



**SLOVENSKI STANDARD  
SIST EN 3663:2004**

**01-maj-2004**

**Aerospace series - Pipe coupling - O-rings in rubber NBR, 75 IRHD, - Temperature range: -55 °C to + 135 °C**

Aerospace series - Pipe coupling - O-rings in rubber NBR, 75 IRHD, - Temperature range: - 55 °C to + 135 °C

Luft- und Raumfahrt - Rohrverschraubung O-Ringe aus NBR-Elastomer, 75 IRHD, - Temperaturbereich: - 55 °C bis + 135 °C

Série aérospatiale - Systeme de raccordement - Joints toriques en élastomere-NBR, 75 DIDC, - Gamme de températures: - 55 °C a + 135 °C

<https://standards.iteh.ai/catalog/standards/sist/4e5fde63-373d-4655-b9ae-5c80218fadaa/sist-en-3663-2004>

**Ta slovenski standard je istoveten z: EN 3663:2001**

**ICS:**

49.080 Štejni sistemi za letalstvo in zračne sile  
Aerospace fluid systems and components

**SIST EN 3663:2004**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 3663**

October 2001

ICS 49.080

English version

**Aerospace series - Pipe coupling - O-rings in rubber NBR, 75  
IRHD, Temperature range: - 55 °C to + 135 °C**

Série aérospatiale - Système de raccordement - Joints  
toriques en élastomère-NBR, 75 DIDC, Gamme de  
températures: -55°C à + 135°C

Luft- und Raumfahrt - Rohrverschraubung - O-Ringe aus  
NBR-Elastomer, 75 IRHD, Temperaturbereich: -55°C bis +  
135°C

This European Standard was approved by CEN on 20 January 2001.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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 April 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

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

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## 1 Scope

This standard specifies the characteristics for O-rings in rubber NBR, 75 IRHD, according to MIL-P-83461, for aerospace applications.

Temperature range: – 55 °C to + 135 °C

## 2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

- |              |   |
|--------------|---|
| ISO 3601-1   | Fluid systems – Sealing devices – O-rings – Part 1: Inside diameters, cross-sections, tolerances and size identification code |
| ISO 3601-3   | Fluid systems – Sealing devices – O-rings – Part 3: Quality acceptance criteria   |
| EN 2607      | Aerospace series – Straight metric-size unions with locking ring – Configuration – O-ring dimensions <sup>1)</sup>            |
| MIL-P-83461B | Packing, preformed, petroleum hydraulic fluid resistant, improved performance at 275 °F (135 °C) <sup>2)</sup>                |

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

2) Published by: Department of Defense (DOD), the Pentagon, Washington, D.C. 20301

### 3 Required characteristics

#### 3.1 Configuration – Dimensions – Mass

According to figure 1 and table 1

The values are taken from ISO 3601-1, series A.

The masses stated in this standard are standard values and shall not be considered as a qualification criterion for joints.

#### 3.2 Dimensions and visual inspection of the appearance

The inspection of dimensions, of appearance defects and surface condition shall be carried out according to ISO 3601-3, grade S.

#### 3.3 Material

Acrylonitrile-butadiene elastomer (NBR), hardness 75 IRHD according to MIL-P-83461B, para 3.2 and 3.4.

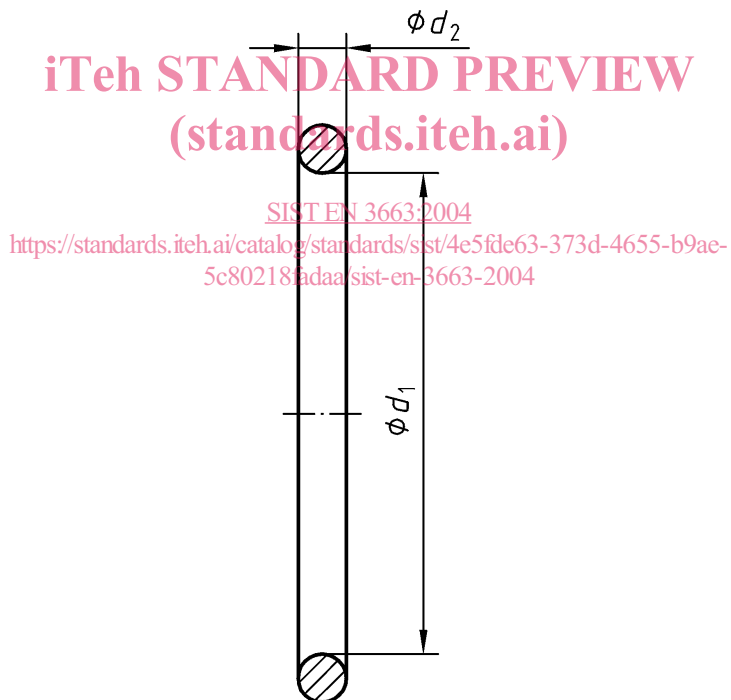


Figure 1

Table 1

Dimensions in millimetres

$d_2$			$1,8 \pm 0,08$	$2,65 \pm 0,09$	$3,55 \pm 0,1$	$5,3 \pm 0,13$
Code for $d_2$			A	B	C	D
Code for $d_1$	$d_1$	Tol.	Mass kg/1 000 pieces <sup>a</sup> (standard value)			
0018	1,8		0,03			
0020	2		0,04			
0022	2,24		0,04			
0025	2,5		0,04			
0028	2,8		0,04			
0031	3,15		0,05			
0035	3,55		0,05			
0037	3,75		0,05			
0040	4		0,06			
0045	4,5	$\pm 0,13$	0,06*	–	–	–
0048	4,87		0,06			
0050	5		0,07			
0051	5,15		0,07			
0053	5,3		0,07			
0056	5,6		0,07			
0060	6		0,08*			
0063	6,3		0,08			
0067	6,7		0,08			
0069	6,9		0,08			
0071	7,1		0,09			
0075	7,5	$\pm 0,14$	0,09	–	–	–
0080	8		0,10			
0085	8,5		0,10			
0087	8,75		0,10			
0090	9	$\pm 0,15$	0,11	–	–	–
0095	9,5		0,11*			
0100	10		0,12			
0106	10,6		0,12			
0112	11,2	$\pm 0,16$	0,13*	–	–	–
0118	11,8		0,13			
0125	12,5	$\pm 0,17$	0,14	–	–	–
0132	13,2		0,14*			
0140	14		0,15	0,35		
0150	15	$\pm 0,18$	0,16*	0,37	–	–
0160	16	$\pm 0,19$	0,17	0,39	–	–
0170	17			0,41		
0180	18	$\pm 0,2$	0,18*	0,43	0,81	–
0190	19	$\pm 0,21$	0,20*	0,45	0,84	–
0200	20	$\pm 0,21$	–	0,47	0,88	
0212	21,2	$\pm 0,22$	0,22*	0,50	0,93	
0224	22,4	$\pm 0,23$	–	0,52	0,97	
0236	23,6			0,55	1,02	
0250	25	$\pm 0,24$	0,24*	0,57	1,07	
0258	25,8			0,59	1,10	
0265	26,5	$\pm 0,25$	0,27*	0,61	1,12	–
0280	28	$\pm 0,26$	–	0,64	1,18	
0300	30	$\pm 0,27$	0,30*	0,68	1,26	
0315	31,5	$\pm 0,28$	–	0,71	1,31	
0325	32,5			0,73	1,35	
0335	33,5	$\pm 0,29$	0,34*	0,75	1,39	
0345	34,5	$\pm 0,3$	–	0,77	1,42	

(continued)

Table 1 (continued)

Dimensions in millimetres

$d_2$			1,8 ± 0,08	2,65 ± 0,09	3,55 ± 0,1	5,3 ± 0,13
Code for $d_2$			A	B	C	D
Code for $d_1$	$d_1$	Tol.	Mass kg/1 000 pieces <sup>a</sup> (standard value)			
0355	35,5	± 0,31	–	0,79	1,46	–
0365	36,5			0,81	1,50	
0375	37,5	± 0,32	0,39*	0,83	1,54	–
0387	38,7			0,86	1,57	
0400	40	± 0,33	–	–	1,63	3,76
0412	41,2	± 0,34			1,67	3,86
0425	42,5	± 0,35			1,72	3,97
0437	43,7				1,77	4,07
0450	45	± 0,36			1,82	4,18
0462	46,2	± 0,37			1,86	4,28
0475	47,5	± 0,38			1,91	4,39
0487	48,7				1,95	4,49
0500	50	± 0,39			2,00	4,59
0515	51,5	± 0,4			2,06	4,72
0530	53	± 0,41			2,12	4,84
0545	54,5	± 0,42			2,17	4,97
0560	56				2,23	5,09
0580	58	± 0,44			2,30	5,26
0600	60	± 0,45			3,38	5,43
0615	61,5				2,43	5,55
0630	63	± 0,46			2,49	5,67
0650	65	± 0,48			2,56	5,84
0670	67	± 0,49			2,64	6,01
0690	69	± 0,5			2,71	6,17
0710	71	± 0,51	2,79	6,34		
0730	73	± 0,52	2,86	6,51		
0750	75	± 0,53	2,94	6,67		
0775	77,5	± 0,55	3,05	6,88		
0800	80	± 0,56	3,13	7,09		
0825	82,5	± 0,57	3,22	7,29		
0850	85	± 0,59	3,31	7,50		
0875	87,5	± 0,6	3,41	7,71		
0900	90	± 0,62	3,50	7,92		
0925	92,5	± 0,63	3,59	8,13		
0950	95	± 0,64	3,69	8,33		
0975	97,5	± 0,66	3,78	8,54		
1000	100	± 0,67	–	–	3,87	8,75
1030	103	± 0,69			3,99	9,00
1060	106	± 0,71			4,10	9,25
1090	109	± 0,72			4,21	9,50
1120	112	± 0,74			4,32	9,75
1150	115	± 0,76			4,44	10,00
1180	118	± 0,77			4,55	10,25
1220	122	± 0,8			4,70	10,58
1250	125	± 0,81			4,81	10,83
1280	128	± 0,83			4,92	11,08
1320	132	± 0,85			5,07	11,41
1360	136	± 0,87			5,22	11,74
1400	140	± 0,89			5,37	12,07

(continued)



Table 1 (concluded)

Dimensions in millimetres

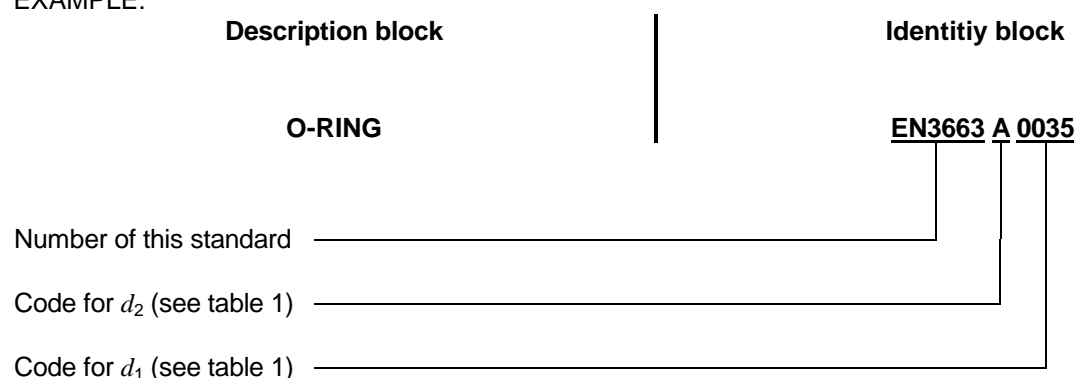
$d_2$			$1,8 \pm 0,08$	$2,65 \pm 0,09$	$3,55 \pm 0,1$	$5,3 \pm 0,13$		
Code for $d_2$			A	B	C	D		
Code for $d_1$	$d_1$	Tol.	Mass kg/1 000 pieces <sup>a</sup> (standard value)					
1450	145	$\pm 0,92$	-	-	5,56	12,49		
1500	150	$\pm 0,95$			5,75	12,90		
1550	155	$\pm 0,98$			5,93	13,32		
1600	160	$\pm 1$			6,12	13,73		
1650	165	$\pm 1,03$			6,31	14,15		
1700	170	$\pm 1,06$			6,49	14,56		
1750	175	$\pm 1,09$			6,68	14,98		
1800	180	$\pm 1,11$			6,87	15,40		
1850	185	$\pm 1,14$			7,05	15,81		
1900	190	$\pm 1,17$			7,24	16,23		
1950	195	$\pm 1,2$			7,43	16,64		
2000	200	$\pm 1,22$			-	-	7,62	17,06
2060	206	$\pm 1,26$					17,56	
2120	212	$\pm 1,29$					18,05	
2180	218	$\pm 1,32$	18,55					
2240	224	$\pm 1,35$	19,05					
2300	230	$\pm 1,39$	19,55					
2360	236	$\pm 1,42$	20,05					
2430	243	$\pm 1,46$	20,63					
2500	250	$\pm 1,49$	21,21					

\* According to EN 2607

<sup>a</sup> Mass values calculated on the basis of  $1,2 \text{ g/m}^3$

## 4 Designation

EXAMPLE:



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