

**Rivet-Titanium alloy
universal head
shear version**

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1 Scope

This standard specifies the dimensions and tolerances of titanium-columbium alloy rivet. These universal head dimensions are in accordance with MS20470.

2 Normative references

AMS4982	Titanium alloy wire 44.5 Cb.
EN2424	Aerospace series: Marking of aerospace products.
ISO8080	Aerospace; Anodic treatment of titanium and titanium alloys.
MIL-R-5674	Procurement specification for titanium-columbium rivet
MS20470	Rivet, solid, universal head.

3 Requirements

3.1 Configuration - Dimensions – Tolerances - Mass

The configuration shall conform with figure 1.

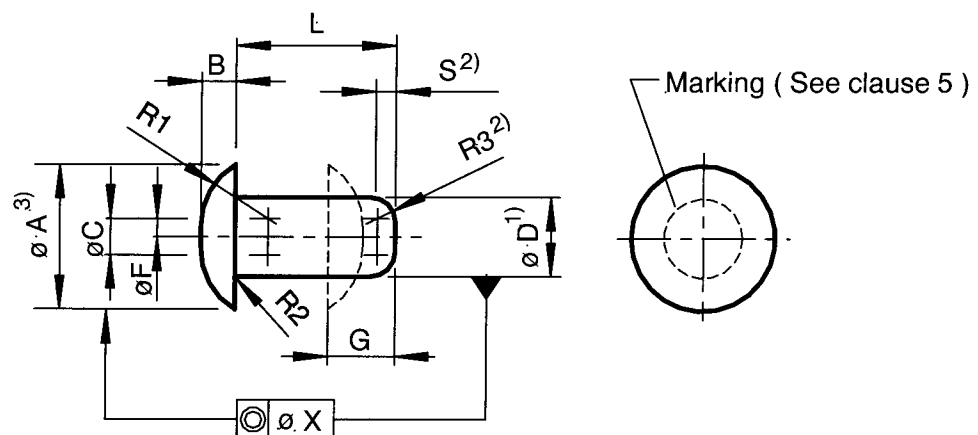
The dimensions, tolerances and mass shall conform with figure 1 and 2 and tables 1 and 2.

3.2 Material

Titanium-columbium alloy 45Cb per AMS4982. Heat treat; annealed to produce 50 ksi (345N/mm²) per AMS4982.

3.3 Surface treatment

Finish; anodized per ISO8080.



1) .001 (0,025) shank diameter increase is permissible within .10 (2,54) of the base of the head.

2) Chamfered ends with radius to R3 dimensions or 20° chamfer to „S“ dimensions.

Figure 1: Configuration

Table 1 ¹⁾

Dimensions in inches (mm)

Dia dash-no. ²⁾		-3	-4	-5
D=Nominal dia	+.003 (-.001)	.094 (2,388)	.125 (3,175)	.156 (3,962)
	(+.076) (-.025)			
A	min	.178 (4,52)	.238 (6,05)	.296 (7,52)
	max	.196 (4,98)	.262 (6,65)	.328 (8,33)
B	±.010 (±0,254)	.040 (1,02)	.054 (1,37)	.067 (1,70)
C	±.010 (±0,254)	.046 (1,17)	.062 (1,57)	.078 (1,98)
F	±.010 (±0,254)	.023 (0,58)	.031 (0,79)	.039 (0,99)
G	min.	.075 (1,9)	.100 (2,5)	.125 (3,2)
	max.	.141 (3,6)	.188 (4,8)	.234 (5,9)
R1	±.010 (±0,254)	.082 (2,08)	.108 (2,74)	.135 (3,43)
R2	max.	.020 (0,508)	.020 (0,508)	.020 (0,508)
R3	±.010 (±0,254)	.029 (0,74)	.039 (0,99)	.049 (1,24)
S	±.010 (±0,254)	.023 (0,58)	.031 (0,79)	.039 (0,99)

1) All dimensions apply before application of lubrication
2) Dash-no. indicates nom. dia in 1/32 inch increments

Table 2

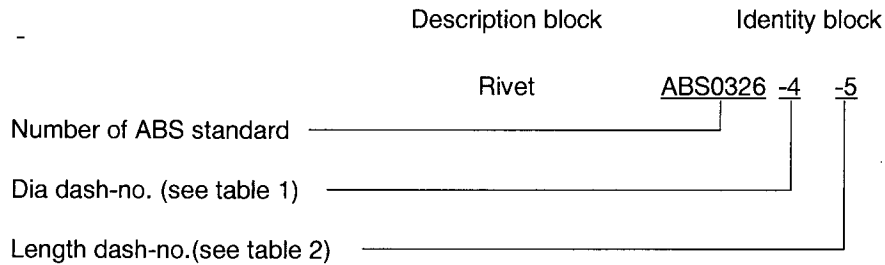
Dimensions in inches (mm)

Length dash-no. ^{1) 2)}	Dia dash-no.					
	-3		-4		-5	
	L ±.010 (±0,254)	Mass lbs/1000pcs (kg/1000pcs)	L ±.010 (±0,254)	Mass lbs/1000pcs (kg/1000pcs)	L ±.010 (±0,254)	Mass lbs/1000pcs (kg/1000pcs)
-2	.125 (3,175)	.315 (0,143)	-	-	-	-
-3	.188 (4,763)	.407 (0,185)	.188 (4,763)	.803 (0,364)	.188 (4,763)	1.371 (0,622)
-4	.250 (6,35)	.499 (0,226)	.250 (6,35)	.966 (0,438)	.250 (6,35)	1.624 (0,737)
-5	.313 (7,938)	.591 (0,268)	.313 (7,938)	1.129 (0,512)	.313 (7,938)	1.877 (0,851)
-6	.375 (9,525)	.683 (0,310)	.375 (9,525)	1.292 (0,586)	.375 (9,525)	2.130 (0,966)
-7	.438 (11,113)	.775 (0,352)	.438 (11,113)	1.455 (0,660)	.438 (11,113)	2.383 (1,081)
-8	.500 (12,700)	.867 (0,394)	.500 (12,700)	1.618 (0,734)	.500 (12,700)	2.636 (1,196)
-9	-	-	.563 (14,288)	1.781 (0,808)	.563 (14,288)	2.889 (1,310)
-11	-	-	-	-	.688 (17,463)	3.395 (1,539)

1) Dash-no. indicates length in 1/16 inch increments
2) Additional lengths on behalf of the production departments in 1/16 inch increments.

4 Designation

Example:



5 Marking

5.1 Material identification

Symbol on the head in accordance with figure 2.

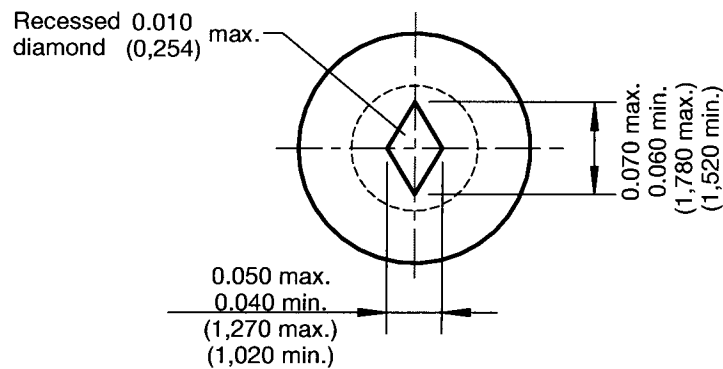


Figure 2: Configuration

5.2 Manufacturer's identification

EN2424 F to be depressed on rivet heads with a shank diameter .125 (3,175) and larger

6 Technical specification

The rivets shall conform to the requirements of MIL-R-5674 except for the finish as stated