

Vertical Marine Centrifugal Pumps PN 10 (individual sizes up to PN 25) for pedestal or wall mounting

ALLMARINE
Series MI with radial inlet
Series MA with axial inlet



MI-S



MA-W

Application

For handling fresh water, sea water, condensate, oils.

Main areas of application

In marine engineering: as a general service and fire extinguisher pump; as a bilge, ballast and cooling water pump; and as a sea water pump.

In industry: for general water supply and in cooling and recirculation circuits.

Structural design

Single-stage, single-flow volute-casing centrifugal pump in short, compact design. Volute casing can be supplied optionally with axial or radial intake branch. In the shipbuilding and industry the delivery rate and hydraulics are closely attuned to the needs.

Volute casing and bearing unit are joined to the drive motor via a lantern. Elastically applied feet make the vibration isolated vertical pedestal mounting possible. Side drill holes permit wall mounting. Through the use of an coupling with distance piece the bearing unit an sealing unit, including impeller, can be dismantled without removing the volute casing, the pipes or the drive motor.

As the pump and drive motor are precisely centered in the lantern, no alignment is required.

Performance data

Q	up to	1800	m ³ /h
H	up to	65	m (individual sizes up to 140 m)
t	up to	40	°C (sea water)
		up to	100 °C (fresh washer)
p _d	up to	10	bar (individual sizes up to 25 bar)

The limits quoted are maximums. Figures may be lower depending on specified technical execution. Inlet pressure plus maximum delivery head must not exceed the permissible outlet pressure.

The mentioned performance data are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.

Branch positions/Flanges

MI: Suction branch: as seen from the drive side at 180° to the delivery branch (standard).

The intake branch can be arranged 90° to the right and 90° to the left.

MA: Suction branch: axial

Nominal width:	Suction branch	125 up to 400 mm
	Delivery branch	65 up to 350 mm

to DIN EN 1092-2

Contact protection

The requirements of DIN EN 809 "Contact protection", are met.

Shaft sealing

By uncooled, unbalanced, maintenance-free mechanical seal.

Material design

Sliding ring	carbon, antimony-impregnated
Counter-ring	aluminium oxide
Bellows	HNBR
O-ring	HNBR

Variation of materials

Sliding ring	Silicon carbide
Counter-ring	Silicon carbide
Bellows	HNBR
O-ring	HNBR

Bearing/Lubrication

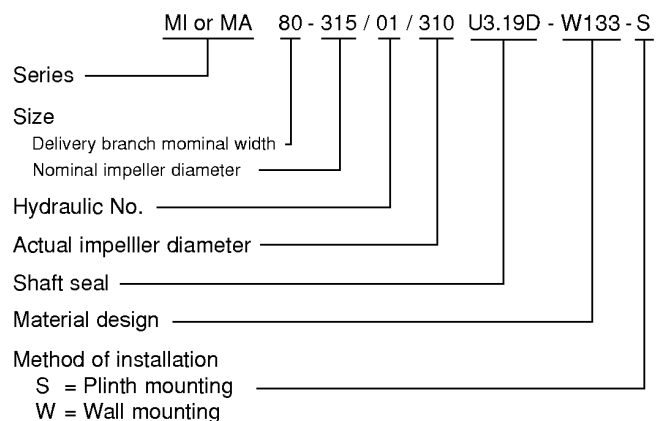
Pump side: Lifetime greased groove ball bearing to DIN 625 in casing cover.

Drive side: By bearing of drive motor.

Drive

Surface-cooled three-phase squirrel-cage induction motors, IM V1 type of construction, enclosure IP55 according to IEC Standard, class F insulation, performances and main dimensions according to DIN 42 677.

Abbreviation system



This abbreviation is placed on the name plate.

Materials

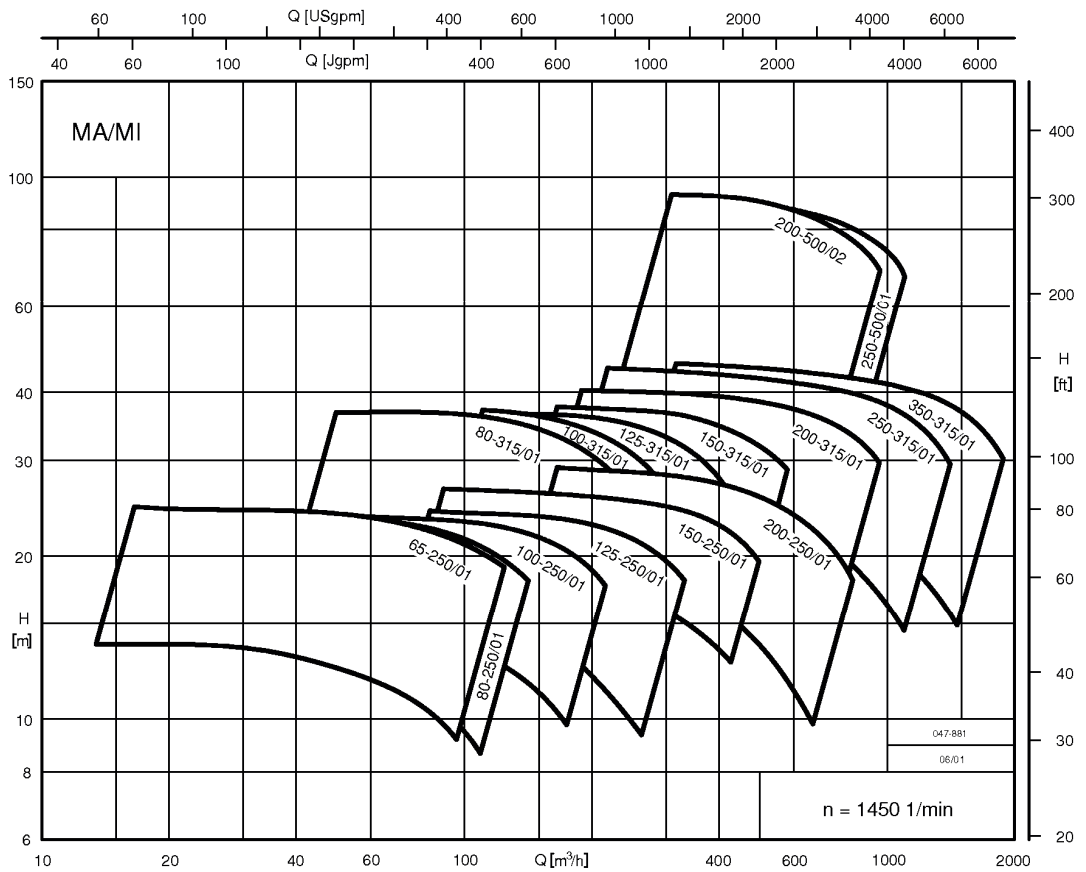
Denomination	Part No.	Material designs		
		W133	W134	W135
Volute casing	102.01	G-CuAl10Ni	EN-GJS-400-15 (GGG-40)	
Casing cover	161.01	G-CuAl10Ni	EN-GJS-400-15 (GGG-40)	
Shaft	210.01		1.4462/1.7139 ②	
Impeller	230.01		G-CuAl10Ni	EN-GJL-200 (GG-20)
Lantern	341.01		steel welded	
Wear ring ①	502.01		GC/GZ-CuSn12	
Screws and nuts in contact with fluid			stainless steel	

① Wear rings against surcharge.

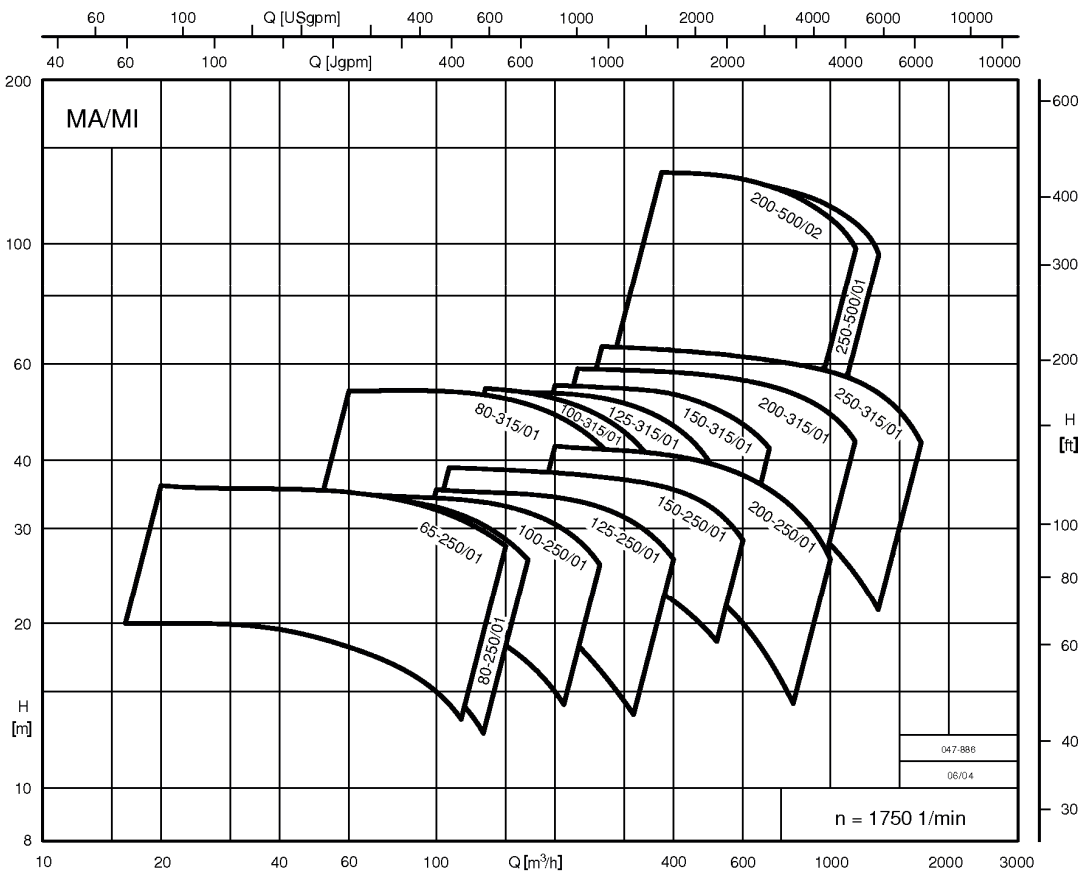
② On pump side (in contact with fluid) in 1.4462/on motor side in 1.7139.

Performance graphs

n = 1450 1/min



n = 1750 1/min

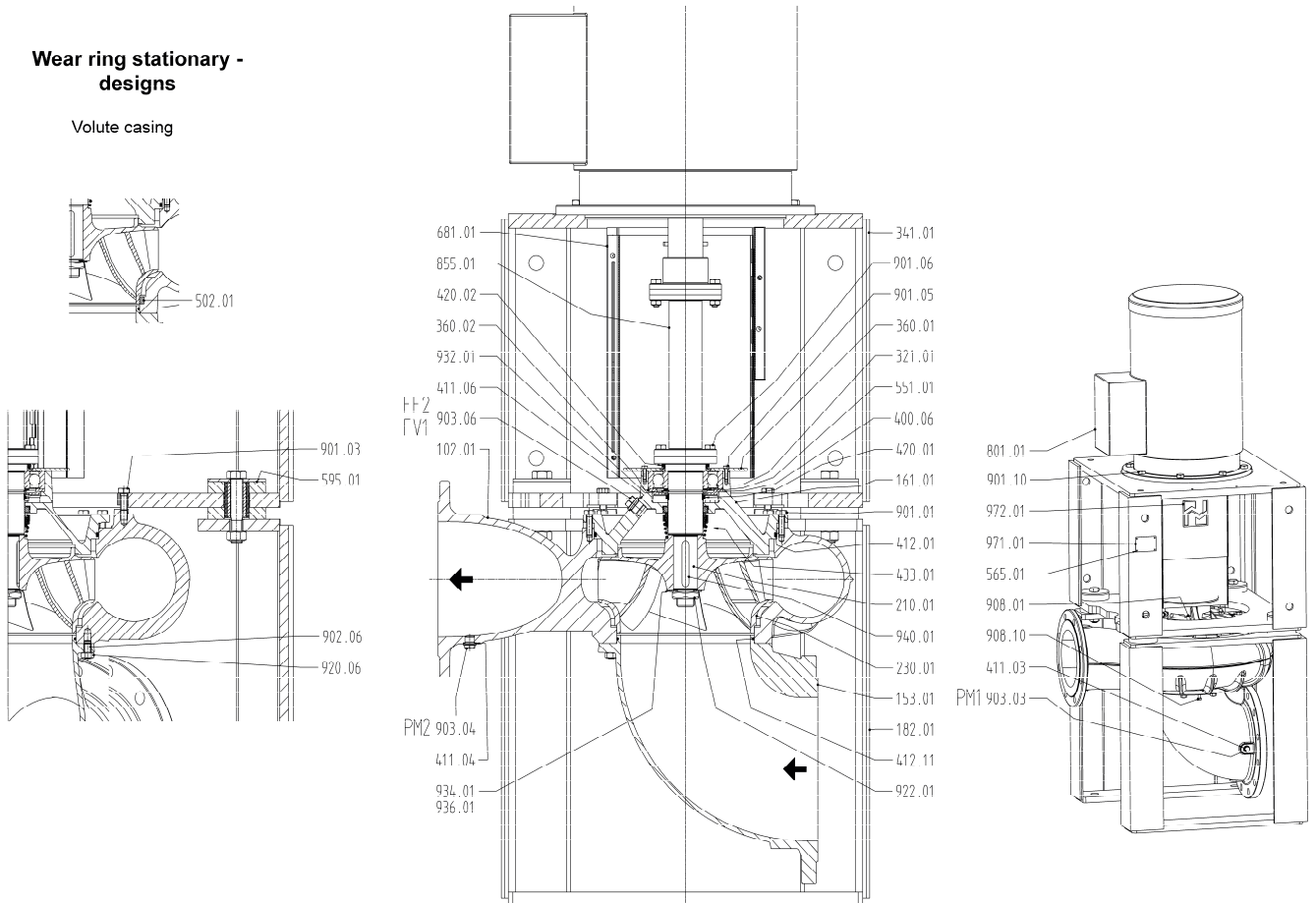


For exact performance data please refer to the individual characteristics.

Sectional drawing
Series MI for pedestal mounting

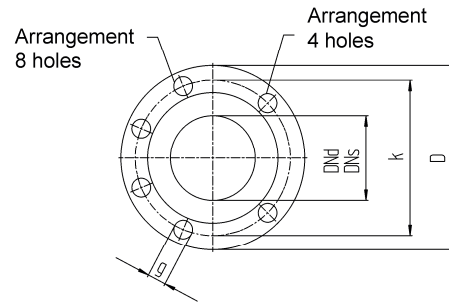
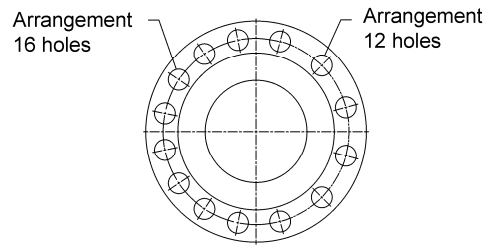
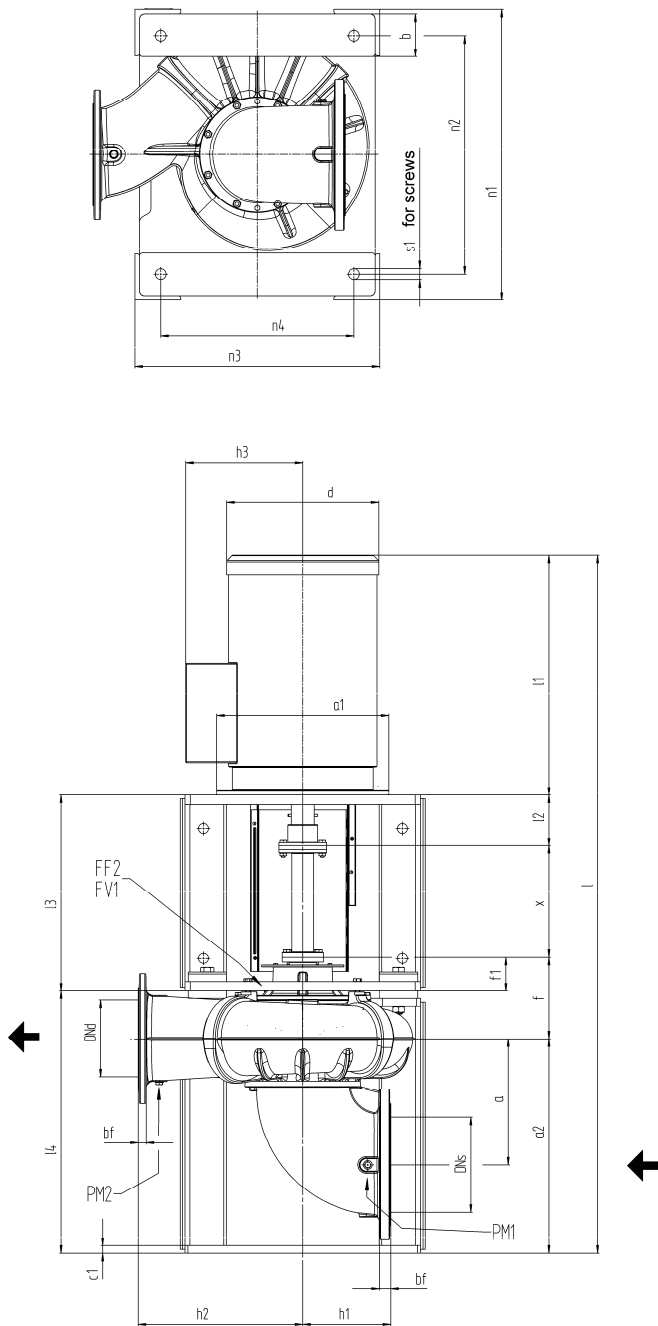
Wear ring stationary - designs

Volute casing



Denomination	Part No.	Denomination	Part No.	Denomination	Part No.
Volute casing	102.01	Wear ring stationary	502.01	Impeller nut	922.01
Suction branch	153.01	Spacer disc	551.01	Circlip	932.01
Casing cover	161.01	Rivet	565.01	Spring disc	934.01
Foot	182.01	Buffer	595.01	Spring ring	936.01
Shaft	210.01	Coupling guard	681.01	Key	940.01
Impeller	230.01	Flange motor	801.01	Name plate	971.01
Radial ball bearing	321.01	Coupling with distance piece	855.01	Information plate	972.01
Motor stool	341.01	Hexagon head screw	901.01		
Bearing cover	360.01	Hexagon head screw	901.03		
Bearing cover	360.02	Hexagon head screw	901.05		
Gasket	400.06	Hexagon head screw	901.06		
Seal ring	411.03	Hexagon head screw	901.10		
Seal ring	411.04	Stud	902.06		
Seal ring	411.06	Screw plug	903.03		
O-ring	412.01	Screw plug	903.04	Connections	
O-ring	412.11	Screw plug	903.06	FF2 Filling	
Shaft seal ring	420.01	Jack screw	908.01	FV1 Venting	
Shaft seal ring	420.02	Jack screw	908.10	PM1 Pressure measurement	
Mechanical seal	433.01	Nut	920.06	PM2 Pressure measurement	

Unit dimensions – series MI for pedestal mounting



Sense of rotation: Clockwise seen from drive side.
Dimensions in mm. Subject to alterations.

Flanges acc. to EN 1092-2 PN 10

DN _s / DN _d	D	bf	k	g	No. of holes
65	185	19	145	19	4
80	200	19	160	19	8
100	220	19	180	19	8
125	250	19	210	19	8
150	285	19	240	23	8
200	340	20	295	23	8
250	395	22	350	23	12
300	445	24,5	400	23	12
350	505	24,5	460	23	16
400	565	24,5	515	28	16

Flanges acc. to EN 1092-2 PN 16

DN _s / DN _d	D	bf	k	g	No. of holes
200	340	20	295	23	12
250	405	22	355	28	12

Flanges acc. to EN 1092-2 PN 16

DN _s / DN _d	D	bf	k	g	No. of holes
250	425	24,5	370	31	12
300	485	27,5	430	31	16

Connections

Filling	Venting	Pressure measurement
FF2	FV1	PM1 / PM2
G 1/2	G 1/2	G 3/8

Unit dimensions – series MI for pedestal design

Sense of rotation: Clockwise seen from drive side.
Dimensions in mm. Subject to alterations.

Size			Unit dimensions																																																	
Pump	Housing cover	Motor	Pump dimensions									Dismantling dimension x	Foot dimensions							Total length approx. l																																
			DN _s	DN _d	a	a2	f	f1	h1	h2	h3		b	c1	l4	n1	n2	n3	n4		s1																															
65-250/01	250/40	132S/M	125	65	210	410	165,5	98,5	150	250	416	230	90	20	477	500	395	480	375	M20	1267																															
		160M/L ③									446										1401																															
132S/M		150	80	235	407	168,1	416		175	250	416										1267																															
160M/L ③							446				1401																																									
100-250/01	250/50	160M/L	150	100	250	486	108,2	175	275	456	270										110	20	691	760	625	490	560	450	M24	1509																						
		180M/L								456																				1633																						
160M/L		200	125	290	483	199,9		200	275	486																				200	315	456	200	315	486	574	600	490	560	450	M24	1508										
180M/L										486																																1632										
125-250/01	315/50	200L ③	200	100	275	497	185,9	200	315	486																				270	110	20	691	760	625	490	560	450	M24	1690												
		225S/M ③								486																														1727												
160M/L		150	80	235	500	182,7		99,5	175	315																														456	200	315	486	574	600	490	560	450	M24	M24	1508	
180M/L																																																			456	1632
200L	200	100	275	497	185,9	200	315		486	574																														600	490	560	450	M24	M24	M24	M24	M24	1690			
180M/L																																																	486	1722		
150-250/01	250/60	180M/L	200	150	305	570	220,5	210	350	487																														270	110	20	691	760	625	490	560	450	M24	M24	1780	
		200L								517																																									1838	
225S/M		250	200	330	563	227,6		230	430	517																																								487	230	430
250M ③												517	1998																																							
200-250/01	315/60	200L	250	200	330	563	227,6	230	430	517		270	110	20	691	760	625	490	560	450																														M24	M24	1838
		225S/M								487																																										1875
250M		250	200	330	563	227,6		230	430	517																																									547	230
280S/M ③											517										2073																															
315S/M ③	547	2208																																																		
125-315/01	315/60	200L	200	125	275	575	215,7	200	350	487	270										110	20	691	760	625	490	560	450	M24																						M24	1838
		225S/M								517																																										1875
250M ③		250	200	330	563	227,6		230	430	517																				547	230	430	517	691	760	625	490	560	450												M24	1998
280S/M ③																																																				517
315S/M ③	547	2208																																																		
150-315/01	315/70	200L	250	150	340	571	219,1	220	355	517																				270	110	20	691	760	625	490	560	450	M24												M24	1838
		225S/M								487																																										1875
250M ③		250	200	330	563	227,6		230	430	517																																									547	230
280S/M ③																																								517	2073											
315S/M ③	547	2208																																																		
200-315/01	315/70	225S/M	250	200	365	690	263,3	113,3	250	440																														581	320	150	25	840	900	720	820	640	M30		M30	2088
		250M																																						611												2211
280S/M ③		300	250	390	682	271,8		280	530	611		578	280	530	611	840	900	720	820	640																				M30										M30	2286	
315S/M ③																																																			611	2421
250-315/01	315/80	315S/M	300	250	390	682	271,8	110,4	280	530		611	320	150	25	840	900	720	820	640																				M30										2421		
350-315/01		315S/M	400	350	595	920	272,3	70,3	400	580		648	400	150	25	1122	1080	900	960	780																				M30										2740		
200-500/02 ①	500/80	280S/M	250	200	350	700	250,4	110,4	250	625		578	320	150	25	840	900	720	820	640																				M30										M30	2283	
250-500/01 ②		315S/M									608	2418																																								
315S/M	300	250	410	690	260,4	110,4	275	700	608	608	320	150									25	840	900	720	820	640	M30	2418																								

① Flange acc. to EN 1092-2 PN 16 ② Flange acc. to EN 1092-2 PN 25
 ③ Attention! With these motor sizes the terminal box dimension h3 is bigger than pump dimension h2.

The stated dimensions are approximate.
Exact data dependant on motor brand.
At drive performances over 132 kW consultation is necessary due to non standardized motor connections.

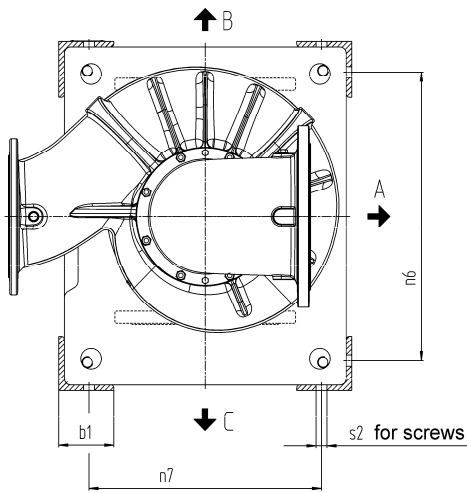
On use of special ship motors, precautions must be taken towards different pump sizes depending on protection type with according performances.
The main dimensions change accordingly.

Motor dimensions

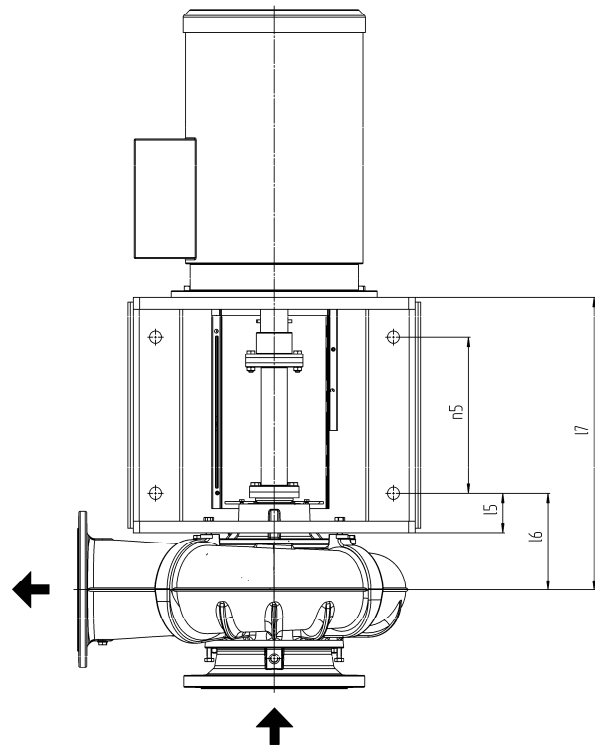
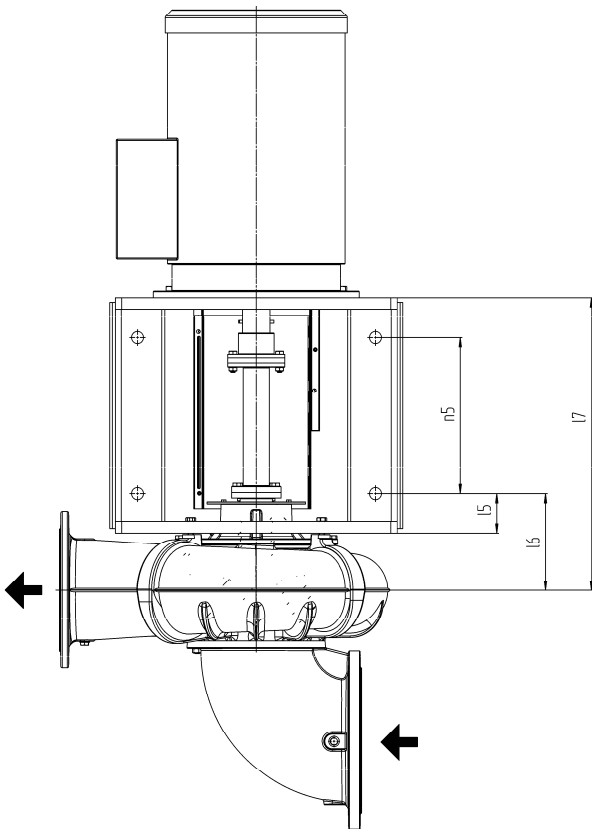
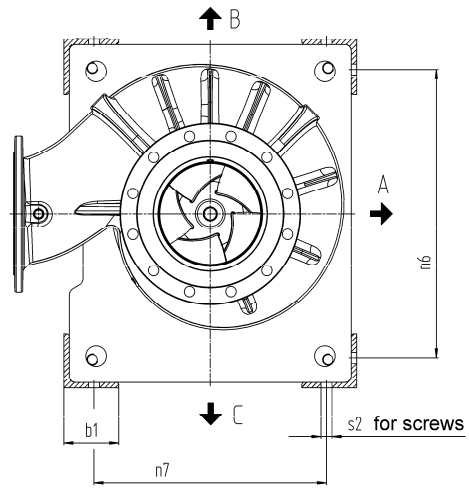
Speed 1/min	Size Motor	Performance kW	Motor dimensions				
			Flange diameter a1	Outside diameter d	Terminal box h3	Shaft end d2 x l2	Length l1
1750 1450 1180	132S/M	5,5/7,5	300	270	233	38 x 80	374
	160M/L	11/15	350	310	257	42 x 110	478
	180M/L	22	350	375	275	48 x 110	602
	200L	30	400	415	310	55 x 110	660
	225S/M	37/45	450	470	339	60 x 140	667
	250M	55	550	520	430	65 x 140	790
	280S/M	75/90	550	575	455	75 x 140	865
	315S/M	110/132	660	645	515	80 x 170	970

Unit dimensions – supplementary dimensions for wall mounting

Series MI



Series MA



Sense of rotation: Clockwise seen from drive side.
Dimensions in mm. Subject to alterations.

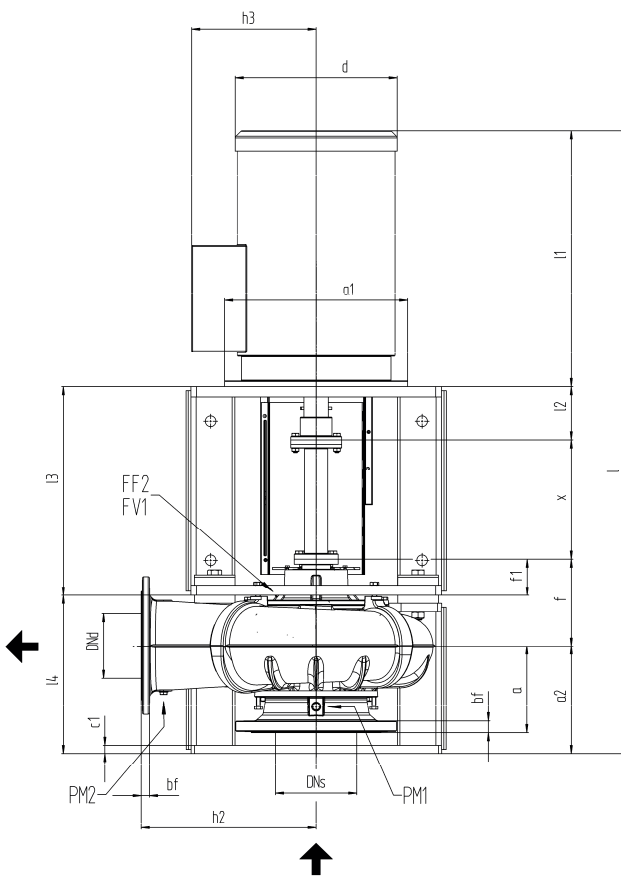
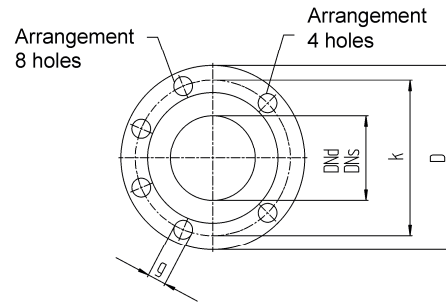
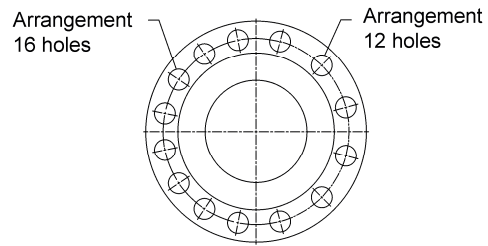
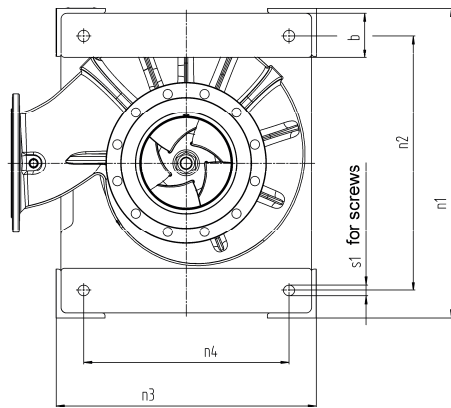
Series	Possible variations for wall mounting			Possible suction branch positions		
	seen from drive side					
	A	B	C	A	B	C
MI	x	x	x	x	x	x
MA	x	x	x	-	-	-

Unit dimensions – supplementary dimensions for wall mounting, series MI and MA

Sense of rotation: Clockwise seen from drive side.
 Dimensions in mm. Subject to alterations.

Size			Dimensions for wall mounting								
Pump	Housing cover	Motor	b1	l5	l6	l7	n5	n6	n7	s2	
65-250/01	250/40	132S/M	90	80	143	483	260	400	380	M20	
		160M/L				513	290				
80-250/01		132S/M			145,6	485,6	260				
		160M/L				515,6	290				
		180M/L									
100-250/01		250/50			160M/L	100	80				164,4
	180M/L										
125-250/01	160M/L		167,2	547,2	320						
	180M/L			577,2				320			
	200L										
225S/M											
80-315/01	315/50	160M/L	100	80	150	530	290	490	450	M24	
		180M/L									
		200L									
100-315/01		180M/L			153,2	533,2	320				
		200L				563,2					320
225S/M											
150-250/01	250/60	180M/L	120	80	197	518	320	630	510	M24	
		200L									
		225S/M			192,2	548	350				
		250M				615,1					350
200-250/01		200L			204,1	645,1	380				
		225S/M				675,1					380
		250M				603,2					320
280S/M											
315S/M											
125-315/01	315/60	200L	120	80	192,2	603,2	320	630	510	M24	
		225S/M									
		250M			195,6	633,2	350				
		280S/M				606,6					350
150-315/01		200L			195,6	636,6	380				
		225S/M				666,6					380
		250M									
280S/M											
315S/M											
200-315/01	315/70	225S/M	160	100	246	729	380	730	650	M30	
		250M									
		280S/M			254,5	759	410				
		315S/M				769,5	410				
250-315/01											
350-315/01	315/80	315S/M	120	318	850	410	910	790	M30		
200-500/02	500/80	280S/M	100	100	236	718	380	730	650	M30	
		315S/M				748	410				
		315S/M			246	758	410				

Unit dimensions – series MA for pedestal mounting



Sense of rotation: Clockwise seen from drive side.
Dimensions in mm. Subject to alterations.

Flanges acc. to EN 1092-2 PN 10

DN _s / DN _d	D	bf	k	g	No. of holes
65	185	19	145	19	4
80	200	19	160	19	8
100	220	19	180	19	8
125	250	19	210	19	8
150	285	19	240	23	8
200	340	20	295	23	8
250	395	22	350	23	12
300	445	24,5	400	23	12
350	505	24,5	460	23	16
400	565	24,5	515	28	16

Flanges acc. EN 1092-2 PN 16

DN _s / DN _d	D	bf	k	g	No. of holes
200	340	20	295	23	12
250	405	22	355	28	12

Flanges acc. EN 1092-2 PN 25

DN _s / DN _d	D	bf	k	g	No. of holes
250	425	24,5	370	31	12
300	485	27,5	430	31	16

Connections

Filling	Venting	Pressure measurement
FF2	FV1	PM1 / PM2
G 1/2	G 1/2	G 3/8

Unit dimensions – series MA for pedestal design

Sense of rotation: Clockwise seen from drive side.
Dimensions in mm. Subject to alterations.

Size			Unit dimensions																			
Pump	Housing cover	Motor	Pump dimensions									Dismantling dimension x	Foot dimensions									Total length approx. l
			DN _s	DN _d	a	a2	f	f1	h2	l3	b		c1	l4	n1	n2	n3	n4	s1			
65-250/01	250/40	132S/M	125	65	150	230	165,5	98,5	250	416	230	90	20	297	500	395	480	375	M20	1087		
		160M/L ③								446										1221		
132S/M		150	80	175	227	168,1	250		416	1087												
160M/L ③									446	1221												
80-250/01		180M/L ③																		1345		
100-250/01	250/50	160M/L	150	100	190	266	108,2	275	456	230	90	20	354	600	490	560	450	M24	1289			
180M/L		1413																				
160M/L		200	125	210	263	199,9		275	486										1288			
180M/L																			1522			
125-250/01		200L ③																		1470		
		225S/M ③																			1507	
80-315/01	315/50	160M/L	150	80	175	280	108,2	315	456	230	90	20	354	600	490	560	450	M24	1288			
180M/L		1412																				
200L		200	100	200	277	185,9		315	486										1470			
180M/L																			1412			
100-315/01		200L																		1488		
		225S/M ③																			1507	
150-250/01	250/60	180M/L	200	150	220	270	99,5	350	487	270	110	20	391	760	625	700	565	M24	1480			
200L		1538																				
225S/M		250	200	215	263	227,6		430	517										547	487	1908	
250M ③																						1575
		200L																		1698		
		225S/M																			1538	
		250M																			1715	
		280S/M ③																			1698	
		315S/M ③																			1773	
125-315/01	315/60	200L	200	125	220	275	99,5	350	487	270	110	20	391	760	625	700	565	M24	1908			
225S/M		1538																				
250M ③		250	150	230	271	219,1		355	517										547	487	1908	
280S/M ③																						1575
		200L																			1698	
		225S/M																			1773	
		250M																			1538	
		280S/M ③																			1575	
		315S/M ③																			1698	
150-315/01		200L																			1773	
		225S/M																			1538	
		250M																			1575	
		280S/M ③																			1698	
		315S/M ③																			1773	
		225S/M																			1908	
200-315/01	315/70	250M	250	200	240	340	113,3	440	581	320	150	25	490	900	720	820	640	M30	1738			
280S/M ③		1861																				
315S/M ③		300	250	240	332	271,8		530	611										1936			
315S/M																				2071		
250-315/01		315S/M																			2071	
350-315/01	315/80	315S/M	400	350	320	380	272,3	70,3	580	648	400	150	25	582	1080	900	960	780	M30	2200		
200-500/02	500/80	280S/M	250	200	225	350	110,4	625	578	320	150	25	490	900	720	820	640	M30	1933			
①		315S/M																	2068			
250-500/01			315S/M	300	250	275		340	260,4										700	608	2068	

① Flange acc. to EN 1092-2 PN 16

② Flange acc. to EN 1092-2 PN 25

③ Attention! With these motor sizes the terminal box dimension h3 is bigger than pump dimension h2.

The stated dimensions are approximate.

Exact data dependant on motor brand.

At drive performances over 132 kW consultation is necessary due to non standardized motor connections.

On use of special ship motors, precautions must be taken towards different pump sizes depending on protection type with according performances.

The main dimensions change accordingly.

Motor dimensions

Speed	Size	Capacity	Motor dimensions				
			Flange diameter	Outside diameter	Terminal box	Shaft end	Length
1750 1450 1180	132S/M	5,5/7,5	300	270	233	38 x 80	374
	160M/L	11/15	350	310	257	42 x 110	478
	180M/L	22	350	375	275	48 x 110	602
	200L	30	400	415	310	55 x 110	660
	225S/M	37/45	450	470	339	60 x 140	667
	250M	55	550	520	430	65 x 140	790
	280S/M	75/90	550	575	455	75 x 140	865
	315S/M	110/132	660	645	515	80 x 170	970

Technische Änderungen bleiben vorbehalten.

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