

Self-Locking All-Metal Nut Plates and Special NAS1097 Solid Rivets for Nut Plates

When gaining access to a regular hex nut causes assembly or maintenance problems, these self-locking nut plates can be a lifesaver. The all-metal construction is rated for 450° F operation. Sizes up to 1/4-28 are designed to be riveted in place with 3/32 inch rivets. Larger sizes accept 1/8 inch rivets. We stock special NAS1097 solid rivets that are

ideal for mounting these nut plates. **Note:** The top of the threaded portion is deformed into an oval shape to produce a self-locking action. It can be difficult to insert the screw the first time a nut plate is used, particularly on the smaller sizes. A drop of oil on the threads prior to first use will make it easier to insert and prevent damage to the screw.

MS21047 Self-Locking Nut Plates



Thread Size	X Dim.	Part No.	Price Each
6-32	0.688	MS21047-06	74¢
8-32	0.688	MS21047-08	69¢
10-32	0.688	MS21047-3	69¢
1/4-28	1.000	MS21047-4	\$1.19
5/16-24	1.000	MS21047-5	\$1.79
3/8-24	1.000	MS21047-6	\$2.99

MS21059 Floating Nut Plates



This style also in Metric! Part No. 6069-Size

Thread Size	X Dim.	Part No.	Price Each
6-32	0.688	MS21059-06	89¢
8-32	0.688	MS21059-08	94¢
10-32	0.688	MS21059-3	89¢
1/4-28	1.000	MS21059-4	\$1.29
5/16-24	1.000	MS21059-5	\$3.29
3/8-24	1.000	MS21059-6	\$4.99

MS21051 Single Lug Nut Plates



Thread Size	X Dim.	Part No.	Price Each
6-32	0.344	MS21051-06	99¢
8-32	0.344	MS21051-08	\$1.29
10-32	0.344	MS21051-3	\$1.09
1/4-28	0.344	MS21051-4	\$1.39
5/16-24	0.500	MS21051-5	\$1.69
3/8-24	0.500	MS21051-6	\$3.79

MS21055 Corner Nut Plates



Thread Size	X Dim.	Part No.	Price Each
6-32	0.344	MS21055-06	\$1.09
8-32	0.344	MS21055-08	99¢
10-32	0.344	MS21055-3	99¢
1/4-28	0.500	MS21055-4	\$1.49
5/16-24	0.500	MS21055-5	\$2.99
3/8-24	0.500	MS21055-6	\$5.39

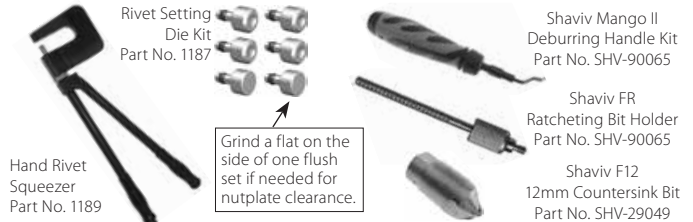
NAS1097 Reduced Head Solid Rivets



These flat head rivets have a very small head that allows flush installation even in thin materials. Just a couple of turns with a manual deburring tool using a 100° countersink bit will create the countersink. A rivet squeezer (shown at right) can be used to set these rivets near the edge of a panel. If the edge distance is too great, a rivet gun and bucking bar will be needed. These rivets should not be used as replacements for standard MS20426 countersunk rivets for structural applications. However, they are perfectly adequate when their only function is to secure a nut plate. Sold in 0.10 pound packages which contain approximately 400 to 600 rivets depending upon the length.

Rivet Length	Panel Thickness	3/32" Diameter Part No.	Price per 1/10 lb.	1/8" Diameter Part No.	Price per 1/10 lb.
0.187"	up to 0.032	NAS1097AD3-3	\$8.49	NAS1097AD4-3	\$5.49
0.219"	.032 - .062	NAS1097AD3-3.5	\$7.59	NAS1097AD4-3.5	\$5.29
0.250"	.062 - .094	NAS1097AD3-4	\$7.59	NAS1097AD4-4	\$4.99

Tools for Setting Solid Aircraft Rivets



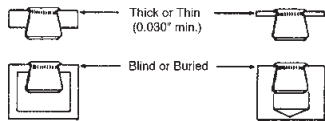
These tools will make it easy to set solid aircraft rivets when they are located near the edge of a panel. The 6 piece die kit works with universal (round) head rivets or flat head rivets.

Adjustable Hand Rivet Squeezer..... Part No. 1189 \$159.99
Features a 3 inch 360° swivel head and long handles for leverage. The 5/8" ram is adjustable, so shims are not needed to get the proper stroke. Die kit sold separately below.

6 Piece Rivet Setting Die Kit..... Part No. 1187..... \$34.99
For use with the rivet squeezer. This six piece set includes one each of the following cup sizes: 3/32, 1/8, 5/32, 3/16 and 2 flush dies. 1/4" body length with a .187" shank.

Shaviv Mango II Deburring Handle Kit..... Part No. SHV-90065..... \$27.99
Shaviv FR Ratcheting Bit Holder only..... Part No. SHV-29006..... \$23.99
Shaviv F12 Countersink Bit only, 12mm OD..... Part No. SHV-29049..... \$23.99
Buy one one FR Bit Holder and one F12 Bit to turn your Mango II Deburring Tool (sold separately) into a countersinking tool.

Rivet Nuts and Insert Nuts



Insert Nuts

These plated steel inserts can be installed in any metal part over .030" thick. When properly installed and used, they provide excellent resistance to pull-out and torque-out. They protrude only .015" above the surface and can be countersunk for a completely flush installation. **Note:** The part being fastened must bear directly against the rim of the insert. If the part has an over-sized hole or is a soft material such as fiberglass, a washer should be used between the insert and the part to prevent pulling out the insert.

10-32 Insert Nut, install in 9/32 inch diameter hole *.....Part No. 655-3..... 59¢

1/4-28 Insert Nut, install in 3/8 inch diameter hole *.....Part No. 655-4..... \$1.09

5/16-24 Insert Nut, install in 1/2 inch diameter hole *.....Part No. 655-5..... \$1.49

* **Note:** The hole diameter shown is for mounting in panels up to 0.090" thick. Please see our website for recommended hole sizes for thicker materials and buried holes.

Rivet Nuts with Anti-Rotation Key

Rivet Nuts are similar to the insert nuts described at left, but they can also perform the dual function of permanently fastening several pieces of sheet metal together (like a pop rivet) and providing a permanently captivated nut for mounting a removable piece. We stock the keyed type which offers superior torque-out resistance (file a small notch on the edge of the mounting hole for the key). The material for these inserts is plated steel. The placing tools shown below can be used to install these inserts. Install 10-32 rivet nuts into a 1/4 inch hole. Use a Q size letter drill for 1/4-28 rivet nuts.

10-32 Rivet Nut, .01 to .08 material thickness.....Part No. 650-3-080..... 89¢

10-32 Rivet Nut, .08 to .13 material thickness.....Part No. 650-3-130..... 89¢

1/4-28 Rivet Nut, .02 to .08 material thickness.....Part No. 650-4-080..... 99¢

1/4-28 Rivet Nut, .08 to .140 material thickness.....Part No. 650-4-140..... 99¢

Hi-Torquer Installation Tool for Insert Nuts Only



The light-duty tools at right are good for occasional use or quick field repairs. If you need to install more than just a few Insert Nuts, this tool will make the job easier. The large handles are more comfortable to operate for repeated use. Requires a Mandrel Kit for each size Insert Nut you will be installing (Mandrel Kits sold separately). Not for use with Rivet Nuts.

Hi-Torquer Insert Nut Installation Tool Only.....Part No. 1185-001..... \$78.99

Mandrel Kit for 10-32 Insert Nuts.....Part No. 1185-101-3..... \$33.99

Mandrel Kit for 1/4-28 Insert Nuts.....Part No. 1185-101-4..... \$33.99

Mandrel Kit for 5/16-24 Insert Nuts.....Part No. 1185-101-5..... \$33.99

Light-Duty Installation Tools for Insert Nuts and Rivet Nuts

These economical, light-duty tools are adequate for occasional use, installing just a few Insert Nuts or Rivet Nuts at a time. They are ideal for quick field repairs because they don't take up much room in your toolbox. The special hex collar has hardened teeth to prevent rotation of the insert while it is being compressed into the work piece. Each tool will work with Insert Nuts or Rivet Nuts. Requires a 9/16" wrench to hold the collar. The 5/16-24 size also requires a 1/2" wrench to turn the center hex-head bolt.

Light-Duty Installation Tool for 10-32 Inserts or Rivet Nuts.... Part No. 659-3.... \$11.99

Light-Duty Installation Tool for 1/4-28 Inserts or Rivet Nuts.... Part No. 659-4.... \$11.99

Light-Duty Installation Tool for 5/16-24 Inserts or Rivet Nuts... Part No. 659-5.... \$13.99