

Hexagonal head titanium alloy bolts 160 000 lbf/in² (1100 MPa)

UDC 629.7.02:621.882.211:669.295.5

Confirmed
April 2008

Foreword

This British Standard has been prepared to provide a range of 160 000 lbf/in² (1 100 MPa) to 180 000 lbf/in² (1 250 MPa) titanium alloy bolts with UNJ profile threads and close tolerance shanks for aerospace use. The lengths of the bolts are in fractional increments. When considering the use of cadmium plated titanium bolts, attention is drawn to DARD Technical Circular No. 292 which recommends certain limitations on their use.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been approved by the Aerospace Industry Standards Committee, was published under the authority of the Executive Board on 31 March 1976

© BSI 02-2000

The following BSI references relate to the work on this standard:
Committee reference ACE/12
Draft for comment 72/37963 DC

ISBN 0 580 08706 9

Amendments issued since publication

Amd. No.	Date of issue	Comments
2647	July 1978	
2812	April 1979	Indicated by a sideline in the margin

Contents

	Page
Foreword	Inside front cover
1 Scope	1
2 References	1
3 General requirements	1
4 Example of call up	7
5 Identification and marking	7
Appendix A Table for the conversion of inches to millimetre equivalents	8
Figure 1 — Basic dimensions	1
Figure 2 — Alternative bolt head manufacturers option. Washer face and/or dimpled head	1
Figure 3 — Typical disposition of the various markings	7
Table 1 — Dimensions (standard shank diameters)	2
Table 2 — Oversize shank diameters	2
Table 3 — Material	3
Table 4 — Bearing length L , overall length E and dimension M	4

1 Scope

This British Standard specifies the materials, dimensions, finish and inspection requirements for titanium alloy bolts with hexagonal heads and UNJ thread for aerospace use.

2 References

This standard makes reference to the following British Standards and Ministry of Defence publications:

BS 4084, *Unified screw threads of "UNJ" basic profile.*

BS A 101, *General requirements for titanium bolts.*

BS A 242-245, *Hexagonal castle nuts (of class 3B UNJ thread).*

BS TA 28, *Forging stock and wire of titanium-aluminium-vanadium alloy (tensile strength 1 100–1 300 MPa) (limiting ruling section 20 mm).*

DTD 904, *Cadmium plating.*

DTD 942, *Anodising of titanium and titanium alloys.*

DEF STAN 91-19/1, *Lubricant, solid film, heat cured.*

The latest editions of these standards shall be used.

NOTE The values in imperial units are to be regarded as the standard. The table in Appendix A provides millimetre equivalents of inch dimensions and is based on the tables in BS 350 "Conversion factors and tables".

3 General requirements

3.1 The bolts shall be manufactured, inspected and tested in accordance with the requirements of BS A 101.

3.2 All bolts shall conform to the dimensions and tolerances given in Table 1, Table 2 and Table 4, and Figure 1 and Figure 2. Unless otherwise specified, the dimensions are those before the application of surface treatment. The material requirements shall be as specified.

