



**NOTE — Tapping points**  
 All connections shall be in accordance with ISO/R 228.  
 A : Connection for cooling or heating supply to be 3/8 in.  
 B : Stuffing box tapping points to be as large as possible but not to exceed 1/2 in.

- 1) The manufacturer shall be consulted about the temperature limitation.
- 2) 1 bar = 0,1 MPa.

## End-suction centrifugal pumps (rating 16 Bar) - Designation, nominal duty point and dimensions

### 1 SCOPE AND FIELD OF APPLICATION <sup>(1)</sup>

This International Standard specifies the principal dimensions and nominal duty point of end-suction centrifugal pumps having a maximum operating rating of 16 bar.<sup>(2)</sup>

### 2 REFERENCES

ISO/R 228, Pipe threads where pressure-tight joints are not made on the threads ( 1/8 inch to 6 inches).

ISO 496, Driving and driven machines - Shaft heights.

ISO/R 775, Cylindrical and 1/10 conical shaft ends.

ISO 3069, End-suction centrifugal pumps - Dimensions of cavities for mechanical seal and for soft packing. (Supplement to this International Standards.)

NOTE - ISO 2084 can be used for the dimensions of flanges.

### 3 DESIGNATION

The pump designation comprises three numbers: the first corresponds to the inlet diameter, the second to the outlet diameter and the third to the nominal diameter of the impeller

Example of designation

A centrifugal pump with an inlet diameter of 80 mm, an outlet diameter of 50 mm and a nominal impeller diameter of 250 mm is designated 80-50-250.

### 4 NOMINAL DUTY POINT AND DIMENSIONS

See figure above and table on page 2.

### 5 STATIC TEST PRESSURE

Static test pressure shall be 1.5 times the maximum discharge pressure but shall not exceed 24 bar. The relation between cold test pressure and hot operating pressure shall be the subject of agreement between manufacturer and user.



International Measurements (millimeters)

US Size in	ISO Size Designation in inches <sup>2)</sup>				Nominal Duty Point				Dimensions in millimeters															
	TYPE	Ø Inlet	Ø Outlet	Ø Impeller Nominal Duty pt	n 1450 min		n 2900 min		Pump				Support					Clearance holes for bolts		Shaft end				
					Q	H	Q	H	a	f	h1	h2	b	m1	m2	n1	n2	n3	w	s1	s2	d	i	X <sup>(1)</sup>
					m <sup>3</sup> /h	m	m <sup>3</sup> /h	m																
2 x 1.5 x 5	32-125	50	32	125	5	12.5	20	80	80	385	112	140	50	100	70	190	140	110	285	M12	M12	24	50	100
2 x 1.5 x 6	32-160	50	32	160	8	12.5	32	80	80	385	132	160	50	100	70	240	190	110	285	M12	M12	24	50	100
2 x 1.5 x 8	32-200	50	32	200	12.5	12.5	50	80	80	385	160	180	50	100	70	240	190	110	285	M12	M12	24	50	100
2 x 1.5 x 10	32-250	50	32	250	20	12.5	80	100	100	500	180	225	65	125	95	320	250	110	370	M12	M12	32	80	100
3 x 2 x 5	50-125	65	50(40) <sup>3</sup>	125	5	25	20	80	80	385	112	140	50	100	70	210	160	110	285	M12	M12	24	50	100
3 x 2 x 6	50-160	65	50(40) <sup>3</sup>	160	8	25	32	80	80	385	132	160	50	100	70	240	190	110	285	M12	M12	24	50	100
3 x 1.5 x 8	40-200	65	40	200	12.5	25	50	100	100	385	160	180	50	100	70	265	212	110	285	M12	M12	24	50	100
3 x 1.5 x 10	40-250	65	40	250	20	25	80	100	100	500	180	225	65	125	95	320	250	110	370	M12	M12	32	80	100
3 x 1.5 x 13	40-315	65	40	315	32	25	125	125	125	500	200	250	65	125	95	345	280	110	370	M12	M12	32	80	100
4 x 3 x 5	65-125	80	65(50) <sup>3</sup>	125	5	50	20	100	100	385	132	160	50	100	70	240	190	110	285	M12	M12	24	50	100
4 x 3 x 6	65-160	80	65(50) <sup>3</sup>	160	8	50	32	100	100	385	132	180	50	100	70	240	190	110	285	M12	M12	24	50	100
3 x 2 x 8	50-200	80	50	200	12.5	50	50	100	100	385	160	200	50	100	70	265	212	110	285	M12	M12	24	50	100
3 x 2 x 10	50-250	80	50	250	20	50	80	125	125	500	180	225	65	125	95	320	250	110	370	M12	M12	32	80	100
3 x 2 x 13	50-315	80	50	315	32	50	125	125	125	500	225	280	65	125	95	345	280	110	370	M12	M12	32	80	100
6 x 3 x 5	80-125	100	80(65) <sup>3</sup>	125	5	100	20	100	100	385	160	180	65	125	95	280	212	110	285	M12	M12	24	50	100
6 x 3 x 6	80-160	100	80(65) <sup>3</sup>	160	8	100	32	100	100	500	160	200	65	125	95	280	212	110	370	M12	M12	32	80	100
4 x 3 x 8	65-200	100	65	200	12.5	100	50	100	100	500	180	225	65	125	95	320	250	110	370	M12	M12	32	80	140
4 x 3 x 10	65-250	100	65	250	20	100	80	125	125	500	200	250	80	160	120	360	280	110	370	M16	M12	32	80	140
4 x 3 x 13	65-315	100	65	315	32	100	125	125	125	530	225	280	80	160	120	400	315	110	370	M16	M12	42	110	140
6 x 3 x 6	80-160	125	80	160	8	160	32	125	125	500	180	225	65	125	95	320	250	110	370	M12	M12	32	80	140
6 x 3 x 8	80-200	125	80	200	12.5	160	50	125	125	500	180	250	65	125	95	345	280	110	370	M12	M12	32	80	140
6 x 3 x 10	80-250	125	80	250	20	160	80	125	125	500	225	280	80	160	120	400	315	110	370	M16	M12	32	80	140
6 x 3 x 13	80-315	125	80	315	32	160	125	125	125	530	250	315	80	160	120	400	315	110	370	M16	M12	42	110	140
6 x 3 x 15	80-400	125	80	400	50	160	-	125	125	530	280	355	80	160	120	435	355	110	370	M16	M12	42	110	140
6 x 4 x 8	100-200	125	100	200	12.5	250	50	125	125	500	200	280	80	160	120	360	280	110	370	M16	M12	32	80	140
6 x 4 x 10	100-250	125	100	250	20	200 <sup>(4)</sup>	80	140	140	530	225	280	80	160	120	400	315	110	370	M16	M12	42	110	140
6 x 4 x 13	100-315	125	100	315	32	250	125	140	140	530	250	315	80	160	120	400	315	110	370	M16	M12	42	110	140
6 x 4 x 15	100-400	125	100	400	50	250	-	140	140	530	280	355	100	200	150	500	400	110	370	M20	M12	42	110	140
6 x 5 x 10	125-250	150	125	250	20	-	-	140	140	530	250	355	80	160	120	400	315	110	370	M16	M12	42	110	140
6 x 5 x 13	125-315	150	125	315	32	-	-	140	140	530	280	355	100	200	150	500	400	110	370	M20	M12	42	110	140
6 x 5 x 15	125-400	150	125	400	50	-	-	140	140	530	315	400	100	200	150	500	400	110	370	M20	M12	42	110	140
8 x 6 x 10	150-250	200	150	250	20	-	-	160	160	530	280	375	100	200	150	500	400	110	370	M20	M12	42	110	180
8 x 6 x 13	150-315	200	150	315	32	-	-	160	160	670	315	400	100	200	150	500	450	140	500	M20	M16	48	110	180
8 x 6 x 15	150-400	200	150	400	50	-	-	160	160	670	315	450	100	200	150	550	450	140	500	M20	M16	48	110	180

- NOTES:
- a) The forms and dimensions not specified are left to the discretion of the manufacturer.
  - b) Rotation is clockwise when viewed from the drive end.
  - 1) Gap necessary for the withdrawal of the rotor toward the driven side.
  - 2) Flange rating 16 BAR
  - 3) Branch sizes in brackets to be valid for limited period only
  - 4) These two values are alternatives.



US Measurements (inches)

US Size in	ISO Size Designation in inches <sup>2)</sup>					Nominal Duty Point				Dimensions in inches											Dimensions in inches				
	TYPE	Ø Inlet	Ø Outlet	Ø Impeller Nominal Duty pt	Ø Max Impeller	n 1750 min		n 3900 min		Pump				Support							Clearance holes for bolts		Shaft end		
						Q	H	Q	H	a	f	h1	h2	b	m1	m2	n1	n2	n3	w	s1	s2	d	i	χ <sup>(1)</sup>
						GPM	ft	GPM	ft																
2 x 1.5 x 5	32-125	2	1.5	4.92	5.47	33.26	23.78	66.00	95.12	3.15	15.16	4.41	5.51	1.97	3.94	2.76	7.48	5.51	4.33	11.22	0.50	0.50	0.875	1.97	3.94
2 x 1.5 x 6	1.26-160	2	1.5	6.30	6.65	33.26	38.05	66.00	152.19	3.15	15.16	5.20	6.30	1.97	3.94	2.76	9.45	7.48	4.33	11.22	0.50	0.50	0.875	1.97	3.94
2 x 1.5 x 8	32-200	2	1.5	7.87	8.22	33.26	59.45	66.00	237.80	3.15	15.16	6.30	7.09	1.97	3.94	2.76	9.45	7.48	4.33	11.22	0.50	0.50	0.875	1.97	3.94
2 x 1.5 x 10	32-250	2	1.5	9.84	10.20	33.26	95.12	66.00	380.48	3.94	19.69	7.09	8.86	2.56	4.92	3.74	12.60	9.84	4.33	14.57	0.50	0.50	1.25	3.15	3.94
3 x 2 x 5	50-125	3	2	4.92	5.47	66.00	23.78	132.00	95.12	3.15	15.16	4.41	5.51	1.97	3.94	2.76	8.27	6.30	4.33	11.22	0.50	0.50	0.875	1.97	3.94
3 x 2 x 6	50-160	3	2	6.30	6.65	66.00	38.05	132.00	152.19	3.15	15.16	5.20	6.30	1.97	3.94	2.76	9.45	7.48	4.33	11.22	0.50	0.50	0.875	1.97	3.94
3 x 1.5 x 8	40-200	3	1.5	7.87	8.22	66.00	59.45	132.00	237.80	3.94	15.16	6.30	7.09	1.97	3.94	2.76	10.43	8.35	4.33	11.22	0.50	0.50	0.875	1.97	3.94
3 x 1.5 x 10	40-250	3	1.5	9.84	10.20	66.00	95.12	132.00	380.48	3.94	19.69	7.09	8.86	2.56	4.92	3.74	12.60	9.84	4.33	14.57	0.50	0.50	1.25	3.15	3.94
3 x 1.5 x 13	40-315	3	1.5	12.40	12.62	66.00	152.19	132.00	594.50	4.92	19.69	7.87	9.84	2.56	4.92	3.74	13.58	11.02	4.33	14.57	0.50	0.50	1.25	3.15	3.94
4 x 3 x 5	65-125	4	3	4.92	5.47	132.00	23.78	264.00	95.12	3.94	15.16	5.20	6.30	1.97	3.94	2.76	9.45	7.48	4.33	11.22	0.50	0.50	0.875	1.97	3.94
4 x 3 x 6	65-160	4	3	6.30	6.65	132.00	38.05	264.00	152.19	3.94	15.16	5.20	7.09	1.97	3.94	2.76	9.45	7.48	4.33	11.22	0.50	0.50	0.875	1.97	3.94
3 x 2 x 8	50-200	3	2	7.87	8.22	132.00	59.45	264.00	237.80	3.94	15.16	6.30	7.87	1.97	3.94	2.76	10.43	8.35	4.33	11.22	0.50	0.50	0.875	1.97	3.94
3 x 2 x 10	50-250	3	2	9.84	10.20	132.00	95.12	264.00	380.48	4.92	19.69	7.09	8.86	2.56	4.92	3.74	12.60	9.84	4.33	14.57	0.50	0.50	1.25	3.15	3.94
3 x 2 x 13	50-315	3	2	12.40	12.62	132.00	152.19	264.00	594.50	4.92	19.69	8.86	11.02	2.56	4.92	3.74	13.58	11.02	4.33	14.57	0.50	0.50	1.25	3.15	3.94
6 x 3 x 5	80-125	6	3	4.92	5.47	264.00	23.78	528.00	95.12	3.94	15.16	6.30	7.09	2.56	4.92	3.74	11.02	8.35	4.33	11.22	0.50	0.50	0.875	1.97	3.94
6 x 3 x 6	80-160	6	3	6.30	6.65	264.00	38.05	528.00	152.19	3.94	19.69	6.30	7.87	2.56	4.92	3.74	11.02	8.35	4.33	14.57	0.50	0.50	1.25	3.15	3.94
4 x 3 x 8	65-200	4	3	7.87	8.22	264.00	59.45	528.00	237.80	3.94	19.69	7.09	8.86	2.56	4.92	3.74	12.60	9.84	4.33	14.57	0.50	0.50	1.25	3.15	5.51
4 x 3 x 10	65-250	4	3	9.84	10.20	264.00	95.12	528.00	380.48	4.92	19.69	7.87	9.84	3.15	6.30	4.72	14.17	11.02	4.33	14.57	0.625	0.50	1.25	3.15	5.51
4 x 3 x 13	65-315	4	3	12.40	12.62	264.00	152.19	528.00	594.50	4.92	20.87	8.86	11.02	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 3 x 6	80-160	6	3	6.30	6.65	422.40	38.05	844.80	152.19	4.92	19.69	7.09	8.86	2.56	4.92	3.74	12.60	9.84	4.33	14.57	0.50	0.50	1.25	3.15	5.51
6 x 3 x 8	80-200	6	3	7.87	8.22	422.40	59.45	844.80	237.80	4.92	19.69	7.09	9.84	2.56	4.92	3.74	13.58	11.02	4.33	14.57	0.50	0.50	1.25	3.15	5.51
6 x 3 x 10	80-250	6	3	9.84	10.20	422.40	95.12	844.80	380.48	4.92	19.69	8.86	11.02	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.25	3.15	5.51
6 x 3 x 13	80-315	6	3	12.40	12.62	422.40	152.19	844.80	594.50	4.92	20.87	9.84	12.40	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 3 x 15	80-400	6	3	15.75		422.40	237.80	844.80	-	4.92	20.87	11.02	13.98	3.15	6.30	4.72	17.13	13.98	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 4 x 8	100-200	6	4	7.87	8.22	660.00	59.45	1320.00	237.80	4.92	19.69	7.87	11.02	3.15	6.30	4.72	14.17	11.02	4.33	14.57	0.625	0.50	1.25	3.15	5.51
6 x 4 x 10	100-250	6	4	9.84	10.20	528.00	95.12	1056.00	380.48	5.51	20.87	8.86	11.02	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 4 x 13	100-315	6	4	12.40	12.62	660.00	152.19	1320.00	594.50	5.51	20.87	9.84	12.40	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 4 x 15	100-400	6	4	15.75		660.00	237.80	1320.00	-	5.51	20.87	11.02	13.98	3.94	7.87	5.91	19.69	15.75	4.33	14.57	0.75	0.50	1.625	4.33	5.51
6 x 5 x 10	125-250	6	5	9.84	10.20	1056.00	95.12	-	-	5.51	20.87	9.84	13.98	3.15	6.30	4.72	15.75	12.40	4.33	14.57	0.625	0.50	1.625	4.33	5.51
6 x 5 x 13	125-315	6	5	12.40	12.62	1056.00	152.19	-	-	5.51	20.87	11.02	13.98	3.94	7.87	5.91	19.69	15.75	4.33	14.57	0.75	0.50	1.625	4.33	5.51
6 x 5 x 15	125-400	6	5	15.75		1056.00	237.80	-	-	5.51	20.87	12.40	15.75	3.94	7.87	5.91	19.69	15.75	4.33	14.57	0.75	0.50	1.625	4.33	5.51
8 x 6 x 10	150-250	8	6	9.84	10.20	1663.20	95.12	-	-	6.30	20.87	11.02	14.76	3.94	7.87	5.91	19.69	15.75	4.33	14.57	0.75	0.50	1.625	4.33	7.09
8 x 6 x 13	150-315	8	6	12.40	12.62	1663.20	152.19	-	-	6.30	26.38	12.40	15.75	3.94	7.87	5.91	19.69	17.72	5.51	19.69	0.75	0.625	1.875	4.33	7.09
8 x 6 x 15	150-400	8	6	15.75		2112.00	237.80	-	-	6.30	26.38	12.40	17.72	3.94	7.87	5.91	21.65	17.72	5.51	19.69	0.75	0.625	1.875	4.33	7.09

NOTES:

- a) The forms and dimensions not specified are left to the discretion of the manufacturer.
- b) Rotation is clockwise when viewed from the drive end.

- 1) Gap necessary for the withdrawal of the rotor toward the driven side.
- 2) Flange rating 150lb. or 300lb.