



SLOVENSKI STANDARD

SIST EN 12756:2001

01-junij-2001

Mechanical seals - Principal dimensions, designation and material codes

Mechanical seals - Principal dimensions, designation and material codes

Gleitringdichtungen - Hauptmaße, Bezeichnung und Werkstoffschlüssel

Garnitures mécaniques d'étanchéité - Dimensions principales, désignation et codes matériaux

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Ta slovenski standard je istoveten z: EN 12756:2000

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ICS:

21.140 Tesnilke, mašilke Seals, glands

SIST EN 12756:2001

en

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EUROPEAN STANDARD

EN 12756

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2000

ICS 21.140

English version

Mechanical seals - Principal dimensions, designation and material codes

Garnitures mécaniques d'étanchéité - Dimensions principales, désignation et codes matériaux

Gleitringdichtungen - Hauptmaße, Bezeichnung und Werkstoffschlüssel

This European Standard was approved by CEN on 8 November 1999.

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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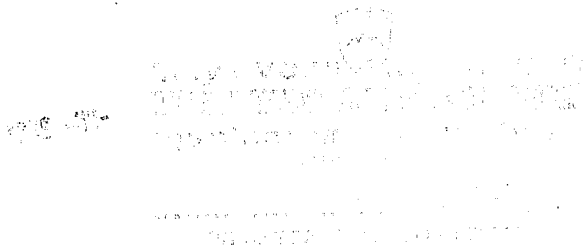
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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 197 "Pumps", the secretariat of which is held by AFNOR.

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 June 2001, and conflicting national standards shall be withdrawn at the latest by June 2001.

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 European Standard defines the principal dimensions for the internal installation of single and multiple mechanical seals with (rotating) spring units into the pump sealing cavity according to ISO 3069 as minimum cavity dimensions as typical for centrifugal pumps in accordance with EN 22858 and EN 733. It also gives the seal designations and material codes to be used.

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.

EN 733, *End-suction centrifugal pumps, rating 10 bar with bearing bracket — Nominal duty point, main dimensions, designation system*

EN 22858, *End suction centrifugal pumps (rating 16 bar) — Designation, nominal duty point and dimensions (ISO 2858:1975)*

ISO 1382, *Rubber — Vocabulary Trilingual edition*

ISO 1629, *Rubbers and latices — Classification, symbols*

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 3069, *End suction centrifugal pumps — Dimensions of cavities for mechanical seals and for softpacking*

ISO 5199, *Technical specifications for centrifugal pumps — Class II*

ISO 9905, *Technical specifications for centrifugal pumps — Class I*

ISO 9908, *Technical specifications for centrifugal pumps — Class III*

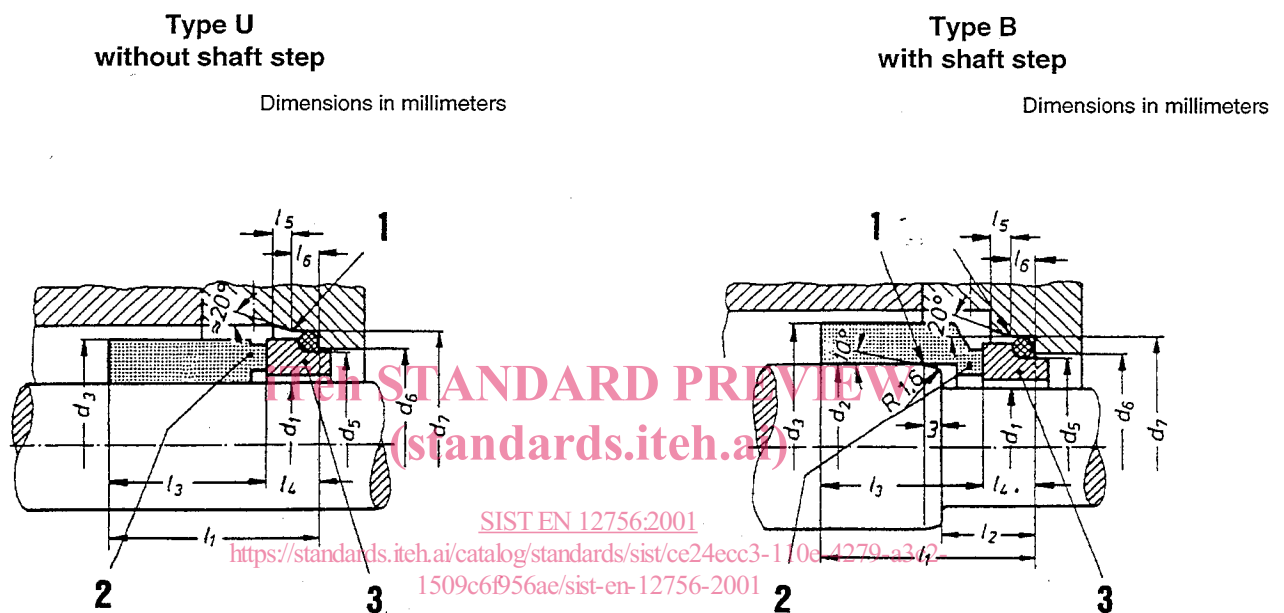
3 Dimensions

The mechanical seals (abbreviation: GLRD¹⁾) and cavities need not correspond to the illustrations, however, the dimensions given shall be complied with. The figures show O-rings as the flexible elements but other shapes of seals may also be used.

General tolerances: ISO 2768-m

3.1 Example for a single mechanical seal²⁾ with rotating spring unit, version N and K³⁾

NOTE Alternative arrangements using the same dimensions can be possible.



Key

- 1 rounded
- 2 spring loaded lead face
- 3 seat

Figure 1 — Examples for single mechanical seals

1) based on the German terminology

2) for abbreviations concerning arrangements of shaft seals refer to ISO 5199

3) N = Normal, K = Short

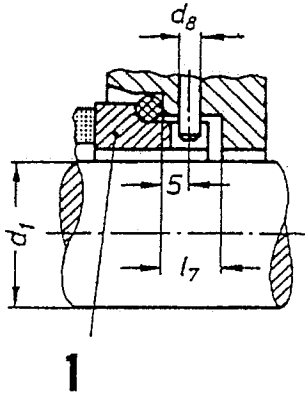
3.2 Retention of the seat

3.2.1 Against rotation

The design is at the descretion of the manufacturer or as agreed.

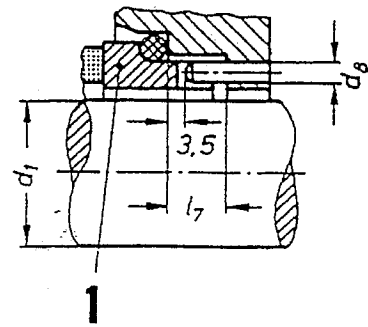
using a radial pin

Dimensions in millimeters



using an axial pin

Dimensions in millimeters



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Key
1 seat

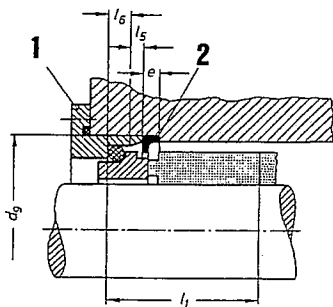
Figure 2 — Retention of the seat against rotation

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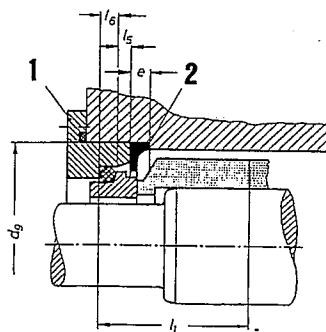
These options are valid for both types U and B

3.2.2 Against axial movement using a securing ring and stationary seat housing (only valid for mechanical seals on the product side with multiple arrangements)

Example of Type U



Example of Type B



Key
1 Seat housing
2 Securing ring

Figure 3 — Retention of the seat against axial movement

The dimension e and d_g refer to the seat housing. The manufacturer of the mechanical seal has to deliver the securing ring on demand.

3.3 Dimensions for versions N and K

Table 1 — Dimensions for versions N and K

Dimensions in millimeters																						
d_1		d_2	$d_3^{1)}$		d_5	d_6	d_7	d_8	d_9		e	$l_1^{2)}$				l_2	l_3	l_5	l_6	l_7		
Nominal diameter		Type B	Maximum dimensions						Type U	Type B		Version N		Version K								
Type U	Type B	Type B	Type U	Type B	h8	H11	H8		Type U	Type B		Type U	Type B	Type U	Type B	$\pm 0,5$					$\pm 0,5$	
h6		h6							H8	H8		$\pm 0,5$	$\pm 0,5$	$\pm 0,5$	$\pm 0,5$						0	
10		14	20	24					26	30												
12		16	22	26					28	32												
14		18	24	32					30	38		40	50	32,5	40		18		1,5	4	8,5	
16		20	26	34					32	40			55	35	42,5							
18		22	32	36					38	42												
20		24	34	38					40	43		45		37,5	45							
22		26	36	40					42	46			60									
24		28	38	42				3	43	48				40	47,5							
25		30	39	44					46	50												
28		33	42	47					48	53		50										
30		35	44	49					50	60												
32		38	46	54					53	62			65	42,5	50					2	5	
33		38	47	54					53	62												
35		40	49	56					60	65		55										
38		43	54	59					62	67												
40		45	56	61					65	70			75									9
43		48	59	64					67	72				45	52,5		23					
45		50	61	66					70	75												
48		53	64	69					72	77		60										
50		55	66	71					75	86												
53		58	69	78					77	88			85	47,5	57,5						6	
55		60	71	80					86	91												
58		63	78	83					88	93		70										
60		65	80	85					91	96					62,5							
63		68	83	88				4	93	98			95	52,5						2,5		
65		70	85	90					96	103												
68		-	88	-					98	-												
70		75	90	99					103	108		80										
75		80	99	104					108	120												
80		85	104	109					120	125												
85		90	109	114					125	130			105	60	70		28				7	
90		95	114	119					130	135												
95		100	119	124					135	140		90		65	75					3		
100		105	124	129					140	145												

1) In order to provide a safe clearance between the mechanical seal and the seal housing, the dimensions d_3 are recommended as the maximum dimensions.

2) The manufacturer of the mechanical seal may supply a shorter seal than that which corresponds to dimension l_1 . In this case, the difference in lengths should be compensated by use of a spacer, which should be supplied by the seal manufacturer. For materials see Position 5 of material key (see clause 5).

3) Those dimensions are not defined. They may vary, depending on the manufacturer of the mechanical seal and should therefore be obtained from the relevant suppliers literature.