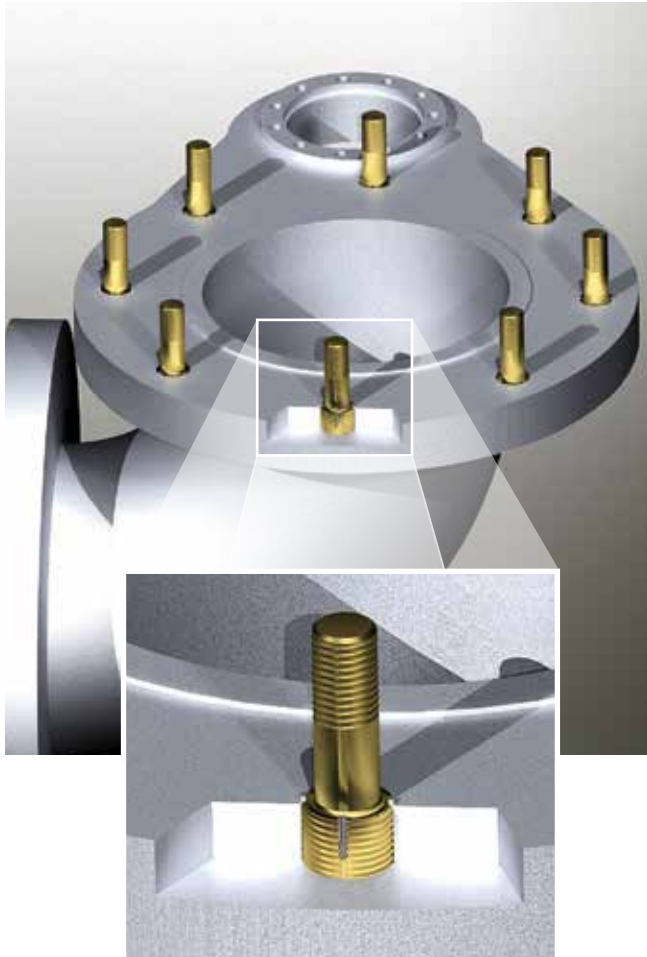




**SUPPLIER FOR**

**AEROSPACE AND DEFENCE  
ENGINEERED HARDWARE**

# Keylocking Studs



- **Securely Locked with Keys**
- **Solid One-Piece Design Provides High Pull-Out Strength and Torque-Out Capabilities**
- **Ideal for OEM Use and High Vibration Applications**

Acme Keylocking Studs provide security and “repairability” in applications where you can’t use a through-bolt/nut combination. They are superior for use in soft materials such as aluminum or magnesium when extra strength, extended thread life and vibration-resistance are required.

## Typical Applications Include:

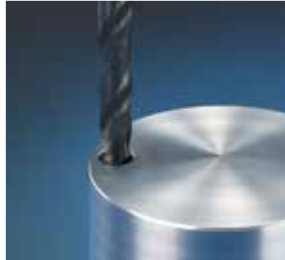
**Aerospace, electronics, automotive, industrial and military. Found on engines, transmissions, housings.**



For complete part number conversions, please visit our website at [www.acmeindustrial.com](http://www.acmeindustrial.com).



## Easy Installation With Standard Drills and Taps



1) Drill with a standard tap drill and countersink with a standard 82° - 100° countersink.



2) Tap new threads with a standard tap.



3) Screw in the stud end until it is .010-.030 below the surface. Keys locate the proper depth.



4) Drive keys down with several hammer taps on the proper installation tool.

- Produced to NAS and SAE standards (MS51833 & MS51834). Produced to AS3543 and AS3544 if requested
- Full range of inch and metric sizes
- Available in 303, A286, and 17-4PH CRES and 4140 Alloy Steel
- Lightweight and heavy duty versions available
- Precision rolled UNJ threads allow transfer of high axial loads into base material

## Removable!

If necessary, Acme Keylocking studs can be removed without damage to the parent material:

1. Cut the stud to be flush with parent material.
2. Drill out material between keys with a standard drill (drill bushing required) to specified depth.
3. Bend the keys inward and break off.
4. Remove the old stud using a screw extractor or similar device.
5. Install a replacement stud into the original tapped hole and drive keys down.

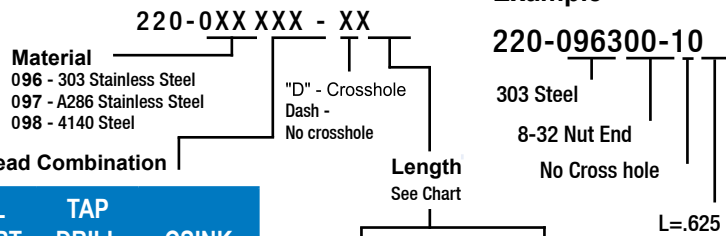
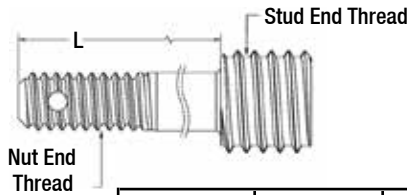


## Short Lead Times, Competitive Prices, Top Quality, Made in USA

Rely on Acme's manufacturing expertise to provide the performance you expect from a supplier as evidenced by approvals from major worldwide aerospace manufacturers.

Since 1914, Acme Industrial has been a major force in supplying precision steel products to the manufacturing and military sectors. Now, Acme introduces its new **Acme Keylocking Stud** product line to the marketplace. These high-performing studs are engineered and manufactured to meet or exceed today's high quality requirements and demands.

# Keylocking Studs MS51834/MS51833



Keylocking Stud PART NUMBER	NUT END THREAD CLASS 3A	STUD END THREAD CLASS 2A	INSTALL TOOL PART NUMBER	TAP DRILL TOOL	CSINK DIA
220-0XX 300	8-32	5/16-18	220-072890	.272	.323
220-0XX 500	8-36				
220-0XX 301	10-24	3/8-16	220-072891	.332	.385
220-0XX 501	10-32				
220-0XX 302	1/4-20	7/16-14	220-072893	.397	.447
220-0XX 502	1/4-28				
220-0XX 303	5/16-18	1/2-13	220-072895	.453	.510
220-0XX 503	5/16-24				
220-0XX 304	3/8-16	9/16-12	220-072897	.516	.572
220-0XX 504	3/8-25				
220-0XX 305	7/16-14	5/8-11	220-072899	.578	.635
220-0XX 505	7/16-20				
220-0XX 306	1/2-13	11/16-11	220-072901	.641	.700
220-0XX 506	1/2-20				
220-0XX 307	9/16-12	13/16-16	220-072903	.766	.822
220-0XX 507	9/16-18				
220-0XX 308	5/8-11	7/8-14	220-072905	.868	.885
220-0XX 508	5/8-18				
220-0XX 309	3/4-10	1 1/8-12	220-072907	1.062	1.145
220-0XX 509	3/4-16				
220-0XX 310	7/8-9	1 1/4-12	220-072909	1.187	1.270
220-0XX 510	7/8-14				
220-0XX 311	1"-8	1 3/8-12	220-072911	1.312	1.395
220-0XX 511	1"-12				
220-0XX 321	10-24	5/16-18	220-072868	.272	.323
220-0XX 521	10-32				
220-0XX 322	1/4-20	3/8-16	220-072870	.332	.385
220-0XX 522	1/4-28				
220-0XX 323	5/16-18	7/16-14	220-072872	.397	.447
220-0XX 523	5/16-24				
220-0XX 324	3/8-16	1/2-13	220-072874	.453	.510
220-0XX 524	3/8-25				
220-0XX 325	7/16-14	9/16-12	220-072876	.516	.572
220-0XX 525	7/16-20				
220-0XX 326	1/2-18	5/8-11	220-072878	.578	.635
220-0XX 526	1/2-20				

Dash #	Dim "L"	Dash #	Dim "L"
-5	.312	-27	1.668
-6	.375	-28	1.750
-7	.438	-29	1.812
-8	.500	-30	1.875
-9	.562	-31	1.937
-10	.625	-32	2.000
-11	.688	-34	2.125
-12	.750	-36	2.250
-13	.812	-38	2.375
-14	.875	-40	2.500
-15	.938	-42	2.625
-16	1.00	-44	2.750
-17	1.062	-46	2.875
-18	1.125	-48	3.000
-19	1.188	-50	3.125
-20	1.250	-52	3.250
-21	1.312	-54	3.375
-22	1.375	-56	3.500
-23	1.438	-58	3.625
-24	1.500	-60	3.750
-25	1.562	-62	3.875
-26	1.625	-64	4.000

Maximum overall length of stud is determined by various diameter dimensions, See AcmeIndustrial.com for further details.



## Installation Tools

Acme Industrial offers a complete line of installation/removal tools.

### Deluxe Style Insert Tool



Found on pages 7 to 21, 24 to 26

### Industrial Style Insert Tool



Found on pages 27, 29 to 31

### Integral Key Insert Install Tool



Used for standard applications to install Integral Key Inserts

Found on Page 22 to 23

### Integral Key Insert Install Tool



Used for limited space applications to install Integral Key Inserts

Found on Page 22 to 23

### Swage-sert Insert Tool



Found on Page 40

### Keylocking Stud Install Tool



Found on Page 38

### Broaching Tool



Used for very hard parent materials to help broach out slots, so keys of inserts can be driven down.

See [AcmeIndustrial.com](http://AcmeIndustrial.com) for more detailed information on all of our Installation Tools.

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