

**STARLITE™ Nut,
Lightweight, 6AL-4V Titanium,
Hexagonal, Self-aligning, Self-locking,
Up to 2nd pin shank oversize
(for use with HI-LITE™ pins)**

STR43

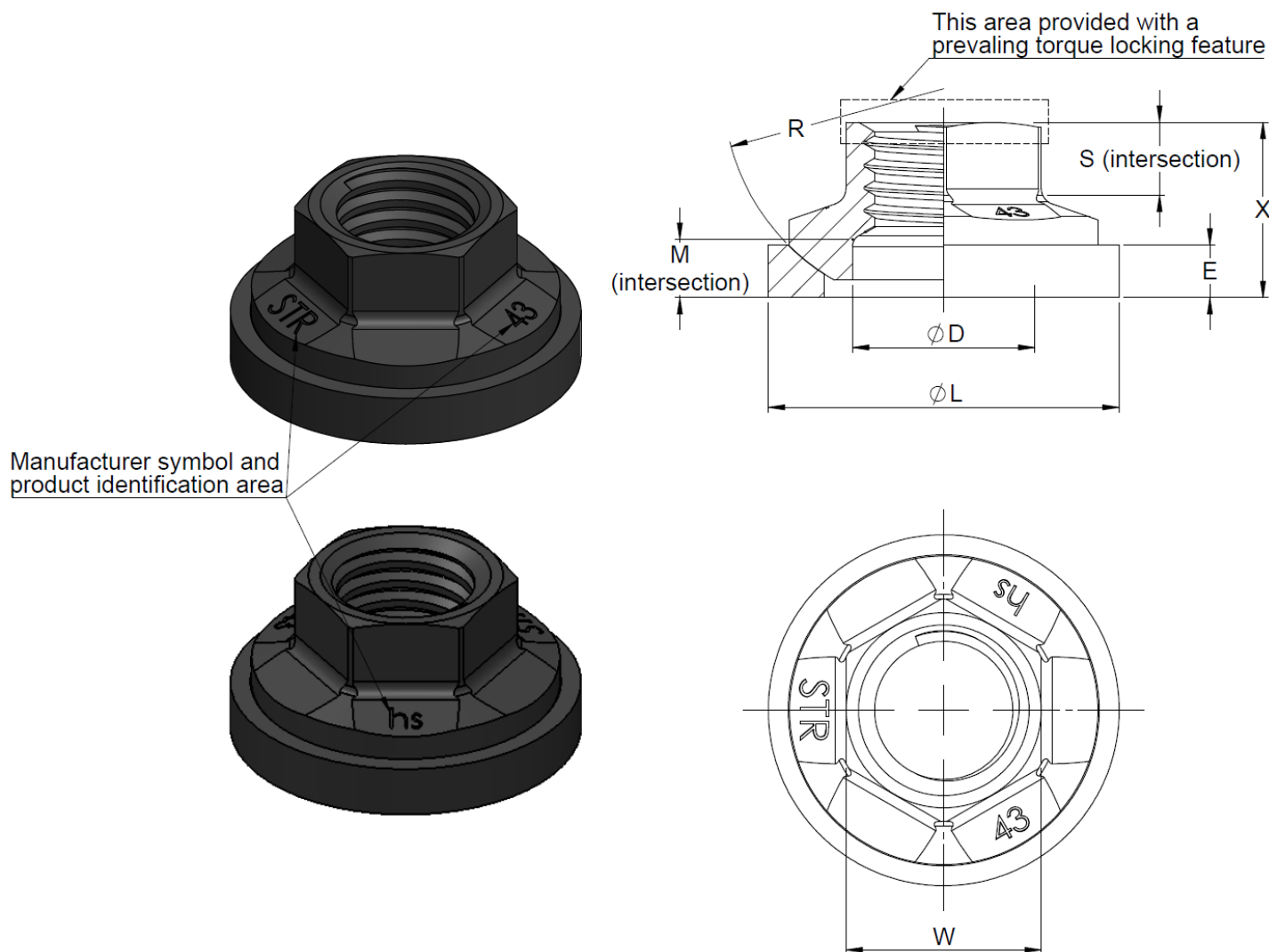


FIGURE 1: CONFIGURATION

NOTES:

UNLESS OTHERWISE SPECIFIED

- I. **Units** Dimensions and tolerances are in inches (millimeters).
Loads are in Lbf (Newton).
Dimensions apply after finish.
- II. **Surface texture** As per ASME B46.1 before coating.
- $R_a \text{ max.} = \sqrt[125]{3,2\mu\text{m}}$.
- Tool mark or distortion permissible in the locking area.
- III. **Thread** UNJF-3B as per SAE AS8879, except diameter code 5 (UNJC-3B).
Go thread gage penetration shall be 3/4 of one revolution minimum after thread lock.

Technical Center	Written by	Signature	Approved by	Signature	Date	Revision
PAGE 1/6	M. ABOU HALIMA		J. GOYER		2021-03-08	B

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1. APPLICATION

This product standard specifies the dimensions, tolerances and properties of a STARLITE™ titanium nut, for use in aerospace application at a maximum operating temperature of 455°F (235°C). The nut is designed to fit HI-LITE™ pins (with short threads and cylindrical shank), nominal diameter, first and second oversizes. It can be used to fasten structures with a sloped surface from 0° to 7°.

2. REQUIREMENTS

Table 1: Material, finish and identification

FINISH CODE	PART	MATERIAL	FINISH
TATF	Nut	Titanium alloy 6AL-4V as per chemistry of AMS4928, AMS4965 or AMS4967, solution heat treated and aged	Surface preparation per Hi-Shear Ti-Shield III and HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305
	Washer		HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292
HKHK	Nut	Min. shear strength: Rc min = 95 KSI (655 MPa) Min. tensile strength: Rm min = 160 KSI (1 103 MPa)	HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397
	Washer		HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397

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Table 2: Dimensions and tolerances

Øcode (1/32")	THREAD UNJF-3B	ØC REF	ØD MIN	E MAX	ØL MAX	M REF	R REF	S MIN	W ⁽²⁾ ± .002 (± 0,05)	X MAX
5	.1640-32 ⁽¹⁾	.248 (6,30)	.193 (4,90)	.064 (1,62)	.379 (9,61)	.095 (2,40)	.252 (6,41)	.084 (2,14)	.217 (5,51)	.232 (5,89)
6	.1900-32	.282 (7,17)	.239 (6,08)	.075 (1,89)	.452 (11,47)	.090 (2,29)	.287 (7,30)	.098 (2,48)	.247 (6,27)	.246 (6,24)
7	.2160-28	.317 (8,06)	.270 (6,86)	.079 (1,99)	.495 (12,56)	.096 (2,45)	.317 (8,04)	.104 (2,65)	.278 (7,07)	.269 (6,83)
8	.2500-28	.352 (8,94)	.285 (7,25)	.088 (2,24)	.560 (14,22)	.092 (2,35)	.349 (8,86)	.115 (2,93)	.309 (7,85)	.282 (7,15)
10	.3125-24	.424 (10,77)	.337 (8,55)	.104 (2,64)	.695 (17,66)	.097 (2,46)	.436 (11,08)	.132 (3,36)	.372 (9,45)	.332 (8,42)
12	.3750-24	.566 (14,38)	.442 (11,23)	.121 (3,08)	.824 (20,93)	.097 (2,45)	.550 (13,97)	.171 (4,35)	.497 (12,62)	.392 (9,96)
14	.4375-20	.636 (16,16)	.507 (12,89)	.137 (3,48)	.986 (25,03)	.103 (2,61)	.590 (14,98)	.165 (4,18)	.559 (14,20)	.445 (11,31)
16	.5000-20	.707 (17,96)	.540 (13,73)	.196 (4,98)	1.145 (29,09)	.103 (2,61)	.610 (15,50)	.154 (3,92)	.619 (15,72)	.467 (11,85)
18	.5625-18	.779 (19,79)	.618 (15,70)	.167 (4,23)	1.211 (30,76)	.106 (2,70)	.727 (18,46)	.210 (5,34)	.682 (17,32)	.543 (13,80)
20	.6250-18	.883 (22,43)	.679 (17,25)	.185 (4,70)	1.397 (35,47)	.106 (2,70)	.865 (21,97)	.235 (5,96)	.773 (19,63)	.573 (14,56)
24	.7500-16	1.062 (26,98)	.850 (21,60)	.212 (5,38)	1.565 (39,74)	.111 (2,83)	.923 (23,45)	.283 (7,20)	.930 (23,62)	.668 (16,97)
28	.8750-14	1.203 (30,56)	.975 (24,77)	.317 (8,06)	1.771 (44,98)	.118 (3,00)	1.058 (26,87)	.295 (7,50)	1.054 (26,77)	.730 (18,54)
32	1.0000-12	1.347 (34,22)	1.102 (27,99)	.286 (7,26)	2.097 (53,26)	.126 (3,21)	1.192 (30,28)	.317 (8,04)	1.180 (29,97)	.817 (20,74)
36	1.1250-12	1.484 (37,70)	1.229 (31,21)	.299 (7,60)	2.506 (63,65)	.126 (3,21)	1.327 (33,70)	.339 (8,61)	1.300 (33,02)	.913 (23,19)

(1) Dia. code 5: UNJC-3B thread as per SAE AS8879

(2) Dimensions apply before application of locking feature

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STR43

Table 3: Tensile strength, mass and wrench size

Øcode (1/32")	THREAD UNJF-3B	Min. Axial Tensile Strength ⁽²⁾ Lbf (N)	Mass Lb / 1000 parts (Kg / 1000 parts)	Wrench Size (inch)
5	.1640-32 ⁽¹⁾	2 302 (10 240)	1.32 (0,60)	7/32
6	.1900-32	2 788 (12 400)	1.98 (0,90)	1/4
7	.2160-28	3 822 (17 000)	2.60 (1,18)	9/32
8	.2500-28	5 283 (23 500)	3.53 (1,60)	5/16
10	.3125-24	8 302 (36 930)	6.70 (3,04)	3/8
12	.3750-24	13 039 (58 000)	11.99 (5,44)	1/2
14	.4375-20	19 008 (84 550)	20.64 (9,36)	9/16
16	.5000-20	25 509 (113 470)	33.11 (15,02)	5/8
18	.5625-18	29 012 (129 050)	37.04 (16,80)	11/16
20	.6250-18	32 013 (142 400)	52.91 (24,00)	25/32
24	.7500-16	46 906 (208 650)	77.78 (35,28)	15/16
28	.8750-14	63 223 (281 230)	118.04 (53,54)	1-1/16
32	1.0000-12	85 654 (381 010)	175.18 (79,46)	1-3/16
36	1.1250-12	115 499 (513 763)	265.22 (120,30)	1-5/16

(1) Dia. code 5: UNJC-3B thread as per SAE AS8879

(2) Mechanical properties apply at room temperature

Tensile value is valid for nut only.

See pin standards for pin strength.

Lower strength (pin or nut) determines system strength.

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3. DESIGNATION

STR43 TATF ()

Dia. code number in 1/32nds inch

Nut assembly finish code (table 1)

Basic part number

Example:

STR43TATF16: STR43 self-aligning nut for HI-LITE™ pins fastener systems, titanium alloy 6AL-4V coated with HI-KOTE™ 2 solid film lube and cetyl alcohol lube, dia. code ½ inch.

4. MARKING

Manufacturer symbol and basic part number on the flange area (except Ø5/32": manufacturer symbol only). Marking shall be positioned as indicated on Figure 1.

5. QUALIFICATION AND ACCEPTANCE

The nuts shall meet all the inspection requirements of LISI AEROSPACE Qualification and Acceptance Specification STR-QA05, except locking torque, breakaway tests, to be performed, using preload releasing fixture.

6. INSTALLATION

Refer to LISI AEROSPACE Installation Specification STR-IS01.

Technical
Center

Revision

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Revision	Date	Modifications	Justification
A	2019-12-10	Initial release	
B	2021-03-08	Finish designation change	Consistency with other drawings