

# INTERNATIONAL STANDARD **ISO** 3661



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## End-suction centrifugal pumps — Baseplate and installation dimensions

*Pompes centrifuges à aspiration en bout — Dimensions relatives aux socles et à l'installation*

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## FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3661 was drawn up by Technical Committee ISO/TC 115, *Pumps*, and was circulated to the Member Bodies in February 1975.

It has been approved by the Member Bodies of the following countries :

Belgium	Italy	Sweden
Brazil	Mexico	Switzerland
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France	Poland	United Kingdom
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# End-suction centrifugal pumps — Baseplate and installation dimensions

## 1 SCOPE

This International Standard specifies the basic baseplate and installation dimensions for end-suction centrifugal pumps. Alternative numbers and locations of baseplate fixing holes are given to suit individual installations.

## 2 FIELD OF APPLICATION

The dimensions and other data given in this International Standard are intended primarily for use with centrifugal pumps in accordance with ISO 2858, coupled to foot-mounted electric motors for installation on a foundation.

Where suitable, this International Standard may be used for other types of pump.

## 3 REFERENCES

ISO/R 273, *Clearance holes for metric bolts.*

ISO 2858, *End-suction centrifugal pumps (rating 16 bar) — Designation, nominal duty point and dimensions.*

IEC Publication 72, *Dimensions and output ratings for rotating electrical machines — Frame numbers 56 to 400 and flange numbers F55 to F1080.*

## 4 BASEPLATE DIMENSIONS

The dimensions and the reference numbers of baseplates are given in figure 1 and table 1.

## 5 BASIC INSTALLATION DIMENSIONS

The baseplate number appropriate to a given pump designation and the corresponding electric motor frame number are obtained from table 2.

The dimensions of the baseplate corresponding to this number are then obtained from table 1 and the basic installation dimensions from the last four columns in table 2.

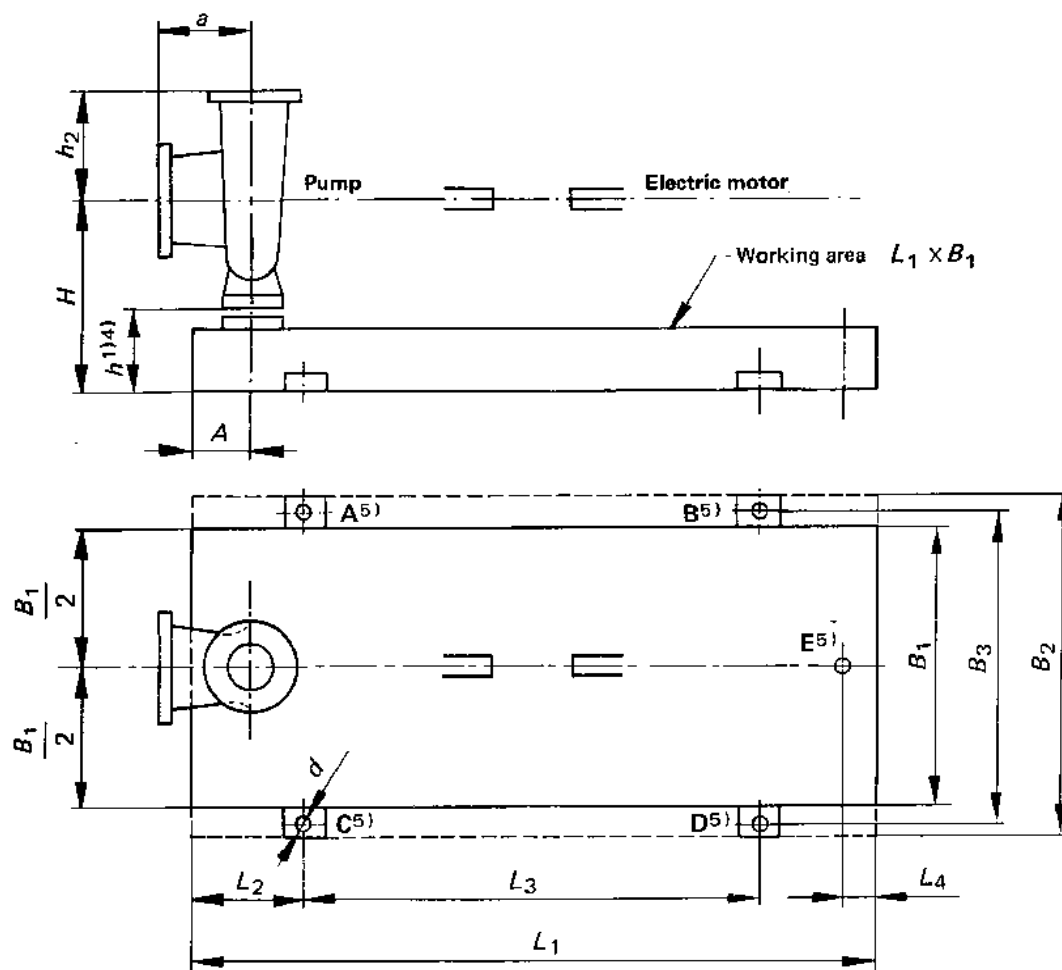


FIGURE 1 — Basic baseplate and installation dimensions

TABLE 1 — Baseplate reference numbers and dimensions

Dimensions in millimetres

Baseplate No.	2	3	4	5	6	7	8	9
$L_1^{(6)}$	800	900	1 000	1 120	1 250	1 400	1 600	1 800
$L_2$	130	150	170	190	205	230	270	300
$L_3$	540	600	660	740	840	940	1 060	1 200
$L_4 \pm 25$	35	35	40	40	45	50	55	55
$B_1$	270	300	340	380	430	480	530	600
$B_2$	360	390	450	490	540	610	660	730
$B_3$	320	350	400	440	490	550	600	670
$h_{max}$	125	125	125	140	160	180	200	200
$d^*$ : clearance hole for bolt	M16	M16	M20	M20	M20	M24	M24	M24

\* To ISO/R 273 (coarse series).

TABLE 2 - Selection of baseplate number and installation dimensions

Dimensions in millimetres

Pump size*	Electric motor frame No.**			71 M	80 M	90 S	90 L	100 L	112 M	132 S	132 M	160 M	160 L	180 M	180 L	200 L	225 S	225 M	250 M	280 S	280 M	Basic installation dimensions				
	H <sub>max</sub> <sup>2)4)</sup>	A	h <sub>2</sub> *																			a*				
50	32	125	2	2	2	3	3	3	4	4													260	60	140	80
50	32	160	2	2	2	3	3	3	4	4													260	60	160	80
50	32	200	2	2	2	3	3	3	4	4	5												300	60	180	80
50	32	250		4	4	4	4	4	5	5	6	6	6	6	7								380	75	225	100
65	40	125	2	2	2	3	3	3	4	4													260	60	140	80
65	50	125	2	2	2	3	3	3	4	4													260	60	140	80
65	40	160	2	2	2	3	3	3	4	4	5	5											300	60	160	80
65	50	160	2	2	2	3	3	3	4	4	5	5											300	60	160	80
65	40	200		3	3	3	3	3	4	4	5	5											300	60	180	100
65	40	250		4	4	4	4	4	5	5	6	6	6	6	7								380	75	225	100
65	40	315		5	5	5	5	5	5	5	6	6	6	6	7	7	7						405	75	250	125
80	50	125	2	2	2	3	3	3	4	4													260	60	160	100
80	65	125	2	2	2	3	3	3	4	4													260	60	160	100
80	50	160		3	3	3	3	3	4	4	5	5	5										320	60	180	100
80	65	160		3	3	3	3	3	4	4	5	5	5										320	60	180	100
80	50	200		3	3	3	3	3	4	4	5	5	5										320	60	200	100
80	50	250		4	4	4	4	4	5	5	6	6	6	6	7	7	7						405	75	225	125
80	50	315		5	5	5	5	5	5	5	6	6	6	6	7	7	7	8	9				480	75	280	125
100	65	125		3	3	3	3	3	4	4	5												300	75	180	100
100	80	125		3	3	3	3	3	4	4	5												300	75	180	100
100	65	160		3	4	4	4	4	5	5	6	6	6	6	7								380	75	200	100
100	80	160		3	4	4	4	4	5	5	6	6	6	6	7								380	75	200	100
100	65	200		4	4	4	5	5	5	5	6	6	6	7	7	7	7						405	75	225	100
100	65	250		5	5	5	5	5	5	5	6	6	6	7	7	7	7	8	9				480	90	250	125
100	65	315					6	6	6	6	6	7	7	7	7	7	8	8	9	9			480	90	280	125
125	80	160		4	4	4	5	5	5	5	6	6	6	7	7								380	75	225	125
125	80	200		5	5	5	5	5	5	5	6	6	6	7	7	7	7	8					380	75	250	125
125	80	250		6	6	6	6	6	6	6	6	6	6	7	7	7	7	8	9	9			480	90	280	125
125	80	315					6	6	6	6	6	7	7	7	7	7	8	8	9	9			480	90	315	125
125	80	400					7	7	7	7	7	7	7	7	7	7	8	8					480	90	355	125
125	100	200		5	5	5	5	5	5	5	6	6	6	7	7	7	8	8	9	9			480	90	280	125
125	100	250					6	6	6	6	6	7	7	7	7	7	8	8	9	9			480	90	280	140
125	100	315							6	6	6	7	7	7	7	7	8	8	9	9			480	90	315	140
125	100	400									8	8	8	8	8	8	8	9	9				480	110	355	140
150	125	250							6	6	6	7	7	7	7	8							450	90	355	140
150	125	315									8	8	8	8	8	8	8	8					480	110	355	140
150	125	400												8	8	8	8	8	9				515	110	400	140
200	150	250									8	8	8	8	8	8	8	8	9				480	110	375	160
200	150	315												9	9	9	9	9	9				515	110	400	160
200	150	400													9	9	9	9	9				515	110	450	160

\* To ISO 2858.

See note 3

\*\* To IEC 72 : Part 1.

NOTES

- 1  $h_{max}$  is the maximum permissible height of the baseplate, including packing that may be used between the baseplate and the pump or motor. The actual height may be less.
  - 2  $H_{max}$  in table 2 is the maximum permitted height. The actual dimension  $H$  may be less. The values  $H_{max}$  given for each pump size take into account the maximum height for the greatest given baseplate number and the centre-line height of the pump or motor, whichever is the greater.
  - 3 On the left side of the bold line in table 2, the centre-line height of the pump is the greater; on the right side the centre-line height of the electric motor is the greater.
  - 4 Additional sub-structures, for example feet for free-standing installations, vibration dampers, are not included in the dimensions  $H_{max}$  and  $h_{max}$ .
  - 5 Figure 1 shows the locations for five holes (A, B, C, D and E).
- Baseplates may have either four (A, B, C and D) or three (A, C and E) holes as determined by the pump manufacturer.
- 6 In table 1, the dimensions  $L_1$  and  $B_1$  are the length and the width respectively of the working surface and do not include casting slope.