SLOVENSKI STANDARD
SIST EN 4812:2017

01-oktober-2017

Aeronavtika - Prirobnične spojke - Robna tesnila z nikljevo zlitino na toplotno odporni jekleni plošči s 4 pritrdilnimi luknjami - Palčne mere

Aerospace series - Flange couplings - Gasket seal with nickel alloy C seal on heat resisting steel plate with 4 fastening holes - Inch series

Luft- und Raumfahrt - Rohrverschraubung mit Flanschen - Flachdichtung aus Nickellegierung, mit Stahlarmierung aus hochwarmfestem Stahl mit 4 Befestigungslöchern - Inch-Reihe

Série aérospatiale - Raccordement à bride - Joint plaque avec joint C en alliage de nickel sur plaque en acier résistant à chaud avec 4 trous de fixation - Série en inches

Ta slovenski standard je istoveten z: **EN 4812:2017**

ICS:

23.040.60	Prirobnice, oglavki in spojni elementi	Flanges, couplings and joints
49.080	Letalski in vesoljski hidravlični sistemi in deli	Aerospace fluid systems and components

SIST EN 4812:2017 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4812

May 2017

ICS 49.080

English Version

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This European Standard was approved by CEN on 14 November 2016.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 4812:2017 E

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European foreword

This document (EN 4812:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-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 ASD, 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of an identical text or by endorsement, at the latest by November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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

1 Scope

This standard specifies the characteristics of gasket seal with nickel alloy C seal on heat resisting steel, 4 holes, for pipe couplings for inch series aerospace applications.

Nominal pressure: up to 21 000 kPa; depends on the associated tube material and tube wall thickness in the assembly (see EN 4814).

Temperature range: –55 °C to 600 °C.

NOTE Assembly in accordance with TR 4815.

This part should not be reused after disassembling.

2 Normative references

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

EN 2407, *Aerospace series — Heat resisting alloy NI-PH2601(NiCr19Fe19Nb5Mo3) — Solution treated and precipitation treated — Sheet, strip and plate — 0,2 mm ≤ a ≤ 10 mm*

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

EN 2516, *Aerospace series — Passivation of corrosion resistant steels and decontamination of nickel base alloys*

EN 3480, *Aerospace series — Steel FE-PA3601 (X6CrNiTi18-10) — Air melted — Softened — Plate — 6 mm < a ≤ 50 mm — 500 MPa ≤ R_m ≤ 700 MPa*

EN 3488, *Aerospace series — Steel FE-PA3601 (X6CrNiTi18-10) — Air melted — Softened — Sheet and strip — a ≤ 6 mm — 500 MPa ≤ R_m ≤ 700 MPa*

EN 4814, *Aerospace series — Flange couplings up to 21 000 kPa — Technical specification — Inch series*

EN 4816, *Aerospace series — Flange couplings — Gasket seal with nickel alloy C seal — Technical specification — Inch series*

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

ISO 1458, *Metallic coatings — Electrodeposited coatings of nickel*

TR 4815, *Aerospace series — Flange couplings up to 21 000 kPa — Design standard — Inch series*[1)]

3 Required characteristics

3.1 Configuration – Dimensions – Tolerances – Masses

See Figure 1 and Table 1. Dimensions and tolerances are in millimetres, except otherwise specified.

1) Published as ASD-STAN Technical Report at the date of publication of this standard. (http://www.asd-stan.org/)

3.2 Material

Plate: EN 3480 or EN 3488.

Seal: EN 2407.

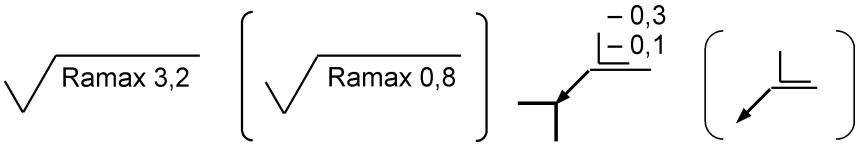
3.3 Surface treatment

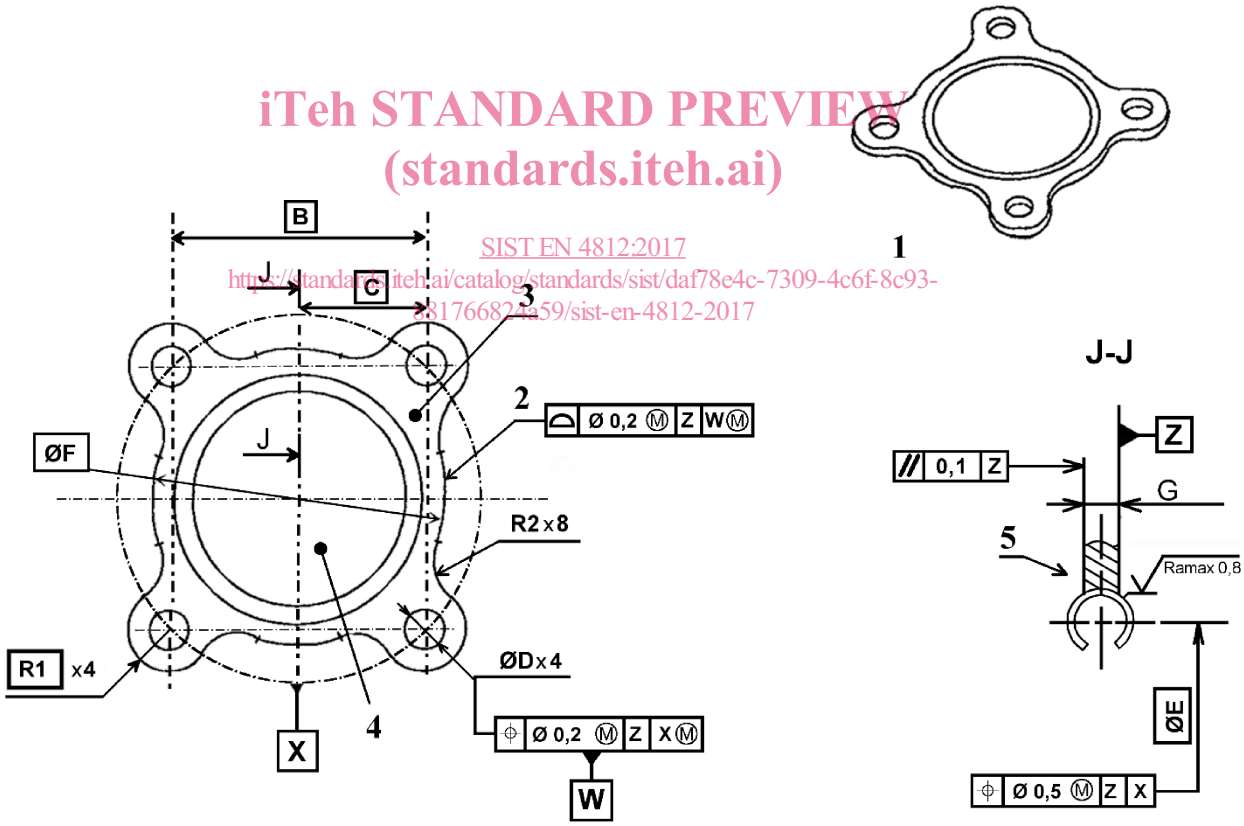
Plate: Passivation EN 2516.

Seal: ISO 1458.

3.4 Assembly

C seal shall not be disassembled from the plate after a drop down from at least 200 mm height.





Key

1 3D view
2 Surface geometric tolerance applies to *ØF* and *R*1
3 Marking
4 Hole diameter for the fluid flow equal to *S*
5 Form not stated are left to the manufacturer's discretion with a theoretical diameter of 1,57 mm and a thickness of 0,15 mm minimum.

Figure 1

Table 1

Dimensional code[a]	Nominal diameter		*B*	*C*	*ØD*	*ØE*	*ØF*	*G*	*R*1	*R*2		*S*	Mass[c]
	inch	mm	Theo.	Theo.	±0,1	Theo.[b]	Theo.	±0,05	Theo.	min	max	Theo.	
10A	.625	15,875	26,36	13,18	5,1	21,21	28,45	1,32	5,56	5,08	8,13	13,5	6,2
10B	.625	15,875	28,30	14,15	6,6	21,21	31,20	1,32	6,76	5,08	8,13	13,5	8,5
12A	.750	19,050	29,36	14,68	5,1	24,38	31,75	1,32	5,56	5,08	8,13	17,0	6,9
12B	.750	19,050	30,48	15,24	6,6	24,38	40,23	1,32	6,76	5,08	8,13	17,0	11,0
16A	1.000	25,400	33,32	16,66	5,1	30,58	38,10	1,32	5,56	5,08	8,13	23,1	7,5
16B	1.000	25,400	35,92	17,96	6,6	30,58	46,84	1,32	6,76	6,60	9,91	23,1	13,1
20B	1.250	31,750	42,06	21,03	6,6	37,90	46,84	1,32	6,76	6,60	9,91	28,9	11,5
24B	1.500	38,100	46,02	23,01	6,6	43,94	53,97	1,32	7,14	6,60	9,91	34,9	13,5
28B	1.750	44,450	52,37	26,06	6,6	51,61	60,32	1,32	7,14	6,60	9,91	41,2	14,1
32C	2.000	50,800	60,32	30,17	8,2	61,01	69,85	1,32	7,92	7,87	11,68	46,8	16,8

[a] This code is composed with the following elements:
- Nominal diameter given in 16th of inches within 2 digit;
- Bolt nominal thread diameter [*A*: .1900 in (4,826 mm); *B*: .2500 in (6,35 mm); *C*: .3125 in (7,938 mm)].

[b] This dimension is a design reference not directly measured but calculated by subtracting average torus diameter value from average external diameter value of the C seal at free state.

[c] Mass ≈ quoted in kg/1 000 parts.

4 Designation

EXAMPLE

Description block	Identity block
SEAL, GASKET, 4 HOLES	EN4812-10A

Number of this standard

Dimensional code (see Table 1)

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

5 Identification marking

EN 2424, category A, as indicated on Figure 1. Marking shall not be embossed.

6 Technical specification

EN 4816 with minimum pressure values for pressurizing tests.

7 Quality Assurance

Approval of the manufactures.

See EN 9100.