UDC 62-762.445 : 621.643.412 DEUTSCHE NORM January 1972

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Translation
Technical Help to Exporters
Service of BSI

SMS

Grooved O-rings and seals for flanged joints

Nominal pressures 64 to 400

DIN 2697

Kammprofilierte Dichtringe und Dichtungen für Flanschverbindungen, Nenndruck 64 bis 400

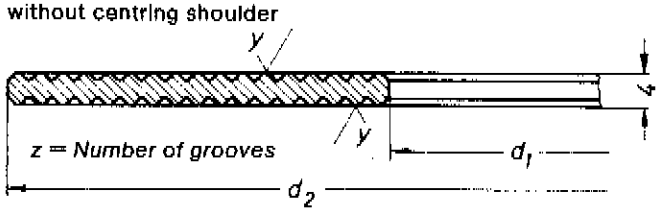
As it is current practice in standards published by the International Organization for Standardization (ISO), the comma has been used throughout as a decimal marker.

Dimensions in mm

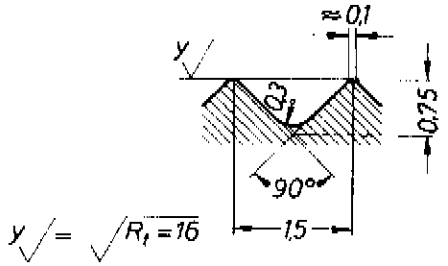
1 O-ring

Type A

without centring shoulder



Flattening of peaks of groove ridges



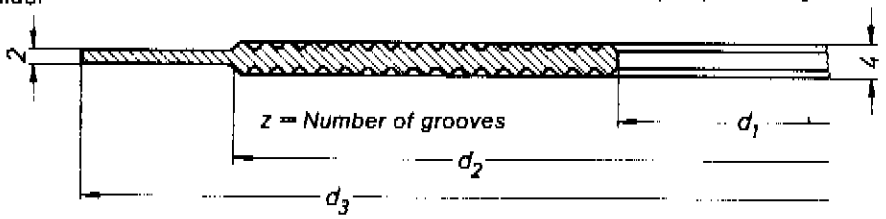
Designation of a grooved O-ring of type A, where $d_1 = 115$ mm internal diameter and $d_2 = 162$ mm external diameter, made of St 35.8:

O-ring A 115 × 162 DIN 2697 – St 35.8

Type B

with centring shoulder

Flattening of peaks of groove ridges as in type A



Designation of a grooved O-ring of type B, where $d_1 = 115$ mm internal diameter and $d_3 = 180$ mm diameter of centring shoulder, made of St 35.8:

O-ring B 115 × 180 DIN 2697 – St 35.8

Table 1. **Dimensions**

Nominal width	d_1	d_2	z	d_3 for nominal pressure					
				64	100	160	250	320	400
10	22	40	6			56			67
15	25	45	7			61		72	77
25	36	68	11				82	92	103
40	50	88	13			102	108	118	135
50	62	102	13	112		118	123	133	150
65	74	122	16	137		143	153	170	192
80	90	138	16	147		153	170	190	207
100	115	162	16	173		180	202	229	256
125	142	188	15	210		217	242	274	301
150	165	218	18	247		257	284	311	348
(175)	190	260	23	277	287	284	316	358	–
200	214	285	24	309		324	358	398	442
250	264	345	27	364	391	388	442	488	–
300	310	410	33	424		458	–	–	–
350	340	465	39	486	512	–	–	–	–
400	386	535	50	543	–	–	–	–	–

Nominal width values in brackets shall be avoided where possible.

Where no entry is shown, the O-ring shown for the next higher nominal pressure level shall be used. A dash (–) signifies that no O-ring of type 9 has been standardized for this pressure level.

Continued on page 2
Explanatory notes on page 2

18.5.19

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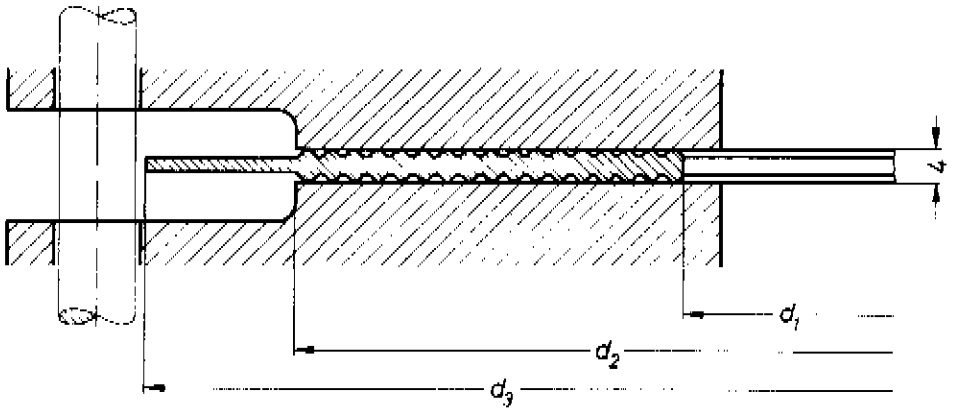
Table 2. **Material**

Steel grade		in accordance with	For flow temperatures in °C	Marking on outer edge
Symbol	Material number			
RSt 34-2	1.0108	DIN 17 100	up to 425	None
St 35.9	1.0305	DIN 17 175		
15 Mo 3	1.5415		over 425 to 475	1 centre mark
13 CrMo 4 4	1.7335		over 475 to 520	2 centre marks
X 7 Cr 14	1.4001	DIN 17 440 (Preliminary standard)	up to 475	4001
X 10 CrNiTi 189	1.4541		up to 530	4541

2 O-ring



Insertion of O-rings: If used with water, it is advisable to add an It-seal (made of compressed asbestos fibre), approx. 1 mm thick, on both sides of the O-ring. If used with steam, application of manganesite putty has proved effective.

Explanatory notes

This standard contains O-rings with uniform internal diameter for all pressure levels. This internal diameter was chosen to correspond to the internal diameter of the pipe with the lowest nominal pressure level plus 8 mm. The external diameter of the type A O-ring, which is identical to diameter d_2 of type B, was chosen with the same diameter as that specified for the new sealing strip; it is the same for all pressure levels. The diameter of the centring shoulder in type B remains the same as specified in the draft version published in September 1966.

When publishing the second draft version, the objections received in response to the first draft standard were taken into account and the designation details altered. The O-rings are now designated in the same manner as is customary in other standards on O-rings, i.e. by stating internal diameter × external diameter or diameter of centring shoulder.