

# DRAFT INTERNATIONAL STANDARD

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ISO/TC 20/SC 10

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### Aerospace series — Pipe coupling 8°30' in titanium alloy — Thrust wire nuts

*Série aérospatiale — Système de raccordement 8°30' en alliage de titane — Écrous à jonc*

ICS: 49.080

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by the Aerospace and Defence Industries Association of Europe – Standardization (ASD-STAN) as EN 3264:2018 and was adopted by ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

# Aerospace series — Pipe coupling 8°30' in titanium alloy — Thrust wire nuts

## 1 Scope

This document specifies the characteristics of thrust wire nuts for pipe couplings 8°30', in titanium alloy, for aerospace applications.

Nominal pressure: up to 28 000 kPa.

Temperature range: -55 °C to 135 °C.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

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

EN 3275, *Aerospace series — Pipe coupling 8°30' up to 28 000 kPa — Dynamic beam seal — Metric series — Technical specification*

EN 3311, *Aerospace series — Titanium alloy TI-P64001 (Ti-6Al-4V) — Annealed — Bar for machining  $D < 110$  mm*

EN 3314, *Aerospace series — Titanium alloy TI-P64001, solution treated and aged — bar for machining  $D \leq 75$  mm*

EN 4032, *Aerospace series — Pipe coupling 8°30' in titanium alloy — Thrust wires*

EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*

ISO 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 5855-3, *Aerospace — MJ threads — Part 3: Limit dimensions for fittings for fluid systems*

ISO 8788, *Aerospace — Nuts, metric — Tolerances of form and position*

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

## 4 Required characteristics

### 4.1 Configuration – Dimensions – Mass

According to Figure 1 and Table 1. The values apply before lubricating.

### 4.2 Surface roughness

According to Figure 1.

### 4.3 Material

According to EN 3311 or EN 3314

### 4.4 Surface treatment

Lubrication: according to EN 2491, on the bottom of the groove only.

Prior to application of the lubricant the surface shall be abrasive blasted using non-metallic grit.

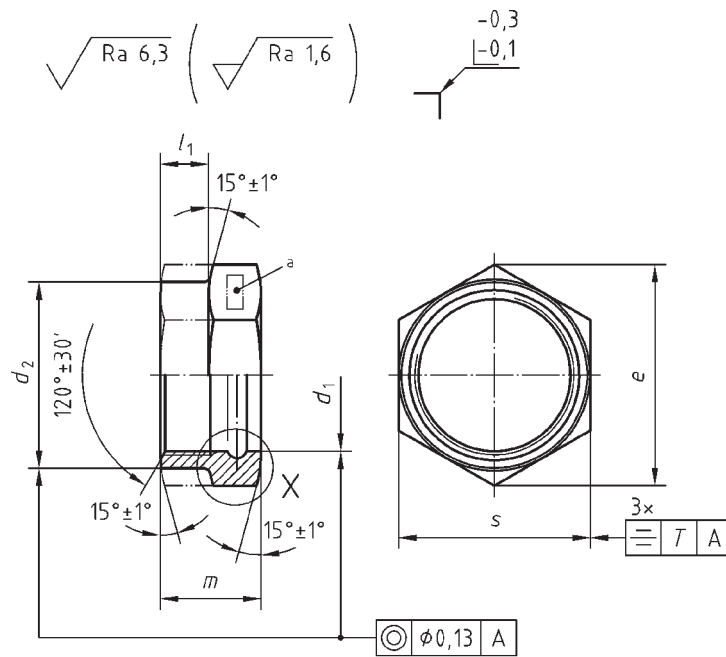
Film thickness: 0,005 mm to 0,013 mm.

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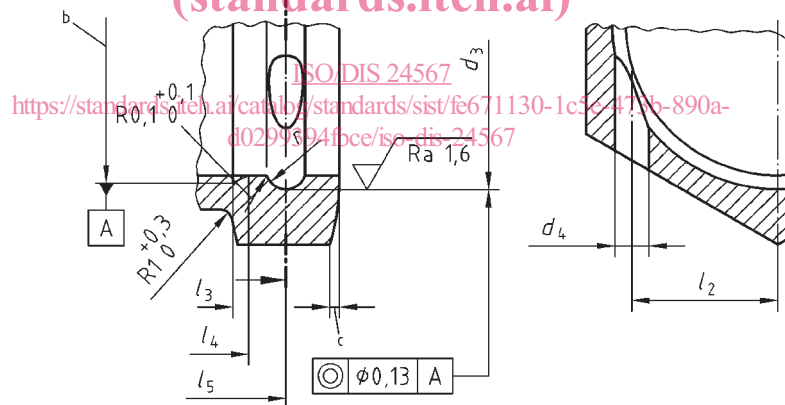
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Dimensions in millimetres



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**Key**

- a Area for marking
- b Thread
- c 0,3 to 0,5 applicable to both faces

**Figure 1**

**Table 1**

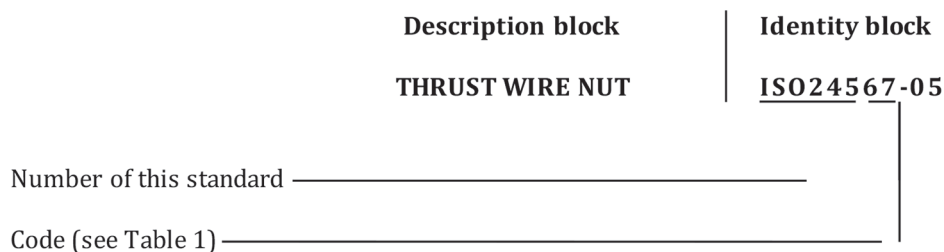
Dimensions in millimetres

Code <sup>a</sup>	Thread <sup>b</sup> 4H5H	$d_1$	$d_2$	$d_3$	$d_4^c$	$e$	$l_1$	$l_2$	$l_3^d$	$l_4$	$l_5$	$m$	$r$	$s$	$t^e$	Mass g/piece max.					
		±0,1	0 -0,2	+0,1 0	+0,1 0	min.	±0,4	±0,1		max.	±0,1	h11 <sup>f</sup>	+0,1 0	h13 <sup>f</sup>							
05	MJ10 × 1	9,1	-	11,0	2,2	15,51	-	4,2	7,2	8,4	10,0	13,0	1,3	14	0,36	5,52					
06	MJ12 × 1,25	10,8	-	12,6		17,77	-	5,2	8,0	9,2	11,0	14,0		16	0,43	7,36					
08	MJ14 × 1,5	12,6	17,0	14,6		20,03	11,0	6,2	9,5	11,0	13,0	16,0		18		7,59					
10	MJ16 × 1,5	14,6	19,0	16,6		23,36		7,2				16,5		21		9,00					
12	MJ18 × 1,5	16,6	21,0	19,2	2,7	24,49	10,5	8,2	10,5	12,0	14,0	17,5	1,6	22	0,52	10,64					
14	MJ20 × 1,5	18,6	23,0	21,2		26,75		9,2								18,0	24	11,56			
16	MJ22 × 1,5	20,6	26,0	23,2	3,2	30,14	10,0	10,2	10,5	12,0	14,5	19,0	1,9	27	0,62	17,50					
18	MJ24 × 1,5	22,6	28,0	25,2		33,53								11,2						30	23,66
20	MJ27 × 1,5	25,6	31,0	28,2		35,72								12,5						32	23,23
22	MJ30 × 1,5	28,6	35,0	31,2		39,98								13,7						36	27,72
25	MJ33 × 1,5	31,6	38,0	34,2	9,5	45,63	9,5	15,5	10,5	12,0	14,5	19,5	1,9	41	0,62	36,63					
28	MJ36 × 1,5	34,6	41,0	37,2		51,28								17,2						46	42,00
32	MJ39 × 1,5	37,6	45,0	40,2		55,80								18,6						50	51,45

<sup>a</sup> Corresponds to the pipe nominal outside diameter.  
<sup>b</sup> According to ISO 5855-3.  
<sup>c</sup> Corresponding wire diameter according to EN 4032.  
<sup>d</sup> Minimum usable thread length.  
<sup>e</sup> According to ISO 8788. <https://standards.iteh.ai/catalog/standards/sist/fe671130-1c5e-473b-890a-d0299394fbce/iso-dis-24567>  
<sup>f</sup> h11 or h13 tolerance in accordance with ISO 286-2.

## 5 Designation

EXAMPLE



NOTE If necessary, the code I9005 shall be placed between the description block and the identity block.

## 6 Marking

According to EN 2424, style A and Figure 1.

## 7 Technical specification

According to EN 3275, type II.