International Standard

Aerospace construction — Fluid systems — Interface of metric couplings

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION MEX CHAPODHAR OPPAHUSALUUR TO CTAHDAPTUSALUUMORGANISATION INTERNATIONALE DE NORMALISATION

Constructions aérospatiales - Systèmes hydrauliques - Interface des raccordements métriques

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UDC 621.643.414 : 629.7

Descriptors : aircraft industry, aircraft equipment, couplings, pipe fittings, nuts (fasteners), dimensions.

ISO 7319-1982 (E)

7319

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7319 was developed by Technical Committee ISO/TC 20, Aircraft and space vehicles, and was circulated to the member bodies in July 1981.

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It has been approved by the member bodies of the following countries:

		<u>ISO 7319:1982</u>	
Australia	Egypt, Arab Rep.	ptatalog/sBomaniasist/d544efaa-4988-4	b7e-a2f7-
Austria	France	8645-Rh South Africa, Rep. of	- //
Belgium	Ireland	Spain	
Brazil	Italy	Sweden	
Canada	Japan	USA	
China	Korea, Rep. of		
Czechoslovakia	Netherlands		

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Germany, F.R. United Kingdom USSR

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INTERNATIONAL STANDARD

Aerospace construction — Fluid systems — Interface of metric couplings

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1 Scope and field of application (standards.iteh.ai) 3 Coupling assembly and sealing principle

This International Standard defines the geometry of Che³19:19 The coupling comprises three elements : interface of the removable couplings for the aircraft fluid lards/sist/d544efaa-4988-4b7e-a2f7-systems, with the possibility that the connection with the pipe/iso-7319-1982 of each one of the connecting elements be of different design.

This International Standard fixes the dimensions providing for the interchangeability of the male and female elements and of the nut used for the connection.

The dimensions are a definition of the maximum volume of the male fitting.

2 Reference

ISO 5855/1, Aerospace construction – MJ thread – Part 1: Basic profile.

A female element including a frustum with a cone angle equal to 24° in which the male element comes into contact to provide the sealing. The contact line is a circle with a theoretical diameter *E*.

A male element, included inside a shell, with a torical/or spherical area extended by two tangential frustums on which the female element comes into contact to provide for the sealing. This contact line is a circle with a theoretical diameter E.

A nut providing for the assembly of the male and female elements of the coupling.

4 Dimensions





Outline of the theoretical profile of the male element shell



Point a = origin at E/2 from the XX' axis.

- Point b = point located at a distance N from point a on the perpendicular to the line tilted 12° relatively to XX' and passing through a.
- Point c = located at B/2 from the XX' axis and at P from a.
- Line cd = tangent drawn from c to the arc of circle with center b and radius <math>N.

Line ef = tangent tilted 12° 50 on the arc of circle of center b and of radius *N*. The point of tangency thus obtained is designated e.

NOTE — The profile involves exclusively those machined male elements which do not lose their shape. Nevertheless, the female elements may receive anchor-type male elements that lose their shape.

Figure - Dimensions

2) L min. = S

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Rated	Thre	ad							nd				Radius	- -					
pipe	external	internal	Y		<i>\$ B</i>	φE	ϕF	Ð	ards	H	T	W	N	ď	S -		Г	D	7
(ND)	4g 6g	4H 5H	min.	max.	max.	theoretical ¹⁾	тах.	min.	s. itel maxim	recommended	max. ²⁾	min.	max. ³⁾	min.	min.	max.	min.	min.	max.
5	MJ 10	- -	1,38	1,62	7,10	6,50	5,06	5,26	1.99/0 198	А 8	3,88	7,18	6,13	2,58	0,56	0,92	3,88	2,8	4,7
9	MJ 12	× 1,25	1,38	1,62	8,10	7,50	6,06	6,26	; % a 6 4 5		4,38	8, 18	6,13	2,58	0,56	0,92	4,38	3,8	4,7
8	MJ 14	× 1,5	1,38	1,62	10,10	9,50	8,06	8,26	(%) (%)	IS	4,38	9,18	6, 13	2,58	0,56	0,92	4,38	3,8	5,2
10	MJ 16	× 1,5	1,38	1,62	12,10	11,50	10,06	10,26	sigen og2		4,38	10, 18	6,13	2,58	0,56	0,92	4,38	4,1	5,9
12	MJ 18	× 1,5	2,28	2,52	14,50	13,50	12,06	12,26	d er ro DAsc	a 319	4,48	9,28	12, 13	3,48	0,96	1,32	4,48	4,1	6,4
14	MJ 20	× 1,5	2,28	2,52	16,50	15,50	14,06	14,26	14,36	X X :198	4,48	9,28	12,13	3,48	0,96	1,32	4,48	4,1	6,4
16	MJ 22	× 1,5	2,28	2,52	18,50	17,50	16,06	16,26	16,36		4,48	9,28	12,13	3,48	0,96	1,32	4,48	4,4	6,1
20	MJ 27	× 1,5	2,28	2,52	22,50	21,50	20,08	20,28	20,38	P k	4,48	9,28	12,13	3,48	0,96	1,32	4,48	3,9	6,1
25	MJ 33	× 1,5	2,28	2,52	27,60	26,60	25,08	25,28	22 22 33	र। .इ	4,48	10,28	13,61	3,48	96'0	1,32	4,48	4,2	5,8
33	MJ 42	× 2	2,28	2,52	34,70	33,70	32,10	32,30	32,40	46	4,98	11,28	17,24	3,48	0,96	1,32	4,98	4,1	5,9
40	MJ 50	× 2	2,28	2,52	42,70	41,70	40,10	40,30	40,40	60	4,98	11,28	21,32	3,48	0,96	1,32	4,98	4,4	7,6
V Tolerance	for the proc	of galige :	+ 0.00	25			-		4t										

Table – Dimensions (in millimetres)

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