



PRECISION AEROSPACE FASTENERS

NEW

Titanium Heat Treat Furnace
Completes In-house Processing

Full-time Hot Forged Bolt Cell -
Blanking Programs Welcome



a **PEM**® Company



Established in 1982, 3V Fasteners is a world class manufacturer of fasteners for aircraft and aerospace applications. A manufacturer of Boeing, AN, AS, MS and NAS certified fasteners, 3V Fasteners experienced workforce supplies most of the world's leading aircraft companies.

In-house Processes and Capabilities:

- Cold Heading
- Progressive Hot Heading
- Hot Forging (large diameter, exotics, etc.)
- Point/Shave/CNC Machining
- Broaching
- Lightening Hole Drilling
- Cross-hole Drilling
- Grinding
- Heat Treating
- Fillet and Thread Rolling
- NDT
- Lab Testing

Materials:

- Titanium
- Inconel 718
- 303 Stainless
- A286 Stainless
- 431 Stainless
- 416 Stainless
- PWA Alloy
- PWA 17-22
- Alloy Steel
- 13-8 MO Stainless
- 17-4 PH Stainless
- Brass
- Aluminum

Bolt/Screw Head Styles:

- 12 Point
- Flat Fillister
- Spline
- Hex
- Pan
- Mortorq®
- Flush
- Socket Head Cap
- Torx Plus®

Thread Sizes and Lengths:

Diameters - #2 to 3/4"
Lengths - 3/16" to 10"

PennEngineering is a licensee of Phillips Screw Company (Mortorq®) and Acument Global Technologies (Torx Plus®).

Quality:

- ISO9001:2008
- AS9100 Rev. C
- QSLM Approved
- NADCAP Approved





HOT FORGED MANUFACTURING

- MS, NAS, and BAC Standards
- Bolt diameter capability to 3/4"
- Bolt length capability to 10"
- Additional head styles and configurations
- Reduced manufacturing cycle time
- Fatigue Testing



HIGH TEMPERATURE TITANIUM HEAT TREAT FURNACE

- Improved lead-time because all titanium fasteners are heat-treated in-house.
- State-of-the-art pre-cleaning unit ensures all parts are extremely clean before entering furnace reducing any opportunity of contamination.





BOEING PARTS

BACS12CA
BACS12CK
BACS12GX
BACS12H
BACS12HK
BACS12HL
BACS12HM
BACS12HN
BACS12HP
BACB30AB
BACB30BF
BACB30BH

AN PARTS

AN173C - AN176C
AN3C - AN6C

AS PARTS

AS3099 - AS3100
AS3102
AS3236 - AS3238
AS3244 - AS3245
AS3250 - AS3251
AS3414 - AS3416
AS3418 - AS3420
AS3530 - AS3531
AS3580

MS PARTS

MS14181-03 - MS14181-12
MS21250-02 - MS21250-12
MS21277 - MS21282
MS21286 - MS21291
MS9033 - MS9036
MS9060 - MS9063
MS9088 - MS9091
MS9110 - MS9113
MS9146 - MS9149
MS9157 - MS9160
MS9169 - MS9172
MS9177 - MS9178
MS9206 - MS9211
MS9215 - MS9220
MS9488 - MS9494
MS9500 - MS9505
MS9554 - MS9559
MS9563 - MS9568
MS9572 - MS9577
MS9912 - MS9917
MS9921 - MS9926
MS9930 - MS9935
MS9939 - MS9944

NAS PARTS

NAS1003 - NAS1008	NAS2832 - NAS2838
NAS1096	NAS2842 - NAS2848
NAS1100 - NAS1102	NAS428
NAS1103 - NAS1108	NAS464
NAS1121 - NAS1128	NAS560
NAS1131 - NAS1138	NAS5310 - NAS5321
NAS1141 - NAS1148	NAS653 - NAS655
NAS1151 - NAS1158	NAS563 - NAS568
NAS1161 - NAS1168	NAS673 - NAS675
NAS1171 - NAS1178	NAS6203 - NAS6212
NAS1181 - NAS1188	NAS624 - NAS626
NAS1189 - NAS1191	NAS6303 - NAS6312
NAS1218	NAS6403 - NAS6412
NAS1221	NAS6603 - NAS6612
NAS1223 - NAS1228	NAS6703 - NAS6712
NAS1303 - NAS1308	NAS6803 - NAS6812
NAS1578	NAS7103 - NAS7108
NAS1580	NAS7203 - NAS7208
NAS1581	NAS7303 - NAS7305
NAS1620 - NAS1628	NAS7400 - NAS7408
NAS1630 - NAS1634	NAS7500 - NAS7508
NAS1741	NAS7600 - NAS7605
NAS1742	NAS7700 - NAS7706
NAS1743	NAS7800 - NAS7806
NAS1790	NAS7900 - NAS7905
NAS1801	NAS8000 - NAS8006
NAS1802	NAS8100 - NAS8106
NAS1953 - NAS1958	NAS8200 - NAS8206
NAS1972 - NAS1978	NAS8302 - NAS8304
NAS1992 - NAS1998	NAS8402 - NAS8404
NAS2803 - NAS2808	NAS8602 - NAS8608
NAS2813 - NAS2818	NAS8702U - NAS8708U

GE PARTS

R1057
R1062
R1440 - R1445
R1451 - R1456
R1460 - R1468
R1470 - R1474
R191
R448
R541 - R548

BOMBARDIER PARTS

S8435
B0201074
B0201076
B0201081
B0201083
B0201087

EMBRAER PARTS

PE21086
PE21094
PE21101
PE21114
PE21116

BELL HELICOPTER PARTS

120-220
120-225
120-276
120-278

LOCKHEED PARTS

JSFB44
JSFB45

WOODWARD GOVERNOR

1106
