



MET TEC

TITANIUM

WORTH OUR WEIGHT IN SPEED





THESE RACERS AGREE METTEC IS WORTH OUR WEIGHT IN SPEED



CASEY LYTLE Race Team Coordinator
KTM Motorsports, Inc.

“Mettecs unmatched quality and service is why the KTM Factory AMA Supercross and Outdoor Motocross team uses Mettec titanium fasteners.”



GLENN MARTIN Team Manager
Nine Racing

“Mettec, high quality and service, also is USA made; it’s the best Ti product on the market which is what a winning team needs.”



GARY A. MOYLE 2 Time World Champion, 2 time Canadian Champion
2010-11 TLR Cup series Champion.
Pro 440 Ice Oval Racer

“When the quality and strength of one spindle bolt on my race sleds could mean the difference of me winning a race or crashing into a wall – you can only go with the best. Materials matter and so does quality control and that’s why I only use Mettec for all my titanium bolt needs.”



GIACOMO GARIBOLDI Team Manager
Gariboldi Racing, Italy

“For our team, Mettec has been the titanium preference for the last few years in the MX GP World Championship.”



MICHAEL LEWIS Parts Manager
Tony Stewart Racing

“At TSR our job is to win races and championships and this is why we choose Mettec titanium fasteners. Mettec Fasteners are second to none in strength, durability, and quality. And they are made in the USA!”

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Mission Statement

Mettec's mission is to produce light weight components and parts from metallurgically complex alloys. We bring sophisticated processes and treatments into ordinary use. Our primary focus has been TITANIUM ALLOYS, however we also manufacture parts from Aluminum, Chrome-Moly and more exotic steels like 300M.

Titanium Bolt Information

All of our bolts are made with aircraft grade Titanium Alloy. One of the outstanding benefits of Mettec bolts is that we forge the heads for superior strength. The threads are then rolled to produce greater fatigue strength and reduce galling.

Our bolts exceed minimum Ultimate Tensile Strength (UTS) of 120,000 psi. Mettec can also make titanium bolts that exceed 160,000 psi in Ultimate Tensile Strength. Mettec bolts conform to both DIN and ASTM specifications. Titanium bolts can replace both grade 5 and grade 8 steel bolts which have minimum UTS requirements of 120,000 psi and 150,000 psi respectively. Metric bolts with an 8.8 rating can always be replaced with titanium while bolts with a 10.9 rating can sometimes be replaced with titanium depending on intended use.

Warranty Disclaimer

All Mettec products are warranted to be free from defects in material and workmanship. It is the responsibility of the purchaser to inspect all goods carefully before use. Use and application of the goods rests solely with the user. Any returns are to be made before the product is used. Credit, repair, or replacement of goods is predicated upon factory inspection of the goods in question.

Due to the nature of high performance applications, the goods in this catalog are sold without any express or implied warranty of merchantability or fitness for a particular purpose. Mettec shall not, under any circumstances, be liable for any special, consequential or incidental damages, including, but not limited to, loss of profit or revenue, loss of life, property, or equipment, cost of purchased or replacement goods, or claims of customers of the purchaser, which may arise and/or result from the sale, use or installation of these goods.



TORQUE ACCURACY ON FASTENERS

Screw threads appear to be a simple concept yet much confusion and inconsistency exists regarding torque values. The mechanics of the screw thread are actually very complex and have numerous interacting variables. Sliding friction is affected by materials (like steel, aluminum, or titanium), surface roughness, bearing area, material hardness, lubrication, and so on.

ACCURACY: TIGHTENING IS NOT AN ACCURATE SCIENCE

Look at the preloading accuracy published in the "Machinery's Handbook, 25th Edition, page 104".

METHOD	ACCURACY
By Feel	+/- 35%"
Torque Wrench	+/- 25%
Turn-of-nut	+/- 15%
Preload Washers	+/- 10%
Bolt Elongation	+/- 3%
Strain Gages	+/- 1%



TORQUE LIMITS FOR BOLTS IN TENSION

Use torque values specified by your equipment manufacturer when available. For titanium fasteners the torque values are listed below. We recommend anti-seize or moly paste be applied to the threads. If you have a specified torque value outside the Mettec range give us a call so that we may be able to understand more clearly your application and provide specific solutions, if they exist, for the use of titanium in your assembly.

The importance of correct application cannot be over-emphasized. Undertorque can result in unnecessary wear of nuts and bolts, or the parts they hold together. When insufficient pressures are applied, uneven loads will be transmitted throughout the assembly which may result in excessive wear or premature failure due to fatigue. Overtorque can be equally damaging because of failure of the bolt or nut from overstressing the thread areas. (For bolts in shear reduce the values shown below by 30-40%.

Torque for Clean Dry Threads

Bolt Size	Torque Min.	Torque Max.
10-32	2 ft lbs	3 ft lbs
¼-20	3 ft lbs	4 ft lbs
¼-28	7 ft lbs	8 ft lbs
5/16-18	7 ft lbs	8 ft lbs
5/16-24	10 ft lbs	12 ft lbs
3/8-16	13 ft lbs	15 ft lbs
3/8-24	17 ft lbs	21 ft lbs
7/16-14	20 ft lbs	21 ft lbs
7/16-20	43 ft lbs	53 ft lbs
½-13	33 ft lbs	40 ft lbs
½-20	64 ft lbs	79 ft lbs

Torque for Clean Dry Threads

Bolt Size	Torque Min.	Torque Max.
M6-1.00	7 ft lbs	8 ft lbs
M8-1.25	10 ft lbs	12 ft lbs
M10-1.25	17 ft lbs	21 ft lbs
M12-1.75	43 ft lbs	53 ft lbs

Torque for Lubricated Threads

Torque Bolt Size	Torque Min.	Torque Max.
10-32	2 ft lbs	2 ft lbs
¼-20	3 ft lbs	4 ft lbs
¼-28	6 ft lbs	8 ft lbs
5/16-18	6 ft lbs	7 ft lbs
5/16-24	9 ft lbs	11 ft lbs
3/8-16	12 ft lbs	12 ft lbs
3/8-24	15 ft lbs	19 ft lbs
7/16-14	18 ft lbs	19 ft lbs
7/16-20	39 ft lbs	47 ft lbs
½-13	30 ft lbs	36 ft lbs
½-20	58 ft lbs	71 ft lbs

Torque for Lubricated Threads

Torque Bolt Size	Torque Min.	Torque Max.
M6-1.00	6 ft lbs	8 ft lbs
M8-1.25	9 ft lbs	11 ft lbs
M10-1.25	15 ft lbs	19 ft lbs
M12-1.75	39 ft lbs	47 ft lbs

Anti-Seize For Titanium Bolts

Moly Paste

Mettec recommends the use of Molybdenum Disulphide Paste. Mettec has found that Moly Paste reduces galling and seizing of titanium threads. Mettec has established that Moly Paste is far superior to aluminum and copper based antiseizes. Most Moly based greases only have around 2% molybdenum content. Mettec's Moly Paste has a whopping 40% molybdenum content.

Description	Part Number
Moly Paste	MOLY.50Z



AMERICAN INCH THREAD FINE THREAD (UNF) BOLTS

AMERICAN INCH THREAD FINE THREAD (UNC) BOLTS



All of our bolts are made with aircraft grade Titanium Alloy. One of the outstanding benefits of Mettec bolts is that we forge the heads for superior strength. The threads are then rolled to produce greater fatigue strength and reduce galling. Use good quality nuts on titanium bolts. Mettec recommends AN or MS nuts on titanium bolts. Look at page 8 for a listing of AN and MS nuts. Mettec also has Moly-Paste in 1/2 oz containers to apply to threads.

Dia.	Lng.	Head Style	Grip	Thread Length
10-32	X 1 1/2"	Hex	1 1/8"	3/8"
Dia.	Lng.	Head Style	Grip	Thread Length
1/4-28	X 1/2"	Hex	0"	1/2"
1/4-28	X 5/8"	Hex	0"	5/8"
1/4-28	X 3/4"	Hex	1/8"	5/8"
1/4-28	X 7/8"	Hex	1/4"	5/8"
1/4-28	X 1"	Hex	3/8"	5/8"
1/4-28	X 1 1/8"	Hex	1/2"	5/8"
1/4-28	X 1 1/4"	Hex	5/8"	5/8"
1/4-28	X 1 3/8"	Hex	3/4"	5/8"
1/4-28	X 1 1/2"	Hex	7/8"	5/8"
1/4-28	X 1 5/8"	Hex	1"	5/8"
1/4-28	X 1 3/4"	Hex	1 1/8"	5/8"
1/4-28	X 1 7/8"	Hex	1 1/4"	5/8"
1/4-28	X 2"	Hex	1 3/8"	5/8"
1/4-28	X 2 1/4"	Hex	1 5/8"	5/8"
1/4-28	X 2 1/2"	Hex	1 7/8"	5/8"
1/4-28	X 3"	Hex	2 3/8"	5/8"
1/4-28	X 3 1/2"	Hex	2 7/8"	5/8"
Dia.	Lng.	Head Style	Grip	Thread Length
1/4-28	X 1/2"	TSHCS	0"	1/2"
1/4-28	X 5/8"	TSHCS	0"	5/8"
1/4-28	X 3/4"	TSHCS	1/8"	5/8"
1/4-28	X 1"	TSHCS	3/8"	5/8"
1/4-28	X 1 1/2"	TSHCS	3/8"	1 1/8"
1/4-28	X 2"	TSHCS	1"	1"
1/4-28	X 2 1/2"	TSHCS	1 1/2"	1"
1/4-28	X 3"	TSHCS	2"	1"
1/4-28	X 3 1/2"	TSHCS	2 1/2"	1"
Dia.	Lng.	Head Style	Grip	Thread Length
5/16-24	X 1/2"	Hex	0"	1/2"
5/16-24	X 3/4"	Hex	1/8"	5/8"
5/16-24	X 7/8"	Hex	1/4"	5/8"
5/16-24	X 15/16"	Hex	3/16"	3/4"
5/16-24	X 1"	Hex	1/4"	3/4"
5/16-24	X 1 1/8"	Hex	3/8"	3/4"
5/16-24	X 1 1/4"	Hex	1/2"	3/4"
5/16-24	X 1 3/8"	Hex	5/8"	3/4"
5/16-24	X 1 1/2"	Hex	3/4"	3/4"
5/16-24	X 1 3/4"	Hex	1"	3/4"
5/16-24	X 2"	Hex	1 1/4"	3/4"
5/16-24	X 2 1/4"	Hex	1 1/2"	3/4"
5/16-24	X 2 1/2"	Hex	1 3/4"	3/4"
5/16-24	X 2 3/4"	Hex	2"	3/4"

5/16-24	X 3"	Hex	2 1/4"	3/4"
5/16-24	X 3 1/4"	Hex	2 1/2"	3/4"
5/16-24	X 3 1/2"	Hex	2 3/4"	3/4"
5/16-24	X 3 3/4"	Hex	3"	3/4"
5/16-24	X 5"	Hex	4 1/4"	3/4"
5/16-24	X 10"	Hex	9 1/8"	7/8"
Dia.	Lng.	Head Style	Grip	Thread Length
3/8-24	X 5/8"	Hex	0"	5/8"
3/8-24	X 3/4"	Hex	1/8"	5/8"
3/8-24	X 7/8"	Hex	1/4"	5/8"
3/8-24	X 1"	Hex	1/4"	3/4"
3/8-24	X 1 1/8"	Hex	3/8"	3/4"
3/8-24	X 1 1/4"	Hex	1/2"	3/4"
3/8-24	X 1 3/8"	Hex	5/8"	3/4"
3/8-24	X 1 1/2"	Hex	1/2"	1"
3/8-24	X 1 5/8"	Hex	5/8"	1"
3/8-24	X 1 3/4"	Hex	3/4"	1"
3/8-24	X 1 7/8"	Hex	7/8"	1"
3/8-24	X 2"	Hex	1"	1"
3/8-24	X 2 1/4"	Hex	1 1/4"	1"
3/8-24	X 2 1/2"	Hex	1 1/2"	1"
3/8-24	X 2 3/4"	Hex	1 3/4"	1"
3/8-24	X 3"	Hex	2"	1"
3/8-24	X 3 1/4"	Hex	2 1/4"	1"
3/8-24	X 3 1/2"	Hex	2 1/2"	1"
3/8-24	X 3 3/4"	Hex	2 3/4"	1"
3/8-24	X 4"	Hex	3"	1"
3/8-24	X 5"	Hex	4"	1"
3/8-24	X 7 1/2"	Hex	6 3/4"	3/4"
3/8-24	X 10"	Hex	9 1/4"	3/4"
Dia.	Lng.	Head Style	Grip	Thread Length
7/16-20	X 3/4"	Hex	1/8"	5/8"
7/16-20	X 7/8"	Hex	1/4"	5/8"
7/16-20	X 1"	Hex	1/8"	7/8"
7/16-20	X 1 1/8"	Hex	1/4"	7/8"
7/16-20	X 1 1/4"	Hex	3/8"	7/8"
7/16-20	X 1 3/8"	Hex	1/2"	7/8"
7/16-20	X 1 1/2"	Hex	5/8"	7/8"
7/16-20	X 1 5/8"	Hex	3/4"	7/8"
7/16-20	X 1 3/4"	Hex	5/8"	1 1/8"

7/16-20	X 1 7/8"	Hex	3/4"	1 1/8"
7/16-20	X 2"	Hex	7/8"	1 1/8"
7/16-20	X 2 1/4"	Hex	1 1/8"	1 1/8"
7/16-20	X 2 1/2"	Hex	1 3/8"	1 1/8"
7/16-20	X 2 3/4"	Hex	1 5/8"	1 1/8"
7/16-20	X 3"	Hex	1 7/8"	1 1/8"
7/16-20	X 3 1/2"	Hex	2 3/8"	1 1/8"
7/16-20	X 4"	Hex	2 7/8"	1 1/8"
7/16-20	X 4 1/2"	Hex	3 3/8"	1 1/8"
7/16-20	X 5"	Hex	3 7/8"	1 1/8"
7/16-20	X 5 1/2"	Hex	4 3/8"	1 1/8"
7/16-20	X 6"	Hex	4 7/8"	1 1/8"
7/16-20	X 6 1/2"	Hex	5 3/8"	1 1/8"
7/16-20	X 12"	Hex	11"	1"
Dia.	Lng.	Head Style	Grip	Thread Length
1/2-20	X 1"	Hex	1/8"	7/8"
1/2-20	X 1 1/8"	Hex	1/4"	7/8"
1/2-20	X 1 1/4"	Hex	1/4"	1"
1/2-20	X 1 3/8"	Hex	3/8"	1"
1/2-20	X 1 1/2"	Hex	1/2"	1"
1/2-20	X 1 5/8"	Hex	3/8"	1 1/4"
1/2-20	X 1 3/4"	Hex	1/2"	1 1/4"
1/2-20	X 1 7/8"	Hex	5/8"	1 1/4"
1/2-20	X 2"	Hex	3/4"	1 1/4"
1/2-20	X 2 1/4"	Hex	1"	1 1/4"
1/2-20	X 2 1/2"	Hex	1 1/4"	1 1/4"
1/2-20	X 2 3/4"	Hex	1 1/2"	1 1/4"
1/2-20	X 3"	Hex	1 3/4"	1 1/4"
1/2-20	X 3 1/4"	Hex	2"	1 1/4"
1/2-20	X 3 1/2"	Hex	2 1/4"	1 1/4"
1/2-20	X 3 3/4"	Hex	2 1/2"	1 1/4"
1/2-20	X 4"	Hex	2 3/4"	1 1/4"
1/2-20	X 4 1/2"	Hex	3 1/4"	1 1/4"
1/2-20	X 5"	Hex	3 3/4"	1 1/4"
1/2-20	X 5 1/2"	Hex	4 1/4"	1 1/4"
1/2-20	X 6"	Hex	4 3/4"	1 1/4"
1/2-20	X 7"	Hex	5 3/4"	1 1/4"
Dia.	Lng.	Head Style	Grip	Thread Length
1/2-20	X 1"	Flush Head	1/4"	3/4"
1/2-20	X 2"	Flush Head	5/8"	1 3/8"
Dia.	Lng.	Head Style	Grip	Thread Length
5/8-18	X 4"	Hex	2 5/8"	1 3/8"
5/8-18	X 4 1/2"	Hex	3 1/8"	1 3/8"
5/8-18	X 5"	Hex	3 5/8"	1 3/8"

American Inch Thread Course Thread (UNC) Bolts

Unified Coarse threads are used extensively in lower strength materials like cast iron and cast aluminum. The male root or minor diameter is smaller on UNC threads than on UNF threads; therefore, load capacity is less on UNC threaded bolt.

Dia.	Lng.	Head Style	Grip	Thread Length
1/4-20	x 1/2"	Hex	0"	1/2"
1/4-20	X 5/8"	Hex	1/8"	1/2"
1/4-20	X 3/4"	Hex	1/8"	5/8"
1/4-20	X 7/8"	Hex	1/4"	5/8"
1/4-20	X 1"	Hex	1/8"	7/8"
1/4-20	X 1 1/4"	Hex	1/4"	1"
1/4-20	X 1 1/2"	Hex	7/8"	5/8"
1/4-20	X 2"	Hex	1 3/8"	5/8"
1/4-20	X 2 1/4"	Hex	1 5/8"	5/8"
1/4-20	X 2 1/2"	Hex	1 7/8"	5/8"
Dia.	Lng.	Head Style	Grip	Thread Length
1/4-20	X 1/2"	TSHCS	0"	1/2"
1/4-20	X 5/8"	TSHCS	0"	5/8"
1/4-20	X 3/4"	TSHCS	1/8"	5/8"
1/4-20	X 7/8"	TSHCS	1/8"	11/16"
1/4-20	X 1"	TSHCS	1/8"	7/8"
1/4-20	X 1 1/4"	TSHCS	1/8"	1 1/8"
1/4-20	X 1 1/2"	TSHCS	3/8"	1 1/8"
1/4-20	X 1 3/4"	TSHCS	5/8"	1 1/8"
1/4-20	X 2"	TSHCS	1 1/8"	7/8"
1/4-20	X 2 1/4"	TSHCS	1 1/8"	1 1/8"
1/4-20	X 2 1/2"	TSHCS	1 1/8"	1 1/8"
Dia.	Lng.	Head Style	Grip	Thread Length
5/16-18	X 1/2"	Hex	0"	1/2"
5/16-18	X 3/4"	Hex	1/8"	5/8"
5/16-18	X 7/8"	Hex	1/8"	3/4"
5/16-18	X 1"	Hex	1/4"	3/4"
5/16-18	X 1 1/8"	Hex	1/4"	7/8"
5/16-18	X 1 1/4"	Hex	1/2"	3/4"
5/16-18	X 1 1/2"	Hex	3/4"	3/4"
5/16-18	X 2"	Hex	1 1/4"	3/4"
5/16-18	X 2 1/2"	Hex	1 3/4"	3/4"
5/16-18	X 3"	Hex	2"	1"



Dia.	Lng.	Head Style	Grip	Thread Length
5/16-18	X 1/2"	TSHCS	0	1/2"
5/16-18	X 5/8"	TSHCS	0	5/8"
5/16-18	X 3/4"	TSHCS	0	3/4"
5/16-18	X 7/8"	TSHCS	0	7/8"
5/16-18	X 1"	TSHCS	1/8"	7/8"
5/16-18	X 1 1/4"	TSHCS	1/4"	1 1/8"
5/16-18	X 1 1/2"	TSHCS	3/8"	1 1/8"
5/16-18	X 1 3/4"	TSHCS	5/8"	1 1/8"
5/16-18	X 2"	TSHCS	7/8"	1 1/8"
5/16-18	X 2 1/4"	TSHCS	1 1/8"	1 1/8"
5/16-18	X 2 1/2"	TSHCS	1 3/8"	1 1/8"
5/16-18	X 2 3/4"	TSHCS	1 3/4"	1"
5/16-18	X 3"	TSHCS	2"	1"
5/16-18	X 3 1/2"	TSHCS	2 1/4"	1 1/4"

Dia.	Lng.	Head Style	Grip	Thread Length
3/8-16	X 5/8"	Hex	0	5/8"
3/8-16	X 3/4"	Hex	1/8"	5/8"
3/8-16	X 1"	Hex	1/8"	7/8"
3/8-16	X 1 1/8"	Hex	3/8"	3/4"
3/8-16	X 1 1/4"	Hex	1/4"	1"
3/8-16	X 1 1/2"	Hex	1/2"	1"
3/8-16	X 1 3/4"	Hex	3/4"	1"
3/8-16	X 2"	Hex	0	2"
3/8-16	X 2 1/4"	Hex	1 1/4"	1"
3/8-16	X 2 1/2"	Hex	1	1 1/2"
3/8-16	X 2 3/4"	Hex	1 1/8"	1 5/8"
3/8-16	X 3"	Hex	2"	1"
3/8-16	X 3 1/4"	Hex	2 1/4"	1"
3/8-16	X 3 1/2"	Hex	2 1/2"	1"
3/8-16	X 4"	Hex	0	4"
3/8-24	X 2"	Hex	0	2"
7/16-14	X 4"	Hex	0	4"
7/16-20	X 2"	Hex	0	2"
7/16-20	X 2"	Hex	0	2"
1/2-20	X 2"	Hex	0	2"

Dia.	Lng.	Head Style	Grip	Thread Length
7/16-14	X 1 1/4"	Hex	1/8"	1 1/8"
7/16-14	X 1 3/8"	Hex	1/4"	1 1/8"
7/16-14	X 1 1/2"	Hex	3/8"	1 1/8"
7/16-14	X 1 3/4"	Hex	5/8"	1 1/8"
7/16-14	X 2"	Hex	3/4"	1 1/4"
7/16-14	X 2 1/2"	Hex	1 3/8"	1 1/8"
7/16-14	X 3"	Hex	1 7/8"	1 3/8"

Dia.	Lng.	Head Style	Grip	Thread Length
7/16-14	X 3/4"	12 pt Star Head	1/8"	5/8"
7/16-14	X 7/8"	12 pt Star Head	1/8"	3/4"
7/16-14	X 1"	12 pt Star Head	1/8"	7/8"
7/16-14	X 1 1/8"	12 pt Star Head	1/4"	7/8"
7/16-14	X 1 1/4"	12 pt Star Head	1/4"	1"

Dia.	Lng.	Head Style	Grip	Thread Length
7/16-14	X 5/8"	12 pt Flange	0"	5/8"
7/16-14	X 3/4"	12 pt Flange	1/8"	5/8"
7/16-14	X 7/8"	12 pt Flange	1/8"	3/4"
7/16-14	X 1"	12 pt Flange	1/8"	7/8"
7/16-14	X 1 1/8"	12 pt Flange	1/4"	7/8"
7/16-14	X 1 1/4"	12 pt Flange	1/4"	1"

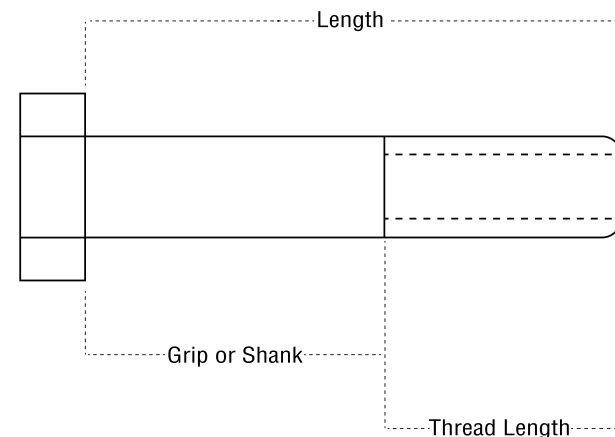
Dia.	Lng.	Head Style	Grip	Length
3/8-16	X 3/4"	Hex Flange	0	3/4"
3/8-16	X 7/8"	Hex Flange	1/8"	3/4"
3/8-16	X 1"	Hex Flange	1/8"	7/8"
3/8-16	X 1 1/8"	Hex Flange	1/8"	1"
3/8-16	X 1 1/4"	Hex Flange	1/4"	1"
3/8-16	X 1 3/8"	Hex Flange	3/8"	1"
3/8-16	X 1 1/2"	Hex Flange	1/2"	1"
3/8-16	X 1 5/8"	Hex Flange	5/8"	1"

Dia.	Lng.	Head Style	Grip	Length
1/2-13	X 1"	Hex Flange	1/8"	7/8"
1/2-13	X 1 1/4"	Hex Flange	3/8"	7/8"

Dia.	Lng.	Head Style	Grip	Length
1/2-13	X 1 5/8"	12 pt Flange	1/2"	1 1/8"
1/2-13	X 2"	12 pt Flange	1 1/8"	7/8"

Dia.	Lng.	Head Style	Grip	Length
1/2-13	X 1"	Flush Head	1/4"	3/4"

Dia.	Lng.	Head Style	Grip	Length
1/2-13	X 1 3/8"	Hex Flange	3/8"	1"



Studs

These studs have rolled threads and have a UTS of 160Ksi.

Part Number	Description
STUD375X1125	Stud 3/8 x 1 1/8" NC = .450" / NF = .450"
STUD312X1750	Stud 5/16 X 1 3/4" NC = .625" / NF = .750"
STUD312X2000	Stud 5/16 X 2" NC = .625" / NF = .750"
STUD375X1500	Stud 3/8 x 1 1/2" NC = 5/8" / NF = 5/8"
STUD375X1750	Stud 3/8 x 1 3/4" NC = 3/4" / NF = 3/4"
STUD375X2000	Stud 3/8 x 2" NC = 1" / NF = 3/4"
STUD375-16x2	Stud 3/8-16 x 2" Full Thread NC
STUD375X10	Stud 3/8 x 10" NF = 5/8" / NF = 5.8"
STUD437X1625	Stud 7/16x 1 5/8" NC = 7/16" / NF = 7/8"
STUD437X1930	Stud 7/16 x 1 15/16" NC = 7/8" / NF = 5/8"
STUD437X12.5	Stud 7/16 x 12 1/2" NF = 5/8" / NF = 5/8"
WH500X2250	Stud 1/2 x 2 1/4" NF = 3/4" / NF = 1 1/4"
WH500X2500	Stud 1/2 x 2 1/2" NF = 3/4" / NF = 1 1/4"
WH500X2750	Stud 1/2" x 2 3/4" NF = 3/4" / NF = 1 1/4"



Washers

AN 960 Washers

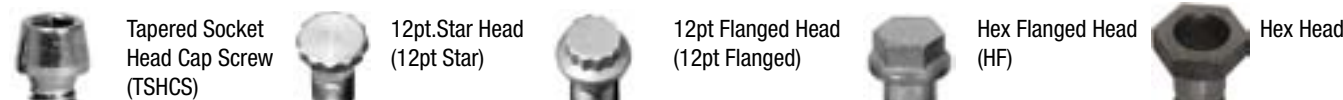
Commonly referred to as "AN" washers they are available in 1/16" (regular) and 1/32" (light) thickness in a given diameter. Gold cad-plated steel.

Part Number	Description
AN960-416L	1/4" Light (.032") AN Washer
AN960-516L	5/16" Light (.032") AN Washer
AN960-616L	3/8" Light (.032") AN Washer
AN960-716L	7/16" Light (.032") AN Washer
AN960-816L	1/2" Light (.032") AN Washer
AN960-416	1/4" Standard (.063") AN Washer
AN960-516	5/16" Standard (.063") AN Washer
AN960-616	3/8" Standard (.063") AN Washer
AN960-716	7/16" Standard (.063") AN Washer
AN960-816	1/2" Standard (.063") AN Washer



Titanium Flat Washers

Part Number	Description	ID	OD	Thickness
FWM5-13	3/16" Flat Washer	0.212	0.490	0.057
FWM6-13	1/4" Flat Washer	0.260	0.511	0.062
FWM6-22	1/4" Flat Washer (Fender Washer)	0.260	0.866	0.062
FWM8-17	5/16" Flat Washer	0.325	0.669	0.062
FWM8-25	5/16" Flat Washer	0.325	0.981	0.080
FWM10-21	3/8" Flat Washer	0.405	0.826	0.075
FWM10-25	3/8" Flat Washer	0.400	1.00	0.119
FW437-24	7/16" Flat Washer	0.447	0.945	0.092
FW500-27	1/2" Flat Washer	0.515	1.063	0.074
FWM12-24		0.510	0.937	0.076
FWM14-26		0.560	1.026	0.098
FW625-30	5/8" Flat Washer	0.630	1.180	0.090
FW750-33	3/4" Flat Washer	0.780	1.312	0.090



Aerospace MS & AN Lock Nuts

Mettec recommends aircraft quality lock nuts. The threads are high quality and have smooth action on the titanium threads. On the AN 364/365 nylon insert nuts, nylon creates positive locking through multiple use. The MS21042 steel flanged nuts have a higher heat resistance and strength rating. They have an ovalized top and are moly coated to reduce friction on titanium bolts. Visually inspect the locking area for wear, and replace the nut when you feel the resistance starting to relax. For areas with repeated disassembly the AN 364/365 lock nuts are good. For maximum performance we suggest the MS21042 lock nuts.

AN 364/365 Nylon Insert Locknuts

These are the most common and durable self-locking aircraft nuts. Almost infinitely reusable, tensile strength rated at 125,000 psi with a 250 F temperature rating. Thin (AN 364) nuts should only be used in shear load applications.

Part Number	Description
364-1032A	10-32 Half High-Shear Nylock Nut
364-428A	1/4-28 Half High-Shear Nylock Nut
364-524A	5/16-24 Half High-Shear Nylock Nut
364-624A	3/8-24 Half High-Shear Nylock Nut
364-720A	7/16-24 Half High-Shear Nylock Nut
364-820A	1/2-20 Half High-Shear Nylock Nut

365-1032A	10-31 Standard Nylock Nut
365-428A	1/4-28 Standard Nylock Nut
365-524A	5/16-24 Standard Nylock Nut
365-624A	3/8-24 Standard Nylock Nut
365-720A	7/16-20 Standard Nylock Nut
365-820A	1/2-20 Standard Nylock Nut



Aluminum "AN" Nylock Nuts

Part Number	Description
364D1032A	10-32 Half High-Shear Nylock Nut
364D428A	1/4-28 Half High-Shear Nylock Nut
364D524A	5/16-24 Half High-Shear Nylock Nut
364D624A	3/8-24 Half High-Shear Nylock Nut
364D820A	1/2-20 Half High-Shear Nylock Nut

365D1032A	10-32 Standard Nylock Nut
365D428A	1/4-28 Standard Nylock Nut
365D524A	5/16-24 Standard Nylock Nut
365D624A	3/8-24 Standard Nylock Nut
365D720A	7/16-20 Standard Nylock Nut
365D820A	1/2-20 Standard Aluminum Nylock Nut



Jet Nut / MS Lock Nut Reduced Hexagon

These nuts feature a good combination of light weight and high strength (160,000 psi tensile). Available in steel which is good up to a temperature of (450 F).

Part Number	Description
MS21042L3	3/16, 10-32 Moly Coated
MS21042L4	1/4-28, Moly Coated
MS21042L5	5/16-24, Moly Coated
MS21042L6	3/8-24, Moly Coated
MS21042L7	7/16-20, Moly Coated
MS21042L8	1/2-20, Moly Coated



Tubular Hex Head King Pins

Mettec's titanium king pins are 40 grams lighter than our nearest steel competitor. We designed the king pins to utilize heat treated titanium. Higher shear strength makes a longer lasting and safer king pin. Each king pin has a top flange and a screw in cap on the bottom. Race track proven performance speaks for itself.

Part Number	Description
Sprint Ti King Pin .859 & 1 Cap-Overall Pin Lng. = 5.805"	KING859LONG
Sprint Ti King Pin .859 & 1 Cap-Overall Pin Lng. = 5.555"	KING859SHORT
Midget Ti King Pin .812 & 1 Cap-Overall Pin Lng. = 4.560"	KING812

Replacement Cap	Part Number
Fits P/N KING859SHORT & P/N KING812	CAP625
Fits P/N KING859LONG	CAP625+250



Torsion Bar Stops

Mettec stops are made from 4130 steel. The steel stop weighs .82 LBS which is a 1/10 of a pound lighter than our nearest competitor. Mettec steel stops are gold-zinc plated for a professional look and rust protection.

Part Number	Description
STOPST-7	Steel Stop 1 1/8 x 48 spline - 1 3/4" bar split Grade 8 steel bolts and nuts are included.
STOPST-8	Steel Stop 1 1/8 x 48 spline - 2" bar split Grade 8 steel bolts and nuts are included.



Titanium Torsion Stop Adjuster Bolts (Fully Threaded)

As with all our bolts these have rolled threads to provide a long lasting thread that won't gall as easily. Mettec recommends a moly grease be applied to the threads before each race. This will give maximum life to your titanium stop adjuster bolts.

Dia.	Lng.	Head Style	Grip	Thread Length
3/8-16	X 2"	9/16 Hex	0	2" Full Lng. Thread
3/8-24	X 2"	9/16 Hex	0	2" Full Lng. Thread
3/8-16	X 4"	9/16 Hex	0	4" Full Lng. Thread
7/16-20	X 2"	5/8 Hex	0	2" Full Lng. Thread (Bullet Nose)
7/16-20	X 2"	11/16 Hex	0	2" Full Lng. Thread (Bullet Nose)

Steel Torsion Stop Adjuster Bolt (Fully Threaded)
7/16-20 X 2" Steel 5/8 Hex 0 2" Full Lng. Thread (Bullet Nose)



Jam Nuts for Adjuster Bolts

Part Number	Description
JAMNUT375-16	3/8-16 Alum. Jam Nut
JAMNUT375-24	3/8-24 Alum. Jam Nut
JAMNUT437-20	7/16-20 Alum. Jam Nut
JAM437-20ST	7/16-20 Steel Jam Nut

Sprint Car & Midget Titanium Bolts and Kits

Wheel Bolts For Three Piece Wheels

Two head styles are used for bolting wheels together. Both bolts are equal in strength. Wheel bolts have forged heads, and rolled threads. All of these steps are performed to provide a bolt that has high fatigue resistance and a minimum UTS of 160,000 psi. This safely exceeds grade 8 steel bolt minimum strength requirements of UTS 150,000 psi. Average weight savings is around 1/4 to 1/3 pound per wheel. Grade 10 titanium bolts exceed grade 10 steel specifications.

<u>Dia.</u>	<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Grade</u>	<u>Thread Length</u>
5/16-24	X 1"	Hex	1/4"	8	3/4"
5/16-24	x 1 1/4"	Hex	1/4"	8	3/4"



Bead Lock Bolts National Course Threads

Bolts are offered in three strengths, grade 5, grade 8, and grade 10. Bead lock rings tend to cause bolt bending during tightening. Excessive bending will cause bolt failure, usually while tightening. Bending can be reduced by uniformly tightening all bolts and using low torque values. Grade 5 bolts are more ductile and have lower strength. Grade 8 bolts have greater strength and less ductility. Grade 5 bolts work well if adequate care is taken for uniform tightening and using lower torque values. If your crew members have a tendency to over torque bolts, we recommend using grade 8 bolts. For the ultimate in strength, Mettec offers a grade 10 titanium bolt that exceeds a grade 10 steel bolt specifications. The applications for these high grade titanium bolts are open wheel, alcohol and fuel drag cars.

<u>Dia.</u>	<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Grade</u>	<u>Thread Length</u>
1/4-20	X 1"	Hex	1/8"	8	7/8"
1/4-20	X 1 1/4"	Hex	1/4"	8	1"
5/16-18	X 1"	Hex	1/4"	5	3/4"
5/16-18	x 1"	Hex	1/4"	8	3/4"
5/16-18	x 1 1/4"	Hex	1/4"	5	1"
5/16-18	x 1 1/4"	Hex	1/4"	8	1"
5/16-18	x 1 1/4"	12 pt flanged	1/4"	10	1"



Wide 5 Lug Bolts with Bullet Nose

Mettec offers bullet nose lug studs to help make your wheel changes faster & easier. Bullet nose studs eliminate dropping your nuts on the ground during wheel changes. We also offer titanium Hex Flange nuts to complete your assembly.

<u>Dia.</u>	<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Thread Length</u>
3/8-16	x 1 1/4"	12pt. Star Head	0	1 1/4"
12pt Star Head replaces "Button Head" lug bolts				
3/8-16	x 1 1/4"	Flush Head	0	1 1/4"
Flush heads are For Sanders Hubs				

<u>Part Number</u>	<u>Description</u>
NUTHF375-16	Titanium 3/8-16 Hex Flange Nut



Torque Tube Bolts & Studs

Mettec offers titanium studs and bolts for torque tube to rear end fastening.

<u>Bolts</u>					
<u>Dia.</u>		<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Thread Length</u>
3/8-16	X	1 1/4"	7/16 Flanged	1/4"	1"
3/8-16	X	1 3/8"	7/16 Flanged	3/8"	1"
3/8-16	X	1 1/2"	7/16 Flanged	1/2"	1"
3/8-16	X	1 5/8"	7/16 Flanged	1/2"	1 1/8"

<u>Studs</u>					
3/8-16-24	X	1 3/4"	NC = 3/4" / NF = 3/4"		
3/8-16-24	X	2"	NC = 1" / NF = 3/4"		

Nuts for torque tube studs.

<u>Part Number</u>	<u>Description</u>
MS21042L6	Jet Nut / MS Lock Nut 3/8-24, Moly Coated 450 F, Reduced Hexagon
AN365-824A	3/8-24 Nylock Nut—Standard 125,000 psi



Bell Housing To Motor Plate & Torque Ball Retaining Ring Bolts & Studs

Bolts for Bell Housing to Motor Plate

<u>Dia.</u>	<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Thread Length</u>
3/8-16	x 1"	Hex	1/8"	7/8"
3/8-16	x 1 1/8"	Hex	3/8"	3/4"
3/8-16	x 1"	7/16" Hex Flange	1/8"	7/8"
3/8-16	x 1 1/8"	7/16" Hex Flange	1/8"	1"

Mettec recommends using 5/16" studs on your Torque Ball Retaining Ring. Aluminum and Magnesium Bell Housings are soft. Bolt will wear out the threads and eventually strip out.

Bolts for Torque Ball Retaining Ring

<u>Dia.</u>	<u>Lng.</u>	<u>Head Style</u>	<u>Grip</u>	<u>Thread Length</u>
5/16-18	x 1 1/8"	Hex	1/4"	7/8"
5/16-18	x 1 1/4"	Hex	1/4"	1"

Studs for Torque Ball Retaining Ring

<u>Part Number</u>	<u>Description</u>
STUD312x1750	Stud 5/16" - 18 x 1 3/4" (Use with Single-Ball Retaining Ring)
STUD312x2000	Stud 5/16" - 18 x 2" (Use with DMI Style, Two-Piece Ball Retaining Ring)

Titanium Nuts For Retaining Ring Studs

<u>Part Number</u>	<u>Description</u>
NUTHF312-18	Titanium 5/16 - 18 Hex Flange Nut



Engine to Motor Plate Bolts

NATIONAL COURSE THREADS

Dia.	Lng.	Head Style	Grip	Thread Length
3/8-16	X 1"	Hex	1/8"	7/8"
3/8-16	X 1 1/8"	Hex	3/8"	3/4"
3/8-16	X 2 1/4"	Hex	1 1/4"	1"
3/8-16	X 2 1/2"	Hex	1"	1 1/2"
3/8-16	X 2 3/4"	Hex	1 3/4"	1"
3/8-16	X 1 1/8"	Hex Flanged	1/8"	1"
3/8-16	X 1 1/4"	Hex Flanged	1/4"	1"
3/8-16	X 1 3/8"	Hex Flanged	3/8"	1"
3/8-16	X 1 1/2"	Hex Flanged	1/2"	1"
3/8-16	X 1 5/8"	Hex Flanged	5/8"	1"



Front and Rear Motor Plate Bolts To Frame

NATIONAL FINE THREADS

Dia.	Lng.	Head Style	Grip	Thread Length
3/8-24	X 7/8"	Hex	1/4"	5/8"
3/8-24	X 1"	Hex	1/4"	3/4"
3/8-24	X 2 1/4"	Hex	1 1/4"	1"
3/8-24	X 2 1/2"	Hex	1 1/2"	1"
3/8-24	X 2 3/4"	Hex	1 3/4"	1"



Part Number Description

MS21042L6 3/8" moly coated Jet nut

We recommend using these moly coated nuts for your motor plate to frame bolts.

Bumper & Nerf Bar Bolts

Dia.	Lng.	Head Style	Grip	Thread Length	Thread Pitch
3/16"	X 1 1/2"	Hex	1 1/8"	3/8"	10-32



Nuts for 3/16" bolts

Part Number Description

364-1032A 3/16 Nylock Nut-Shear

364D1032A Aluminum 3/16 Nylock Nut-Shear

MS21042L3 3/16 Moly Coated Jet Nut

Seat Mounting Bolts

These are used for seat mounting. They have a button head with a hex key in the head so that you don't have to hassle with two wrenches under or behind the seat when mounting your seat. Head diameter is 0.750.

Diameter	Lng.	Head Style	Grip	Thread Length
3/8-24	X 1"	Button	1/4"	3/4"
3/8-24	X 1 1/2"	Button	1/2"	1"
3/8-24	X 2"	Button	1"	1"
3/8-24	X 2 1/2"	Button	1 1/2"	1"



U-Joint Bolts –UNF Thread

All of the top race teams work hard to reduce rotating weight. A 12 point 7/16 socket will fit into the tight confines of the U-Joint hole. This is a smart place to save weight and you will not have to hassle with allen head bolts rounding out.

Dia.	Lng.	Head Style	Grip	Thread Length
7/16-20	X 7/8"	12 pt. flanged	3/16"	11/16"
7/16-20	X 1"	12 pt. flanged	3/16"	13/16"
7/16-20	X 1 3/8"	12 pt. flanged	3/16"	1 1/16"



Inboard Brake Mounting Bolts-UNC Thread

These coarse threaded bolts reduce unsprung weight. We make several lengths to help you custom fit your brake mounts. Remember, unsprung weight is your worst enemy for going fast.

Dia.	Lng.	Head Style	Grip	Thread Length
7/16-14	X 1 1/4"	Hex	3/8"	7/8"
7/16-14	X 1 1/2"	Hex	1/2"	1"
7/16-14	X 1 3/4"	Hex	3/4"	1"



Top Birdcage to Top Radius Rod Bolt

Mettec offers a hex flange bolt with a small flange. Wrench size is a 9/16" hex. This allows the rod end (Heim Joint) to have full range of movement with out binding.

Part Number Description

T6NF5001500F Hex Flange 1/2 - 20 X 1 1/2"

T6NF5001500FS Hex Flange 1/2 - 20 X 1 1/2" - Head drilled for safety wire



Steering Arm Bolts

Description	Application	Part Number	Head Style
7/16- 20 x 1 3/4"	Flush Head for midgets	T4FNF4371750	Flush
7/16-20 x 1 1/2"	Hex Head for midgets	T4NF04371500	Hex
7/16-20 X 1 3/4"	Hex Head for midgets	T4NF04371750	Hex
1/2-20 X 1 3/4"	Hex Head for sprints	T4NF05001750	Hex
1/2-20 X 2"	Hex Head for sprints	T4NF05002000	Hex
1/2-20 X 2"	Flush Head	T4FNF5002000	Flush



Titanium 1/2" Steering Stud with Broached Allen Key for Drag Link and Tie Rod

Mettec offers a 1/2" stud that screws into the steering arms and then you use a cone washer for proper spacing. Secure the stud with a half tall aluminum nylock nut on the back side of the arm. Use a steel Nylock nut on the rod end (Heim Joint) side of stud.

Part Number: STUD500X25BR



Brake Rotor Bolts

Description	Location	Part Number
1/2-20 X 1" Flush Head	Left Front Brake Rotor	T4FNF5001000
5/16-24 X 7/8" Hex Head	Rear Inboard Brake Rotor	T4NF03120875
5/16-24 X 1" Hex Head	Rear Inboard Brake Rotor	T4NF03121000
5/16-24 X 1 1/8" Hex Head	Rear Inboard Brake Rotor	T4NF03121125
5/16-24 X 1 1/4" Hex Head	Rear Inboard Brake Rotor	T4NF03121250
5/16-24 X 1 3/8" Hex Head	Rear Inboard Brake Rotor	T4NF03121375



Top Wing, Front Post and Wing Tree Mounting Bolts

Top Wing Post

Dia.	Lng	Head Style
5/16-24 x	1-1/4"	Hex
5/16-24 x	1-1/2"	Hex

Wing Tree Mounting and Adjusting Bolts

Dia.	Lng	Head Style
1/4-28 X	1"	Hex
1/4-28 X	1 1/8"	Hex
1/4-28 X	1 1/4"	Hex

Wing Ram To Tree and Chassis

Dia.	Lng	Head Style
3/8-24 X	3/4"	Hex
3/8-24 X	7/8"	Hex
3/8-24 X	1"	Hex

Jacob Ladder Quick Pin Kit 6Pcs

Description	Part Number
Titanium Kit with 3/8" Pin for birdcage heim (If you are using a 3/8" Pin with a 1/2" heim you will need to use a spacer in the heim)	KT515
Steel Kit with 3/8" Pin for birdcage heim (If you are using a 3/8" Pin with a 1/2" heim you will need to use a spacer in the heim)	KS515
Titanium Kit with 1/2" Pin for birdcage heim (1/2" Titanium Pin is drilled for extra light weight)	KT520



Sprint Car Titanium Chassis Bolt Kits

We assemble three different kits for the most popular chassis. Please call for a current price and a list of bolts, nuts, and washers provided in these kits.

- Half Inch (1/2") Titanium Bolt and Nut Kit (1/2" bolts only)
- Complete Titanium Bolt and Nut Kit
- Custom titanium Bolt and Nut Kit (You tell us what Bolt and nuts you would like)



Mettec Titanium Quick Pin & One Nut Stud Kits

With Mettec titanium one nut studs you can expect to reduce your weight by 50 percent over a steel equivalent. Our one nut studs also have a built in shoulder which eliminates binding of your shock bearings and rod ends.

Titanium Shock One Nut Stud Kits

Description	Part Number
Titanium Thru Bolt Shock Kit	KT503
Titanium Combo Shock Kit	KT503C
Titanium Screw In Shock Kit	KT503S



P/N: KT503

Use this kit on axles with thru bolts for mounting lower front shocks



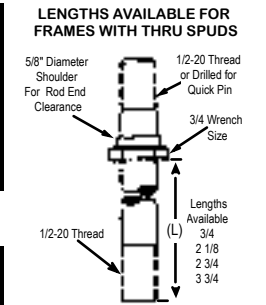
P/N: KT503C

Use this kit on axles with threaded lower spuds to mount front shocks



P/N: KT503S

Use this kit when all frame spuds and axle spuds are threaded



Titanium Shock Quick Pin Stud Kit

Description	Part Number
Titanium Quick Pin Thru Bolt Shock Kit	KT513
Titanium Quick Pin Combo Shock Kit	KT513C
Titanium Quick Pin Screw In Shock Kit	KT513S



P/N: KT513

Use this kit on axles with thru bolts for mounting lower front shocks



P/N: KT513C

Use this kit on axles with threaded lower spuds to mount front shocks

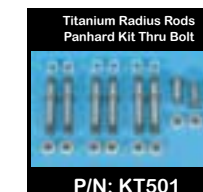


P/N: KT513S

Use this kit when all frame spuds and axle spuds are threaded

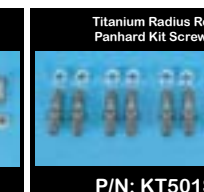
Titanium Radius Rod & Panhard Bar One Nut Stud Kits

Description	Part Number
Titanium Thru Bolt Kit	KT501
Titanium Screw in Kit	KT501S



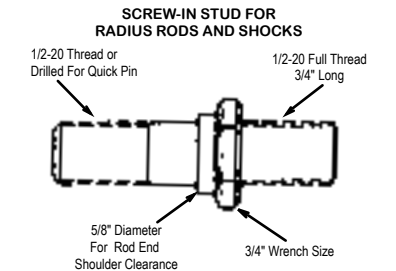
P/N: KT501

Use this kit on frames with thru bolt spuds for mounting radius rods



P/N: KT501S

Use this kit on frames with threaded spuds to mount radius rods



Titanium Radius Rod & Panhard Bar Quick Pin Stud Kits

Description	Part Number
Titanium Thru Bolt Quick Pin Kit	KT511
Titanium Screw in Quick Pin Kit	KT511S



P/N: KT511

Use this kit on frames with thru bolt spuds for mounting radius rods

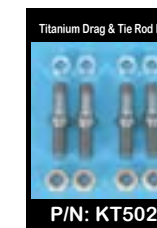


P/N: KT511S

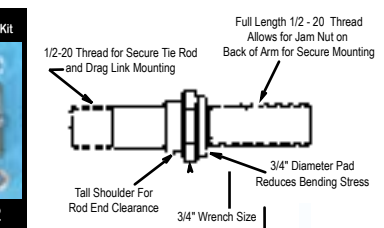
Use this kit on frames with threaded spuds to mount radius rods

Titanium Drag Link and Tie Rod One Nut Stud Kit

Description	Part Number
Titanium Drag Link and Tie Rod One Nut Stud Kit	KT502



P/N: KT502



Individual Part Numbers for Titanium Quick Pins and One Nut Studs

Description	Length (L)	Part Number	Description	Length (L)	Part Number
Titanium One Nut Stud	3/4"	TD501-750	Titanium Quick Pin Stud	3/4"	TD511-750
Titanium One Nut Stud	2 1/8"	TD501-213	Titanium Quick Pin Stud	2 1/8"	TD511-213
Titanium One Nut Stud	2 3/4"	TD501-275	Titanium Quick Pin Stud	2 3/4"	TD511-275
Titanium One Nut Stud	3 3/4"	TD501-375	Titanium Quick Pin Stud	3 3/4"	TD511-375

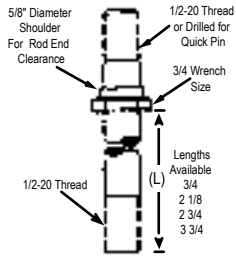
Titanium Lower Rear Shock Arm One Nut Stud	TD503
Titanium Lower Rear Shock Arm Quick Pin Stud	TD513

Titanium Drag Link and Tie Rod One Nut Stud	TD502
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Mettec Steel Quick Pin & One Nut Stud Kits

Our steel one nut stud kits give race teams a affordable option to titanium. Also a great choice for teams that race with associations that do not allow titanium. Our steel one nut studs are made from aerospace grade Chrome-Moly steel. Our steel one nut studs also have a built in shoulder which eliminates the binding of your shock bearings and rod ends.

LENGTHS AVAILABLE FOR FRAMES WITH THRU SPUDS



KS503
Use this kit on axes with thru bolts for mounting lower front shocks

KS503C
Use this kit on axes with threaded lower spuds to mount front shocks

KS503S
Use this kit when all frame spuds and axle spuds are threaded

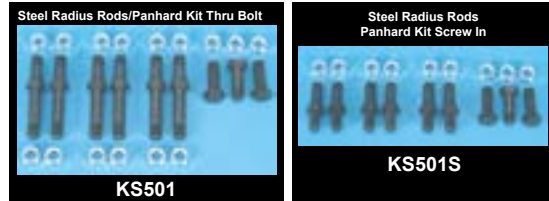
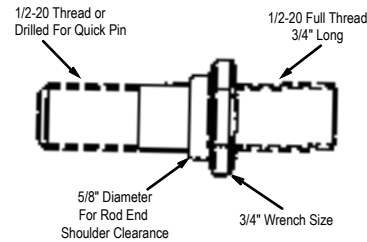


KS513
Use this kit on axes with thru bolts for mounting lower front shocks

KS513C
Use this kit on axes with threaded lower spuds to mount front shocks

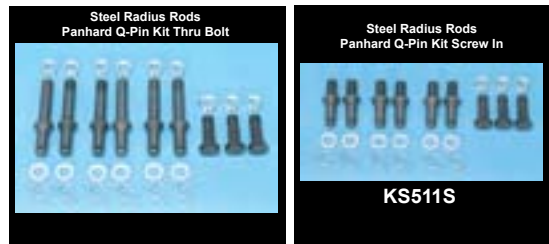
KS513S
Use this kit when all frame spuds and axle spuds are threaded

SCREW-IN STUD FOR RADIUS RODS AND SHOCKS



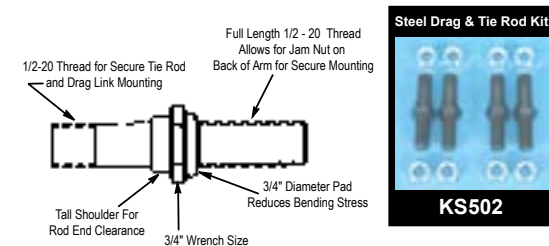
KS501
Use this kit on frames with thru bolt spuds for mounting radius rods

KS501S
Use this kit on frames with threaded spuds to mount radius rods



KS511S
Use this kit on frames with thru bolt spuds for mounting radius rods

KS511S
Use this kit on frames with threaded spuds to mount radius rods



KS502

Description	Part Number
Steel Shock One Nut Stud Kit	
Steel Thru Bolt Shock Kit	KS503
Steel Combo Shock Kit	KS503C
Steel Screw in Shock Kit	KS503S

Description	Part Number
Steel Quick Pin Stud Kit	
Steel Quick Pin Thru Bolt Shock Kit	KS513
Steel Quick Pin Combo Shock Kit	KS513C
Steel Quick Pin Screw in Shock Kit	KS513S

Description	Part Number
Steel Radius Rod & Panhard Bar One Nut Stud Kit	
Steel Thru Bolt Thru Bolt Kit	KS501
Steel Screw in Bolt Kit	KS501S

Description	Part Number
Steel Radius Rod & Panhard Bar Quick Pin Stud Kit	
Steel Thru Bolt Quick Pin Kit	KS511
Steel Screw in Quick Pin Kit	KS511S

Description	Part Number
Steel Drag Link and Tie Rod One Nut Stud Kit	
Steel Drag Link and Tie Rod One Nut Stud Kit	KS502

Individual Part Numbers for Steel Quick Pins and One Nut Studs

Description	Length (L)	Part Number	Description	Length (L)	Part Number
Steel One Nut Stud	3/4"	SD501-750	Steel Quick Pin Stud	3/4"	SD511-750
Steel One Nut Stud	2 1/8"	SD501-213	Steel Quick Pin Stud	2 1/8"	SD511-213
Steel One Nut Stud	2 3/4"	SD501-275	Steel Quick Pin Stud	2 3/4"	SD511-275
Steel One Nut Stud	3 3/4"	SD501-375	Steel Quick Pin Stud	3 3/4"	SD511-375

Steel Lower Rear Shock Arm One Nut Stud	SD503
Steel Lower Rear Shock Arm Quick Pin Stud	SD513

Steel Drag Link and Tie Rod One Nut Stud	SD502
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Titanium Engine Fasteners



Intake Manifold Bolts National Course Threads

This is an easy place to save 1/3 to 1/2 pound of weight. The heads of the bolts are forged to a 7/16 hex with a small flange. This small head allows for small wrenches to be used in hard to reach places.

Dia.	Lng.	Style	Grip	Thread Length
3/8-16	X 7/8"	7/16 Hex flanged	3/4"	1/8"
3/8-16	X 1"	7/16 Hex flanged	7/8"	1/8"
3/8-16	X 1 1/8"	7/16 Hex flanged	1"	1/8"
3/8-16	X 1 1/4"	7/16 Hex flanged	1"	1/4"
3/8-16	X 1 3/8"	7/16 Hex flanged	1"	3/8"
3/8-16	X 1 1/2"	7/16 Hex flanged	1"	1/2"
3/8-16	X 1 5/8"	7/16 Hex flanged	1 1/8"	1/2"



Exhaust Header Studs

Part Number	Description
STUD375X1125	Stud 3/8" x 1 1/8"
NF thread Length = .450"	NC thread Length = .450"

Part Number	Description
MS21042L6	3/8-24, Moly Coated



Oil Pan , Timing Cover, Valve and Injector Stack Pinch Bolts - UNC Thread

Dia.	Lng.	Head Style	Grip	Thread Length
1/4-20	X 5/8"	TSHCS	1/8"	1/2"
1/4-20	X 3/4"	TSHCS	1/8"	5/8"
1/4-20	X 7/8"	TSHCS	1/8"	3/4"
1/4-20	X 1"	TSHCS	1/8"	7/8"
1/4-20	X 1 1/4"	TCHSC	1/4"	1"
1/4-20	X 1 1/2"	TCHSC	3/8"	1 1/8"
1/4-20	X 1 3/4"	TCHSC	5/8"	1 1/8"
1/4-20	X 2"	TCHSC	7/8"	1 1/8"
1/4-20	X 2 1/4"	TCHSC	1 1/8"	1 1/8"
5/16-18	X 5/8"	TCHSC	1/8"	1/2"
5/16-18	X 3/4"	TCHSC	1/8"	5/8"
5/16-18	X 7/8"	TCHSC	1/8"	3/4"
5/16-18	X 1"	TCHSC	1/8"	7/8"



Engine Fly Wheel Bolts - UNF

Next to unsprung weight, rotating weight is your worst enemy. By reducing your rotating weight, your engine will accelerate and decelerate faster. There are two different head styles to choose from. This is a smart place to save weight.

Dia	Lng.	Head Style	Grip	Thread Length
7/16-20	X 7/8"	12 point Flanged	3/16"	11/16"
7/16-20	X 1"	12 point Flanged	3/16"	13/16"
7/16-20	X 7/8"	12 point 5/8 Star Head	1/4"	5/8"
7/16-20	X 1"	12 point 5/8 Star Head	3/16"	13/16"

Metric Thread Titanium Bolts



Metric Thread Titanium Bolts

M5-Allen Head Bolt (TSHCS = Tapered Socket Head Cap Screw)			
Size x Lng.	Head Style	Grip	Thread Length
M5-0.80 x 8mm	TSHCS	0mm	8mm
M5-0.80 x 10mm	TSHCS	0mm	10mm
M5-0.80 x 12mm	TSHCS	0mm	12mm
M5-0.80 x 15mm	TSHCS	2mm	13mm
M5-0.80 x 18mm	TSHCS	2mm	15mm
M5-0.80 x 20mm	TSHCS	2mm	18mm
M5-0.80 x 25mm	TSHCS	2mm	23mm
M5-0.80 x 30mm	TSHCS	7mm	23mm
M5-0.80 x 35mm	TSHCS	12mm	23mm
M5-0.80 x 45mm	TSHCS	22mm	23mm
M5-0.80 x 60mm	TSHCS	37mm	23mm

M6-Allen Head Bolt (TSHCS = Tapered Socket Head Cap Screw)			
Size x Lng.	Head Style	Grip	Thread Length
M6-1.00 x 8mm	TSHCS	2mm	6mm
M6-1.00 x 10mm	TSHC	2mm	8mm
M6-1.00 x 12mm	TSHCS	2mm	10mm
M6-1.00 x 15mm	TSHCS	2mm	13mm
M6-1.00 x 18mm	TSHCS	2mm	16mm
M6-1.00 x 20mm	TSHCS	2mm	18mm
M6-1.00 x 25mm	TSHCS	2mm	23mm
M6-1.00 x 30mm	TSHCS	5mm	25mm

M6-1.00 x 35mm	TSHCS	5mm	30mm
M6-1.00 x 40mm	TSHCS	10mm	30mm
M6-1.00 x 45mm	TSHCS	15mm	30mm
M6-1.00 x 50mm	TSHCS	30mm	20mm
M6-1.00 x 55mm	TSHCS	35mm	20mm
M6-1.00 x 60mm	TSHCS	40mm	20mm
M6-1.00 x 65mm	TSHCS	45mm	20mm
M6-1.00 x 70mm	TSHCS	45mm	25mm
M6-1.00 x 80mm	TSHCS	55mm	25mm
M6-1.00 x 100mm	TSHCS	75mm	25mm

M8-Allen Head Bolt (TSHCS = Tapered Socket Head Cap Screw)			
Size x Lng.	Head Style	Grip	Thread Length
M8-1.25 x 15mm	TSHCS	2mm	13mm
M8-1.25 x 20mm	TSHCS	2mm	18mm
M8-1.25 x 25mm	TSHCS	2mm	23mm
M8-1.25 x 30mm	TSHCS	5mm	25mm
M8-1.25 x 35mm	TSHCS	10mm	25mm
M8-1.25 x 40mm	TSHCS	5mm	35mm
M8-1.25 x 45mm	TSHCS	10mm	35mm
M8-1.25 x 50mm	TSHCS	20mm	30mm
M8-1.25 x 55mm	TSHCS	25mm	30mm
M8-1.25 x 60mm	TSHCS	30mm	30mm
M8-1.25 x 75mm	TSHCS	35mm	40mm

M8-1.25 x 100mm	TSHCS	60mm	40mm
M8-1.25 x 120mm	TSHCS	90mm	30mm

M10-Allen Head Bolt with 1.25 Thread Pitch (TSHCS = Taper Socket Head Cap Screw)			
Size x Lng.	Head Style	Grip	Thread Length
M10-1.25 x 20mm	TSHCS	0mm	20mm
M10-1.25 x 25mm	TSHCS	2mm	23mm
M10-1.25 x 30mm	TSHCS	5mm	25mm
M10-1.25 x 35mm	TSHCS	10mm	25mm
M10-1.25 x 40mm	TSHCS	15mm	25mm
M10-1.25 x 45mm	TSHCS	20mm	25mm
M10-1.25 x 50mm	TSHCS	25mm	25mm
M10-1.25 x 55mm	TSHCS	30mm	25mm
M10-1.25 x 60mm	TSHCS	35mm	25mm
M10-1.25 x 70mm	TSHCS	45mm	25mm
M10-1.25 x 80mm	TSHCS	55mm	25mm
M10-1.25 x 90mm	TSHCS	65mm	25mm
M10-1.25 x 100mm	TSHCS	75mm	25mm
M10-1.25 x 120mm	TSHCS	95mm	25mm

M10-Allen Head Bolt with 1.50 Thread Pitch (TSHCS = Tapered Socket Head Cap Screw)			
Size x Lng.	Head Style	Grip	Thread Length
M10-1.50 x 20mm	TSHCS	2mm	18mm
M10-1.50 x 25mm	TSHCS	2mm	23mm
M10-1.50 x 30mm	TSHCS	5mm	25mm
M10-1.50 x 35mm	TSHCS	10mm	25mm
M10-1.50 x 40mm	TSHCS	15mm	25mm
M10-1.50 x 45mm	TSHCS	20mm	25mm
M10-1.50 x 50mm	TSHCS	25mm	25mm
M10-1.50 x 55mm	TSHC	30mm	25mm
M10-1.50 x 60mm	TSHCS	35mm	25mm
M10-1.50 x 70mm	TSHCS	45mm	25mm
M10-1.50 x 80mm	TSHCS	55mm	25mm
M10-1.50 x 90mm	TSHCS	65mm	25mm
M10-1.50 x 100mm	TSHCS	75mm	25mm
M10-1.50 x 110mm	TSHCS	85mm	25mm
M10-1.50 x 120mm	TSHCS	95mm	25mm

M5 Flanged Bolt with 8mm Hex Head			
Size x Lng.	Head Style	Grip	Thread Length
M5-.07 x 8mm	Hex Flanged	0mm	8mm
M5-.07 x 10mm	Hex Flanged	0mm	10mm
M5-.07 x 12mm	Hex Flanged	0mm	12mm

M5-.07 x 15mm	Hex Flanged	0mm	15mm
M5-.07 x 20mm	Hex Flanged	0mm	20mm
M5-.07 x 25mm	Hex Flanged	2mm	23mm
M5-.07 x 30mm	Hex Flanged	5mm	25mm
M5-.07 x 35mm	Hex Flanged	10mm	25mm
M5-.07 x 40mm	Hex Flanged	15mm	25mm
M5-.07 x 50mm	Hex Flanged	20mm	25mm

M6 Flanged Bolt with 8mm Hex Head			
Size x Lng.	Head Style	Grip	Thread Length
M6-1.00 x 8mm	Hex Flanged	0mm	8mm
M6-1.00 x 10mm	Hex Flanged	0mm	10mm
M6-1.00 x 12mm	Hex Flanged	2mm	10mm
M6-1.00 x 15mm	Hex Flanged	2mm	13mm
M6-1.00 x 20mm	Hex Flanged	2mm	18mm
M6-1.00 x 25mm	Hex Flanged	3mm	22mm
M6-1.00 x 30mm	Hex Flanged	5mm	25mm
M6-1.00 x 35mm	Hex Flanged	10mm	25mm
M6-1.00 x 40mm	Hex Flanged	15mm	25mm
M6-1.00 x 45mm	Hex Flanged	20mm	25mm
M6-1.00 x 50mm	Hex Flanged	25mm	25mm
M6-1.00 x 55mm	Hex Flanged	30mm	25mm
M6-1.00 x 60mm	Hex Flanged	35mm	25mm
M6-1.00 x 65mm	Hex Flanged	40mm	25mm
M6-1.00 x 70mm	Hex Flanged	45mm	25mm
M6-1.00 x 75mm	Hex Flanged	50mm	25mm
M6-1.00 x 80mm	Hex Flanged	55mm	25mm
M6-1.00 x 85mm	Hex Flanged	60mm	25mm
M6-1.00 x 90mm	Hex Flanged	65mm	25mm
M6-1.00 x 95mm	Hex Flanged	70mm	25mm
M6-1.00 x 100mm	Hex Flanged	75mm	25mm
M6-1.00 x 110mm	Hex Flanged	85mm	25mm
M6-1.00 x 120mm	Hex Flanged	95mm	25mm

M7 Flanged Bolt with 8mm Hex Head			
Size x Lng.	Head Style	Grip	Thread Length
M7-1.00 x 18mm	Hex Flanged	0mm	18mm
M7-1.00 x 20mm	Hex Flanged	0mm	20mm
M7-1.00 x 25mm	Hex Flanged	2mm	23mm
M7-1.00 x 30mm	Hex Flanged	5mm	25mm
M7-1.00 x 38mm	Hex Flanged	13mm	25mm
M7-1.00 x 40mm	Hex Flanged	15mm	25mm
M7-1.00 x 45mm	Hex Flanged	20mm	25mm
M7-1.00 x 50mm	Hex Flanged	25mm	25mm



METRIC SIZE FASTENERS

M7-1.00 x 55mm	Hex Flanged	30mm	25mm
M7-1.00 x 60mm	Hex Flanged	35mm	25mm
M7-1.00 x 70mm	Hex Flanged	45mm	25mm
M7-1.00 x 73mm	Hex Flanged	48mm	25mm
M7-1.00 x 80mm	Hex Flanged	55mm	25mm

M8 Flanged Bolt with 10mm Hex Head

Size Lng.	Head Style	Grip	Thread Length
M8-1.25 x 10mm	Hex Flanged	0mm	10mm
M8-1.25 x 12mm	Hex Flanged	2mm	12mm
M8-1.25 x 15mm	Hex Flanged	2mm	15mm
M8-1.25 x 20mm	Hex Flanged	2mm	18mm
M8-1.25 x 25mm	Hex Flanged	3mm	22mm
M8-1.25 x 30mm	Hex Flanged	5mm	25mm
M8-1.25 x 35mm	Hex Flanged	10mm	25mm
M8-1.25 x 40mm	Hex Flanged	15mm	25mm
M8-1.25 x 45mm	Hex Flanged	20mm	25mm
M8-1.25 x 50mm	Hex Flanged	25mm	25mm
M8-1.25 x 55mm	Hex Flanged	30mm	25mm
M8-1.25 x 60mm	Hex Flanged	35mm	25mm
M8-1.25 x 65mm	Hex Flanged	40mm	25mm
M8-1.25 x 70mm	Hex Flanged	45mm	25mm
M8-1.25 x 75mm	Hex Flanged	50mm	25mm
M8-1.25 x 80mm	Hex Flanged	55mm	25mm
M8-1.25 x 85mm	Hex Flanged	60mm	25mm
M8-1.25 x 90mm	Hex Flanged	65mm	25mm
M8-1.25 x 95mm	Hex Flanged	70mm	25mm
M8-1.25 x 100mm	Hex Flanged	75mm	25mm
M8-1.25 x 110mm	Hex Flanged	85mm	25mm
M8-1.25 x 115mm	Hex Flanged	90mm	25mm
M8-1.25 x 120mm	Hex Flanged	95mm	25mm
M8-1.25 x 125mm	Hex Flanged	100mm	25mm
M8-1.25 x 130mm	Hex Flanged	105mm	25mm
M8-1.25 x 140mm	Hex Flanged	115mm	25mm

M10 Flanged Bolt with 12mm Hex Head

Size Lng.	Head Style	Grip	Thread Length
M10-1.25 x 20mm	Hex Flanged	0mm	20mm
M10-1.25 x 25mm	Hex Flanged	2mm	23mm
M10-1.25 x 30mm	Hex Flanged	5mm	25mm
M10-1.25 x 35mm	Hex Flanged	10mm	25mm
M10-1.25 x 40mm	Hex Flanged	15mm	25mm
M10-1.25 x 45mm	Hex Flanged	20mm	25mm
M10-1.25 x 50mm	Hex Flanged	25mm	25mm

M10-1.25 x 55mm	Hex Flanged	30mm	25mm
M10-1.25 x 60mm	Hex Flanged	35mm	25mm
M10-1.25 x 65mm	Hex Flanged	40mm	25mm
M10-1.25 x 70mm	Hex Flanged	45mm	25mm
M10-1.25 x 75mm	Hex Flanged	50mm	25mm
M10-1.25 x 80mm	Hex Flanged	55mm	25mm
M10-1.25 x 85mm	Hex Flanged	60mm	25mm
M10-1.25 x 90mm	Hex Flanged	65mm	25mm
M10-1.25 x 95mm	Hex Flanged	70mm	25mm
M10-1.25 x 100mm	Hex Flanged	75mm	25mm
M10-1.25 x 105mm	Hex Flanged	80mm	25mm
M10-1.25 x 110mm	Hex Flanged	85mm	25mm
M10-1.25 x 115mm	Hex Flanged	90mm	25mm
M10-1.25 x 120mm	Hex Flanged	95mm	25mm
M10-1.25 x 125mm	Hex Flanged	100mm	25mm
M10-1.25 x 130mm	Hex Flanged	105mm	25mm
M10-1.25 x 135mm	Hex Flanged	110mm	25mm
M10-1.25 x 140mm	Hex Flanged	115mm	25mm
M10-1.25 x 145mm	Hex Flanged	120mm	25mm
M10-1.25 x 150mm	Hex Flanged	125mm	25mm
M10-1.25 x 155mm	Hex Flanged	130mm	25mm
M10-1.25 x 160mm	Hex Flanged	135mm	25mm
M10-1.25 x 165mm	Hex Flanged	140mm	25mm
M10-1.25 x 170mm	Hex Flanged	145mm	25mm
M10-1.25 x 175mm	Hex Flanged	150mm	25mm
M10-1.25 x 180mm	Hex Flanged	155mm	25mm
M10-1.25 x 185mm	Hex Flanged	160mm	25mm
M10-1.25 x 190mm	Hex Flanged	165mm	25mm
M10-1.25 x 195mm	Hex Flanged	170mm	25mm
M10-1.25 x 200mm	Hex Flanged	175mm	25mm
M10-1.25 x 205mm	Hex Flanged	180mm	25mm
M10-1.25 x 210mm	Hex Flanged	185mm	25mm
M10-1.25 x 215mm	Hex Flanged	190mm	25mm
M10-1.25 x 220mm	Hex Flanged	195mm	25mm
M10-1.25 x 225mm	Hex Flanged	200mm	25mm
M10-1.25 x 230mm	Hex Flanged	205mm	25mm
M10-1.25 x 240mm	Hex Flanged	215mm	25mm

M12 Flanged Bolt z with 14mm Hex Head and 1.25 Thread Pitch

Size Lng.	Head Style	Grip	Thread Length
M12-1.25 x 20mm	Hex Flanged	0mm	20mm
M12-1.25 x 25mm	Hex Flanged	2mm	23mm
M12-1.25 x 30mm	Hex Flanged	5mm	25mm
M12-1.25 x 35mm	Hex Flanged	10mm	25mm

METRIC SIZE FASTENERS

M12-1.25 x 40mm	Hex Flanged	15mm	25mm
M12-1.25 x 45mm	Hex Flanged	20mm	25mm
M12-1.25 x 50mm	Hex Flanged	25mm	25mm
M12-1.25 x 55mm	Hex Flanged	30mm	25mm
M12-1.25 x 60mm	Hex Flanged	35mm	25mm
M12-1.25 x 70mm	Hex Flanged	45mm	25mm
M12-1.25 x 80mm	Hex Flanged	55mm	25mm
M12-1.25 x 90mm	Hex Flanged	65mm	25mm

M12 Flanged Bolt with 14mm Hex Head and 1.75 Thread Pitch

Size x Lng.	Head Style	Grip	Thread Length
M12-1.75 x 20mm	Hex Flanged	2mm	18mm
M12-1.75 x 25mm	Hex Flanged	2mm	23mm
M12-1.75 x 30mm	Hex Flanged	5mm	25mm
M12-1.75 x 35mm	Hex Flanged	10mm	25mm
M12-1.75 x 40mm	Hex Flanged	15mm	25mm
M12-1.75 x 45mm	Hex Flanged	20mm	25mm
M12-1.75 x 50mm	Hex Flanged	25mm	25mm
M12-1.75 x 55mm	Hex Flanged	30mm	25mm
M12-1.75 x 60mm	Hex Flanged	35mm	25mm
M12-1.75 x 70mm	Hex Flanged	45mm	25mm
M12-1.75 x 80mm	Hex Flanged	55mm	25mm
M12-1.75 x 90mm	Hex Flanged	65mm	25mm

M4 Bolt with Button Head

Size x Lng.	Head Style	Grip	Thread Length
M4-0.70 x 15mm	Button Head	0mm	15mm
M4-0.70 x 20mm	Button Head	0mm	20mm
M4-0.70 x 30mm	Button Head	5mm	25mm
M4-0.70 x 35mm	Button Head	10mm	25mm
M4-0.70 x 40mm	Button Head	15mm	25mm

M5 Bolt with Button Head

Size Lng.	Head Style	Grip	Thread Length
M5-0.80 x 8mm	Button Head	0mm	8mm
M5-0.80 x 10mm	Button Head	0mm	10mm
M5-0.80 x 12mm	Button Head	2mm	10mm
M5-0.80 x 15mm	Button Head	2mm	13mm
M5-0.80 x 20mm	Button Head	2mm	18mm
M5-0.80 x 25mm	Button Head	5mm	20mm
M5-0.80 x 90mm	Button Head	65mm	25mm

M6 Bolt with Button Head			
Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 8mm	Button Head	0mm	8mm
M6-1.00 x 10mm	Button Head	2mm	8mm
M6-1.00 x 15mm	Button Head	2mm	13mm
M6-1.00 x 20mm	Button Head	2mm	18mm
M6-1.00 x 25mm	Button Head	2mm	23mm
M6-1.00 x 30mm	Button Head	5mm	25mm
M6-1.00 x 35mm	Button Head	10mm	25mm
M6-1.00 x 40mm	Button Head	15mm	25mm
M6-1.00 x 45mm	Button Head	20mm	25mm
M6-1.00 x 50mm	Button Head	25mm	25mm

M8 Bolt with Button Head

Size Lng.	Head Style	Grip	Thread Length
M8-1.25 x 15mm	Button Head	2mm	13mm
M8-1.25 x 20mm	Button Head	2mm	18mm
M8-1.25 x 25mm	Button Head	2mm	23mm
M8-1.25 x 30mm	Button Head	5mm	25mm

M8 Bolt with Dome Head Flange

Size Lng.	Head Style	Grip	Thread Length
M8-1.25 x 15mm	Flange Dome Head	0mm	15mm
M8-1.25 x 15mm	Flange Dome Head	3mm	17mm
M8-1.25 x 15mm	Flange Dome Head	5mm	25mm

M10 Bolt with Dome Head Flange

Size Lng.	Head Style	Grip	Thread Length
M10-1.25 x 20mm	Flange Dome Head	3mm	17mm
M10-1.25 x 25mm	Flange Dome Head	3mm	22mm

M5 Bolt with Flush Head

Size Lng.	Head Style	Grip	Thread Length
M5-0.80 x 10mm	Flush Head	?	Call
M5-0.80 x 12mm	Flush Head	?	Call
M5-0.80 x 15mm	Flush Head	?	Call
M6-1.00 x 20mm	Flush Head	?	Call
M5-0.80 x 25mm	Flush Head	?	Call
M5-0.80 x 30mm	Flush Head	?	Call
M5-0.80 x 35mm	Flush Head	?	Call
M5-1.00 x 40mm	Flush Head	?	Call
M5-1.00 x 45mm	Flush Head	?	Call



M5-0.80 x 55mm	Flush Head	?	Call
M5-0.80 x 65mm	Flush Head	?	Call
M5-0.80 x 80mm	Flush Head	?	Call
M5-0.80 x 85mm	Flush Head	?	Call

M6 Bolt with Flush Head

Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 10mm	Flush Head	?	Call
M6-1.00 x 14mm	Flush Head	?	Call
M6-1.00 x 20mm	Flush Head	?	Call
M6-1.00 x 25mm	Flush Head	?	Call
M6-1.00 x 30mm	Flush Head	?	Call
M6-1.00 x 35mm	Flush Head	?	Call
M6-1.00 x 40mm	Flush Head	?	Call
M6-1.00 x 50mm	Flush Head	?	Call
M6-1.00 x 60mm	Flush Head	?	Call
M6-1.00 x 75mm	Flush Head	?	Call

M8 Bolt with Flush Head

Size Lng.	Head Style	Grip	Thread Length
M8-1.25 x 15mm	Flush Head	?	Call
M8-1.25 x 21mm	Flush Head	?	Call
M8-1.25 x 25mm	Flush Head	?	Call
M8-1.25 x 28mm	Flush Head	?	Call
M8-1.25 x 30mm	Flush Head	?	Call
M8-1.25 x 35mm	Flush Head	?	Call
M8-1.25 x 40mm	Flush Head	?	Call
M8-1.25 x 45mm	Flush Head	?	Call
M8-1.25 x 50mm	Flush Head	?	Call
M8-1.25 x 60mm	Flush Head	?	Call
M8-1.25 x 75mm	Flush Head	?	Call

M6 Bolt with Large Diameter Button Head

Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 10mm	Lrg Dia But Head	0mm	10mm

M6 Bolt with Medium Flange (No Holes)

Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 10mm	Lrg HF w/Holes	0mm	10mm
M6-1.00 x 12mm	Lrg HF w/Holes	0mm	12mm
M6-1.00 x 20mm	Lrg HF w/Holes	0mm	20mm
M6-1.00 x 25mm	Lrg HF w/Holes	0mm	25mm



M6 Bolt with Large Hex Flange

Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 8mm	Lrg Hex Flange	0mm	8mm
M6-1.00 x 10mm	Lrg Hex Flange	0mm	10mm
M6-1.00 x 12mm	Lrg Hex Flange	0mm	12mm
M6-1.00 x 15mm	Lrg Hex Flange	0mm	15mm
M6-1.00 x 20mm	Lrg Hex Flange	0mm	20mm
M6-1.00 x 25mm	Lrg Hex Flange	0mm	25mm
M6-1.00 x 30mm	Lrg Hex Flange	5mm	25mm

M6 Bolt with Medium Flange (No Holes)

Size Lng.	Head Style	Grip	Thread Length
M6-1.00 x 10mm	Med. Hex Flange	0mm	10mm
M6-1.00 x 12mm	Med. Hex Flange	0mm	12mm
M6-1.00 x 15mm	Med. Hex Flange	0mm	15mm
M6-1.00 x 25mm	Med. Hex Flange	5mm	20mm
M6-1.00 x 28mm	Med. Hex Flange	8mm	20mm
M6-1.00 x 30mm	Med. Hex Flange	10mm	20mm
M6-1.00 x 35mm	Med. Hex Flange	15mm	20mm
M6-1.00 x 65mm	Med. Hex Flange	45mm	20mm

Metric Adjustment Bolts

Size Lng.	Head Style	Grip	Thread Length
M8-1.25 x 25mm	Hex	0mm	25mm
M6-1.00 x 55mm	Hex	0mm	55mm
M6-1.00 x 55mm	Hex	0mm	55mm
M6-1.00 x 100mm	Hex	0mm	100mm

2012 Mettec Catalog Nuts & Washers

These are machined locking nuts with ovalized tops. Always use a small dab of moly grease or assembly paste on these nuts. The crimp locking action needs lubrication in the Titanium to Titanium sliding interface of the threads.

Part Number	Description
TLNUTM5-8	M5-.80 Lock Nut
TLNUTM6-1.0	M6-1.00 Lock Nut
TLNUTM8-1.2	M8-1.25 Lock Nut
TLNUTM10-1.2	M10-1.25 Lock Nut
TLNUTM10-1.5	M10-1.50 Lock Nut

Titanium Hex Flange Nuts

Part Number	Description
NUTHFM5-.8	Ti Hex Flange Nut M5-.80
NUTHFM6-10	Ti Hex Flange Nut M6-1.00
NUTHFM8-12	Ti Hex Flange Nut M8-1.25
NUTHFM10-10	Ti Hex Flange Nut M10-1.00
NUTHFM10-12	Ti Hex Flange Nut M10-1.25
NUTHFM10-15	Ti Hex Flange Nut M10-1.50
NUTHFM12-12	Ti Hex Flange Nut M12-1.25
NUTHFM12-17	Ti Hex Flange Nut M12-1.75
NUTHFM14-15	Ti Hex Flange Nut M14-1.50
NUTHFM16-15	Ti Hex Flange Nut M16-1.50
NUTHFM18-15	Ti Hex Flange Nut M18-1.50
NUTHFM20-15	Ti Hex Flange Nut M20-1.50
NUTHFM22-15	Ti Hex Flange Nut M22-1.50
NUTHFM22-15C	Ti Castellated Hex Flange Nut M22-1.50
NUTHFM30-1.5	Ti Hex Flange Nut M30-1.50
NUTHFM30-1.5C	Ti Castellated Hex Flange Nut M30-1.50

Nylock Hex Flange Nuts

Part Number	Description
NYNUTHFM5-8	Nylock Hex Flange Nut M5-0.80 Tall
NYNUTHFM58S	Nylock Hex Flange Nut M5-0.80 Short
NYNUTHFM610	Nylock Hex Flange Nut M6-1.00 Tall
NYNUTHFM6-10S	Nylock Hex Flange Nut M6-1.00 Short
NYNUTHFM812	Nylock Hex Flange Nut M8-1.25 Tall
NYNUTHFM812S	Nylock Hex Flange Nut M8-1.25 Short
NYNUTHFM1012	Nylock Hex Flange Nut M10-1.25 Tall
NYNUTHFM1012S	Nylock Hex Flange Nut M10-1.25 Short

Ordering Information

Phone Orders (775)246-8200

Mettec is open Monday-Friday 8am-4:30pm (Pacific Time).
Orders received after 11am will be shipped the next day. There are no minimum orders.

Fax Orders (775)246-8220

You may fax your orders 24 hours a day.
Please include your fax and daytime phone number in case we have a question regarding your order.

Backorders

Mettec maintains a record of all backordered items.
We will notify you when parts are ready to determine if you still need the part.

Shipping

All orders are shipped by UPS and US Postal Service.
Carrier freight costs are added to the invoice.

Shipping & Handling Fees

Shipping costs from our warehouse are added to the invoice.
All orders and returns are subject to a standard \$4.50 Handling Fee.

Payment

Prepayment

We accept Visa, MasterCard, American Express and C.O.D. Money Orders.
All C.O.D. orders will be shipped via UPS. Money Orders only for all C.O.D. payments.
An \$11.00 C.O.D. fee will be added to all C.O.D. orders.

Returns & Exchanges

All return requests must be made within 30 days. All returns incur a USD\$15.00 restocking charge.
Special order items are not returnable. Parts must be unused and in new condition.
Original invoice must be included with returned parts.
Call 775-246-8200 for Return Merchandise Authorization number (RMA).

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