



SLOVENSKI STANDARD

SIST EN 3724:2005

01-junij-2005

BUXca Yý U
SIST EN 3724:2004

Aerospace series - Bolts, double hexagon head, relieved shank, long thread, in titanium alloy TI-P64001, MoS2 coated - Strength Class: 1 100 MPa (at ambient temperature)

Aerospace series - Bolts, double hexagon head, relieved shank, long thread, in titanium alloy TI-P64001, MoS2 coated - Strength Class: 1 100 MPa (at ambient temperature)

(standards.iteh.ai)

Luft- und Raumfahrt - Zwölfkantschrauben, Dünnschaft, langes Gewinde, aus Titanlegierung TI-P64001, MoS2-beschichtet - Festigkeitsklasse: 1 100 MPa (bei Raumtemperatur) <https://standards.iteh.ai/catalog/standards/sist/f8c4a83d-78f8-4163-91ba-1b0afec0ea39/sist-en-3724-2005>

Série aérospatiale - Vis a tete bihexagonale, fut dégagé, filetage long, en alliage de titane TI-P64001, revetues MoS2 - Classe de résistance : 1 100 MPa (a température ambiante)

Ta slovenski standard je istoveten z: EN 3724:2004

ICS:

49.030.20 Sorniki, vijaki, stebelni vijaki Bolts, screws, studs

SIST EN 3724:2005

en

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English version

**Aerospace series - Bolts, double hexagon head, relieved shank,
long thread, in titanium alloy TI-P64001, MoS2 coated - Strength
Class: 1 100 MPa (at ambient temperature)**

Série aéronautique - Vis à tête bihexagonale, fût dégagé,
filetage long, en alliage de titane TI-P64001, revêtues
MoS2 - Classe de résistance : 1 100 MPa (à température
ambiante)

Luft- und Raumfahrt - Zwölfkantschrauben, Dünnschaft,
langes Gewinde, aus Titanlegierung TI-P64001, MoS2-
beschichtet - Festigkeitsklasse: 1 100 MPa (bei
Raumtemperatur)

This European Standard was approved by CEN on 11 September 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3724:2004) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This document supersedes EN 3724:2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN 3724:2004 (E)

1 Scope

This standard specifies the characteristics of double hexagon headed bolts with relieved shank and long thread in TI-P64001, MoS₂ coated, for aerospace applications.

Strength class: 1 100 MPa ¹⁾

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3353-1, *Aerospace – Lead and runout threads – Part 1: Rolled external threads*

ISO 4095, *Aerospace – Bihexagonal drives – Wrenching configuration – Metric series*

ISO 5855-2, *Aerospace – MJ threads – Part 2: Limit dimensions for bolts and nuts*

EN 2424, *Aerospace series – Marking of aerospace products*

EN 2491, *Aerospace series – Molybdenum disulphide dry lubricants – Coating methods*

EN 3813, *Aerospace series – Titanium alloy TI-P64001 – Annealed – Bar and wire for forged fasteners – $D_e \leq 25$ mm ²⁾*

EN 3818, *Aerospace series – Bolts, MJ threads, in titanium alloy TI-P64001 – Strength class: 1 100 MPa (at ambient temperature) – Technical specification*

<https://standards.iteh.ai/catalog/standards/sist/f8c4a83d-78f8-4163-91ba-1b0afec0ea39/sist-en-3724-2005>

3 Required characteristics**3.1 Configuration – Dimensions – Tolerances – Masses**

See Figure 1 and Tables 1 and 2.

Dimensions and tolerances are in millimetres. They apply before MoS₂ coating.

3.2 Material

EN 3813

3.3 Surface treatment

EN 2491

1) Minimum tensile strength of the material at ambient temperature

2) Published as AECMA Prestandard at the date of publication of this standard

Table 2

| Length code | N ± 0,3 | Thread code | | | | | | | | | | | | | | | | | |
|-------------|------------|-------------|-----------|-------------------|------|-----------|-------------------|------|-----------|-------------------|------|-----------|-------------------|------|-----------|-------------------|------|-----------|-------------------|
| | | 050 | | | 060 | | | 070 | | | 080 | | | 100 | | | 120 | | |
| | | max. | W min. | Mass ^a | max. | W min. | Mass ^a | max. | W min. | Mass ^a | max. | W min. | Mass ^a | max. | W min. | Mass ^a | max. | W min. | Mass ^a |
| 008 | 8 | | | 1,76 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 010 | 10 | | | 1,90 | | | 2,72 | | | 3,84 | | | 5,14 | — | — | — | — | — | — |
| 012 | 12 | | | 2,04 | | | 2,92 | | | 4,12 | | | 5,51 | — | — | — | — | — | — |
| 014 | 14 | | | 2,17 | | | 3,12 | | | 4,40 | | | 5,89 | | | 9,53 | — | — | — |
| 016 | 16 | | | 2,31 | | | 3,32 | | | 4,68 | | | 6,26 | | | 10,12 | | | 15,87 |
| 018 | 18 | | | 2,46 | | | 3,52 | | | 4,96 | | | 6,64 | | | 10,71 | | | 16,74 |
| 020 | 20 | 4 | 2,5 | 2,60 | | | 3,72 | | | 5,24 | | | 7,02 | | | 11,30 | | | 17,61 |
| 022 | 22 | 6 | 4,5 | 2,74 | 4 | 2,5 | 3,92 | | | 5,52 | | | 7,39 | | | 11,88 | | | 18,48 |
| 024 | 24 | 8 | 6,5 | 2,88 | 6 | 4,5 | 4,12 | 4 | 2,5 | 5,80 | | | 7,77 | | | 12,46 | | | 19,35 |
| 026 | 26 | 10 | 8,5 | 3,02 | 8 | 6,5 | 4,32 | 6 | 4,5 | 6,08 | 4 | 2,5 | 8,14 | | | 13,05 | | | 20,22 |
| 028 | 28 | 12 | 10,5 | 3,16 | 10 | 8,5 | 4,52 | 8 | 6,5 | 6,36 | 6 | 4,5 | 8,52 | | | 13,64 | | | 21,09 |
| 030 | 30 | 14 | 12,5 | 3,30 | 12 | 10,5 | 4,72 | 10 | 8,5 | 6,65 | 8 | 6,5 | 8,90 | 4 | 2,7 | 14,23 | | | 21,96 |
| 032 | 32 | 16 | 14,5 | 3,44 | 14 | 12,5 | 4,92 | 12 | 10,5 | 6,93 | 10 | 8,5 | 9,27 | 6 | 4,5 | 14,82 | | | 22,83 |
| 034 | 34 | 18 | 16,5 | 3,58 | 16 | 14,5 | 5,12 | 14 | 12,5 | 7,21 | 12 | 10,5 | 9,65 | 8 | 6,5 | 15,40 | 4 | 2,8 | 23,71 |
| 036 | 36 | 20 | 18,5 | 3,71 | 18 | 16,5 | 5,32 | 16 | 14,5 | 7,49 | 14 | 12,5 | 10,03 | 10 | 8,5 | 15,99 | 6 | 4,5 | 24,58 |
| 038 | 38 | 22 | 20,5 | 3,85 | 20 | 18,5 | 5,52 | 18 | 16,5 | 7,77 | 16 | 14,5 | 10,41 | 12 | 10,5 | 16,58 | 8 | 6,5 | 25,45 |
| 040 | 40 | 24 | 22,5 | 3,99 | 22 | 20,5 | 5,71 | 20 | 18,5 | 8,05 | 18 | 16,5 | 10,78 | 14 | 12,5 | 17,16 | 10 | 8,5 | 26,32 |
| 042 | 42 | 26 | 24,5 | 4,13 | 24 | 22,5 | 5,91 | 22 | 20,5 | 8,33 | 20 | 18,5 | 11,16 | 16 | 14,5 | 17,75 | 12 | 10,5 | 27,19 |
| 044 | 44 | 28 | 26,5 | 4,27 | 26 | 24,5 | 6,12 | 24 | 22,5 | 8,61 | 22 | 20,5 | 11,53 | 18 | 16,5 | 18,34 | 14 | 12,5 | 28,06 |
| 046 | 46 | 30 | 28,5 | 4,41 | 28 | 26,5 | 6,31 | 26 | 24,5 | 8,89 | 24 | 22,5 | 11,91 | 20 | 18,5 | 18,93 | 16 | 14,5 | 28,94 |
| 048 | 48 | 32 | 30,5 | 4,55 | 30 | 28,5 | 6,51 | 28 | 26,5 | 9,17 | 26 | 24,5 | 12,29 | 22 | 20,5 | 19,52 | 18 | 16,5 | 29,80 |
| 050 | 50 | 34 | 32,5 | 4,69 | 32 | 30,5 | 6,71 | 30 | 28,5 | 9,45 | 28 | 26,5 | 12,66 | 24 | 22,5 | 20,10 | 20 | 18,5 | 30,68 |
| 052 | 52 | 36 | 34,5 | 4,83 | 34 | 32,5 | 6,91 | 32 | 30,5 | 9,73 | 30 | 28,5 | 13,04 | 26 | 24,5 | 20,69 | 22 | 20,5 | 31,54 |
| 054 | 54 | 38 | 36,5 | 4,97 | 36 | 34,5 | 7,11 | 34 | 32,5 | 10,02 | 32 | 30,5 | 13,41 | 28 | 26,5 | 21,27 | 24 | 22,5 | 32,42 |
| 056 | 56 | 40 | 38,5 | 5,11 | 38 | 36,5 | 7,31 | 36 | 34,5 | 10,30 | 34 | 32,5 | 13,79 | 30 | 28,5 | 21,86 | 26 | 24,5 | 33,29 |
| 058 | 58 | 42 | 40,5 | 5,25 | 40 | 38,5 | 7,51 | 38 | 36,5 | 10,58 | 36 | 34,5 | 14,17 | 32 | 30,5 | 22,45 | 28 | 26,5 | 34,16 |
| 060 | 60 | 44 | 42,5 | 5,39 | 42 | 40,5 | 7,71 | 40 | 38,5 | 10,86 | 38 | 36,5 | 14,54 | 34 | 32,5 | 23,01 | 30 | 28,5 | 35,03 |
| 062 | 62 | 46 | 44,5 | 5,53 | 44 | 42,5 | 7,91 | 42 | 40,5 | 11,14 | 40 | 38,5 | 14,92 | 36 | 34,5 | 23,63 | 32 | 30,5 | 35,90 |
| 064 | 64 | 48 | 46,5 | 5,67 | 46 | 44,5 | 8,11 | 44 | 42,5 | 11,42 | 42 | 40,5 | 15,30 | 38 | 36,5 | 24,21 | 34 | 32,5 | 36,77 |
| 066 | 66 | 50 | 48,5 | 5,81 | 48 | 46,5 | 8,31 | 46 | 44,5 | 11,70 | 44 | 42,5 | 15,67 | 40 | 38,5 | 24,80 | 36 | 34,5 | 37,64 |
| 068 | 68 | 52 | 50,5 | 5,95 | 50 | 48,5 | 8,51 | 48 | 46,5 | 11,98 | 46 | 44,5 | 16,05 | 42 | 40,5 | 25,38 | 38 | 36,5 | 38,51 |

continued

Table 2 (concluded)

| Length code | N ± 0,3 | Thread code | | | | | | | | | | | | | | | | | |
|-------------|------------|-------------|------|-------------------|--------|------|-------------------|--------|------|-------------------|--------|------|-------------------|--------|-------|-------------------|--------|-------|-------------------|
| | | 050 | | | 060 | | | 070 | | | 080 | | | 100 | | | 120 | | |
| | | max. W | min. | Mass ^a | max. W | min. | Mass ^a | max. W | min. | Mass ^a | max. W | min. | Mass ^a | max. W | min. | Mass ^a | max. W | min. | Mass ^a |
| 070 | 70 | 54 | 52,5 | 6,09 | 52 | 50,5 | 8,71 | 50 | 48,5 | 12,26 | 48 | 46,5 | 16,43 | 44 | 42,5 | 25,97 | 40 | 38,5 | 39,38 |
| 072 | 72 | – | – | – | 54 | 52,5 | 8,90 | 52 | 50,5 | 12,54 | 50 | 48,5 | 16,80 | 46 | 44,5 | 26,56 | 42 | 40,5 | 40,25 |
| 074 | 74 | – | – | – | 56 | 54,5 | 9,10 | 54 | 52,5 | 12,82 | 52 | 50,5 | 17,18 | 48 | 46,5 | 27,15 | 44 | 42,5 | 41,13 |
| 076 | 76 | – | – | – | 58 | 56,5 | 9,30 | 56 | 54,5 | 13,10 | 54 | 52,5 | 17,56 | 50 | 48,5 | 27,74 | 46 | 44,5 | 41,99 |
| 078 | 78 | – | – | – | 60 | 58,5 | 9,50 | 58 | 56,5 | 13,39 | 56 | 54,5 | 17,93 | 52 | 50,5 | 28,32 | 48 | 46,5 | 42,87 |
| 080 | 80 | – | – | – | 62 | 60,5 | 9,70 | 60 | 58,5 | 13,67 | 58 | 56,5 | 18,31 | 54 | 52,5 | 28,91 | 50 | 48,5 | 43,74 |
| 082 | 82 | – | – | – | 64 | 62,5 | 9,90 | 62 | 60,5 | 13,95 | 60 | 58,5 | 18,69 | 56 | 54,5 | 29,50 | 52 | 50,5 | 44,61 |
| 084 | 84 | – | – | – | 66 | 64,5 | 10,10 | 64 | 62,5 | 14,23 | 62 | 60,5 | 19,06 | 58 | 56,6 | 30,08 | 54 | 52,5 | 45,48 |
| 086 | 86 | – | – | – | – | – | – | 66 | 64,5 | 14,51 | 64 | 62,5 | 19,44 | 60 | 58,5 | 30,67 | 56 | 54,5 | 46,35 |
| 088 | 88 | – | – | – | – | – | – | 68 | 66,5 | 14,79 | 66 | 64,5 | 19,81 | 62 | 60,5 | 31,26 | 58 | 56,5 | 47,22 |
| 090 | 90 | – | – | – | – | – | – | 70 | 68,5 | 15,08 | 68 | 66,5 | 20,18 | 64 | 62,5 | 31,84 | 60 | 58,5 | 48,09 |
| 092 | 92 | – | – | – | – | – | – | 72 | 70,5 | 15,36 | 70 | 68,5 | 20,56 | 66 | 64,5 | 32,43 | 62 | 60,5 | 48,97 |
| 094 | 94 | – | – | – | – | – | – | 74 | 72,5 | 15,64 | 72 | 70,5 | 20,94 | 68 | 66,5 | 33,02 | 64 | 62,5 | 49,83 |
| 096 | 96 | – | – | – | – | – | – | 76 | 74,5 | 15,92 | 74 | 72,5 | 21,32 | 70 | 68,5 | 33,61 | 66 | 64,5 | 50,71 |
| 098 | 98 | – | – | – | – | – | – | 78 | 76,5 | 16,20 | 76 | 74,5 | 21,69 | 72 | 70,5 | 34,19 | 68 | 66,5 | 51,58 |
| 100 | 100 | – | – | – | – | – | – | – | – | – | 78 | 76,5 | 22,07 | 74 | 72,5 | 34,78 | 70 | 68,5 | 52,45 |
| 104 | 104 | – | – | – | – | – | – | – | – | – | 82 | 80,5 | 22,83 | 78 | 76,5 | 35,95 | 74 | 72,5 | 54,19 |
| 108 | 108 | – | – | – | – | – | – | – | – | – | 86 | 84,5 | 23,58 | 82 | 80,5 | 37,13 | 78 | 76,5 | 55,93 |
| 112 | 112 | – | – | – | – | – | – | – | – | – | 90 | 88,5 | 24,33 | 86 | 84,5 | 38,30 | 82 | 80,5 | 57,67 |
| 116 | 116 | – | – | – | – | – | – | – | – | – | – | – | – | 90 | 88,5 | 39,48 | 86 | 84,5 | 59,42 |
| 120 | 120 | – | – | – | – | – | – | – | – | – | – | – | – | 94 | 92,5 | 40,65 | 90 | 88,5 | 61,16 |
| 124 | 124 | – | – | – | – | – | – | – | – | – | – | – | – | 98 | 96,5 | 41,83 | 94 | 92,5 | 62,90 |
| 128 | 128 | – | – | – | – | – | – | – | – | – | – | – | – | 102 | 100,5 | 43,00 | 98 | 96,5 | 64,64 |
| 132 | 132 | – | – | – | – | – | – | – | – | – | – | – | – | 106 | 104,5 | 44,18 | 102 | 100,5 | 66,38 |
| 136 | 136 | – | – | – | – | – | – | – | – | – | – | – | – | 110 | 108,5 | 45,35 | 106 | 104,5 | 68,12 |
| 140 | 140 | – | – | – | – | – | – | – | – | – | – | – | – | 114 | 112,5 | 46,53 | 110 | 108,5 | 69,87 |
| 144 | 144 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 114 | 112,5 | 71,60 |
| 148 | 148 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 118 | 116,5 | 73,35 |
| 152 | 152 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 122 | 120,5 | 75,09 |
| 156 | 156 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 126 | 124,5 | 76,83 |
| 160 | 160 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 130 | 128,5 | 78,57 |
| 164 | 164 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 134 | 132,5 | 80,32 |
| 168 | 168 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | 138 | 136,5 | 82,06 |

^a Mass ≈ quoted in kg/1 000 parts

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