHEET 1 OF 2

REVISION (M) 19 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE I

SIZE CODE	T THREAD 	R MAX	J	L MAX	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
06	.1380-32UNJC-3B	.560	.467	.24	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M3	M3X0.5 4H6H	[14.22]	[11.86]	[6.10]	[14.25] - [14.38]		
08	.1640-32UNJC-3B	.560	.467	.24	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M4	M4X0.7 4H6H	[14.22]	[11.86]	[6.10]	[14.25] - [14.38]		
3	.1900-32UNJF-3B	.560	.467	.24	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M5	M5X0.8 4H6H	[14.22]	[11.86]	[6.10]	[14.25] - [14.38]		

TABLE II

MATL CODE	ITEM	MATERIAL	STANDARD FINISH
A	NUT	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	HOUSING	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE I OR CHEM FILM PER MIL-C-5541
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541
C	NUT	CRES 303	PASSIVATE PER AMS-QQ-P-35
	HOUSING	CRES 303 PER ASTM-A-582	PASSIVATE PER AMS-QQ-P-35
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541
S	NUT	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	HOUSING	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541
SP1	NUT	CRES 303	SILVER PLATE PER AMS 2410 OR AMS 2412
	HOUSING	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE I OR CHEM FILM PER MIL-C-5541
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541
CSP2	NUT	CRES 303	PASSIVATE PER AMS-QQ-P-35
	HOUSING	CRES 303 PER ASTM-A-582	PASSIVATE PER AMS-QQ-P-35
	CAP	CRES 302 OR 304	PASSIVATE PER AMS-QQ-P-35

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, THIN PANEL, BLIND THREADED,
FLOATING NUT**

SL618

SHEET **2** OF **2**

REVISION (M) 19 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

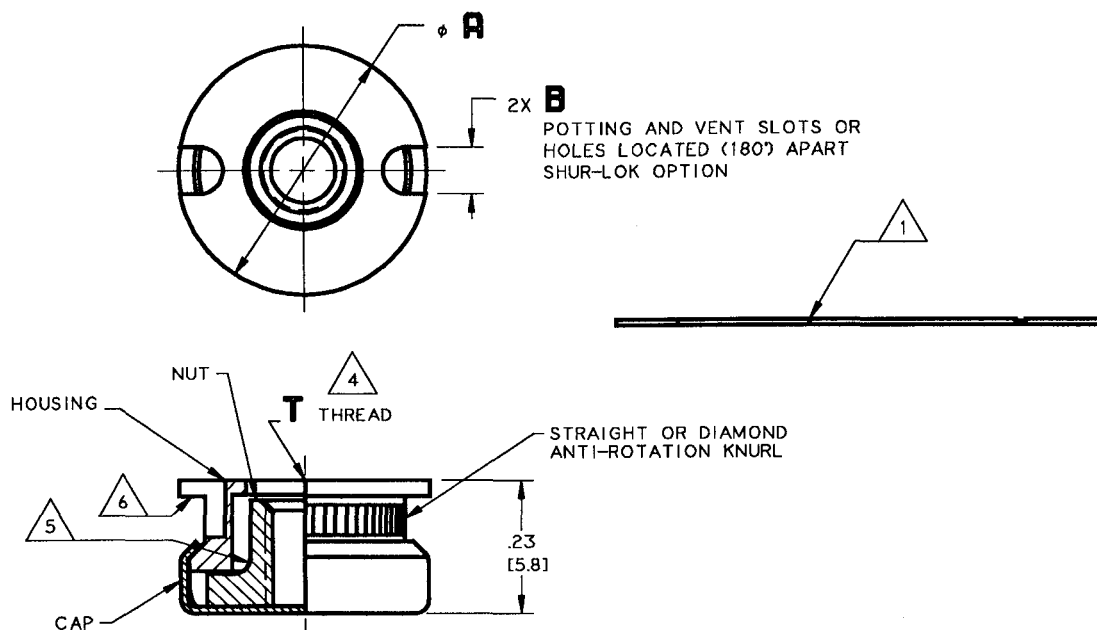


TABLE I

SIZE CODE	T THREAD	ϕ A MAX	B	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
06	.1380-32UNJC-3B	.435	.078	.436 - .441	SLT600T24	SLT600G24
M3	MJ3X0.5-4H6H	[11.05]	[1.98]	[11.07] - [11.20]		
08	.1640-32UNJC-3B	.498	.093	.499 - .504	SLT600T4	SLT600G4
M4	MJ4X0.7-4H6H	[12.65]	[2.36]	[12.67] - [12.80]		

EXAMPLE OF PART CODING:

SL626 - 06 (INCH)

SL626 - M3 (METRIC)

SIZE CODE
(SEE TABLE I)
MATERIAL CODE
(SEE TABLE II)
BASIC PART NUMBER

NOTES:

- SHUR-TAB FURNISHED WITH EACH INSERT.
- TORQUE-OUT VALUES SHALL BE IN ACCORDANCE WITH BPS-N-70 WHEN TESTED PER FIGURE "1" OF BPS-N-70.
- REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURE.
- INCH THREAD PER MIL-S-8879
METRIC THREAD PER ISO5855 OR FED-STD-H28/21.
- LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027
METRIC THREAD PER NA0009
SELF LOCKING CORROSION RESISTANT STEEL INSERT WITHOUT PLATING OR LUBRICANT SHALL BE TESTED WITH SILVER PLATED BOLT OR SCREW.
- BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
- INSERT NUT MINIMUM RADIAL FLOAT INSIDE THE HOUSING IS .032 [0.81].

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN | ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, THIN PANEL, BLIND,
FLOATING NUT**

SL626

SHEET 1 OF 2

REVISION (B) 14 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE II

MATL CODE	ITEM	MATERIAL	STANDARD FINISH
A	NUT	CARBON STEEL PER ASTM-A-108 ULTIMATE STRENGTH 85 KSI MIN	CAD PLATE PER QQ-P-416 TYPE II, CLASS 2
	HOUSING	AL ALLOY 2024-T4 OR T351 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE I, CLASS 1
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541
C	NUT	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
	HOUSING	CRES 303 PER ASTM A582	PASSIVATE PER AMS-QQ-P-35
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541
-	NUT	CARBON STEEL PER ASTM-A-108 ULTIMATE STRENGTH 85 KSI MIN	CAD PLATE PER QQ-P-416 TYPE II, CLASS 2
	HOUSING	CARBON STEEL PER ASTM-A-108 ULTIMATE STRENGTH 85 KSI MIN	CAD PLATE PER QQ-P-416 TYPE II, CLASS 2
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	ANODIZE PER MIL-A-8625 TYPE I, CLASS OPTIONAL OR CHEM FILM PER MIL-C-5541

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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TELEPHONE: (949) 474-6000

SHUR-LOK

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, THIN PANEL, BLIND.
FLOATING NUT**

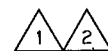
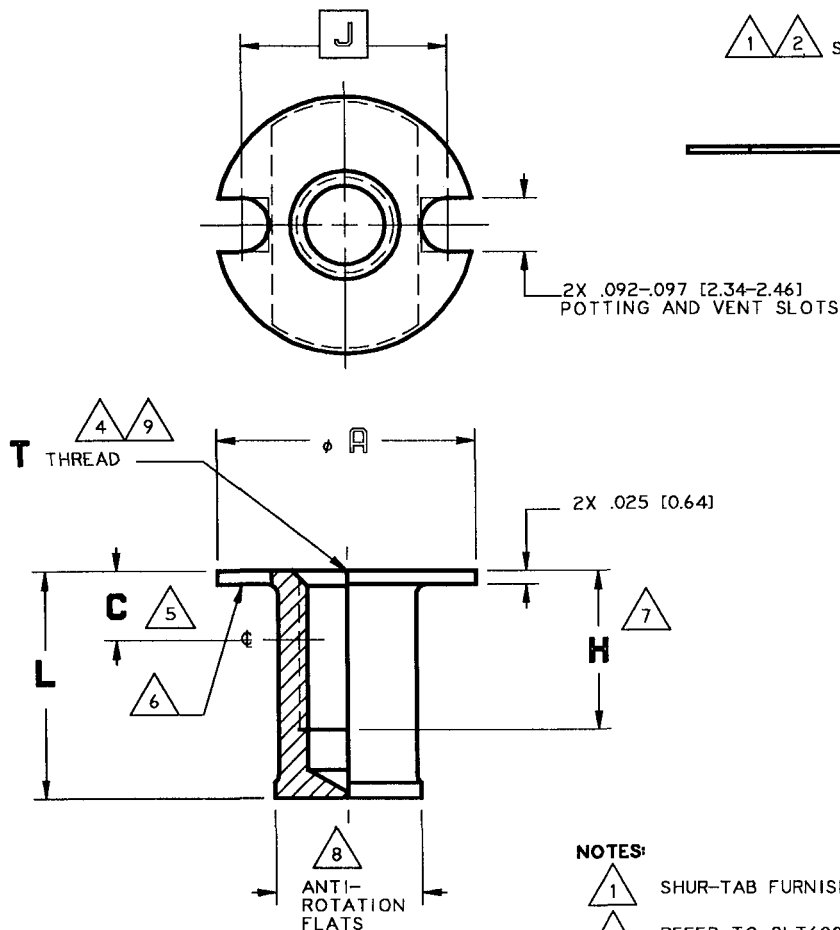
SL626

SHEET **2** OF **2**

REVISION (B) 14 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS



SHUR-TAB

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SL600 DATA SHEET FOR INSTALLATION PROCEDURES.
- 4 INCH THREAD PER MIL-S-8879. METRIC THREAD PER LN9163 OR FED-STD-H28.
- 5 LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027.
METRIC THREAD PER NA0009.
SELF-LOCKING CORROSION RESISTANT STEEL INSERT WITHOUT PLATING OR LUBRICANT SHALL BE TESTED WITH SILVER PLATED BOLT OR SCREW.
- 6 BURRS PERMISSIBLE UNDER POTTING SLOTS AS LONG AS SLOTS ARE NOT RESTRICTED.
- 7 H MINIMUM THREAD DEPTH SEE TABLE III.
- 8 ORIENTATION OF ANTI-ROTATION FLATS TO .092-.097 [2.34-2.46] POTTING SLOTS OPTIONAL.
- 9 MINIMUM "GO" THREAD GAGE PENETRATION SHALL BE ONE HALF REVOLUTION BEFORE LUBRICATION. MINIMUM BOLT THREAD PENETRATION SHALL BE THREE QUARTER REVOLUTION AFTER LUBRICATION.
- 10 SIZE CODES 3 AND M5 NOT AVAILABLE IN -3 LENGTH. SIZE CODES 4 AND M6 NOT AVAILABLE IN -3 OR -4 LENGTHS.

EXAMPLE OF PART CODING:

SL644 - 3 -7 M (INCH)
SL644 - M5 -7 M [METRIC]

SPECIAL FINISH CODE (SEE TABLE IV)
LENGTH CODE (SEE TABLE III)
SIZE CODE (SEE TABLE I)
MATERIAL AND FINISH CODE (SEE TABLE I)
BASIC PART NO.

APPLICATION:

AN EPOXY POTTED-IN INSERT FOR PANEL ATTACHMENTS WHERE BOLT HOLE MISALIGNMENT REQUIRES A FLOATING NUT ELEMENT.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREAD,
LIGHTWEIGHT**

SL644

SHEET 1 OF 2

REVISION (G) 06 JULY 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE I

MATL AND FINISH	MATERIAL	STANDARD FINISH
-	CARBON STEEL PER ASTM A108	CADMIUM PLATE PER QQ-P-416, TYPE II, CL 2
C	CRES 303 PER ASTM A581 OR ASTM A582	PASSIVATE PER AMS-QQ-P-35

TABLE II

SIZE CODE	T THREAD 	A +.000 -.010 +{0.00} -0.25	C REF	J BASIC	INSTALLATION HOLE SIZE
04	.1120-40UNC-3B	.451 [11.46]	.12 [3.05]	.358 [9.09]	.452 - .457 [11.48] - [11.61]
06	.1380-32UNC-3B	.451 [11.46]	.12 [3.05]	.358 [9.09]	.452 - .457 [11.48] - [11.61]
M3	M3X0.5-4H6H				
08	.1640-32UNC-3B	.451 [11.46]	.12 [3.05]	.358 [9.09]	.452 - .457 [11.48] - [11.61]
M4	M4X0.7-4H6H				
3	.1900-32UNJF-3B	.451 [11.46]	.12 [3.05]	.358 [9.09]	.452 - .457 [11.48] - [11.61]
M5	M5X0.8-4H6H				
4	.2500-28UNJF-3B	.498 [12.65]	.14 [3.56]	.405 [10.29]	.499 - .504 [12.67] - [12.80]
M6	M6X1-4H5H				

TABLE III

LENGTH CODE	L	H MINIMUM THREAD DEPTH								
		04	06	M3	08	M4	3	M5	4	M6
10 10	3	.170 [4.32]	.138 [3.51]	.138 [3.51]	.138 [3.51]					
	4	.218 [5.54]	.187 [4.75]	.187 [4.75]	.187 [4.75]	.187 [4.75]				
	5	.281 [7.14]	.200 [5.08]	.200 [5.08]	.200 [5.08]	.200 [5.08]	.200 [5.08]			
	6	.343 [8.71]	.225 [5.72]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]			
	7	.397 [10.08]	.225 [5.72]	.276 [7.01]	.276 [7.01]	.276 [7.01]	.276 [7.01]			
	8	.453 [11.51]	.225 [5.72]	.276 [7.01]	.328 [8.33]	.328 [8.33]	.328 [8.33]			
	9	.500 [12.70]	.225 [5.72]	.276 [7.01]	.328 [8.33]	.375 [9.52]	.375 [9.52]			
	10	.550 [13.97]	.225 [5.72]	.276 [7.01]	.328 [8.33]	.375 [9.52]	.437 [11.10]			
	11	.687 [17.45]	.225 [5.72]	.276 [7.01]	.328 [8.33]	.375 [9.52]	.500 [12.70]			

TABLE IV

FINISH CODE	SPECIAL FINISH
M	SOLID FILM LUBRICANT PER AS5272, TYPE I IN THREAD AREA ONLY
C	CADMIUM PLATE PER QQ-P-416, TYPE II, CL 2 ON CRES INSERTS
S	SILVER PLATE PER AMS2410 OR AMS2411

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES

.XX .XXX	ANGLES	[X.X]	[X.X X]
±.03 ±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 67-32 07 17

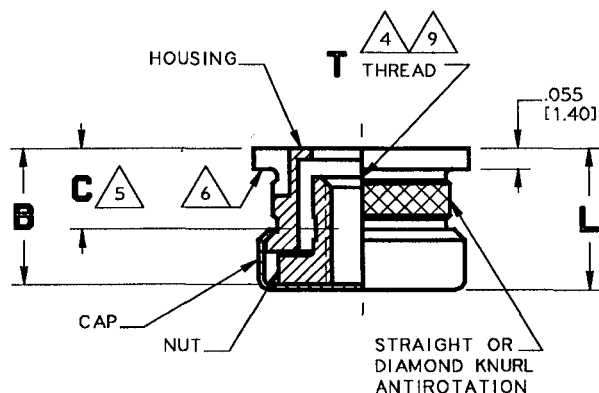
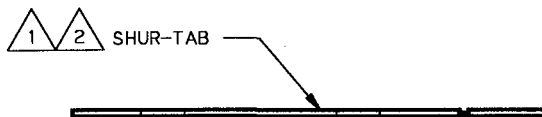
SL644

**INSERT, BLIND THREAD,
LIGHTWEIGHT**

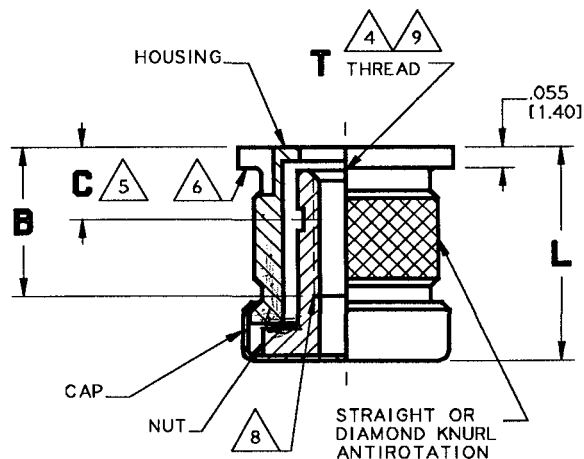
SHEET **2** OF **2**

REVISION (E) 06 JULY 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



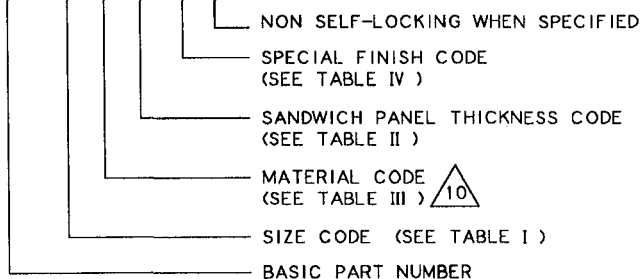
STANDARD MANUFACTURING CONFIGURATION
FOR -3 AND SHORTER



OPTIONAL MANUFACTURING CONFIGURATION
FOR -4 LENGTHS AND LONGER

EXAMPLE OF PART CODING:

SL2334 -3 A 3 M SP5 (INCH)
SL2334 M5 A 3 M SP5 [METRIC]



NOTES CONTINUED:

- 9 MINIMUM "GO" THREAD GAGE PENETRATION SHALL BE ONE HALF REVOLUTION BEFORE LUBRICATION. MINIMUM BOLT THREAD PENETRATION SHALL BE THREE QUARTER REVOLUTION AFTER LUBRICATION.
- 10 INACTIVE FOR NEW DESIGN (SEE EXAMPLE OF PART CODING).
- 11. SEE SHEET 4 OF 4 FOR LOT ACCEPTANCE TORQUE OUT TESTING AND REQUIREMENTS.

APPLICATION:

AN EPOXY POTTED-IN INSERT FOR PANEL ATTACHMENTS WHERE BOLT HOLE MISALIGNMENT REQUIRES A FLOATING NUT ELEMENT.

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO SLT600 DATA SHEET FOR SHUR-TAB AND GUIDE TOOL.
- 3. REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURES.
- 4 INCH THREAD PER MIL-S-8879. METRIC THREAD PER LN9163 OR FED-STD-H28
- 5 LOCKING TORQUE. INCH THREAD PER MIL-DTL-25027. METRIC THREAD PER NA0009. SELF-LOCKING CORROSION RESISTANT STEEL INSERT WITHOUT PLATING OR LUBRICANT SHALL BE TESTED WITH SILVER PLATED BOLT OR SCREW
- 6 BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
- 7. INSERT NUT MINIMUM RADIAL FLOAT INSIDE THE HOUSING IS .032 [0.81].
- 8 THREAD MAY NOT BE THROUGH ON -4 LENGTHS AND LONGER. (MANUFACTURES OPTION)

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
+.03 +.010 ±2° +[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
FLOATING NUT**

SL2334

SHEET 1 OF 4

REVISION (AA) 08 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE I

SIZE CODE	T THREAD 	A +.000 -.010 +[0.00] -[0.25]	C REF 	INSTALLATION HOLE SIZE	SHUR-TAB PART NO. 
04	.1120-40UNJC-3B	.561 [14.25]	.14 [3.6]	.562 - .565 [14.27] - [14.35]	SLT600T6 OR SLT600T6P
06	.1380-32UNJC-3B	.561 [14.25]	.14 [3.6]	.562 - .565 [14.27] - [14.35]	SLT600T6 OR SLT600T6P
M3	M3 X 0.5-4H6H				
08	.1640-32UNJC-3B	.561 [14.25]	.16 [4.1]	.562 - .565 [14.27] - [14.35]	SLT600T6 OR SLT600T6P
M4	M4 X 0.7-4H6H				
3	.1900-32UNJF-3B	.561 [14.25]	.16 [4.1]	.562 - .565 [14.27] - [14.35]	SLT600T6 OR SLT600T6P
M5	M5 X 0.8-4H6H				
4	.2500-28UNJF-3B	.685 [17.40]	.18 [4.6]	.687 - .690 [17.45] - [17.53]	SLT600T9 OR SLT600T9P
M6	M6 X 1-4H5H				
5	.3125-24UNJF-3B	.811 [20.60]	.20 [5.1]	.812 - .815 [20.62] - [20.70]	SLT600T10 OR SLT600T10P
M8	M8 X 1.25-4H5H				
6	.3750-24UNJF-3B	.937 [23.80]	.22 [5.6]	.937 - .940 [23.80] - [23.88]	SLT600T11 OR SLT600T11P
M10	M10 X 1.5-4H5H				

TABLE II

SANDWICH PANEL THICKNESS CODE	L MAX	B MAXIMUM RECOMMENDED BOLT ENGAGEMENT LENGTH													
		SIZE CODE													
		04	06	M3	08	M4	3	M5	4	M6	5	M8	6	M10	
1	.310 [7.87]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	.250 [6.35]	—		—			
2	.350 [8.89]	.250 [6.35]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.281 [7.14]		.281 [7.14]		
3	.375 [9.52]	.250 [6.35]	.281 [7.14]	.281 [7.14]	.281 [7.14]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]		.312 [7.92]		
4	.455 [11.56]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]	.312 [7.92]		.312 [7.92]		
5	.565 [14.35]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.437 [11.10]	.437 [11.10]	.437 [11.10]	.437 [11.10]	.437 [11.10]		.437 [11.10]		
6	.690 [17.53]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.500 [12.70]	.500 [12.70]	.532 [13.51]	.532 [13.51]	.532 [13.51]		.532 [13.51]		
7	.815 [20.70]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.500 [12.70]	.500 [12.70]	.625 [15.88]	.625 [15.88]	.656 [16.66]		.656 [16.66]		
8	.935 [23.75]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.500 [12.70]	.500 [12.70]	.625 [15.88]	.625 [15.88]	.718 [18.24]		.718 [18.24]		
9	1.060 [26.92]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.500 [12.70]	.500 [12.70]	.625 [15.88]	.625 [15.88]	.718 [18.24]		.718 [18.24]		
10	1.185 [30.10]	.250 [6.35]	.281 [7.14]	.312 [7.92]	.375 [9.52]	.375 [9.52]	.500 [12.70]	.500 [12.70]	.625 [15.88]	.625 [15.88]	.718 [18.24]		.718 [18.24]		

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
FLOATING NUT,**

SL2334

SHEET **2** OF **4**

REVISION (AA) 08 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE III

MATL CODE	ITEM, MATERIAL AND STANDARD FINISH		
	NUT	HOUSING	CAP
A	CARBON OR ALLOY STEEL, ULTIMATE STRENGTH 85 KSI MIN. CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2	AL ALLOY 2024-T4, ANODIZE PER MIL-A-8625 TYPE I OR CHEM FILM PER MIL-C-5541	AL ALLOY 6061-T6, ANODIZE PER MIL-A-8625, TYPE I OR CHEM FILM PER MIL-C-5541
B	CARBON OR ALLOY STEEL, ULTIMATE STRENGTH 85 KSI MIN. CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2	CARBON OR ALLOY STEEL, CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2	
C	CRES 303, PASSIVATE PER ASTM A967	CRES 303, PASSIVATE PER ASTM A967	
D	CRES 303, PASSIVATE PER ASTM A967	AL ALLOY 2024-T4, ANODIZE PER MIL-A-8625 TYPE I OR CHEM FILM PER MIL-C-5541	
E 	CARBON OR ALLOY STEEL, ULTIMATE STRENGTH 85 KSI MIN. CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2 AND DRY-FILM LUBE PER AS5272, TYPE I	AL ALLOY 2024-T4, ANODIZE PER MIL-A-8625 TYPE I OR CHEM FILM PER MIL-C-5541	
F 	CRES 303, HIGH CHLORIDE NICKEL STRIKE AND CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2	AL ALLOY 2024-T4, ANODIZE PER MIL-A-8625 TYPE I OR CHEM FILM PER MIL-C-5541	
G	CARBON OR ALLOY STEEL, ULTIMATE STRENGTH 85 KSI MIN. CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2	CRES 303, PASSIVATE PER ASTM A967	
H 	CRES 303, SILVER PLATE PER AMS2410	AL ALLOY 2024-T4, ANODIZE PER MIL-A-8625 TYPE I OR CHEM FILM PER MIL-C-5541	
J 	CRES 303, SILVER PLATE PER AMS2410	CRES 303, PASSIVATE PER ASTM A967	

TABLE IV

FINISH CODE	SPECIAL FINISH
M	SOLID FILM LUBRICANT PER AS5272, TYPE I, NUT ONLY.
C	CAD PLATE PER QQ-P-416 TYPE II, CLASS 2 ON CRES NUT ONLY.
S	SILVER PLATE PER AMS2410, NUT ONLY

UNLESS OTHERWISE SPECIFIED
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ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]  ALL SURFACES

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

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TELEPHONE: (32) 87-32.07.11

**INSERT, BLIND THREADED,
FLOATING NUT**

SL2334

SHEET **3** OF **4**

REVISION AA 08 OCTOBER 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

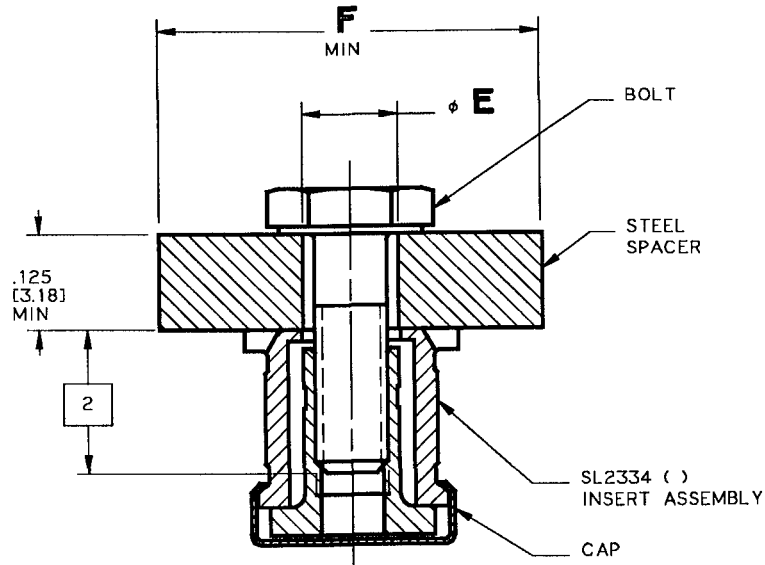


FIGURE 1

TORQUE-TENSION TEST SETUP

TABLE V

TORQUE-TENSION TESTING				
SIZE CODE	THREAD SIZE REF	TORQUE 4	SPACER DIMENSION	
			ϕ E	F MIN
04	.1120-40 UNJC-3B	10 IN-LB [1.1 N-m]	.114 - .117 [2.90] - [2.97]	.625 [15.88]
M3	M3 X 0.5-4H6H	10 IN-LB [1.1 N-m]	.120 - .123 [3.05] - [3.12]	.625 [15.88]
06	.1380-32 UNJC-3B	20 IN-LB [2.3 N-m]	.140 - .143 [3.56] - [3.62]	.625 [15.88]
M4	M4 X 0.7-4H6H	30 IN-LB [3.4 N-m]	.158 - .161 [4.01] - [4.09]	.625 [15.88]
08	.1640-32 UNJC-3B		.164 - .167 [4.17] - [4.24]	
3	.1900-32 UNJF-3B	35 IN-LB [4.0 N-m]	.190 - .193 [4.83] - [4.90]	.625 [15.88]
M5	M5 X 0.8-4H6H		.197 - .200 [5.00] - [5.08]	
M6	M6 X 1-4H5H	65 IN-LB [7.3 N-m]	.236 - .239 [6.00] - [6.07]	.750 [19.05]
4	.2500-28 UNJF-3B		.250 - .253 [6.35] - [6.43]	
5	.3125-24 UNJF-3B	110 IN-LB [12.4 N-m]	.312 - .315 [7.92] - [8.00]	.875 [22.22]
M8	M8 X 1.25-4H5H		.315 - .318 [8.00] - [8.08]	
6	.3750-24 UNJF-3B	175 IN-LB [19.8 N-m]	.375 - .378 [9.52] - [9.60]	1.000 [25.40]
M10	M10 X 1.5-4H5H		.394 - .397 [10.01] - [10.08]	

TORQUE-TENSION LOT ACCEPTANCE

MANUFACTURER WILL TEST FIVE (5) PIECES PER LOT IN ACCORDANCE WITH TORQUE-TENSION PROCEDURE AND REQUIREMENTS BELOW:

1. TEST SL2334 () INSERT ASSY WITH SPACER PER TABLE V AS SHOWN IN FIGURE 1
2. ENGAGE A TEST-BOLT INTO INSERT ASSEMBLY AS SHOWN IN FIGURE 1 WITH CAUTION THAT BOLT DOES NOT CONTACT BOTTOM OF CAP. TEST-BOLT SHALL BE PLATED AND RATED AT 160 KSI UTS MINIMUM. FOR SELF-LOCKING INSERTS, BOLT MUST PROTRUDE TWO (2) THREADS MINIMUM PAST THE LOCKING FEATURE. FOR NON-SELF-LOCKING INSERTS, BOLT THREADS MUST ENGAGE MINIMUM ONE (1) DIAMETER THREAD LENGTH.
3. WITH INSERT RESTRAINED, TIGHTEN BOLT AGAINST THE STEEL SPACER WITH A SOCKET WRENCH TO THE TORQUE VALUES NOTED IN TABLE V
4. PARTS ARE ACCEPTABLE IF TORQUE WRENCH REFLECTS STEADY TORQUE INCREASE TO VALUE SPECIFIED IN TABLE V.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. .125 [3.2]
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN () ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
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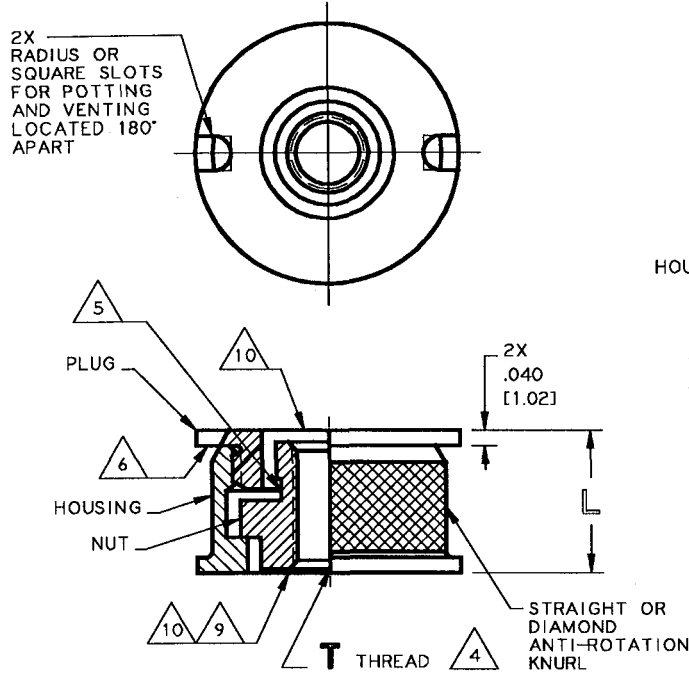
SL2334

**INSERT, BLIND THREADED,
FLOATING NUT**

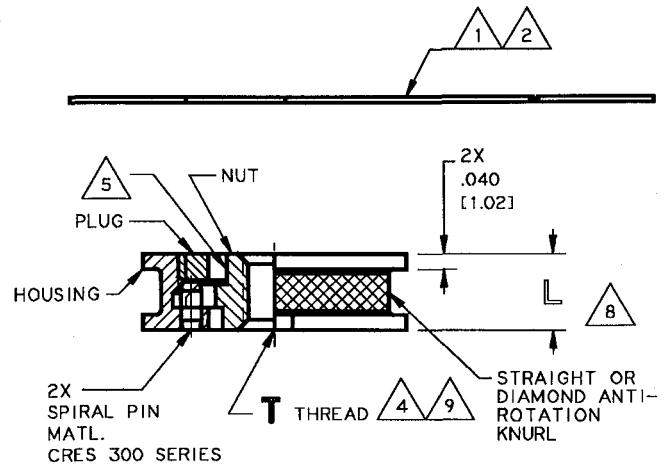
SHEET 4 OF 4

REVISION (AA) 08 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



STANDARD CONFIGURATION



SHORT LENGTH CONFIGURATION

SL2821 C 3 - 375 (INCH)
SL2821 C M5 - 9.53 (METRIC)

INCH = LENGTH CODE
IN THOUSANDTHS
METRIC = LENGTH CODE
IN MILLIMETERS
SIZE CODE (SEE TABLE I)
MATERIAL CODE (SEE TABLE II)
BASIC PART NUMBER

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO TABLE I FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SL600 DATA SHEET FOR INSTALLATION PROCEDURE.
- 4 INCH THREAD PER MIL-S-8879, METRIC THREAD PER ISO5855 OR FED-STD-H28/21.
- 5 LOCKING TORQUE:
INCH THREAD PER MIL-DTL-25027, METRIC THREAD PER NA0009. SELF-LOCKING CORROSION RESISTANT STEEL INSERT WITHOUT PLATING OR LUBRICANT SHALL BE TESTED WITH SILVER PLATED BOLT OR SCREW.
- 6 BURRS PERMISSIBLE UNDER POTTING SLOTS AS LONG AS SLOTS ARE NOT RESTRICTED.
7. INSERT NUT MINIMUM RADIAL FLOAT INSIDE HOUSING IS .032 [0.81].
- 8 "L" DIMENSION MIN .20 [5.08] FOR SHORT LENGTH CONFIGURATION ONLY.
- 9 BOLT OR SCREW ENTRY THIS SIDE ONLY.
- 10 NUT WILL NOT PROTRUDE BEYOND THIS SURFACE.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
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PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.XX]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
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SHUR-LOK

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**INSERT, THROUGH THREADED,
FLOATING NUT**

SL2821

SHEET 1 OF 2



INSERTS FOR ALL TYPE SANDWICH PANELS

TABLE I

SIZE CODE	T THREAD	φ R MAX	L MIN 	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
06	.1380-32UNJC-3B	.685 [17.40]	.20 [5.1]	.686 - .691 [17.42] - [17.55]	SLT600T9 OR	SLT600G9
M3	MJ3X0.5-4H6H				SLT600T9P	
08	.1640-32UNJC-3B	.685 [17.40]	.20 [5.1]	.686 - .691 [17.42] - [17.55]	SLT600T9 OR	SLT600G9
M4	MJ4X0.7-4H6H				SLT600T9P	
3	.1900-32UNJF-3B	.685 [17.40]	.20 [5.1]	.686 - .691 [17.42] - [17.55]	SLT600T9 OR	SLT600G9
M5	MJ5X0.8-4H6H				SLT600T9P	

TABLE II

MATL CODE	ITEM	MATERIAL	FINISH
A	NUT	CARBON STEEL, 85 KSI UTS MIN PER ASTM A108	CAD PLATE PER QQ-P-416
	HOUSING	AL ALLOY 7075-T6 PER AMS-QQ-A-225/9	ANODIZE PER MIL-A-8625
	PLUG	AL ALLOY 7075-T6 PER AMS-QQ-A-225/9	ANODIZE PER MIL-A-8625
S	NUT	CARBON STEEL, 85 KSI UTS MIN PER ASTM A108	CAD PLATE PER QQ-P-416
	HOUSING	CARBON STEEL, 85 KSI UTS MIN PER ASTM A108	CAD PLATE PER QQ-P-416
	PLUG	CARBON STEEL, 85 KSI UTS MIN PER ASTM A108	CAD PLATE PER QQ-P-416
C	NUT	CRES 303 PER ASTM A581 OR A582	PASSIVATE PER AMS-QQ-P-35
	HOUSING	CRES 303 PER ASTM A581 OR A582	PASSIVATE PER AMS-QQ-P-35
	PLUG	CRES 303 PER ASTM A581 OR A582	PASSIVATE PER AMS-QQ-P-35

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES

TOLERANCES	XX	.XXX	ANGLES	[X.X]	[X.X X]
	±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
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TELEPHONE: (32) 87-32.07.11

SL2821

**INSERT, THROUGH THREADED,
FLOATING NUT**

SHEET **2** OF **2**

REVISION (H) 22 JUNE 1999



INSERTS FOR ALL TYPE SANDWICH PANELS

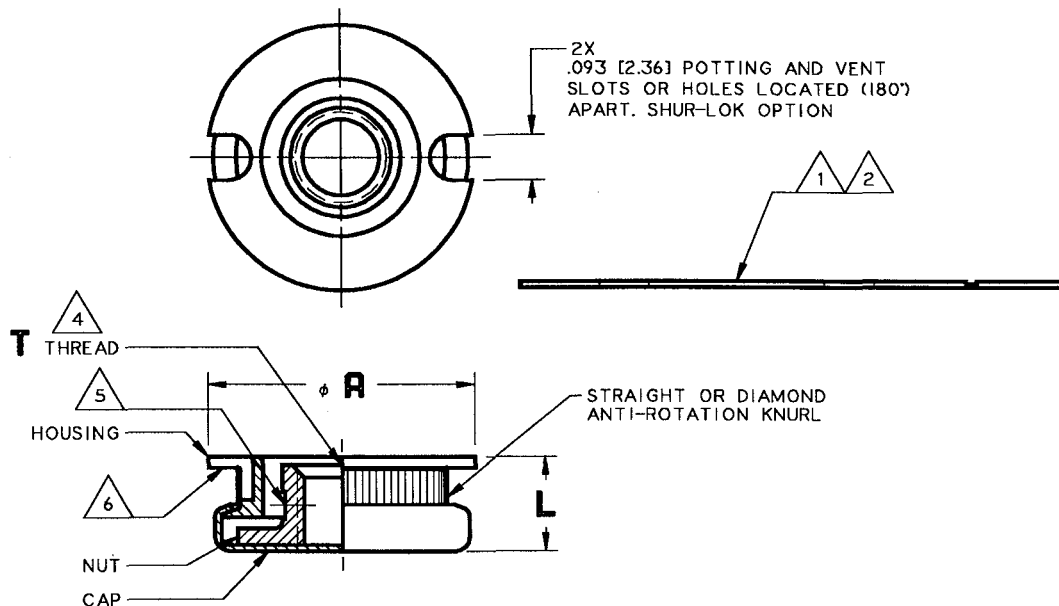


TABLE I

SIZE CODE	T THREAD	ϕ A MAX	L MAX	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
-04	.1120-40 UNJC-3B	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
-06	.1380-32 UNJC-3B	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
M3	M3X0.5 4H6H	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
-08	.1640-32 UNJC-3B	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
M4	M4X0.7 4H6H	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
-3	.1900-32 UNJF-3B	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6
M5	M5X0.8 4H6H	.560 [14.22]	.200 [5.08]	.561 - .566 [14.25] - [14.38]	SLT600T6 OR SLT600T6P	SLT600G6

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO TABLE I FOR SHUR-TAB AND GUIDE TOOL.
3. REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURE.
- 4 INCH THREAD PER MIL-S-8879
METRIC THREAD PER LN9163 OR FED-STD-H28.
- 5 MODIFIED THREAD IN THIS AREA TO PROVIDE LOCKING TORQUE.
INCH THREAD PER MIL-DTL-25027,
METRIC THREAD PER NA0009.
- 6 BURRS PERMISSIBLE UNDER POTTING HOLES OR SLOTS AS LONG AS HOLES OR SLOTS ARE NOT RESTRICTED.
7. INSERT NUT MINIMUM RADIAL FLOAT INSIDE THE HOUSING IS .032 [0.81].

EXAMPLE OF PART CODING:

SL6224 - 3 S M

- ADD LETTER "M" FOR DRI-FILM LUBE PER AS5272, TYPE I OVER STANDARD FINISH ON NUT ONLY
- MATERIAL CODE (SEE TABLE II)
- SIZE CODE (SEE TABLE I)
- BASIC PART NUMBER

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ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
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SHUR-LOK

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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, THIN PANEL, BLIND,
FLOATING NUT**

SL6224

SHEET 1 OF 2

REVISION E 14 OCTOBER 1999

INSERTS FOR ALL TYPE SANDWICH PANELS



TABLE II

MATL CODE	ITEM	MATERIAL	STANDARD FINISH
A	HOUSING	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625, TYPE I OR CHEM FILM PER MIL-C-5541
	NUT	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541, CLASS 1A
C	HOUSING	CRES 303	PASSIVATE PER AMS-QQ-P-35
	NUT	CRES 303	PASSIVATE PER AMS-QQ-P-35
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541, CLASS 1A
S	HOUSING	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	NUT	CARBON OR ALLOY STEEL	CAD PLATE PER QQ-P-416, TYPE II, CLASS 2
	CAP	AL ALLOY 6061-0 PER QQ-A-250/11	CHEM FILM PER MIL-C-5541, CLASS 1A

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ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
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FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X.X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
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TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-82.07.11

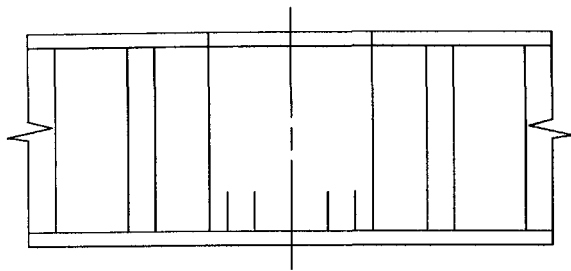
**INSERT, THIN PANEL, BLIND,
FLOATING NUT**

SL6224

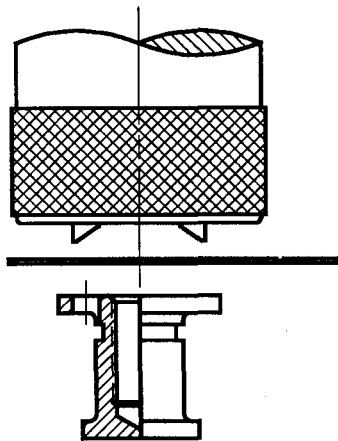
SHEET **2** OF **2**

REVISION (E) 14 OCTOBER 1999

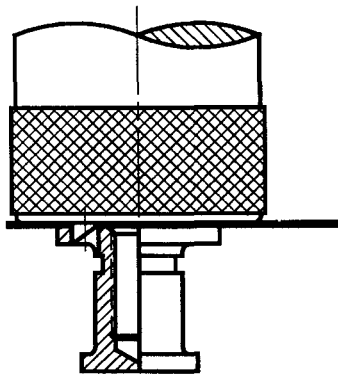
INSERT FOR ALL TYPE SANDWICH PANELS



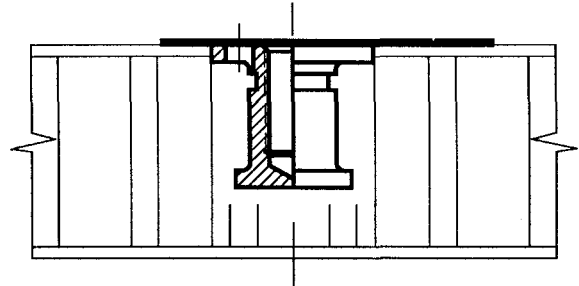
1. DRILL INSTALLATION HOLE TO A DEPTH SLIGHTLY GREATER THAN LENGTH OF INSERT FOR BLIND THREADED INSERTS. DRILL INSTALLATION HOLE THROUGH SANDWICH PANEL FOR THROUGH TYPE INSERTS. REFER TO INDIVIDUAL INSERT CATALOG PAGES FOR INSTALLATION HOLE SIZE.



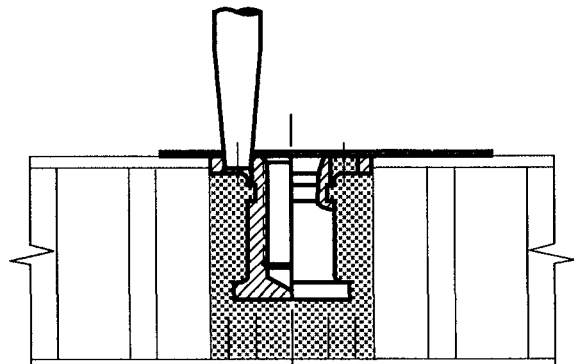
2. SLT600 SHUR-TAB GUIDE TOOL IS USED TO ASSIST IN POSITIONING SHUR-TAB ON INSERT. REMOVE PAPER BACKING FROM TAB AND PLACE ON TOOL WITH ADHESIVE FACE OPPOSITE TOOL. PLACE INSERT ON TOOL, FITTING POTTING VENT HOLES OVER PRONGS OF TOOL.



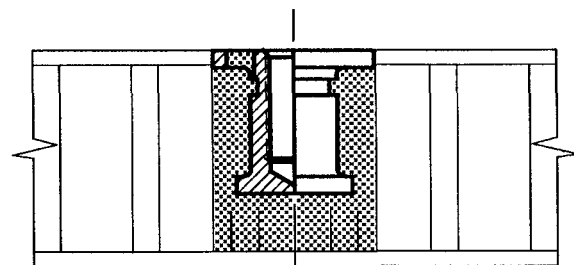
3. PRESS INSERT FIRMLY AGAINST ADHESIVE SIDE OF TAB. REMOVE GUIDE TOOL FROM INSERT AND TAB.



4. PLACE SHUR-TAB INSERT ASSEMBLY IN INSTALLATION HOLE. APPLY ADEQUATE FORCE TO INSURE THAT TAB WILL ADHERE TO FACE OF PANEL. FOR SANDWICH THICKNESSES OVER .50 INCH [12.7 mm] PARTIAL PREPOTTING IS RECOMMENDED. FINAL FILL MAY BE MADE WITH SEALANT GUN.



5. EPOXY MAY BE INJECTED WITH SEALANT GUN THROUGH POTTING HOLE. CAVITY IS FILLED WHEN EPOXY APPEARS IN VENT HOLE.



6. COMPLETED INSTALLATION. TAG SHOULD BE REMOVED AND DISCARDED AFTER EPOXY HAS SET.

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FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSTALLATION PROCEDURE
INSERT, SHUR-TAB**

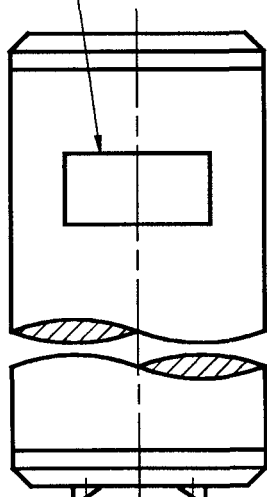
SLD600 DATA

SHEET 1 OF 1

REVISION (N) 14 OCTOBER 1999



MARKING:
PART NO.



$\phi .090$
[2.29]
MAX

GUIDE
TOOL

.073
[1.85]

.101
[2.57]

2X HOLE CONFIGURATION
FOR SLT600T45 SHUR-TAB
ONLY.

VIEW Y

EXAMPLE OF PART CODING

GUIDE TOOL

SLT600 G6

GUIDE TOOL SIZE CODE
(SEE TABLES I THRU VII)

BASIC PART NUMBER

SHUR-TAB

SLT600 T6 P

MATERIAL CODE
(SEE TABLE IX, SHEET 3 OF 3)

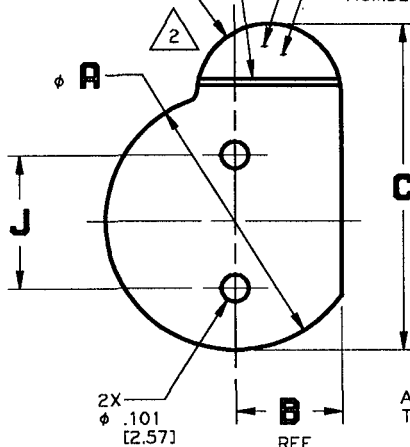
SHUR-TAB SIZE CODE
(SEE TABLES I THRU VII)

BASIC PART NUMBER

NOTES CONTD.

- 8 CONFIGURATION AND ORIENTATION OF LIFTING SECTION OPTIONAL ON THIS SIDE OF BREAKAWAY SEGMENT. INDENTED LINE SHALL BE PARALLEL TO ϕ OF HOLES.

OPTIONAL CREASE
R .25
[6.3]
CONFIGURATION OPTIONAL
SHUR-TAB
IDENTIFICATION
NUMBER



SHUR-TAB, PLASTIC

5

.25
[6.35]
REF
NO
ADHESIVE
IN THIS
AREA

ADHESIVE BACKING
THIS SURFACE

SHUR-TAB
IDENTIFICATION
NUMBER

2X
 $\phi .101$
[2.57]

.25
[6.4]

SHUR-TAB, ALUMINUM

5

ADHESIVE
BACKING
THIS
SURFACE

NOTES:

- FOR GUIDE TOOL AND SHUR-TAB RECOMMENDATIONS SEE TABLES I THRU III
- NO ADHESIVE ALLOWED UNDER FLAP FOR PLASTIC TABS.
- FOR GUIDE TOOL MATERIAL SEE TABLE IV, SHEET 3 OF 3.
- T11 AND T45 SHUR-TABS ARE NOT AVAILABLE IN THE PLASTIC CONFIGURATION.
- PLASTIC AND ALUMINUM SHUR-TABS MEET THE REQUIREMENTS OF NAS 1837 STANDARD.
- LINE INDENTED BOTH SIDES TO PROVIDE BREAKAWAY SEGMENT FOR CONFINED APPLICATIONS. BREAKAWAY SEGMENT APPLIES TO T2, T3, T4, T6, T7 AND T45 ALUMINUM TABS ONLY.
- ADHESIVE UNDER BREAKAWAY SEGMENT PERMISSIBLE BUT NOT REQUIRED FOR ALUMINUM TABS.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES

TOLERANCES	XX	XXX	ANGLES	[X.X]	[X.X X]
	±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

SLT600

GUIDE TOOL AND SHUR-TAB

SHEET 1 OF 3



TABLE I
USE WITH: SL601, SL602, SL603 AND SL604.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-06 M3	G3	T3	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.367 [9.32]
-08 M4	G3	T3	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.367 [9.32]
-3 M5	G3	T3	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.367 [9.32]
-4 M6	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]
-5 M8	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]
-6 M10	G9	T9	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.591 [15.01]

TABLE II
USE WITH: SL606.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-06 M3	G7	T7	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.500 [12.70]
-08 M4	G7	T7	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.500 [12.70]
-3 M5	G7	T7	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.500 [12.70]
-4 M6	G9	T9	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.591 [15.01]
-5 M8	G10	T10	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.655 [16.64]
-6 M10	G11	T11 	1.13 [28.7]	—	—	.718 [18.24]

TABLE III
USE WITH: SL607 AND SL644.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-04	G2	T2	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.358 [9.09]
-06 M3	G2	T2	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.358 [9.09]
-08 M4	G2	T2	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.358 [9.09]
-3 M5	G2	T2	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.358 [9.09]
-4 M6	G4	T4	.90 [22.9]	.33 [8.4]	1.140 [28.96]	.405 [10.29]

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ALL SURFACES
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN | J ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

GUIDE TOOL AND SHUR-TAB

SLT600

SHEET 2 OF 3

REVISION (AA) 23 MAR 1999



TABLE IV
USE WITH: SL6301 AND SL6302.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-08	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]
-3	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]

TABLE V
USE WITH: SL6303 AND SL6304.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-08	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]
-3	G6	T6	.90 [22.9]	.37 [9.4]	1.140 [28.96]	.467 [11.86]
-4	G9	T9	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.591 [15.01]

TABLE VI
USE WITH: SL6306.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-08	G9	T9	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.591 [15.01]
-3	G9	T9	1.13 [28.7]	.50 [12.7]	1.52 [38.6]	.591 [15.01]

TABLE VII
USE WITH: SL6307.

INSERT SIZE CODE	GUIDE TOOL SIZE CODE	SHUR-TAB SIZE CODE	φ A REF.	B REF.	φ C REF.	J REF.
-08	G45	T45 	.90 [22.9]	—	—	.387 [9.83]
-3	G45	T45 	.90 [22.9]	—	—	.387 [9.83]

TABLE VIII
GUIDE TOOL MATERIAL

ITEM	COMPONENT	MATERIAL & FINISH
ALIGNING TOOL	HANDLE	AL ALY. ANODIZE PER MIL-A-8625
	PINS	TOOL STEEL, FINISH: NONE

TABLE IX
SHUR-TAB MATERIAL

MAT'L CODE	MAT'L THK MAX	MATERIAL
NO LETTER	.020 [0.51]	ALUMINUM ALLOY
P	.020 [0.51]	PLASTIC: MECHANICAL PROPERTIES ONLY OF FEDERAL SPEC L-P-535 COMP. B. TYPE II CLASS OPTIONAL.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
XX .XX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

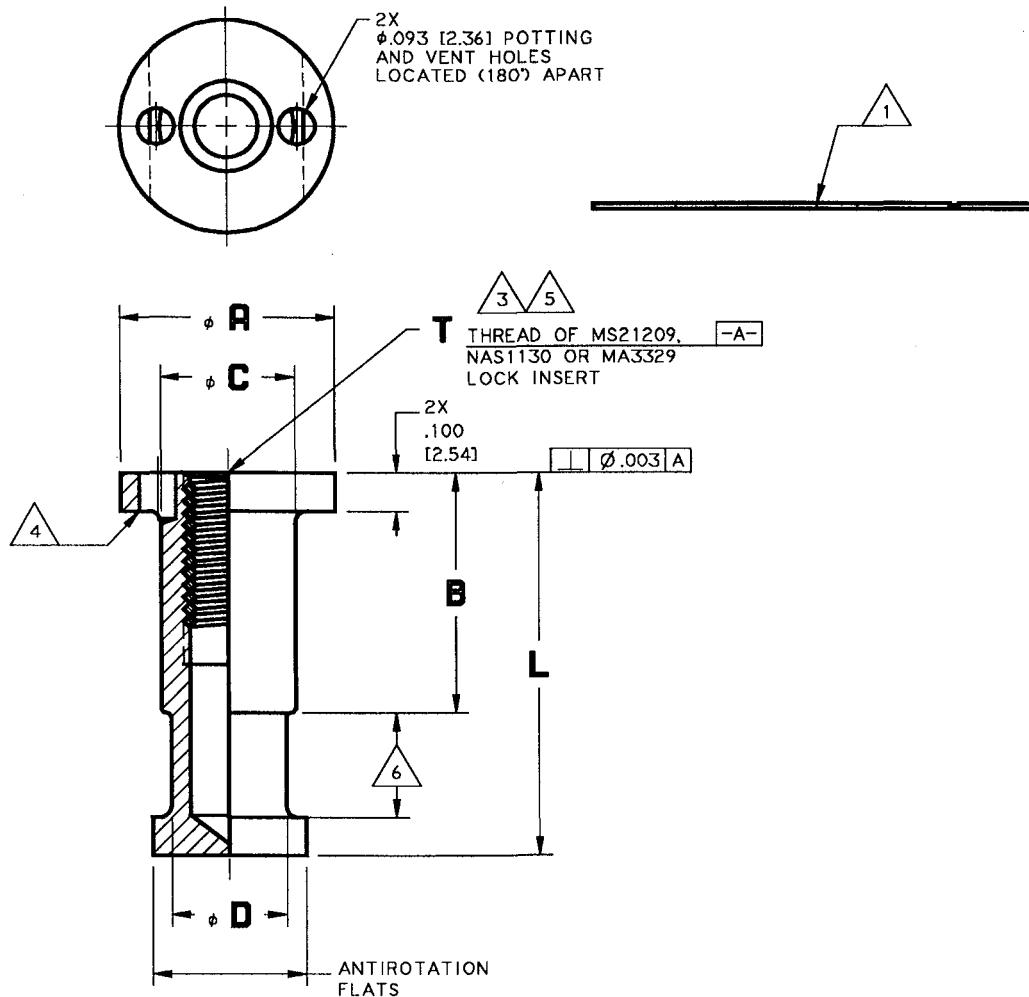
SLT600

GUIDE TOOL AND SHUR-TAB

SHEET **3** OF **3**

REVISION (AA) 23 MAR 1999

INSERTS FOR SPACE AND SATELLITE PANEL APPLICATIONS



EXAMPLE OF PART CODING

SL2630 C 4 -12 (INCH)
SL2630 C M6 -38.1 (METRIC)

INCH = LENGTH CODE IN
INCREMENTS OF .125
METRIC = LENGTH CODE IN
INCREMENTS OF 3.175mm

SIZE CODE
(SEE TABLE I)

MATERIAL CODE
(SEE TABLE II)

BASIC PART NUMBER

NOTES:

- 1 SHUR-TAB FURNISHED WITH EACH INSERT.
- 2 REFER TO TABLE I FOR SHUR-TAB AND GUIDE TOOL.
- 3 MINIMUM FULL THREAD WHERE LENGTH PERMITS SHALL BE TWO DIAMETERS OF THREAD.
- 4 BURRS PERMISSIBLE UNDER POTTING HOLES AS LONG AS HOLES ARE NOT RESTRICTED.
- 5 LOCKING INSERT:
MS21209 OR NAS1130 = INCH SERIES
MA3329 = METRIC SERIES
INSTALL PER MS33537 (INCH)
MA1567 (METRIC)
- 6 EXTERNAL CONFIGURATION OPTIONAL IN THIS AREA FOR SHORT LENGTHS.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]

TOLERANCES

.XX	.XXX	ANGLES	[X.X]	[X.X X]
±.03	±.010	±2°	±[0.8]	±[0.25]

DIMENSIONS IN [] ARE MILLIMETERS

ALL SURFACES

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TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

INSERT, SELF LOCKING

SL2630

SHEET 1 OF 2

05 AUGUST 1999
REVISION (H)

INSERTS FOR SPACE AND SATELLITE PANEL APPLICATIONS



TABLE I

SIZE CODE	T THREAD	φ A +.000 -.002 +[0.00] -[0.05]	φ B REF	φ C REF	φ D REF	INSTALLATION HOLE SIZE	SHUR-TAB PART NO.	GUIDE TOOL PART NO.
3	.1900-32UNF-3B	.560	.62	.35	.30	.561 - .566	SLT600T6 OR SLT600T6P	SLT600G6
M5	M5X0.8-4H6H	[14.22]	[15.7]	[8.9]	[7.6]	[14.25] - [14.38]		
4	.2500-28UNF-3B	.685	.87	.43	.37	.686 - .691	SLT600T9 OR SLT600T9P	SLT600G9
M6	M6X1-4H5H	[17.40]	[22.1]	[10.9]	[9.4]	[17.42] - [17.55]		
5	.3125-24UNF-3B	.685	1.00	.50	.44	.686 - .691	SLT600T9 OR SLT600T9P	SLT600G9
M8	M8X1-4H5H	[17.40]	[25.4]	[12.7]	[11.2]	[17.42] - [17.55]		
6	.3750-24UNF-3B	.841	1.00	.56	.50	.842 - .848	SLT600T11 OR SLT600T11P	SLT600G11
M10	M10X1.25-4H5H	[21.36]	[25.4]	[14.2]	[12.7]	[21.39] - [21.54]		

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
-	AL ALLOY 2024-T4 PER AMS-QQ-A-225/6	ANODIZE PER MIL-A-8625
C	CRES 304 PER QQ-S-763	PASSIVATE PER AMS-QQ-P-35

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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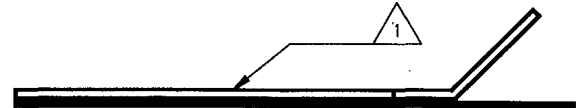
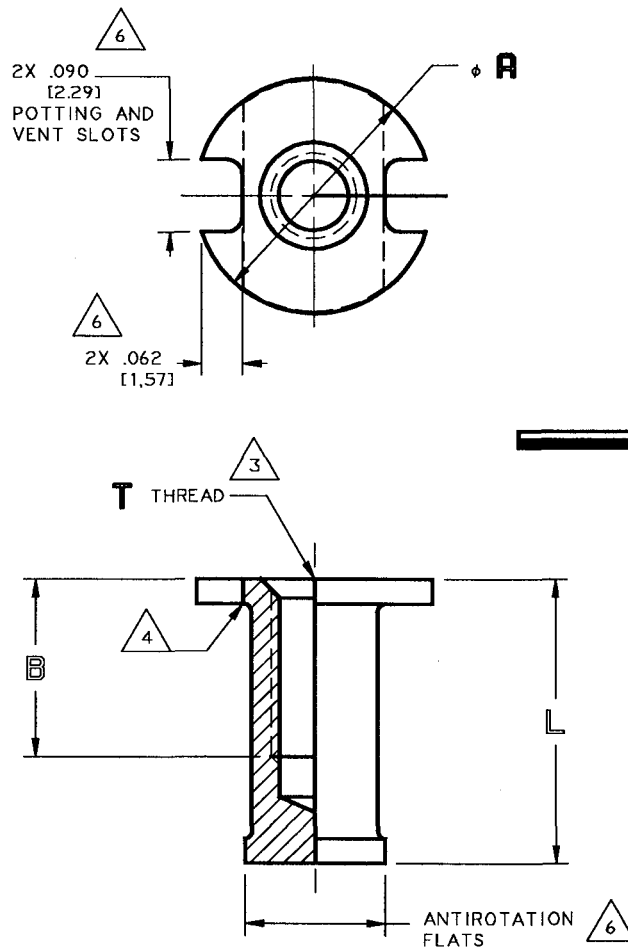
SL2630

INSERT, SELF LOCKING

SHEET **2** OF **2**

REVISION (H) 05 AUGUST 1999

INSERTS FOR SPACE AND SATELLITE PANEL APPLICATIONS



EXAMPLE OF PART NUMBER

SL6288 A 04 -6 (INCH)
SL6288 A M3 -9.53 (METRIC)

INCH = LENGTH CODE IN INCREMENTS OF .0625
METRIC = LENGTH CODE IN INCREMENTS OF 1.59mm
SIZE CODE (SEE TABLE I)
MATERIAL CODE (SEE TABLE II)
BASIC PART NUMBER

NOTES:

- SHUR-TAB FURNISHED WITH EACH INSERT.
- REFER TO SLD600 DATA SHEET FOR INSTALLATION PROCEDURE.
- INCH THREAD PER MIL-S-8879
METRIC THREAD PER MA1370 OR ISO5855.
- BURRS PERMISSIBLE UNDER POTTING SLOTS AS LONG AS SLOTS ARE NOT RESTRICTED.
- MINIMUM LENGTH WHICH MAY BE SPECIFIED.
- ORIENTATION OF SLOTS TO ANTIROTATIONAL FLATS IS OPTIONAL.

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES
.XX .XXX ANGLES [X.X] [X.X.X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, LIGHTWEIGHT,
NON-LOCKING, SHUR-TAB**

SL6288

SHEET 1 OF 2

REVISION A 21 OCTOBER 1999

INSERTS FOR SPACE AND SATELLITE PANEL APPLICATIONS



TABLE I

SIZE CODE	T THREAD	φ A +.000 -.010 +.0001 -0.0251	B MIN THREAD DEPTH	L MIN 	INSTALLATION HOLE SIZE	SHUR-TAB PART NUMBER	GUIDE TOOL PART NUMBER
02	.0860-56 UNJC-3B	.310 [7.87]	.130 [3.30]	.187 [4.75]	.311 - .317 [7.90] - [8.05]	SLT600T15 OR SLT600T15P	SLT600G15
04	.1120-40 UNJC-3B	.310 [7.87]	.170 [4.32]	.250 [6.35]	.311 - .317 [7.90] - [8.05]	SLT600T15 OR SLT600T15P	SLT600G15
06	.1380-32 UNJC-3B	.310 [7.87]	.210 [5.33]	.312 [7.92]	.311 - .317 [7.90] - [8.05]	SLT600T15 OR SLT600T15P	SLT600G15
M3	MJ3X0.5-4H6H						
08	.1640-32 UNJC-3B	.341 [8.66]	.245 [6.22]	.312 [7.92]	.342 - .348 [8.69] - [8.84]	SLT600T16 OR SLT600T16P	SLT600G16
M4	MJ4X0.7-4H6H						
3	.1900-32 UNJF-3B	.390 [9.91]	.285 [7.24]	.375 [9.52]	.392 - .398 [9.96] - [10.11]	SLT600T17 OR SLT600T17P	SLT600G17
M5	MJ5X0.8-4H6H						

TABLE II

MATL CODE	MATERIAL	STANDARD FINISH
A	AL ALLOY 2024-T851 PER AMS-QQ-A 225/6	ANODIZE PER MIL-A-8625

REVISION A 21 OCTOBER 1999

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2] ✓ ALL SURFACES
TOLERANCES
XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

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IRVINE, CALIFORNIA 92614
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SHUR-LOK

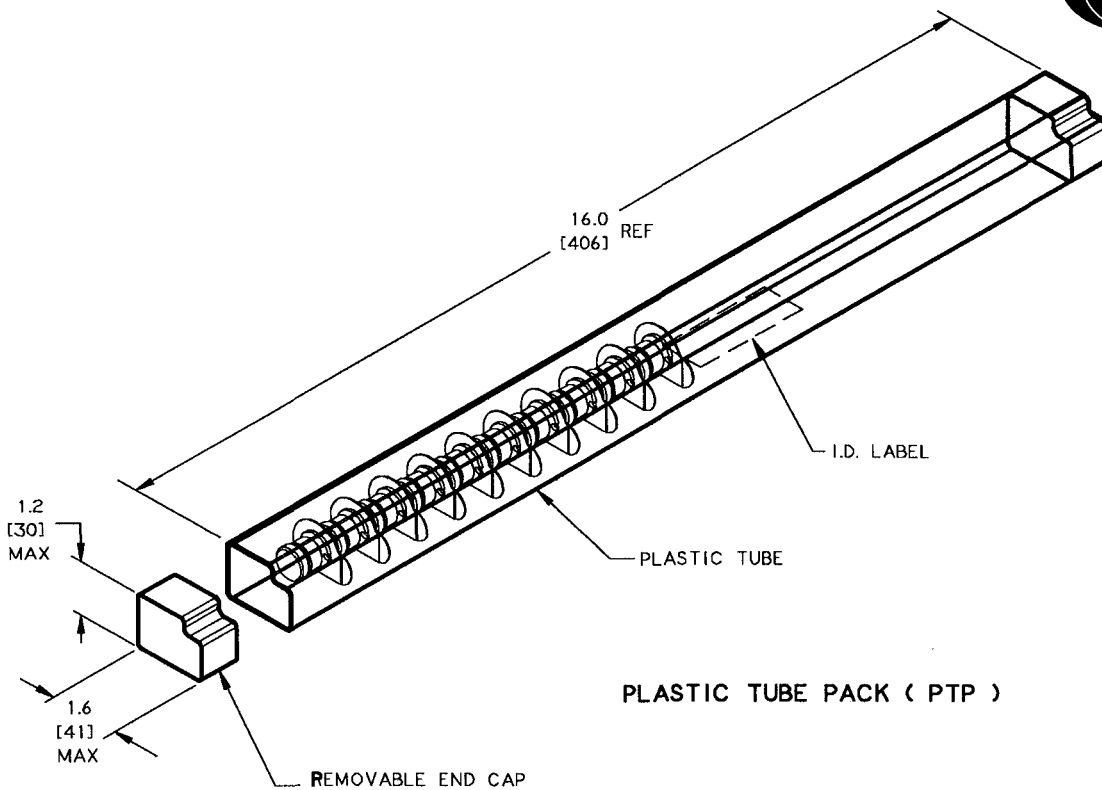
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PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT, LIGHTWEIGHT,
NON-LOCKING, SHUR-TAB**

SL6288

SHEET **2** OF **2**

SPECIAL PACKAGING



PLASTIC TUBE PACK (PTP)

NOTES:

IN ADDITION TO PROVIDING A COMPLETE LINE OF SANDWICH PANEL FASTENERS, SHUR-LOK HAS DEVELOPED TWO PACKAGING METHODS THAT WILL FACILITATE AND REDUCE TIME OF INSTALLATION BY SUPPLYING SHUR-TABS AND INSERTS PRE-ASSEMBLED.

PLASTIC TUBE PACK

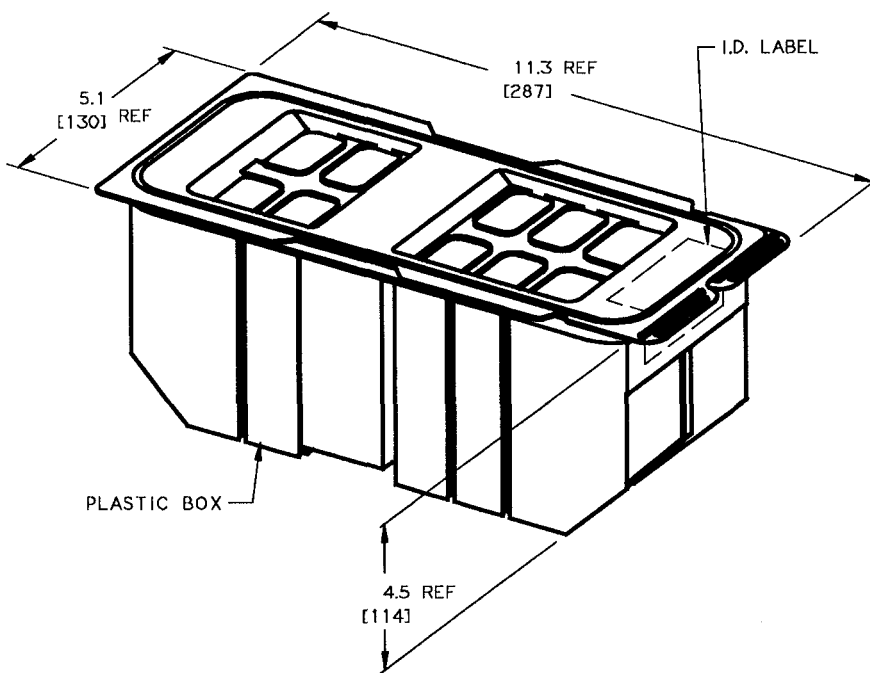
INSERTS AND SHUR-TABS ARE PRE-ASSEMBLED AND HELD IN A CLEAR PLASTIC "L" SHAPED TUBE WITH FOAM END PLUGS. AFTER USING A PORTION OF THE PRE-ASSEMBLED INSERTS, THE PLUGS MAY BE REPLACED.

CLEAR PLASTIC BOX

INSERTS AND TABS ARE PRE-ASSEMBLED AND ENCLOSED IN A CLEAR PLASTIC BOX WITH A SEPARATE LID THAT SNAPS IN PLACE. TO ACCESS PRE-ASSEMBLED INSERTS REMOVE LID BY PULLING APART THE TWO TABS AT THE FRONT OF THE BOX.

NOTE:

METHOD OF PACKAGING, PTP, CPB, SHALL BE SPECIFIED ON PURCHASE ORDER WHEN REQUIRED.



CLEAR PLASTIC BOX (CPB)

REVISION (NC) 30 MAR 1999

UNLESS OTHERWISE SPECIFIED
INTERPRET DIMENSIONS & TOLERANCES PER
ANSI Y14.5M. ALL DIMENSIONS APPLY AFTER
PLATING AND PRIOR TO THE ADDITION OF SOLID
FILM LUBRICANT. 125 [3.2]
TOLERANCES ALL SURFACES
.XX .XXX ANGLES [X.X] [X.X X]
±.03 ±.010 ±2° ±[0.8] ±[0.25]
DIMENSIONS IN [] ARE MILLIMETERS

SHUR-LOK CORPORATION
IRVINE, CALIFORNIA 92614
TELEPHONE: (949) 474-6000

SHUR-LOK

SHUR-LOK INTERNATIONAL, S.A.
PETIT-RECHAIN, BELGIUM
TELEPHONE: (32) 87-32.07.11

**INSERT PACKAGING
SYSTEMS**

PTP-CPB

SHEET 1 OF 1

APPENDIX B
INTERNATIONAL SPECIFICATIONS FOR STEELS

USA	FRANCE	EUROPE		GERMANY	GREAT BRITAIN	COMMERCIAL SPECIFICATION
		AECMA	EN			
STAINLESS STEELS						
303	Z10CNF18.09			1.4305		
304	Z6CN18.09			1.4301		
(AISI 431) MIL-S-18732	Z15CN17-03 AIR 9160	FE-PM 42	2136	1.4044	5S80	A.P.X.
	Z8CND17-04 AIR 9160					A.P.X. 4
15-5 PH AMS 5659		FE-PM 64		1.4546		
17-4 PH AMS 5643	Z6CNU17-0 4 AIR 9160	FE-PM 61		1.4548		X 17 U 4
17-7 PH MIL-S-25043						
13-8 Mo AMS 5629				1.4534		
		FE-PM 66	prEN 2506		2 S 145	
A 286 AMS 5737 (Bars) AMS 5525(Tubes)	E-Z6NCT25 AIR 9165	FE-PA 92 HT	prEN 2303 prEN 2304	1.4944 (Bars)	BS HR 51 DTD 5076	
INCONEL 718 AMS 5662	NC19FeNb AIR 9165	NI-P 100 HT	prEN 2404 prEN 2405	2.4668		
STRUCTURAL STEELS						
	30NCD16 AIR 9160					
	E30NCD16 AIR 9160					
(SAE 4135)	35CD4 AIR 9160	FE-PL 45		1.7220	708H37 ?	
	35NCD16 AIR 9160					
	E 35NCD16 AIR 9160					
SAE 4140 MIL-S-5626	40CD4 AIR 9160					
SAE 4130 MIL-S-6758 (Bars) MIL-S-1872 9(Tubes)	25CD4S AIR 9160	FE-PL 43S	2206	1.7214	S-142(Bars) S-534 (Tubes)	
SAE 4340 MIL-S-8844 AMS 6414	(40NCD7) AIR 9160			1.6944	817M40 ? 3S99 ?	
MACHINING STEELS						
12L14 FED-STD 66 ASTM-A-108				1.0737		9SMnPb36
1117						
1137						
1140				1.0726		35S20