



# SLOVENSKI STANDARD SIST EN 733:2000

01-december-2000

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

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

Kreiselpumpen mit axialem Eintritt PN 10 mit Lagerträger - Nennleistung, Hauptmaße, Bezeichnungssystem

Pompes centrifuges a aspiration axiale PN 10 a support sous corps de pompe - Point de fonctionnement nominal, dimensions principales, systeme de désignation

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**Ta slovenski standard je istoveten z: EN 733:1995**

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**ICS:**

23.080

11.040

Pumps

**SIST EN 733:2000**

**en**

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EUROPEAN STANDARD

EN 733

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1995

ICS 23.080

Descriptors: centrifugal pumps, designation, dimensions, performance evaluation, pressure tests, hydrostatic pressure

English version

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

Pompes centrifuges à aspiration axiale PN 10 à support sous corps de pompe - Point de fonctionnement nominal, dimensions principales, système de désignation

Kreiselpumpen mit axialem Eintritt PN 10 mit Lagerträger - Nennleistung, Hauptmaße, Bezeichnungssystem

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## CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents	Page
Foreword	3
1 Scope	4
2 Normative references	4
3 Nominal duty point and dimensions	4
4 Hydrostatic pressure test	5
5 Designation system	6
Annex A (informative) Bibliography	9

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**Foreword**

This European Standard has been prepared by SC. 4 "Rotodynamic pumps" of CEN/TC 197 "Pumps" of which the Secretariat is held by DIN, based on a proposal, document CEN/TC 197/SC 4 N 22, submitted by the European Committee of Pump manufacturers (EUROPUMP) in December 1990 and was adopted for CEN enquiry at the meeting of CEN/TC 197/SC 4 on 1991-03-14 in Frankfurt.

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 October 1995, and conflicting national standards shall be withdrawn at the latest by October 1995.

According to the CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Austria, Belgium, 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 specifies the designations, nominal duty points and main dimensions of end-suction centrifugal pumps rated at 10 bar.

NOTE: Depending on special circumstances e.g. temperature, materials, sealing of the shafts etc., excess operating pressure need not attain the value of the nominal pressure under any circumstances.

## 2 Normative references

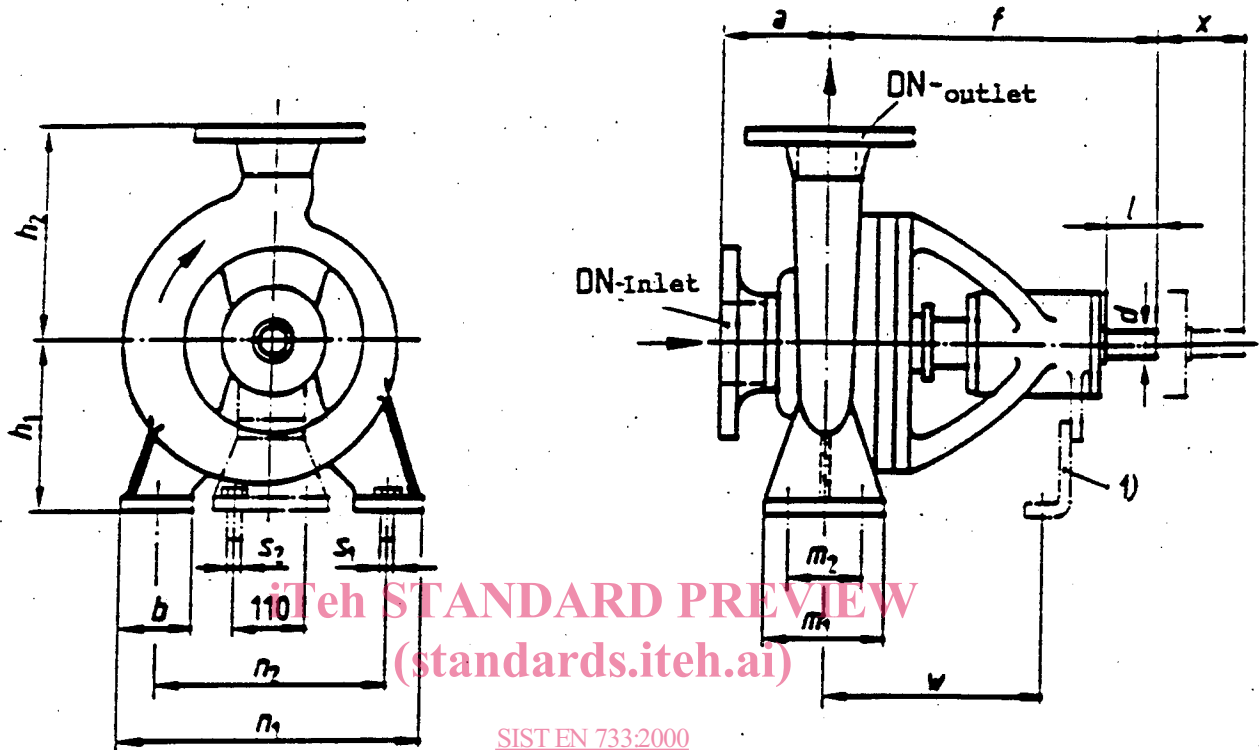
This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate place in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications 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.

- ISO 7005-1:1992** Metallic flanges - Part 1: Steel flanges  
**ISO 7005-2:1988** Metallic flanges - Part 2: Cast iron flanges  
**ISO 7005-3:1988** Metallic flanges - Part 3: Copper alloy and composite flanges

## 3 Nominal duty point and main dimensions

The nominal duty point and main dimensions appropriate to the relevant pump designation shall be as given in table 1 and as illustrated in figure 1.

Figure 1 illustrates a pictorial representation of an end suction centrifugal pump. Pumps to this standard do not need to correspond to this pictorial representation, only the indicated dimensions and direction of rotation are to be as specified.



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1) Rear foot bearing housing at manufacturers discretion

Figure 1: Main dimensions

#### 4 Hydrostatic pressure test

Hydrostatic pressure test is an internal pressure test using water.

Hydrostatic test pressure shall be 1,3 times the maximum discharge pressure but shall not exceed 13 bar.

The relation between cold test pressure and hot operating pressure or extreme cold operating pressure, shall be the subject of agreements between purchaser and manufacturer.

Table 1: Nominal duty point and main dimensions

Size	Nominal diameter of the impeller mm	Nominal duty point				Flange mounting dimensions <sup>2)</sup> for DN		Pump dimensions mm						Foot dimensions mm						Shaft end dimensions			
		1450 min <sup>-1</sup>		2900 mm <sup>-1</sup>		Inlet mm	Outlet mm	a	f	h <sub>1</sub>	h <sub>2</sub>	b	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	s <sub>1</sub> for bolts	s <sub>2</sub> for bolts	W	x <sup>3)</sup>	d	I	
		Q m <sup>3</sup> /h (l/s)	H <sup>1)</sup> m	Q m <sup>3</sup> /h (l/s)	H <sup>1)</sup> m																		
32-125	125	5	20	12,5	32	50	80	360	112	140				190	140								
32-160	160	8	32	12,5	32	50	80	360	132	160	50	100	70	240	190	M 12	M 12	260	100	24	50		
32-200	200	12,5	50	12,5	40	65	100	360	160	180				240	190	M 12	M 12	260	100	24	50		
40-125	125	5	20	25	40	65	80	360	112	140				210	160								
40-160	160	8	32	25	40	65	80	360	132	160	50	100	70	240	190	M 12	M 12	260	100	24	50		
40-200	200	12,5	50	25	40	65	100	360	160	180				240	190	M 12	M 12	260	100	24	50		
40-250	250	20	80	25	40	65	100	360	180	225	65	125	95	320	250	M 12	M 12	260	100	24	50		
50-125	125	5	20	50	50	65	100	360	132	180				240	190								
50-160	160	8	32	50	50	65	100	360	160	180	50	100	70	265	212	M 12	M 12	260	100	24	50		
50-200	200	12,5	50	50	50	65	100	360	180	200				265	212	M 12	M 12	260	100	24	50		
50-250	250	20	80	50	50	65	100	360	180	225	65	125	95	320	250	M 12	M 12	260	100	24	50		
65-125	125	5	20	100	65	80	100	470	200	250				280	212								
65-160	160	8	32	100	65	80	100	470	225	280				280	212	M 12	M 12	260	100	24	50		
65-200	200	12,5	50	100	65	80	100	470	225	280				280	212	M 12	M 12	260	100	24	50		
65-250	250	20	80	100	65	80	100	470	250	280				320	250	M 12	M 12	260	100	24	50		
65-315	315	32	-	100	80	100	125	470	225	280	80	160	120	360	280	M 16	M 16	340	140	32	80		
80-160	160	8	32	160	80	100	125	360	180	225	65	125	95	320	250	M 12	M 12	260	100	24	50		
80-200	200	12,5	50	160	80	100	125	360	180	250	65	125	95	345	280	M 12	M 12	260	100	24	50		
80-250	250	20	80	160	80	100	125	470	200	280	80	160	120	400	315	M 12	M 12	260	100	24	50		
80-315	315	32	-	160	80	100	125	470	250	315	80	160	120	400	315	M 16	M 16	340	140	32	80		

(continued)



Table 1: Nominal duty point and main dimensions (Concluded)

Size	Nominal diameter of the impeller mm	Nominal duty point				Flange mounting dimensions PN 10 <sup>2</sup> ) for DN		Pump dimensions mm							Foot dimensions mm						Shaft end dimensions		
		1450 min <sup>-1</sup>		2900 mm <sup>-1</sup>		Inlet mm	Outlet mm	a	f	h <sub>1</sub>	h <sub>2</sub>	b	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	s <sub>1</sub> for bolts	s <sub>2</sub> for bolts	w	x <sup>3)</sup>	d	I	
		Q m <sup>3</sup> /h (1/s)	H <sup>1)</sup> m ≈	Q m <sup>3</sup> /h (1/s)	H <sup>1)</sup> m ≈																		
100-200	200	125 (35)	12,5	250 (70)	50	125	100	125	200	280	80	160	120	400	315	M 16	M 12	340	140	32	80		
100-250	250		20		80			470	225	280	80	160	120	400	315								
100-315	315		32		-	140		140	250	315				400	315								
100-400	400		50		-			530	280	355	100	200	150	500	400	M 20		370	140	42	110		
125-250	250	200 (56)	20					470	250	355	80	160	120	400	315	M 16		340	140	32	80		
125-315	315		32		-	150	125	140	280	355													
125-400	400		50		-			530	315	400	100	200	150	500	400	M 20	M 12	370	140	42	110		
150-315	315	315 (87,5)	32		-	200	150	160	280	400													
150-400	400		50		-			160	315	450	100	200	150	550	450	M 20	M 12	370	140	42	110		

1) The nominal delivery head values indicated for the nominal supply values are approximate values only. The precise values may be found in the manufacturer's literature.

2) According to ISO 7005 Parts 1, 2 and 3 the permitted temperature range may be found in the manufacturer's literature.

3) Dimension to be considered by the manufacturer in respect of removal of inner parts of the pump. The dimension x must not be identical with the distance between the shafts of the pump and the driving machine. The given dimension considers the use of flexible shaft couplings with spacer sleeve. The gap is necessary for the withdrawal of the rotor toward the driven side.