



SLOVENSKI STANDARD
SIST EN 12157:2000
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Rotodynamic pumps - Coolant pumps units for machine tools - Nominal flow rate, dimensions

Rotodynamic pumps - Coolant pumps units for machine tools - Nominal flow rate, dimensions

Kreiselpumpen - Kühlmittelpumpenaggregate für Werkzeugmaschinen - Nennförderstrom, Maße

Pompes rotodynamiques - Groupes motopompes a réfrigérant pour machines-outils - Débit nominal, dimensions

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ICS:

23.080 23.080 Pumps

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12157

May 1999

ICS 23.080

English version

Rotodynamic pumps - Coolant pumps units for machine tools - Nominal flow rate, dimensions

Pompes rotodynamiques - Groupes motopompes à
réfrigérant pour machines-outils - Débit nominal,
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Werkzeugmaschinen - Nennförderstrom, Maße

This European Standard was approved by CEN on 16 April 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 Central Secretariat 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 Central Secretariat 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

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

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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 November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

<https://standards.iteh.ai/catalog/standards/sist/caf084f5-d367-461b-a036-587119-2157-2000>

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.



1 Scope

This European Standard specifies the dimensional requirements for the installation of machine tool electrical motor driven coolant pump units of the sump and suction type.

This standard is applicable to coolant pump units having nominal capacities in the range 20 l/min to 250 l/min.

This standard does not apply to coolant pump units of positive displacement pump design.

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 60529	Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)
ISO 228-1	Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation
IEC 60038	IEC standard voltages

3 Designation system

The designation for a coolant pump unit shall comprise the following information:

- description: Pump
- reference of this standard: EN 12157
- pump type: sump pump T
suction pump S
- nominal capacity: see clause 4
- for type T pumps, the submerged depth h_1 : see clause 4
- terminal box arrangement: see clause 6

EXAMPLE 1: Designation of a sump pump T with a nominal capacity of 100 l/min, a submerged depth $h_1 = 170$ mm and with a terminal box arrangement 1

Pump EN 12157–T–100–170–1

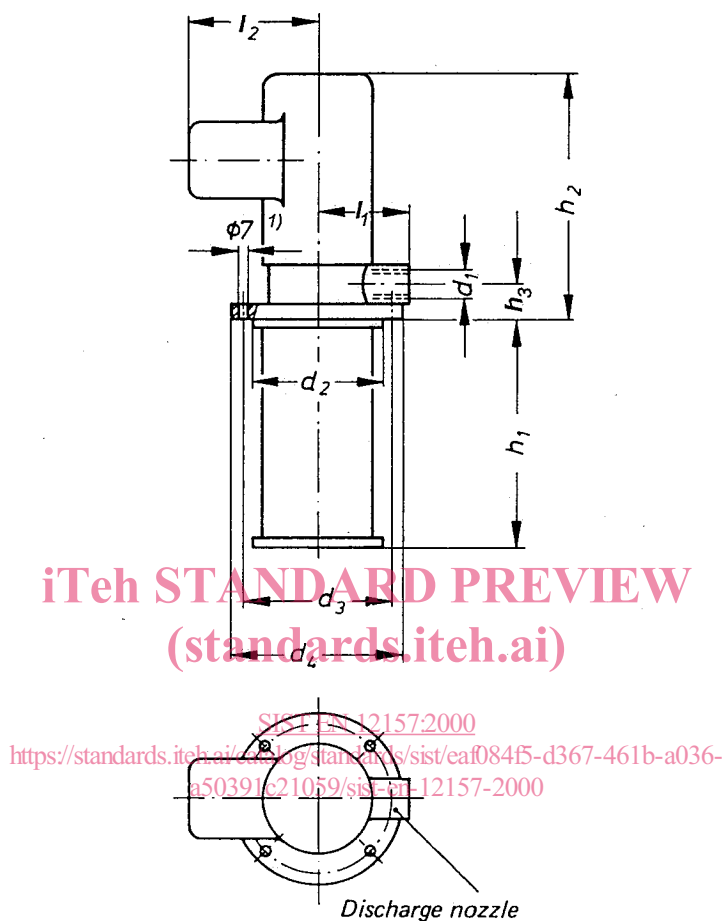
EXAMPLE 2: Designation of a suction pump S with a nominal capacity of 20 l/min and with a terminal box arrangement 2

Pump EN 12157–S–20–2

4 Nominal capacity, dimensions

4.1 Sump pumps

The design of the pump need not conform to the pump shown in figure 1, however, the specified dimensions and location of the nozzles shall apply.



1) The drilled holes for the fixing bolts have been specified at 7 mm diameter for M 6 bolts. For a transition period, drilled holes of 9 mm diameter for M 8 fixing bolts will also be tolerated in the case of sump pumps with a nominal capacity > 100 l/min.

Figure 1: Sump pump (T) (illustrated with terminal box arrangement 1, see clause 6)

Table 1: Nominal capacity and dimensions for sump pumps (T)

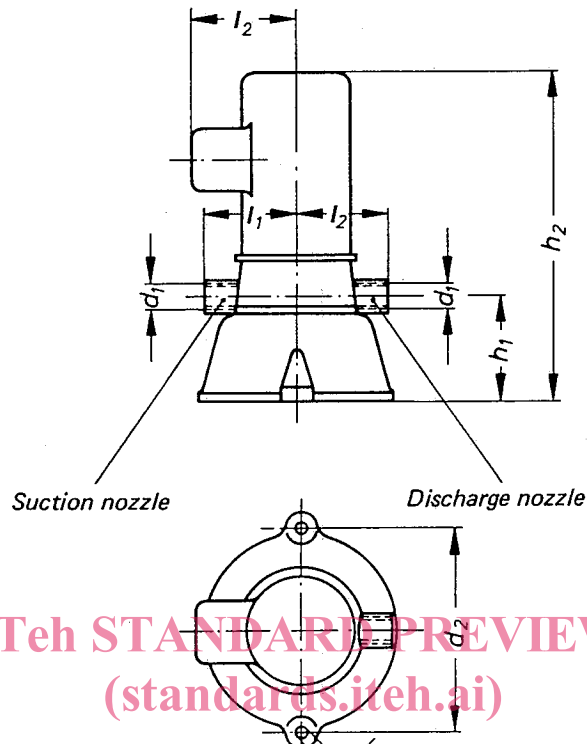
Nominal capacity ¹⁾ ± 15 % l/min	h_1 mm	d_1 2)	d_2 0 - 1 mm	d_3 ± 0,2 mm	d_4 mm	l_1 ± 2 mm	h_3 + 1 - 2 mm	l_2 max. mm	h_2 max. mm
25	90 120 170 220 270 350	G ¾	100	115	130	70	25	130	190
40	90 120 170 220 270 350								
63	120 170 220 270 350								
100	120 170 220 270 350								
160	200 270 350 440 550								
250	200 270 350 440 550	G 1¼	140	160	180	100	32	150	280

1) The capacity data relate to water with a kinematic viscosity of 1 mm²/s at a total head of 2 m. More precise capacity data can be obtained from the manufacturer's documentation.

2) Threads according to ISO 228-1

4.2 Suction pumps

The design of the pump need not conform to the pump shown in figure 2, however, the specified dimensions and location of the nozzles shall apply.



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Figure 2: Suction pump (S) (illustrated with terminal box arrangement 1, see clause 6)

Table 2: Nominal capacity and dimensions of suction pumps (S)

Nominal capacity ¹⁾ ± 15 % l/min	d_1 ²⁾	d_2 ± 0,2 mm	l_1/l_2 max. mm	l_3 max. mm	h_1 max. mm	h_2 max. mm
20	G 3/4	154	70	125	80	250

1) The capacity data relate to water with a kinematic viscosity of 1 mm²/s at a total head of 2 m. More precise capacity data can be obtained from the manufacturer's documentation.
2) Threads according to ISO 228-1