

Volute pumps

for heat carrier oils up to 350 °C

SIHI *SuperNova*



ZTND 032-125 . . . 200-500

TECHNICAL DATA

Output:	max. 1000 m ³ /h
Delivery head:	max. 95 m
Speed:	max. 3600 rpm
Temperature:	max. 350 °C
Casing pressure:	PN 16
Shaft sealing:	radial seal rings or mechanical seal
Flange connection:	DIN EN 1092-2 PN 16 / 25 ¹⁾
Direction of rotation:	clockwise, when looking at the pump from the drive end



APPLICATION

Volute pumps of the series ZTN have been specially developed for handling of mineral and synthetic heat transfer oils. The pumps may be used in installations with positive or negative suction pressure.

Especially to be emphasised is the application in plants of:

The chemical industry:

heating of agitators, reactors, drying plants, polymerisation plants, plants for conveying high-viscous products and producing plastic materials and synthetic fibres.

The rubber and plastic industry:

heating of calendars, melting pots, power presses for plastics, automatic injection moulding machines, production of PVC adhesive tape.

The food industry:

heating of baking and fish-frying ovens, distillation of fatty acids and glycerine, fat softening plants, production of potato chips and milk powder.

The paper industry and laundries:

calendar rolls, production of corrugated cardboard, heating of washing machines, mangles and dryers.

DESIGN

Horizontal, single-stage volute pumps with the dimensions and nominal ratings to 24255/EN 733 in back pull out design* which permits the removal of the complete bearing unit toward the drive end without removing the pump casing from the pipe work. If a spacer coupling is installed it is also unnecessary to disconnect the motor.

The programme comprises 38 pump sizes, but only three shaft assemblies are required owing to the unit construction system. Within each shaft assembly, shafts, shaft sealing, impeller fastenings, bearing bracket and bearing covers are interchangeable.

The DIN 4754 regulations are complied with.

Should heat carrier seepage occur from the shaft seal, it is ensured that the leakage will be drained off and collected completely.

¹⁾ from size 150315 to 200500

* due to additional sizes the performance range is increased to higher output rates.

CONSTRUCTION

Casing pressure:

Maximal 16 bar from 0 °C to 120 °C
Maximal 13 bar from 120 °C to 300 °C
Maximal 10 bar from 300 °C to 350 °C
Intermediate values can be obtained by interpolation.

Please note:

Technical rules and safety regulations.

Max. Casing pressure = inlet pressure + zero head
Admissible inlet pressure (system pressure) = 5 bar when using shaft sealing 002.

Admissible inlet pressure = admissible casing pressure when using shaft sealing GBC.

Flanges location:

Axial suction flange, discharge flange radially upwards.

Flanges:

The flanges comply with DIN EN1092-2/PN 16, resp. PN 25. Flanges drilled to according to ANSI (previous ASA) 150 can be supplied.

Hydraulic:

Designation of this construction type: A, B, D

Bearing:

One grease-lubricated grooved ball bearing resp. 2 inclined ball bearings (the first grease filling is made in the factory) and one internal liquid flushed sleeve bearing.
Designation of this construction type: A

Direction of rotation:

Clockwise, when looking at the pump from the drive end.

Shaft sealing:

Code 002: several radial shaft seal rings arranged in series; uncooled

Code GBC: unbalanced bellows mechanical seal
seal face materials cast chromium steel/carbon elastomer FPM (Viton)

Material design:

ITEM	COMPONENTS	MATERIAL						EXECUTION	
		EN mat.-number	EN mat.- denomination	DIN mat.-number	DIN mat.- denomination	US denomination		1B	2B (1)
						ASTM Standard	AISI		
10.20	Volute casing	EN-JS 1025	EN-GJS-400-18-LT	0.7043	GGG-40.3	A 395		X	
		1.0619	GP 240 GH	1.0619	GS-C 25	A 216 Gr WCB			X
16.10	Casing cover	EN-JS 1025	EN-GJS-400-18-LT	0.7043	GGG-40.3	A 395		X	
		1.0619	GP 240 GH	1.0619	GS-C 25	A 216 Gr WCB			X
21.00	Shaft	1. 1191	C 45 E	1.1191	Ck 45 K + N	A 576 Gr 1045	1045	X	
		1.4021	X 20 Cr 13	1.4021	X 20 Cr 13	A 276 Type 420	420	X (2)	X
23.00	Impeller	EN-JL 1040	EN-GJL 250	0.6025	GG-25	A 278 Class 30		X	X
33.00	Bearing bracket								
36.00	Bearing cover								
42.13	Radial seal rings	FPM (Viton)						X	X
43.30	Mechanical seal	chrome cast / carbon FPM (Viton)						X	X
44.10	Casing for mech. seal	1. 1191	C 45 E	1.1191	Ck 45 K + N	A 576 Gr 1045	1045	X	X
44.11	Seal of the shaft casing								
54.51	Sleeve bearing	carbon						X	X

(1) For sizes 200400 and 200500.

(2) For sizes 150315, 150400, 150500, 200250 and 200315.

Casing gasket:

The casing is sealed by flat gaskets of graphite. Designation of this construction type: 2

Motor power:

Using commercial electric motors, type of construction IM B3.

To determine the drive power we recommend the following safety margin:

Up to 4 kW: 25% 4 to 7,5 kW: 20% above 7,5 kW: 15%

The following maximum speeds are to be observed:

max. speed n = 3600 rpm	size	max. speed n = 3000 rpm	size	max. speed n = 1800 rpm	size	max. speed n = 1500 rpm	size
t = 120 °C	032125 050200	t = 120 °C	032250	t = 120 °C	040315 150315	t = 120 °C	150500
	032160 065125		040250		050315 150400		200315
	032200 065160		050250		065315 200250		200400
	040125 065200		065250		080315		200500
	040160 080160		080250		100315		
	040200 080200		100250		125250		
	050125 100160		125200		150200		
	050160 100200		150250		150250		
t = 350 °C	032125 050200	t = 350 °C	032250	t = 350 °C	040315 150250	t = 350 °C	150315
	032160 065125		040250		050315		150400
	032200 065160		050250		065315		150500
	040125 080200		065200		080315		200250
	040160 100160		065250		100315		200315
	040200		080160		125200		200400
	050125		080250		125250		200500
	050160		100200		150200		

The maximum speeds result from the permissible peripheral speeds of the impellers or from the shaft load admissible at higher temperatures, respectively.

Bearing bracket / pump size:

Bracket 25	032125 032160 032200 032250 040125 040160 040200 040250 050125 050160 050200 050250 065125 065160 065200 080160
Bracket 35	040315 050315 065250 065315 080200 080250 080315 100160 100200 100250 100315 125200 125250 150200 150250
Bracket 45	150315 150400 150500 200250 200315 200400 200500

General remarks:

For horizontal volute pumps CLOSE COUPLED construction with STANDARD motor for nominal performances and flange connections as per EN 733 refer to our series **ZTK**.

For INLINE pumps with the same drive unit, consisting of bearing bracket with bearing, stub shaft and mechanical seal, casing cover, impeller and impeller nut, refer to our series **ZTI**.

For equipping hot media systems a complete programme is available for a flow range between 1-600 m³/h consisting of the range:

ZEN volute pumps to EN 22858, t_{max} 230 °C PN 40. Hot water design.

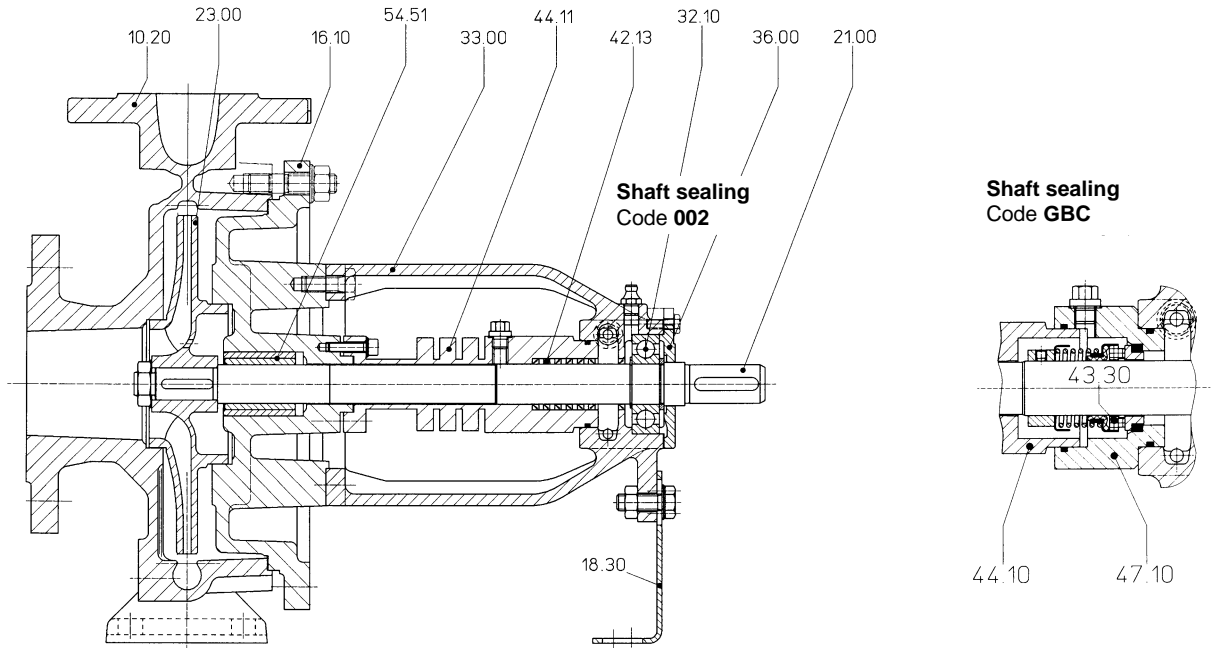
ZDN volute pumps to EN 22858, t_{max} 207 °C PN 25. Hot water design.

ZHN volute pumps to EN 733, t_{max} 180 °C PN 16. Hot water design.

ZLI volute pumps to EN 733 as INLINE construction, t_{max} 150 °C PN 25. Hot water design.

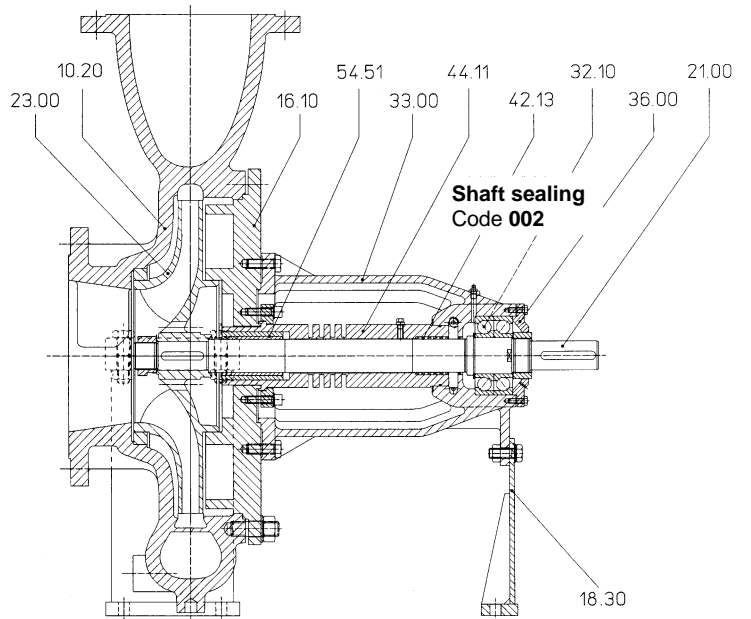
Technical documentation on these programmes will readily be supplied on request.

SECTIONAL DRAWING AND NOMENCLATURE
ZTN 032125 ... 150250

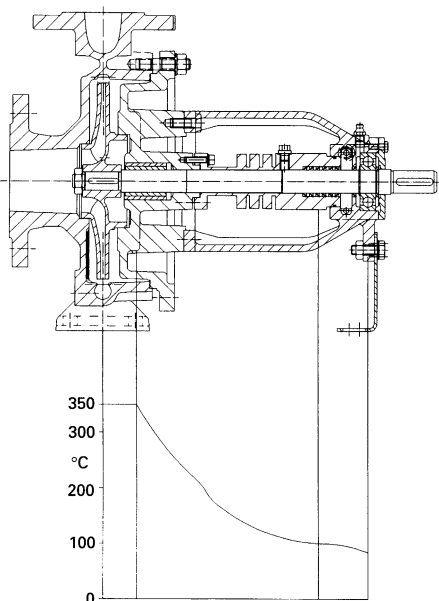


- 10.20 volute casing
- 16.10 casing cover
- 18.30 supporting foot
- 21.00 shaft
- 23.00 impeller
- 32.10 grooved ball bearing
- 33.00 bearing bracket
- 36.00 bearing cover
- 42.13 radial seal ring
- 43.30 mechanical seal
- 44.10 shaft seal casing
- 44.11 shaft seal casing
- 47.10 sealing cover
- 54.51 sleeve bearing

ZTN 150315 ... 200500



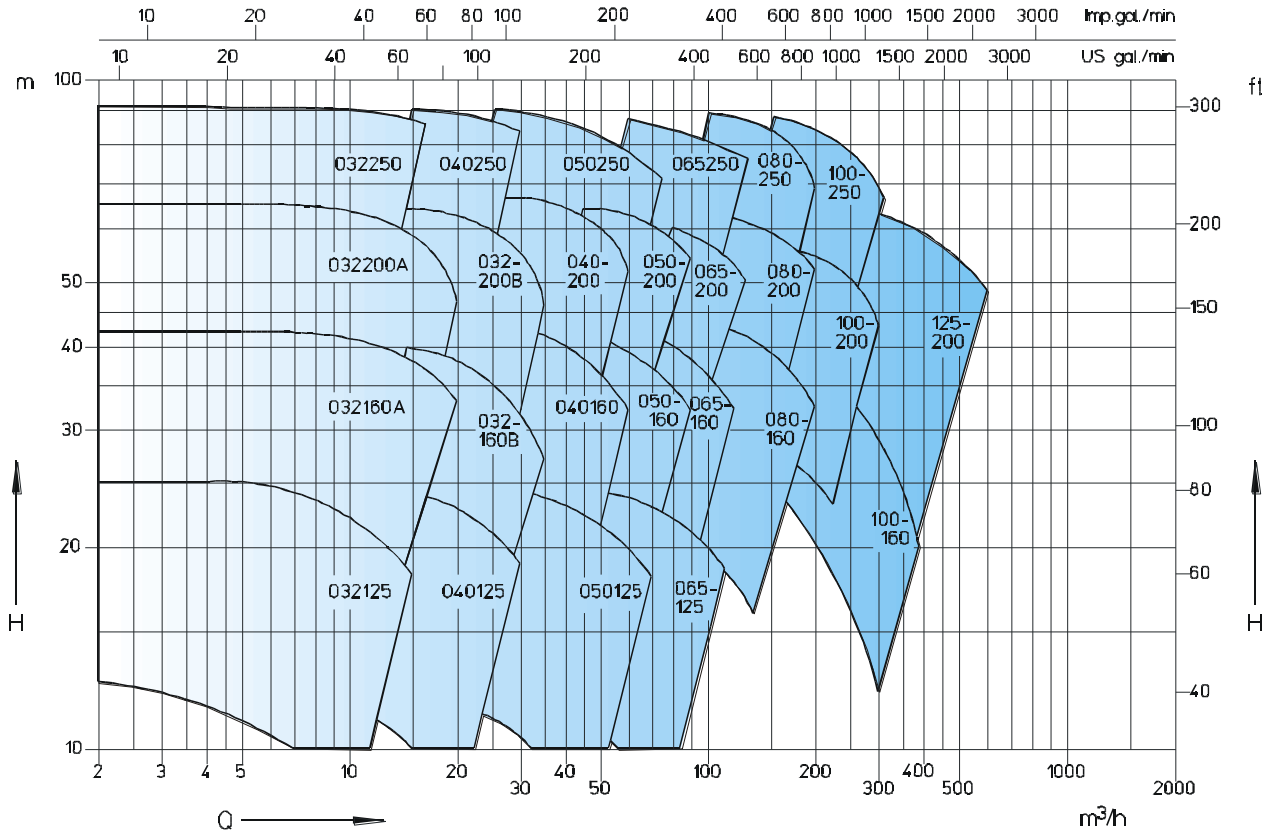
Heat barrier / shaft sealing / bearing



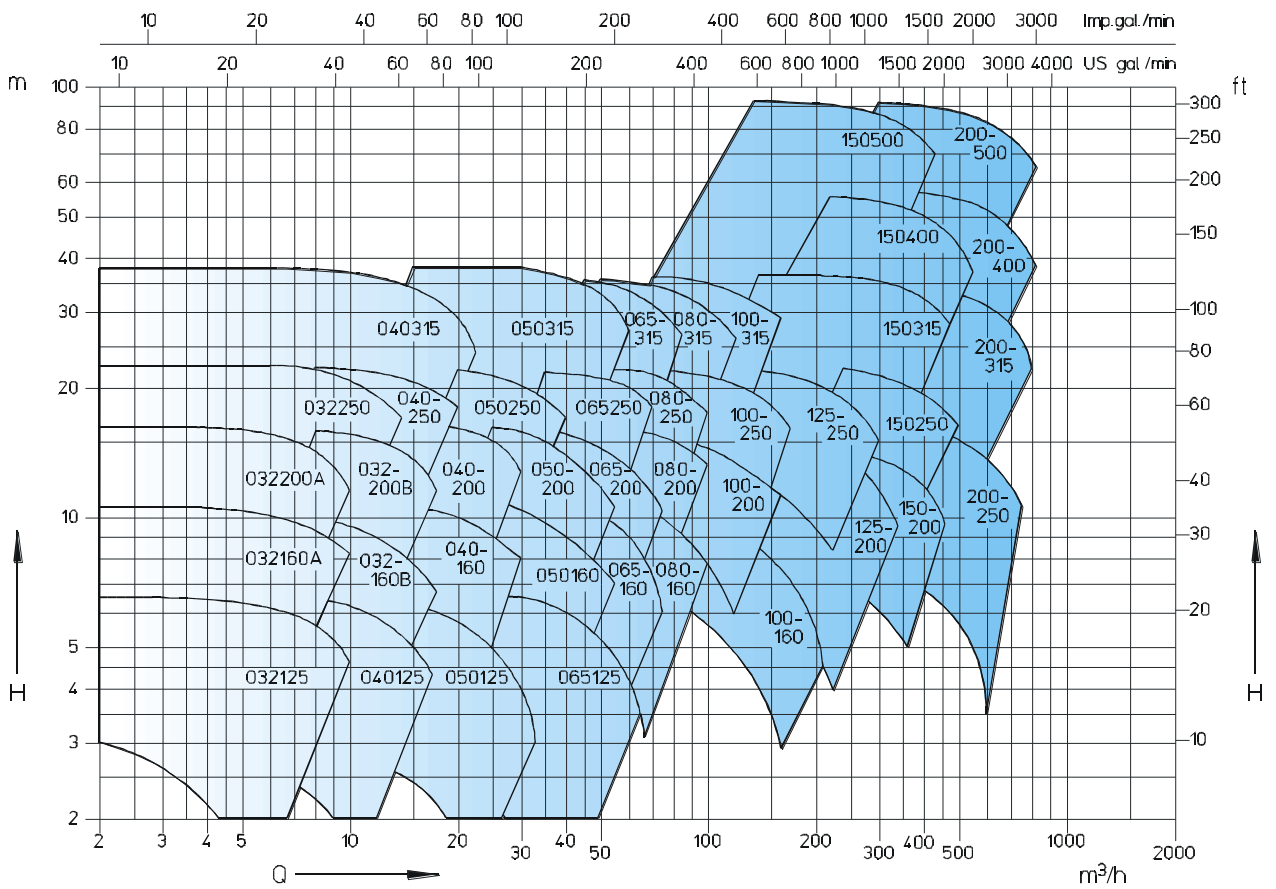
Heat transfer installations have achieved a high level of technical development. Consequently the requirements on pumps handling heat transfer oils have increased regarding operating safety, environmental protection, maintenance and operating costs. The Sterling SIHI ZTN pump, based on many years of experience and on the latest technical know-how, fully complies with these requirements.

By the heat barrier with integrated throttle gab, located behind the cover, a favourable drop in temperature toward the drive side is achieved (see opposite drawing). Heat losses at the product side are effectively prevented (saving of energy). The reduced temperature allows the use of simple, uncooled type of shaft sealing. As the lubricating properties of heat transfer oils for antifriction bearings are not specially good, a liquid flushed sleeve bearing has been fitted at the impeller side and an antifriction bearing, not in contact with the heat carrier, has been fitted behind the shaft sealing. By this arrangement noiseless operation and long working life have been achieved.

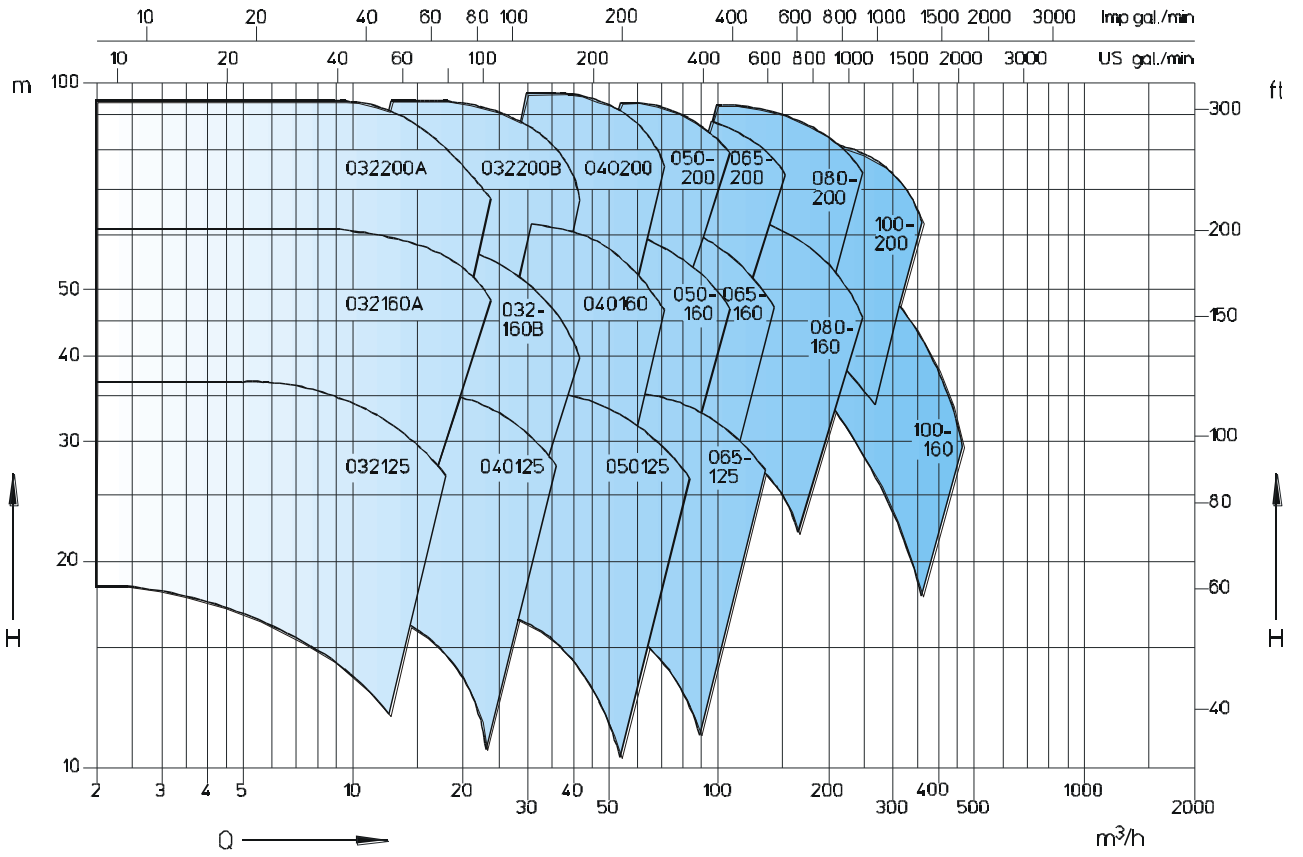
n=2900 1/min



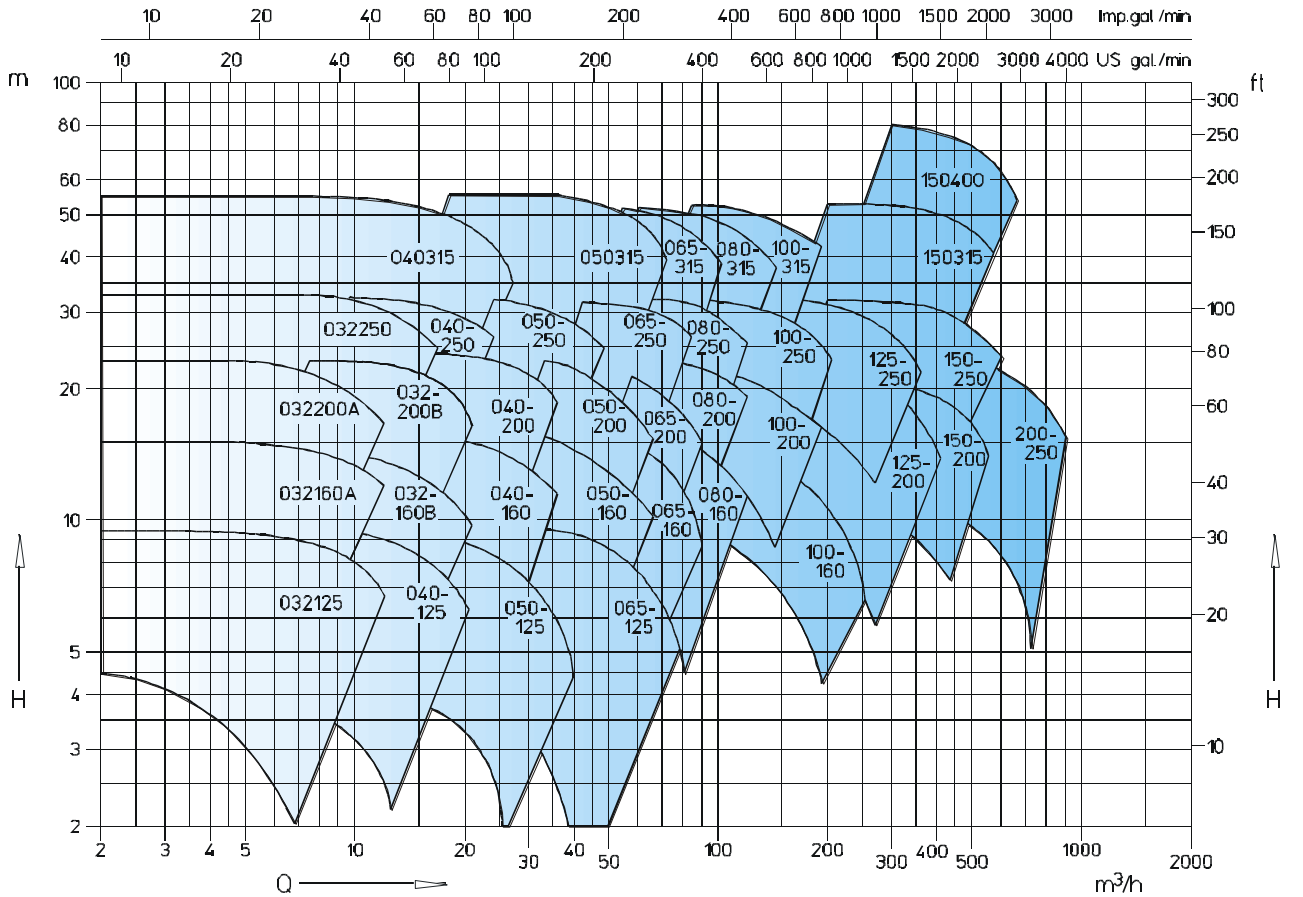
n=1450 1/min



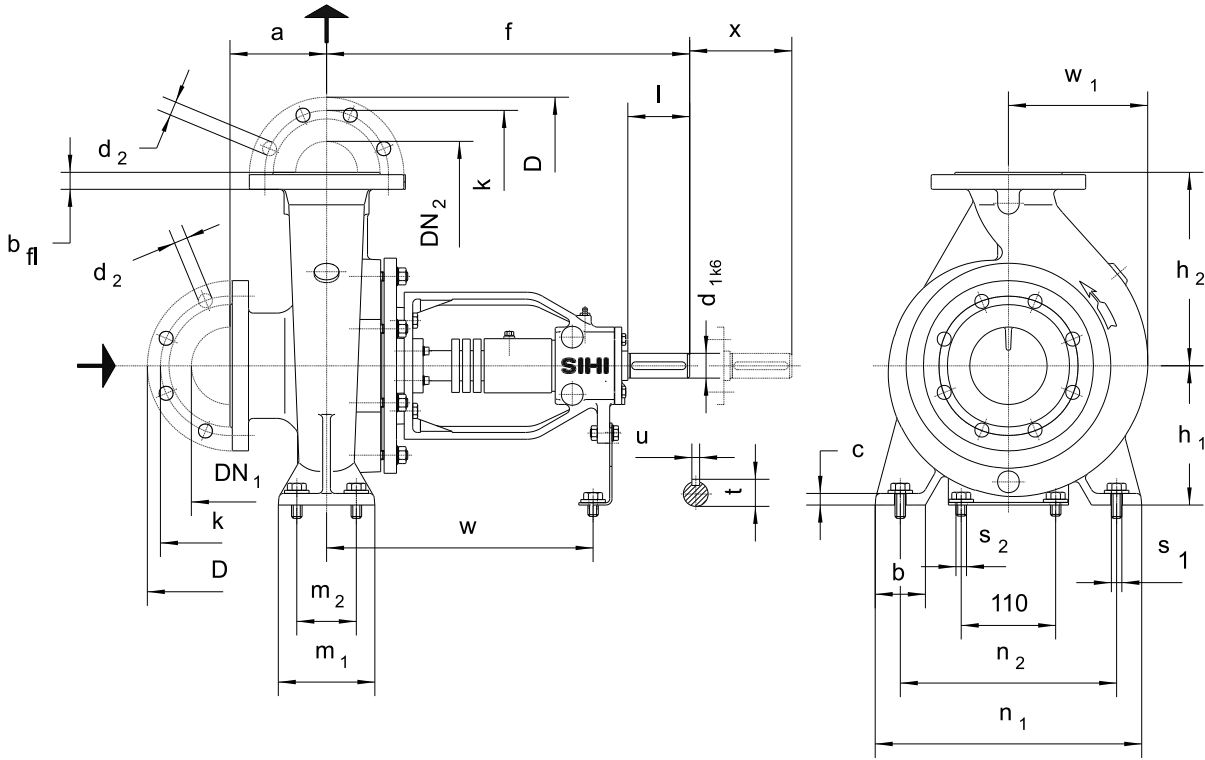
n=3500 1/min



n=1750 1/min



Dimension table



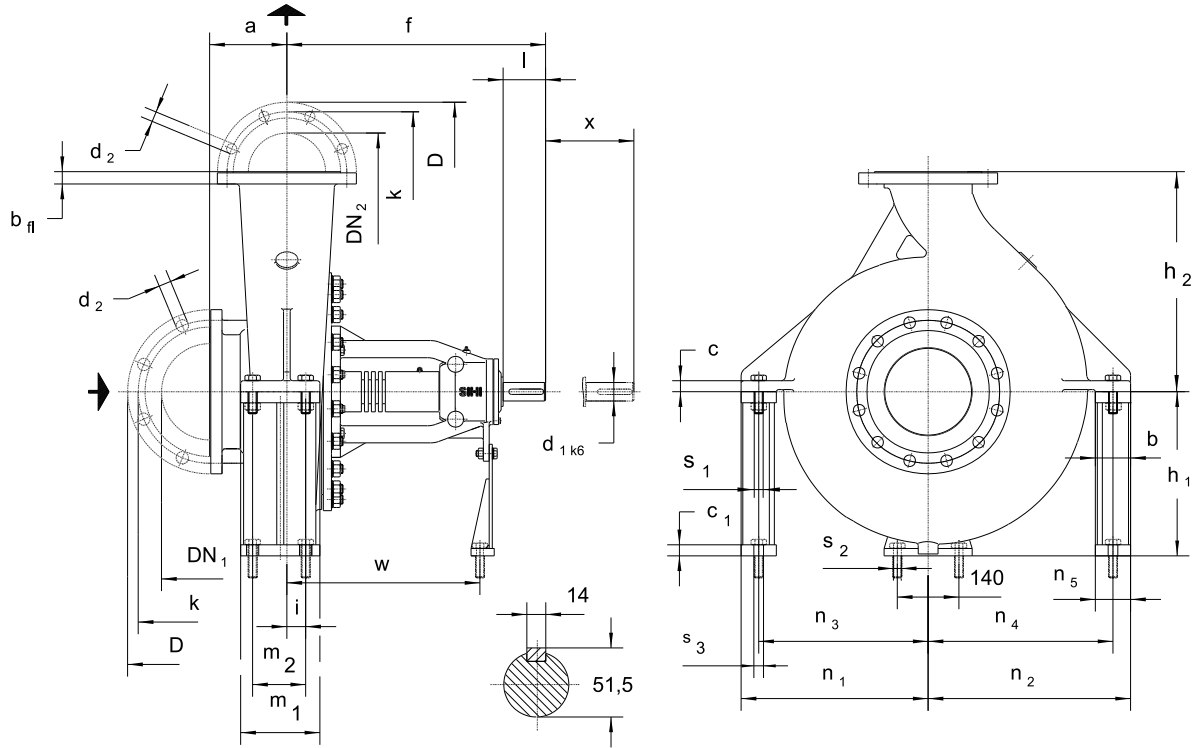
All dimensions in mm.

size	DN ₂	DN ₁	a	b	c	f	h ₁	h ₂	m ₁	m ₂	n ₁	n ₂	s ₁ *	s ₂ *	w	w ₁	x	d ₁	l	t	u	
032125	32	50	80	50	15	360	112	140	100	70	190	140	M12		267	105	100	24	50	27	8	
032160							132	160			240	190										120
032200							160	180			265	212										127
032250 ¹⁾							180	225			320	250										160
040125	40	65	80	50	18	470	112	140	125	95	210	160	M12		340	204	100	32	80	35	10	
040160							132	160			240	190										108
040200							160	180			265	212										128
040250							180	225			320	250										140
040315 ¹⁾							225	250			345	280										164
050125	50	65	100	50	17	470	132	160	125	95	240	190	M12		267	120	100	24	50	27	8	
050160							160	180			265	212										130
050200							160	200			320	250										150
050250							180	225			320	250										169
050315 ¹⁾							225	280			345	280										210
065125	65	80	100	65	15	360	160	180	160	120	280	212	M16		340	183	100	24	50	27	8	
065160							160	200			320	250										147
065200							180	225			360	280										166
065250							200	250			400	315										220
065315							225	280			400	315										220
080160	80	100	125	65	15	360	180	225	125	95	320	250	M12		267	165	100	24	50	27	8	
080200							180	250			345	280										180
080250							200	280			400	315										200
080315							250	315			400	315										235
100160 ¹⁾	100	125	80	18	470	200	200	280	160	120	360	280	M16		340	202	120	32	80	35	10	
100200							225	315			400	315										212
100250							225	315			400	315										242
100315							250	355			400	315										236
125200 ¹⁾							250	355			550	450										190
125250	250	355	500	400	170																	
150200 ¹⁾	150	200	160	100	20	280	400	200	200	150	550	450	M20		274	190	100	80	35	10		
150250 ¹⁾							400	200			500	400									170	

¹⁾ Transnorm pump sizes, not included in DIN 24255/ EN 733. Flanges drilled according to ANSI 150 can be supplied.

* Slots suitable for bolts with dimensions indicated. Bolts are not included in the bare shaft pump standard scope of supply.

Dimension table



All dimensions in mm.

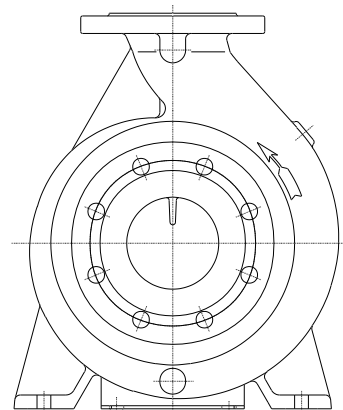
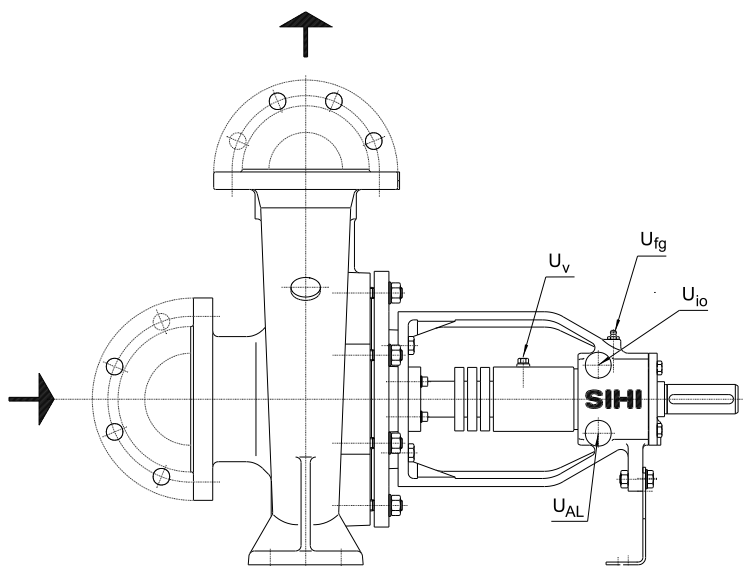
size	DN ₂	DN ₁	a	f	h ₁	h ₂	m ₁	m ₂	i	l	x	d ₁	w	c	c ₁	s ₁	s ₂ *	s ₃ *	n ₁	n ₂	n ₃	n ₄	b, n ₅
150315 ¹⁾	150	200	180	670	315	400	160	100	35					25	23	M20	M12	M20	320	360	290	330	60
150400 ¹⁾					355	450													380	420	340	380	
150500 ¹⁾					400	500													425	460	385	420	
200250 ¹⁾	200	250	250	670	335	425	180	120	45	110	180	48	500	30	23	M20	M12	M20	340	410	300	370	80
200315 ¹⁾			355		450	360													420	320	380		
200400 ¹⁾			375		500	400													480	360	440		
200500 ¹⁾			425		560	220													160	50	475	575	

¹⁾ Transnorm pump sizes, not included in DIN 24255/ EN 733. Flanges drilled according to ANSI 150 can be supplied.

* Slots suitable for bolts with dimensions indicated. Bolts are not included in the bare shaft pump standard scope of supply.

Flange connection according to DIN EN 1092-2 PN 16 Execution material 1B	DIN EN 1092-2 PN 25															
	Execution material 1B										Execution material 2B					
DN ₂ /DN ₁	32	40	50	65	80	100	125	150	200	150	200	250	200	250		
D	140	150	165	185	200	220	250	285	340	300	360	425	360	425		
k	100	110	125	145	160	180	210	240	295	250	310	370	310	370		
b _n	18	19	19	19	19	19	19	19	20	20	22	24,5	30	32		
Tolerances	+4,0 -3,0										+4,5 -4,0				+1,5 -1,5	
d ₂ x number	19x4	19x4	19x4	19x4	19x8	19x8	19x8	23x8	23x12	28x8	28x12	31x12	26x12	30x12		

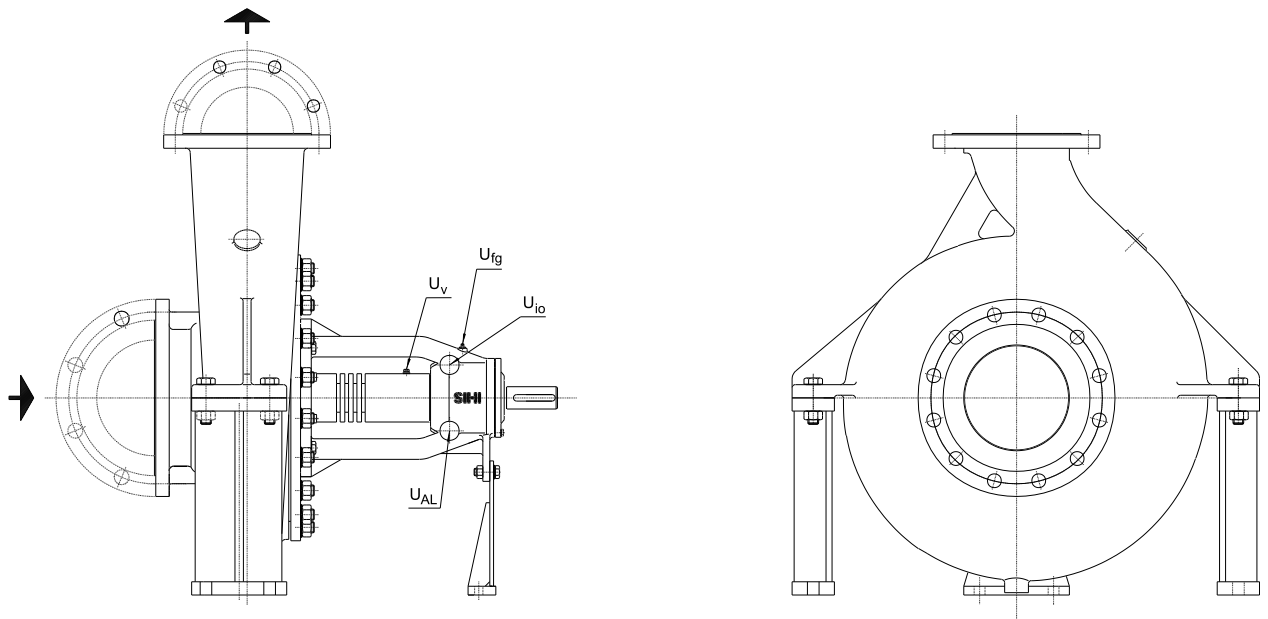
Connections for bearing brackets 25 and 35



- U_{fg} : Grease filling connection.
- U_{io} : Sealing liquid connection.
- U_{AL} : Drainage for leakage.
- U_v : Vent connection

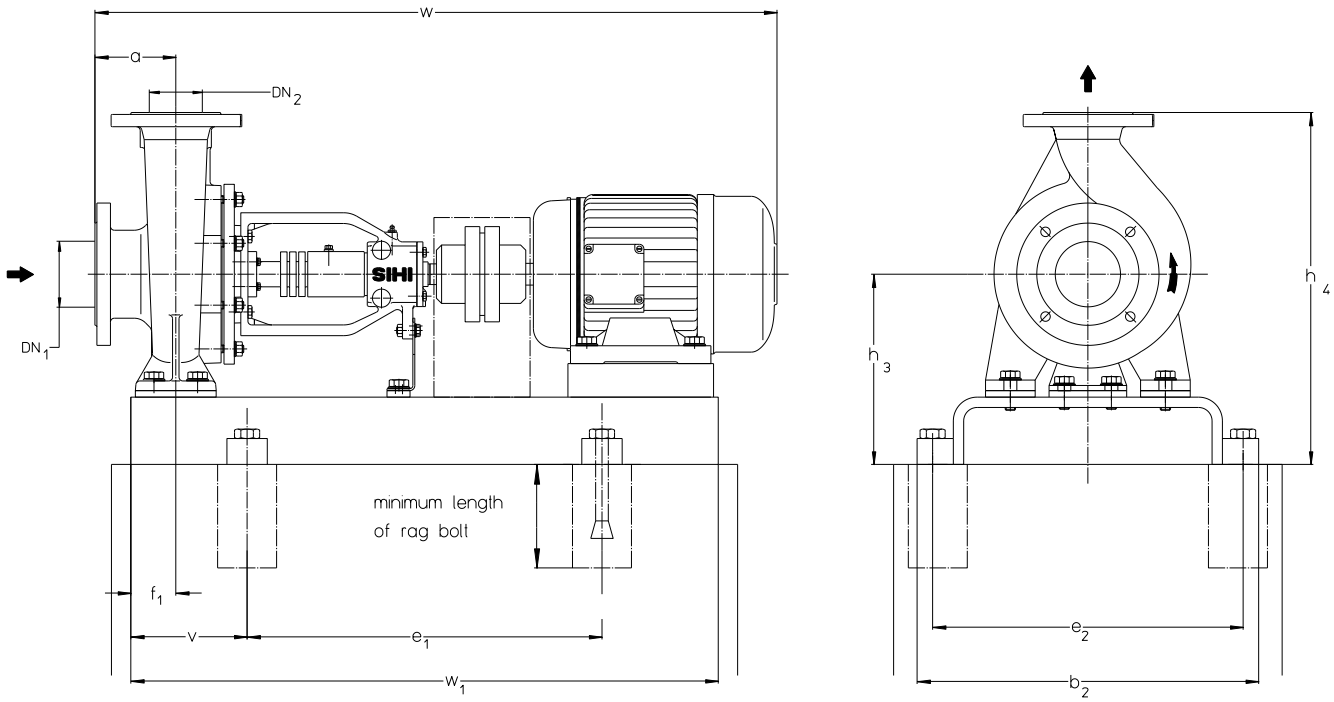
Size	U _{fg}	U _v	U _{io}	U _{AL}
032125				
032160				
032200				
032250				
040125				
040160				
040200				
040250				
040315				
050125				
050160				
050200				
050250				
050315				
065125				
065160	G 1/8	G 1/8	G 1/4	G 1/4
065200				
065250				
065315				
080160				
080200				
080250				
080315				
100160				
100200				
100250				
100315				
125200				
125250				
150200				
150250				

Connections for bearing bracket 45



- u_{fg} : Grease filling connection.
- u_{io} : Sealing liquid connection.
- u_{AL} : Drainage for leakage.
- u_v : Vent connection.

Size	u_{fg}	u_v	u_{io}	u_{AL}
150315				
150400				
150500				
200250	G 1/8	G 1/8	G 1/4	G 1/4
200315				
200400				
200500				



Dimensions in mm.

Dimensional tolerances admissible (base plates) for welded parts according to DIN 8570 B

size	motor		base plate No.	coup-ling **	weight		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	w*	w ₁	rag bolt DIN 529
	size	kW			pump kg	Unit kg													
032125	71	0.25	S008	B68	32	51	32	50	80	297	400	265	120	60	152	292	682	640	M12x100
	71	0.37				52													
032160	71	0.37	S270	B68	41	69	40	65	80	360	420	320	115	60	197	357	716	650	M16x200
	80	0.55				72													
032200	80	0.55	S301	B68	39	70	40	65	80	390	480	350	125	60	225	405	774	730	M16x200
	80	0.75				78													
	90L	1.50				80													
032250	80	0.75	S383	B80	52	103	40	65	100	490	600	440	160	75	260	485	736	920	M20x400
	90S	1.10				106													
	90L	1.50				108													
	100L	2.20				118													
040125	71	0.25	S270	B68	34	61	40	65	80	360	420	320	115	60	177	317	682	650	M16x200
	71	0.37				62													
040160	80	0.55	S301	B68	39	65	40	65	80	360	420	320	115	60	197	357	716	730	M16x200
	71	0.37				69													
	80	0.55				70													
040200	80	0.75	S383	B80	43	78	40	65	100	390	480	350	125	75	225	405	736	920	M20x400
	90S	1.10				84													
	90L	1.50				88													
	100L	2.20				111													
040250	80	0.55	S434	B95	57	113	40	65	125	490	600	440	160	75	260	485	835	920	M20x400
	80	0.75				123													
	90L	1.50				153													
040315	100L	2.20	S434	B95	87	154	40	65	125	540	660	490	170	75	305	555	970	1000	M20x400
	100L	3.00				154													
	112M	4.00				199													
050125	71	0.37	S270	B68	35	63	40	65	100	360	420	320	115	60	197	357	702	650	M16x200
	80	0.55				67													
	80	0.75				80													
050160	80	0.55	S301	B68	44	83	40	65	100	390	480	350	125	60	225	405	736	730	M16x200
	80	0.75				83													
050200	90S	1.10	S383	B80	43	79	40	65	100	390	480	350	125	75	225	425	794	920	M20x400
	80	0.75				82													
	90L	1.50				84													
	100L	2.20				94													
050250	90L	1.50	S434	B95	57	113	40	65	125	490	600	440	160	75	260	485	835	920	M20x400
	100L	2.20				124													
	100L	3.00				157													
050315	112M	4.00	S434	B95	90	202	40	65	125	540	660	490	170	75	305	585	1067	1000	M20x400
	112M	4.00				202													
	132S	5.50				205													

Foundation plan

n = 1450 rpm

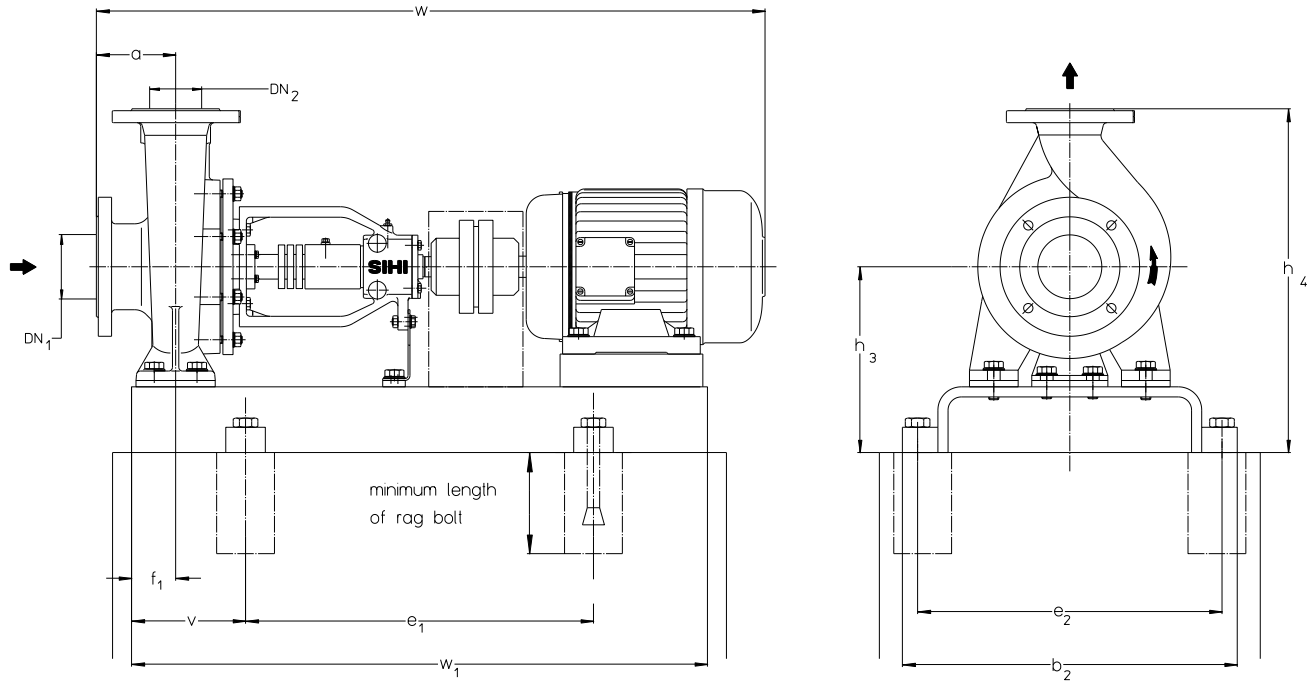
size	motor		base plate No.	coup-ling **	weight		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	w*	w ₁	rag bolt DIN 529												
	size	kW			pump kg	Unit kg																									
065125	80	0,55	S342	B68	39	83	65	80	100	450	540	400	140	60	240	420	736	820	M20x400												
	80	0,75				86											794														
	90S	1,10				89											736														
065160	80	0,75			45	B80											92			105	100	450	540	400	140	60	240	440	440	794	820
	90S	1,10															94													835	
	90L	1,50															105													835	
065200	100L	2,20	S383	B80	48	102			65	80	100	490	600	440	160	75	260	485		794	920	M20x400									
	90L	1,50				104														835											
	100L	2,20				114														856											
	100L	3,00				115														945											
065250	100L	2,20	S434	B80	78	161					65	80	100	540	660	490	170	90		280	530		945	1000	M24x400						
	100L	3,00				162																	966								
	112M	4,00				190	1042																								
	132M	5,50				231	1067																								
065315	132S	5,50	S486	B95	94	234	65	80					125	610	840	550	205	90	325	605	1093		1250	M24x400							
	132M	7,50				250															1185										
	160M	11,00				280															1247										
	160L	15,00				102															761										
080160	80	0,75	S383	B68	51	102			80	100			100	490	600	440	160	75	260	485	819	920	M20x400								
	90S	1,10				105															860										
	90L	1,50				107															929										
	100L	2,20				118															970										
	100L	3,00				127					991																				
080200	90L	1,50		S434	B80	71					137	80									100				100	540	660	490	170	90	300
	100L	2,20	138								970																				
	100L	3,00	183								1093																				
	112M	4,00	192				1067																								
080250	132S	5,50	S486	B95	84	193	80	100			125		610	840	550	205	90	350	665	1093		1250		M24x400							
	100L	3,00				221														1067											
	112M	4,00				224														1093											
	132S	5,50				241			1067																						
080315	132M	7,50	S486	B95	104	244			80	100	125		610	840	550	205	90	350	665	1093		1250	M24x400								
	160M	11,00				260														1185											
	160L	15,00				290														1247											
	100L	2,20				163														971											
100160	100L	3,00	S434	B80	80	164					100	125	100	540	660	490	170	90	280	560	992	1000			M20x400						
	112M	4,00				192															1068										
	132S	5,50				199															1093										
	100L	2,20				162															971										
100200	100L	3,00	S434	B80	79	163	100	125					100	540	660	490	170	90	280	560	992	1000		M20x400							
	112M	4,00				191															1068										
	132S	5,50				194															1094										
	132M	7,50				198															1006										
100250	112M	4,00	S486	B80	89	226			100	125			100	540	660	490	170	90	325	605	1082	1250	M24x400								
	132S	5,50				229															1108										
	132M	7,50				245															1200										
	160M	11,00				262															1262										
100315	160M	11,00	S486	B95	106	292					100	125	140	610	840	550	205	90	350	665	1262	1250			M24x400						
	160L	15,00				304															1324										
	180M	18,50				320															1404										
	180L	22,00				242															1108										
125200	132M	7,50	S486	B95	102	258	125	150					100	540	660	490	170	90	350	665	1200	1250		M24x400							
	160M	11,00				288															1262										
	160L	15,00				249															1108										
125250	132M	7,50	S486	B95	109	265							125	150	100	540	660	490	170	90	705	665				1200	1250	M24x400			
	160M	11,00				295			1262																						
	160L	15,00				278			1128																						
150200	132M	7,50	S605	B95	120	294			150	200					160	730	840	670	190	110	380	780	1220			1120	M24x400				
	160M	11,00				323																	1282								
	160L	15,00				335					1344																				
	180M	18,50				351					1346																				
	180L	22,00				395					1404																				
150250	200L	30,00	S606	B125	134	337					150	200			160	730	840	670	190	110	380	780	1282		1120	M24x400					
	160L	15,00				339	1344																								
	180L	18,50				377	1402																								
	200L	30,00				421	1469																								
	225S	37,00				467																									
225M	45,00	487																													
150315																															
150400																															
150500																															
200250																															
200315																															
200400																															
200500																															

Foundation plans with base plates and fittings on request

* Motor protection type IP 55, dimensions depend on the motor manufacturer. Some sizes are not corresponding to the drawing in small details. Foundation plan for 60 Hz on request.

Foundation plan

n = 2900 rpm

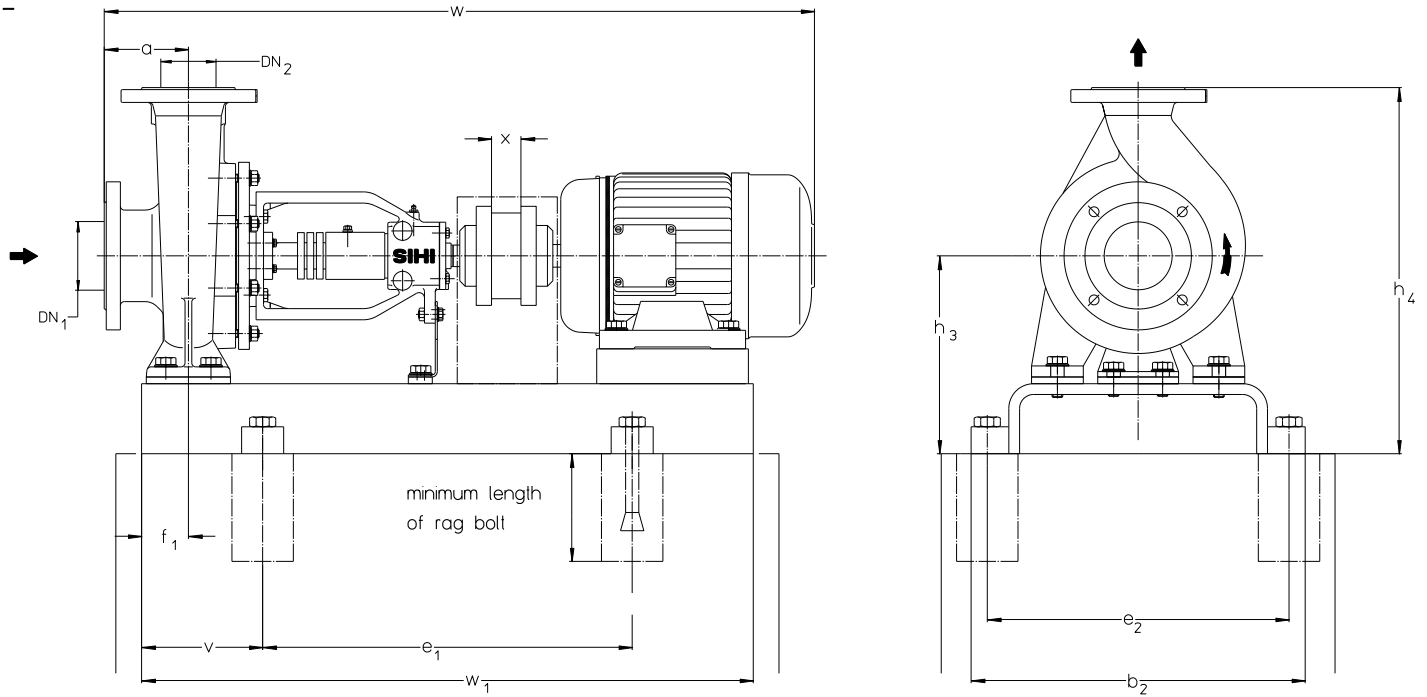


Dimensions in mm.
Dimensional tolerances admissible (base plates) for welded parts according to DIN 8570 B

size	motor		base plate No.	coupling **	weight		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	w*	w ₁	rag bolt DIN 529																
	size	kW			pump kg	Unit kg																													
032125	71	0.55	S008	B68	32	52	32	50	80	297	400	265	120	60	152	292	682	640	M12x100																
	80	0.75				55											716																		
	80	1.10	S241			67											330			480	290	125	177	317	774										
	90S	1.50				69																													
	90L	2.20				72																													
032160	80	1.10	S270	B80	41	72	32	50	80	360	420	320	115	60	197	357	716	730	M16x200																
	90S	1.50	S301			80											390			480	350	125	774												
	90L	2.20				82																													
	100L	3.00				92																													
	112M	4.00	S342			B95											93			450	540	400	140	815	836	820	M20x400								
	132S	5.50															130																		
	132S	7.50	S301			B80											39			40	65	80	390	480	350	125	60	225	405	774	815	836	730	M16x200	
	90L	2.20																																	80
	100L	3.00																																	90
	112M	4.00																																	91
132S	5.50	128																																	
032200	132S	7.50	S342	B95	39	128	40	65	80	450	540	400	140	60	240	420	912	820	M20x400																
	160M	11.00															147																		
	160M	15.00															175																		
	160L	18.50															175																		
	160L	18.50															148																		
032250	132S	7.50	S383	B95	52	167	40	65	100	490	600	440	160	75	260	485	1150	920	M20x400																
	160M	11.00															148																		
	160M	15.00															167																		
	160M	15.00															1050																		
040125	80	1.10	S270	B68	34	65	40	65	80	360	420	320	115	60	177	317	716	650	M16x200																
	90S	1.50	70																																
	90L	2.20	71																																
	100L	3.00	82																																
	100L	3.00	S241			B80											34			330	480	290	125	774											
90S	1.50	78																																	
040160	90L	2.20	S301	B80	39	80	40	65	80	390	480	350	125	60	197	357	776	730	M16x200																
	100L	3.00				80																													
	112M	4.00				90																													
	132S	5.50				91																													
	132S	5.50	S342			B95				39	128	138	40		65	450	540			400	140	60	212	372	912	820	M20x400								
	132S	7.50																							138										
	160M	11.00	S383			B95				39	159	138	40		65	490	600			440	160	60	212	372	895	820	M20x400								
	160M	11.00	159																																
040200	100L	3.00	S301	B80	43	94	40	65	100	390	480	350	125	60	225	405	817	730	M16x200																
	112M	4.00				95																													
	132S	5.50	S342			B95											43			132	132	40	65	450	540	400	140	60	240	420	932	820	M20x400		
	132S	7.50																													158				
	160M	11.00	S383			B95											43			153	153	40	65	490	600	440	160	75	260	485	1050	920	M20x400		
160M	15.00	153																																	
040250	132S	7.50	S434	B95	57	172	40	65	100	540	660	490	170	75	260	485	932	1000	M20x400																
	160M	11.00				216																													
	160M	15.00				172																													
	160L	18.50				216																													

Foundation plan for units with spacer type coupling

n = 1450 rpm



Dimensions in mm.

Dimensional tolerances admissible (base plates) for welded parts according to DIN 8570 B

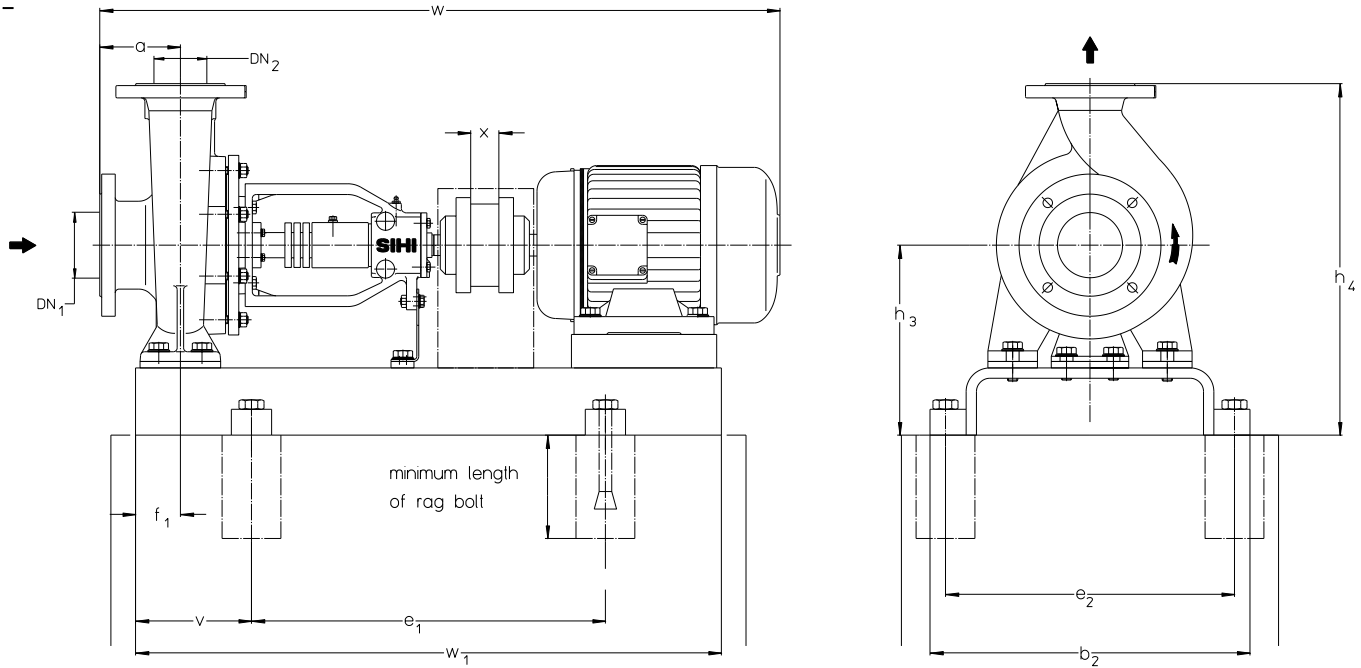
size	motor size	motor kW	base-plate No.	coupling **	weight pump kg	weight unit kg	DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	x	w*	w ₁	rag bolt DIN 529								
032125	71	0.25	S241	H80	32	63	32	50	80	330	480	290	125	60	177	317	100	780	730	M16x200								
	71	0.37	S301			76															350	197	357					
032160	80	0.55	S272		41	80				360	540	320	140		225	405		814	820									
	80	0.75				81															83	872						
032200	90S	1.10			80	0.75				39	105	100	490		600	440		160	75		260	485	834	892	920	M20x400		
	90L	1.50			108	110					120																	
032250	80	0.75	S383		52	108				110	120	100	490		600	440		160	75		260	485	834	892	920	M20x400		
	90S	1.10				108																					110	120
040125	71	0.25			S241	H80				34	65	40	65		80	330		480	290		125	60	177	317	100	780	730	M16x200
	71	0.37			S272						73																	
040160	80	0.55	S301	39	74		390	480	350	125	225			405	814	820												
	80	0.75			78												360	540	320	140	197		357					
040200	90S	1.10		S272	43		81	450	540	400	140			240	420	814	820											
	80	0.55					89											360	540	320	140		197	357				
040250	80	0.75	S342		57		92	490	600	440	160			260	485	834	820											
	90S	1.10					94											450	540	400	140		240	420				
040315	90L	1.50		S383	87		113	125	540	660	490			170	75	305	555											
	100L	2.20					115											490	600	440	160		260	485				
040315	100L	2.20	S434		87	125	171	207	125	540	660	490	170	200	75	305	555	1068	1000	M20x400								
	112M	4.00				172															540	660	490	170	200	305	555	
050125	132S	5.50		S435	H95	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207							
	71	0.37		S301	H80	35	70	50	65	100	390	480	350	125	60	197	357	100	800	730	M16x200							
80	0.55	S272	74	360			540															320	140	197	357			
050160	80	0.75	S342	44		90	450			540	400	140	240	420		834	820											
	80	0.55				93													450	540		400	140	240	420			
050200	90S	1.10		S383		43	89			490	600	440	160	260		485	834		820									
	90L	1.50					92													490		600	440	160	260	485		
050250	100L	2.20	S434			57	94			125	126	125	540	660		490	170		200	75		305	585	933	920	M20x400		
	90L	1.50					115																				490	600
050315	100L	2.20		S435		90	126			210	213	125	540	660		490	170		200	75		305	585	1068	1000	M20x400		
	112M	4.00					126																				540	660
050315	132S	5.50	S435		H95	90	210	213	125	540	660	490	170	200	75	305	585	1068	1000	M20x400								
	132M	7.50					213														540	660	490	170	200	305	585	

Foundation plan for units with spacer type coupling

n = 1450 rpm

size	motor size	motor kW	base plate No.	coupling **	weight pump kg	weight unit kg	DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	x	w*	w ₁	rag bolt DIN 529
065125	80	0,55	S342	H80	39	85	65	80	100	450	540	400	140	60	240	420	100	834	820	M20x400
	80	0,75				88												892		
	90S	1,10				91												834		
065160	80	0,75	S342	H80	45	91	65	80	100	450	540	400	140	60	240	440	100	834	820	M20x400
	90S	1,10				94												892		
	90L	1,50				96												933		
	100L	2,20				106														
065200	90S	1,10	S383	H80	48	104	65	80	100	490	600	440	160	75	260	485	100	932	920	M20x400
	90L	1,50				106												973		
	100L	2,20				116												994		
	100L	3,00				117														
065250	100L	2,20	S434	H80	78	162	65	80	100	540	660	490	170	90	280	530	140	1083	1000	M24x400
	112M	4,00				163												1104		
	132S	5,50				198												1180		
065315	132S	5,50	S486	H95	94	233	65	80	100	610	840	550	205	90	325	605	140	1205	1250	M24x400
	132M	7,50				236												1231		
	160M	11,00		252		1323														
	160L	15,00		282		1385														
080160	80	0,75	S383	H80	51	104	65	80	100	490	600	440	160	75	260	485	140	899	920	M20x400
	90S	1,10				107												957		
	90L	1,50				109												998		
	100L	2,20				119												1067		
	100L	3,00				144												1108		
080200	90L	1,50	S434	H80	71	155	65	80	100	540	660	490	170	90	300	580	140	1129	1000	M24x400
	100L	2,20				156												1205		
	100L	3,00				191												1205		
	112M	4,00				191												1108		
080250	132S	5,50	S435	H95	84	194	65	80	100	610	840	550	205	90	300	580	140	1108	1250	M24x400
	100L	3,00				195												1129		
	112M	4,00				223												1205		
	132M	7,50				226												1231		
080315	132S	5,50	S486	H95	104	243	65	80	100	610	840	550	205	90	350	665	140	1205	1250	M24x400
	132M	7,50				246												1231		
	160M	11,00		262		1323														
	160L	15,00		292		1385														
100160	100L	2,20	S434	H80	80	164	65	80	100	540	660	490	170	90	280	560	140	1108	1000	M20x400
	100L	3,00				165												1129		
	112M	4,00				200												1205		
	132S	5,50				200												1108		
100200	100L	2,20	S434	H80	79	163	65	80	100	540	660	490	170	90	280	560	140	1108	1000	M20x400
	100L	3,00				164												1129		
	112M	4,00				199												1205		
	132S	5,50				202												1231		
100250	132M	7,50	S435	H95	89	200	65	80	100	610	840	550	205	90	325	605	140	1144	1250	M24x400
	132M	7,50				228												1220		
	160M	11,00				231												1246		
	160M	11,00				247												1338		
100315	160M	11,00	S486	H95	106	264	65	80	100	610	840	550	205	90	350	665	140	1400	1250	M24x400
	160L	15,00				294												1462		
	180M	18,50		306		1482														
	180L	22,00		323		1540														
125200	132M	7,50	S486	H95	102	244	65	80	100	610	840	550	205	90	350	665	140	1246	1250	M24x400
	160M	11,00				260												1338		
	160L	15,00		290		1400														
	132M	7,50		251		1246														
125250	160M	11,00	S486	H95	109	267	65	80	100	610	840	550	205	90	350	665	140	1338	1250	M24x400
	160L	15,00				297												1400		
	132M	7,50		279		1266														
	160M	11,00		306		1358														
150200	160L	15,00	S605	H95	120	337	65	80	100	730	840	670	205	110	380	780	140	1423	1400	M24x400
	180M	18,50				349												1482		
	160L	15,00		351		1420														
	180M	18,50		363		1482														
150250	180L	22,00	S606	H110	134	392	65	80	100	730	940	670	230	110	380	780	140	1482	1250	M24x400
	200L	30,00				436												1540		
150315																				
150400																				
150500																				
200250																				
200315																				
200400																				
200500																				
Foundation plans with base plates and fittings on request																				

* Motor protection type IP 55, dimensions depend on the motor manufacturer.
 Some sizes are not corresponding to the drawing in small details.
 Foundation plan for 60 Hz on request



Dimensions in mm.

Dimensional tolerances admissible (base plates) for welded parts according to DIN 8570 B

size	motor		base plate No.	coupling **	weight		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	x	w*	w ₁	rag bolt Din 529												
	size	kW			pump kg	unit kg																										
032125	71	0.55	S241	H80	32	64	32	50	80	330	480	290	125	60	177	317	100	780	730	M16x200												
	80	0.75				72												814														
	80	1.10				75												872														
	90S	1.50				77												872														
	90L	2.20				80												814														
032160	80	1.10	S272	H80	41	83	32	50	80	360	540	320	140	60	197	357	100	814	820	M16x200												
	90S	1.50				85												872														
	90L	2.20				85												872														
	100L	3.00	S303	H95	41	95												390	600		350	160	60	197	357	60	197	357	100	913	920	M16x200
	112M	4.00				96																								934		
	132S	5.50				98																								993		
	132S	7.50				98																								1012		
032200	90L	2.20	S272	H80	39	83	32	50	80	360	540	320	140	60	225	405	100	872	820	M16x200												
	100L	3.00				93												913														
	112M	4.00				94												934														
	132S	5.50	S303	H95	39	127												390	600		350	160	60	225	405	60	225	405	100	1010	920	M16x200
	160M	11.00				158																								1128		
	160M	15.00				158																								1020		
	160L	18.50				S385																								203	1190	
032250	132S	7.50	S383	H95	52	149	32	50	100	490	740	440	200	75	260	485	100	1030	1140	M20x400												
	160M	11.0	S434			184												160	1030		920											
	160M	15.0	S434			184												170	1148		1000											
040125	80	1.10	S272	H80	34	73	40	65	80	360	540	320	140	60	177	317	100	814	820	M16x200												
	90S	1.50				76												872														
	90L	2.20				78												872														
	100L	3.00				88												913														
	90S	1.50				81												872														
040160	90L	2.20	S272	H80	39	83	40	65	80	360	540	320	140	60	197	357	100	814	820	M16x200												
	100L	3.00				83												872														
	112M	4.00				93												913														
	132S	5.50	S303	H95	39	127												390	600		350	160	60	197	357	60	197	357	100	1010	920	M16x200
	132S	7.50				127																								934		
	160M	11.00				S344																								162	1128	
	160M	15.00				S344																								162	1020	
040200	100L	3.00	S342	H80	43	104	40	65	100	450	660	400	180	75	240	420	100	933	1020	M20x400												
	112M	4.00				105												954														
	132S	5.50	S303	H95	43	131												390	600		350	160	60	225	405	75	225	405	100	1030	920	M16x200
	132S	7.50				131																								1030		
	160M	11.00				S344																								160	1148	
040250	160M	15.00	S383	H95	57	154	40	65	100	490	740	440	200	75	260	485	100	1030	920	M20x400												
	160M	11.00				S434												189	1148													
	160L	15.00	S434	189	1000																											
	160L	18.50	S385	219	1210																											

Foundation plan for units with spacer type coupling

n = 2900 rpm

size	motor		base plate No.	coupling **	weight		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	x	w*	w ₁	rag bolt DIN 529			
	size	kW			pump kg	unit kg																	
050125	90S	1,50	S272	H80	35	77	50	65	100	360	540	320	140	60	197	357	100	892	820	M16x200			
	90L	2,20				79												933	920	M12x100			
	100L	3,00	89	954																			
	112M	4,00	90	1030		920												M16x200					
	132S	5,50	123	892																			
050160	90L	2,20	S342	H80	44	95	65	80	100	450	540	400	140	60	240	420	100	892	820	M20x400			
	100L	3,00				105												933	920	M20x400			
	112M	4,00	106	954																			
	132S	5,50	132	1030		920												M16x200					
	132S	7,50	161	892																			
050200	100L	3,00	S342	H80	43	104	65	80	100	450	660	400	180	75	260	485	100	1148	1020	M20x400			
	112M	4,00				105												933	820		M20x400		
	132S	5,50	131	954																			
	132S	7,50	160	1030		920												M16x200					
	160M	11,00	195	1148															1020				
050250	160M	15,00	S344	H95	57	189	65	80	100	540	660	490	170	75	260	485	100	1148	1000	M20x400			
	160L	18,50	S385			219												1210	1140				
	160M	15,00	S434			238												1148	1000				
	160L	18,50	S385			299												1210	1140				
	180M	22,00	S435			H110												1272	1140				
065125	100L	3,00	S342	H80	39	100	65	80	100	450	540	400	140	60	240	440	100	933	820	M20x400			
	112M	4,00				101												954	920		M20x400		
	132S	5,50	136	1030		920												M20x400					
	132S	7,50	142	1148															1020				
	132S	5,50	S383	162		1188												1140					
065160	132S	7,50	S344	H95	45	182	65	80	100	490	600	440	160	75	260	485	100	1250	1140	M20x400			
	132S	5,50				210												1312	1270		M24x400		
	160M	11,00	229	1370		1270												M24x400					
	160M	15,00	252	1360															1270	M24x400			
	160L	18,50	S436	H110		1422												1420					
065200	160M	11,00	S385	H95	48	229	65	80	100	540	740	440	200	75	260	485	100	1480	1420	M24x400			
	160L	18,50				297												1447	1270		M24x400		
	180M	22,00	S435	H110		1510												1400					
	200L	30,00	S436	H95		1095												1000					
	200L	30,00	S436	H110		1213												1140					
065250	160L	18,50	S436	H95	78	266	65	80	100	610	840	490	215	90	300	550	100	1480	1420	M24x400			
	200L	30,00				362												1447	1270		M24x400		
	200L	37,00	S487	H125		1510												1400					
	225M	45,00	S607	H110		1095												1000					
	225M	45,00	S607	H125		1213												1140					
080160	132S	7,50	S434	H95	51	164	65	80	100	540	660	490	170	75	260	485	100	1213	1140	M20x400			
	160M	11,00				165												1275	1270		M24x400		
	160M	15,00	213	1337		1270												M24x400					
	160L	18,50	232	1323															1270	M24x400			
	180M	22,00	S435	H110		1385												1270					
080200	160M	15,00	S436	H95	71	210	65	80	100	540	840	490	215	75	300	550	100	1447	1270	M24x400			
	160L	18,50				244												1505	1420				
	180M	22,00	S436	H110		258												1447	1250				
	200L	30,00	S487	H125		354												1505	1420				
	200L	37,00	S487	H125		284												1447	1250				
080250	180M	22,00	S486	H110	84	284	65	80	100	610	840	550	205	90	300	580	100	1447	1250	M24x400			
	200L	30,00				368												1535	1400				
	200L	37,00	S487	H125		451												1665	1600				
	225M	45,00	S607	H125		651												1385	1270				
	250M	55,00	S608	H140		254												1447	1270				
100160	160L	18,50	S436	H95	80	254	65	80	100	540	840	490	215	90	280	560	100	1385	1270	M20x400			
	180M	22,00				268												1447	1270		M24x400		
	200L	30,00	364	1505		1420																	
	200L	37,00	S487	H125		610												940	550	240	300	580	
	200L	37,00	S487	H125		253												540	840	490	215	280	560
100200	160L	18,50	S436	H95	79	253	65	80	100	610	840	490	215	90	280	560	100	1385	1270	M20x400			
	180M	22,00				267												1447	1270		M24x400		
	200L	30,00	363	1505		1420																	
	200L	37,00	S487	H125		610												940	550	240	300	580	
	225M	45,00	S607	H125		446												730	940	670	230	325	605
100250	200L	30,00	S487	H125	89	373	65	80	100	610	940	550	240	90	325	605	100	1520	1420	M24x400			
	200L	37,00				456												1550	1400				
	225M	45,00	S607	H140		656												730	1060	670	230	350	630
	250M	55,00	S608	H140		909												744	1200	696	300	380	660
	280S	75,00	S609A	H160		959												730	1060	670	270	350	665
125200	280M	90,00	S609A	H160	669	125	150	744	1200	696	300	380	695	1780	1800								
	250M	55,00	S608	H140	922	125	150	730	1060	670	270	350	665	1680	1600								
	280S	75,00	S609A	H160	972	125	150	744	1200	696	300	380	695	1780	1800								

* Motor protection type IP 55, dimensions depend on the motor manufacturer.
Some sizes are not corresponding to the drawing in small details.
Foundation plan for 60 Hz on request

Data regarding pump size

Type + Pump size	Hydraulics + Bearing	Shaft sealing	Material	Casing gasket				
	A- hydraulic A B- hydraulic B D: transnorm size with double volute -A one ball bearing respectively two inclined ball bearing grease lubricated and one liquid flushed sleeve bearing	002 radial shaft seal rings GBC unbalanced standard mechanical seal	1B main parts of sperodial cast 2B main parts of cast steel	2 confined flat gasket of graphite with A4 insertion				
ZTND	032125	alternatively 002 GBC	1B	2				
	032160				AA			
	032160				BA			
	032200				AA			
	032200				BA			
	032250				AA	2B	2	
	040125							
	040160							
	040200							
	040250							
	040315							
	050125							
	050160							
	050200							
	050250							
	050315							
	065125							
	065160							
	065200							
	065250							
	065315							
	080160							
	080200							
	080250							
	080315							
	100160							
	100200							
	100250							
	100315							
	125200							
	125250							
	150200							
	150250							
	150315							
	150400							
	150500							
	200250							
	200315							
	200400							DA
	200500							DA

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