

SIHI SuperNova

ZHND 032160... 150250

Volute pumps for hot water up to 180°C



TECHNICAL DATA

Output:	max. 600 m ³ /h
Delivery head:	max. 95 m
Speed:	max. 3600 rpm
Medium temperature:	max. 180 °C
Casing pressure:	PN 16
Shaft sealing:	standard mechanical seal uncooled
Flange connections:	DIN EN 1092-2 PN 16
Sense of rotation:	clockwise, when looking at the pump from the drive end



APPLICATION

The volute pumps of the series ZHND are part of the overall programme heat transfer and circulation pumps. They are primarily used for circulation of **hot water** in closed pipe and vessel systems.

Therefore their fields of application are

- the energy production,
- the heat transport and
- the industry

and here mainly in systems where hot water as heat carrier is given preference, despite its high system pressure, over oil as heat carrier.

DESIGN

Horizontal, single-stage volute pumps with dimensions and nominal ratings to **EN 733** in back pull out design.

The series **ZHND** has especially designed for the trouble free handling of hot water up to 180 °C and is distinguished by:

- A heat barrier that causes an optimal energy consumption by the pump and reduces the temperature level in the mechanical seal chamber to less than 80 °C without external cooling circuit (see temperature curve on page 3). The service life of the mechanical seal increases considerably.
- A special design that automatically leads accumulation of gas to exhaust. Consequently the dry operation of the mechanical seal can be excluded.
- A programme that comprehends 22 construction sizes and thus guarantees an optimal solution for every operating point.
- The back pull out design, which permits the removal of the complete, bearing unit towards 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.

CONSTRUCTION

Casing pressure

Max 16 bar

Please note:

Technical rules and safety regulations.

Max. casing pressure = inlet pressure + zero head

Max test pressure = 21 bar

Flange location:

Axial suction flange, discharge flange radially upwards.

Flanges:

The flanges comply with DIN EN 1092-2 resp. PN 16.

Flanges drilled according to ANSI (previous ASA) 150 can be supplied.

Hydraulic:

Designation of this construction type: A or B

Bearing:

One grease lubricated antifriction bearing to DIN 625 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 BJ3: Unbalanced standard mechanical seal
Seal face materials SIC/carbon
Elastomer EPDM

Material design:

Item	Components	Material						Execution 1B
		EN material-number	EN material-denomination	DIN material-number	DIN material-denomination	US denomination		
						ASTM Standard	AISI	
10.20 16.10 33.00	volute casing casing cover bearing bracket	EN-JS 1025	EN-GJS-400-18-LT	0.7043	GGG 40.3	A 395		X
21.00	shaft	1.4021	X 20 Cr 13	1.4021	X 20 Cr 13	A 276 Type 420	420	X
23.00 44.10	impeller casing for mechanical seal	EN-JL 1040	EN-GJL 250	0.6025	GG 25	A 278 Class 30		X
43.30	mechanical seal	SIC / carbon						X
52.90 54.00	sleeve bearing	SIC / SIC						X

Casing gasket:

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

Motor power:

Using commercial electric motors, type of construction IM B3.

To determine drive power we recommend the following safety margin:

up to 4 kW: 25%

4 up to 7,5 kW: 20%

above 7,5 kW: 15%

The following speeds are to be observed:

max. speed rpm	size	max. speed rpm	size	max. speed rpm	size
3600	032160 065160	3000	032250 125200	1800	125250
	032200 065200		040250		150200
	040160 080160		050250		150250
	040200 080200		065250		
	050160 100160		080250		
	050200 100200		100250		

The max. speeds result from the permissible peripheral speed of the impeller or from the shaft load admissible at higher temperatures, respectively.

Bearing bracket / pump size:

Bracket 25	032160 032200 032250 040160 040200 040250 050160 050200 050250 065160 065200 080160
Bracket 35	065250 080200 080250 100160 100200 100250 125200 125250 150200 150250

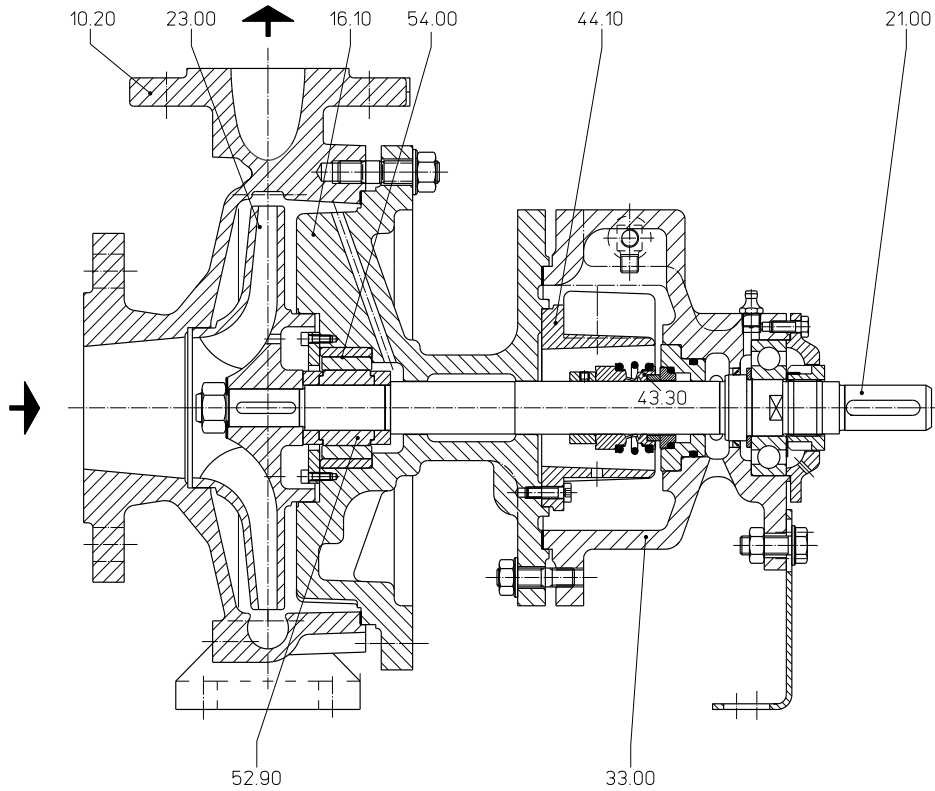
General remarks:

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 DIN EN 22858, t_{max} 230 °C PN 40. Hot water design
- ZDN** volute pumps to DIN EN 22858, t_{max} 207 °C PN 25. Hot water design
- ZLI** volute pumps to EN 733 as INLINE construction, t_{max} 150 °C PN 25. Hot water design.
- ZTN** volute pumps to EN 733, t_{max} 350 °C PN 16. Heat transfer oil design.
- ZTK** volute pumps to EN 733 close coupled design, t_{max} 350 °C PN 16. Heat transfer oil.
- ZTI** volute pumps to EN 733 as INLINE construction, t_{max} 350 °C PN 16. Heat transfer oil.

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

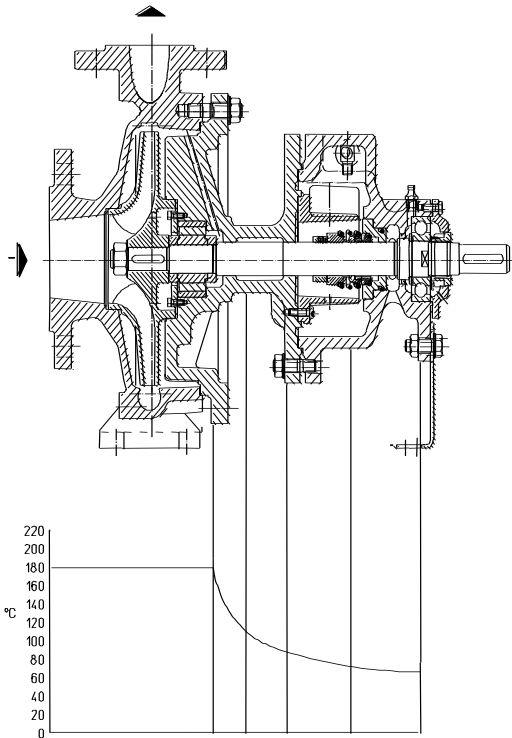
Sectional drawing and nomenclature



10.20 volute casing
16.10 casing cover
21.00 shaft

23.00 impeller
33.00 bearing bracket
43.30 shaft seal

44.10 casing for mechanical seal
52.90, 5400 sleeve bearing



curve of temperature decrease

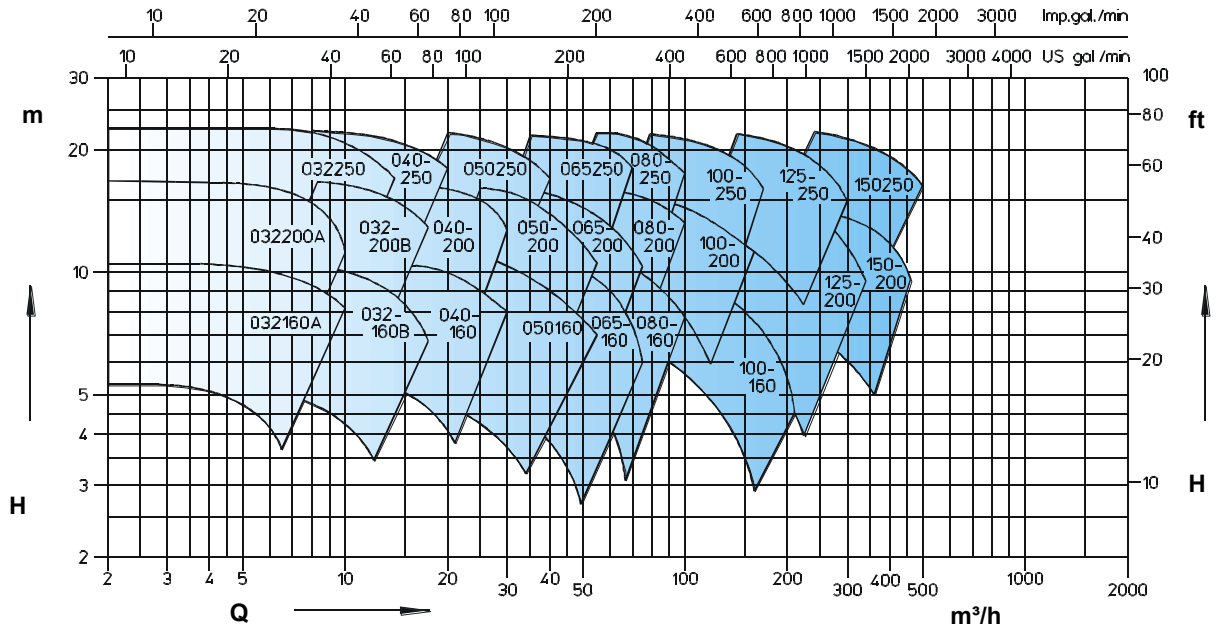
Heat barrier / shaft seal / bearing / feet arrangement

Heat transfer installations have achieved a high level of technical development. Consequently the requirements on the pumps handling heat carriers have increased regarding operating safety, environmental protection, maintenance and operating costs. On the basis of many years experience and latest technical know-how the ZHND fully complies with these requirements. Special attention was paid to the above technical details.

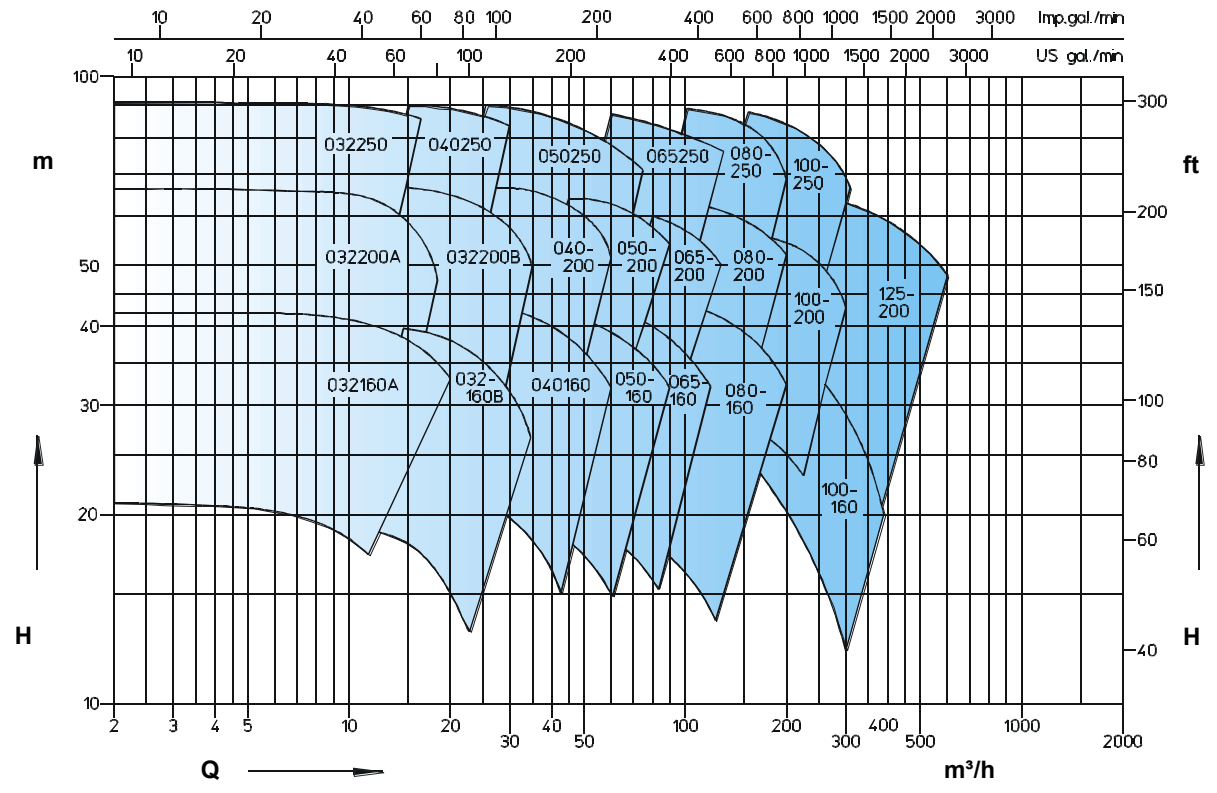
A favourable reduction in temperature is obtained towards the drive side by fitting a heat barrier between the casing cover and the shaft seal housing. See illustration. Product-side heat losses are effectively prevented (energy saving). The temperature reduction makes it possible to use safely an **uncooled** mechanical seal up to a pumping medium temperature of **180 °C**.

Performance graph

50 Hz
n = 1450 rpm

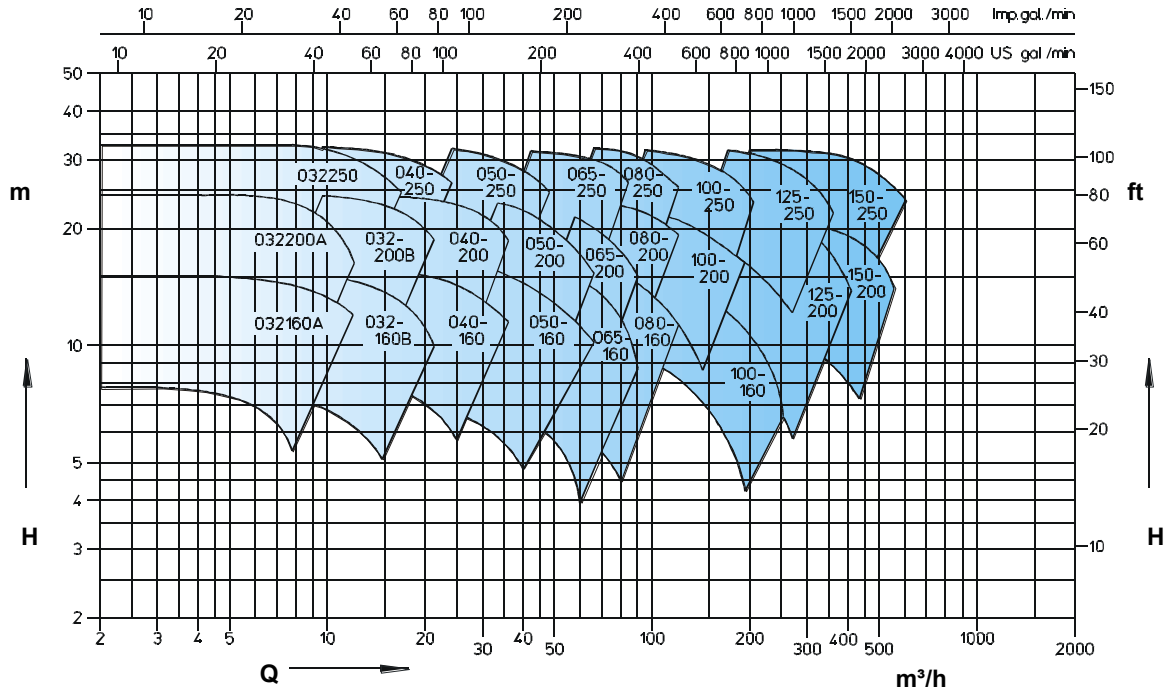


n = 2900 rpm

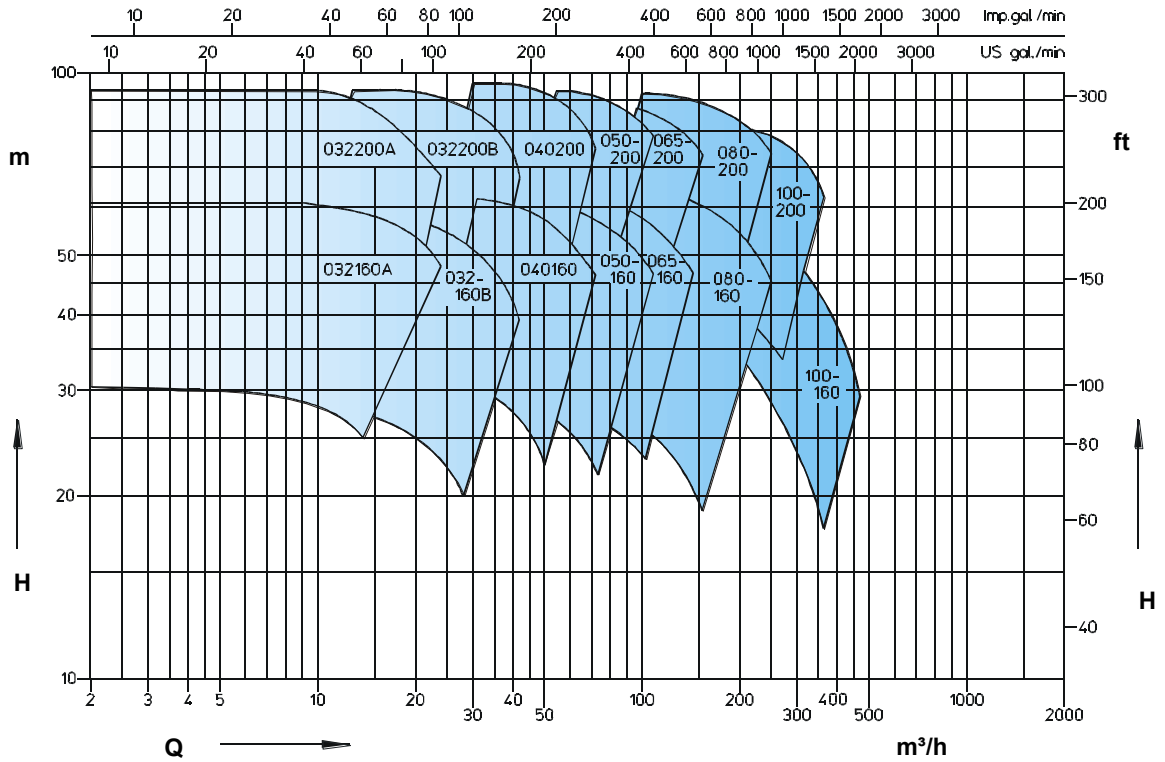


Performance graph

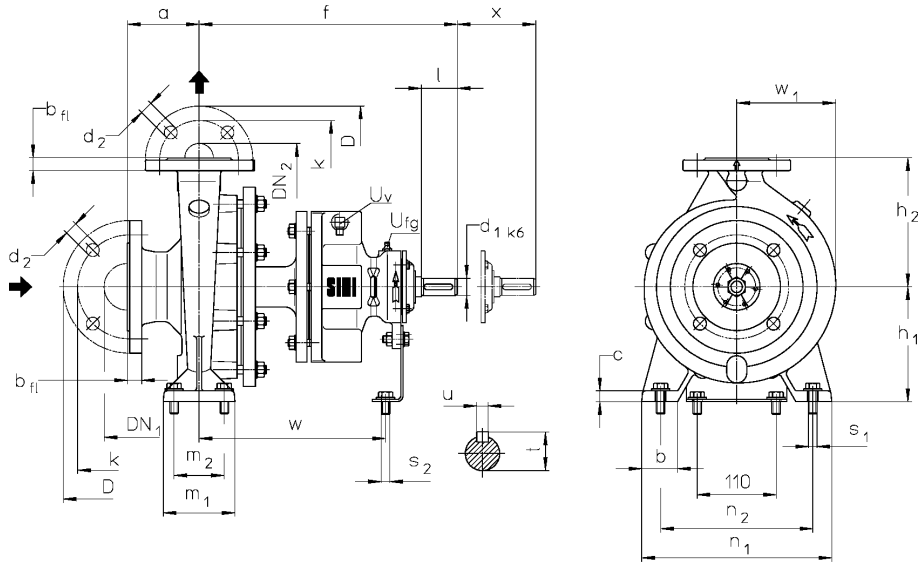
60 Hz
n = 1750 rpm



n = 3500 rpm



Dimension table



U_v = vent connection (G1/8)

U_{fg} = grease filling connection (G1/8)

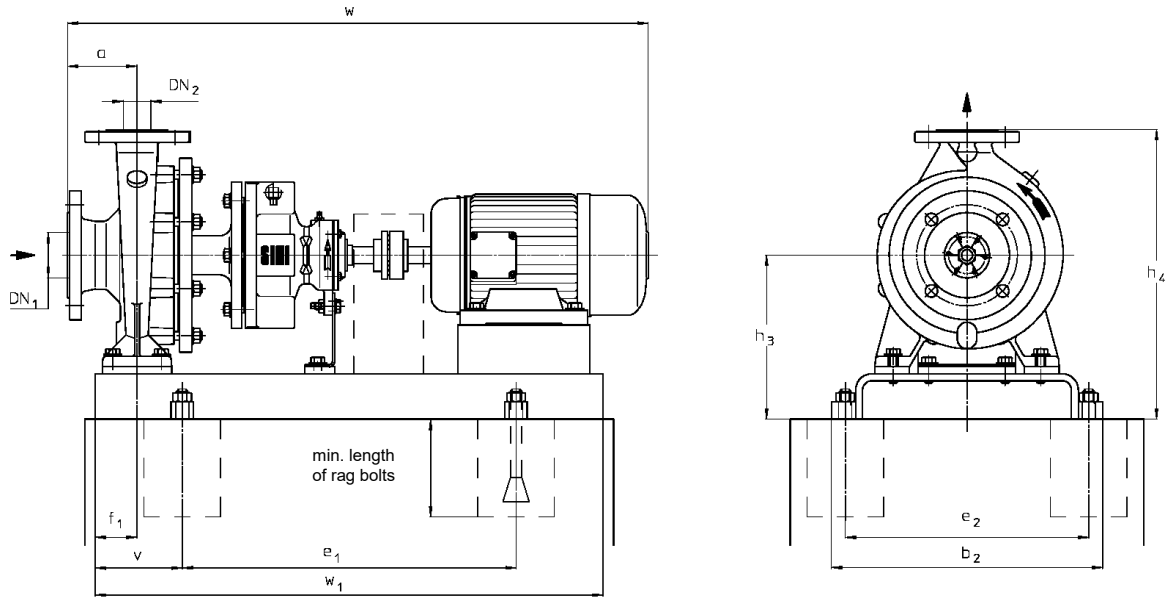
Dimensions in mm

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
032160	32	50	80	50	15	360	132	160	100	70	240	190	M12	M12	267	120	100	24	50	27	8
032200			160	180			127														
032250 ¹⁾			100	65			180	225													
040160	40	65	80	50	15	360	132	160	100	70	240	190	M12	M12	267	128	100	24	50	27	8
040200			160	180			140														
040250			65	65			180	225													
050160	50	65	80	50	15	360	160	180	100	70	265	212	M12	M12	267	130	100	24	50	27	8
050200			200	150																	
050250			180	225			169														
065160	65	80	65	65	15	360	160	200	125	95	280	212	M12	M12	267	147	100	24	50	27	8
065200			180	225			166														
065250			470	200			250	160													
080160	80	100	65	65	15	360	180	225	125	95	320	250	M12	M12	267	165	100	24	50	27	8
080200			250	345			280														
080250			125	400			315														
100160 ¹⁾	100	125	80	80	18	470	200	280	160	120	360	280	M16	M16	340	202	120	32	80	35	10
100200			225	315			400	315													
100250			250	355			400	315													
125200 ¹⁾	125	150	140	140	18	470	250	315	160	120	400	315	M16	M16	340	242	140	32	80	35	10
125250			355	355			400	315													
150200 ¹⁾	150	200	160	100	20	470	280	400	200	150	550	450	M20	M20	340	274	190	32	80	35	10
150250 ¹⁾			200	200			500	400													

¹⁾ Transnorm pump sizes, not included in 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										
DN ₂ /DN ₁	32	40	50	65	80	100	125	150	200	
D	140	150	165	185	200	220	250	285	340	
k	100	110	125	145	160	180	210	240	295	
b _{fl}	18	19	19	19	19	19	19	19	20	
Tolerances	+4,0 -3,0									
d ₂ x number	19x4	19x4	19x4	19x4	19x8	19x8	19x8	23x8	23x12	

Foundation plan



Dimensions in mm

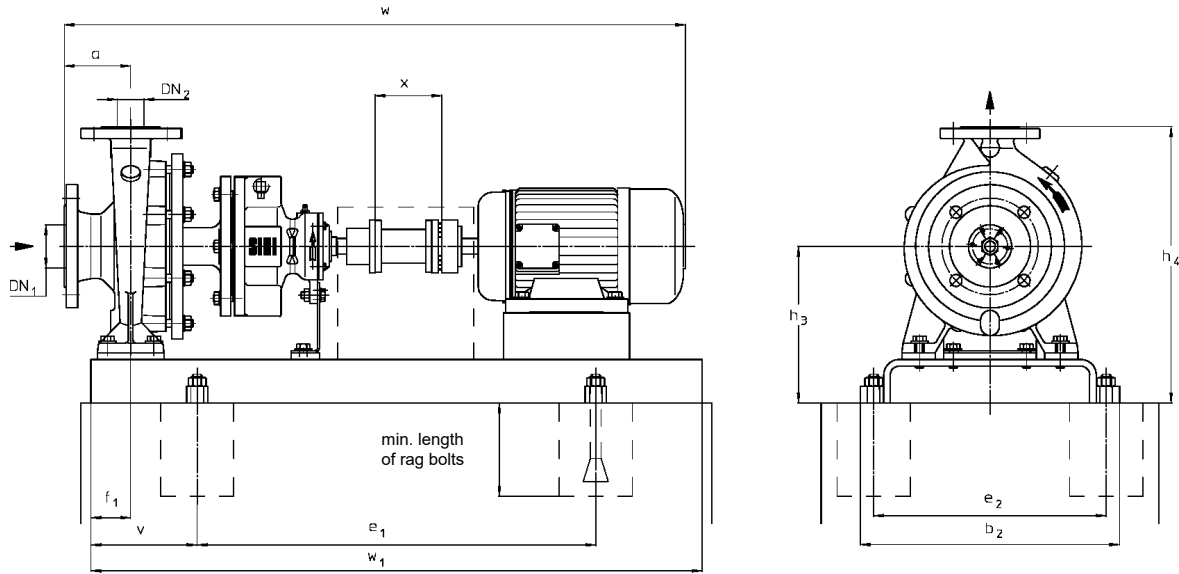
ZHND Size	Motor Speed		Size	Base-plate No.	Coupling	Weight (kg)		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	Rag bolt size		
	1450 kW	2900 kW				Pump	Unit											w*	w ₁	
032160	0,37	-	71	S270	B68	50	78	32	50	80	360	420	320	115	60	197	357	682	650	M16x200
	0,55	1,10	80															716		
	-	1,50	90S	774	730															
	-	2,20	90L	774																
	-	3,00	100L	815	820															
	-	4,00	112M	836																
	-	5,50	132S	912	M20x400															
-	7,50	132S	912																	
032200	0,55	-	80	S270	B68	55	86	32	50	80	360	420	320	115	60	225	405	716	650	M16x200
	0,75	-	80															716		
	1,10	1,50	90S	93	730															
	1,50	2,20	90L	96																
	-	3,00	100L	106	820															
	-	4,00	112M	107																
	-	5,50	132S	144	M20x400															
	-	7,50	132S	144																
	-	11,00	160M	163	920															
	-	15,00	160M	163																
	-	18,50	160L	191	1020															
032250	0,75	-	80	S383	B68	56	107	40	65	100	490	600	440	160	75	260	485	736	920	M20x400
	1,10	-	90S															794		
	1,50	-	90L	112	730															
	2,20	-	100L	123																
	-	7,50	132S	152	820															
	-	11,00	160M	171																
	-	15,00	160M	171	1050															
040160	0,37	-	71	S270	B68	44	72	40	65	80	360	420	320	115	60	197	357	682	650	M16x200
	0,55	-	80															716		
	0,75	1,10	80	75	730															
	1,10	1,50	90S	83																
	-	2,20	90L	85	820															
	-	3,00	100L	95																
	-	4,00	112M	97	M20x400															
	-	5,50	132S	133																
	-	7,50	132S	143	920															
	-	11,00	160M	164														1030		
	040200	0,55	-	80	S301													B68	46	
0,75		-	80	736																
1,10		-	90S	84	730															
1,50		-	90L	86																
-		3,00	100L	97	820															
-		4,00	112M	98																
-		5,50	132S	135	M20x400															
-		7,50	132S	135																
-		11,00	160M	161	920															
-		15,00	160M	161		1050														

ZHND Size	Motor Speed		Size	Base-plate No.	Coup-pling	Weight (kg)		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	w*	w ₁	Rag bolt size
	1450	2900				Pump	Unit													
040250	1,10	-	90S	S383	B68	58	112	40			490	600	440	160	75	260	485	794	920	M20x400
	1,50	-	90L		B80		114											835		
	2,20	-	100L				125											835		
	3,00	-	100L				125											835		
	-	7,50	132S	S434	B95	154	1050													
	-	11,00	160M			173	1050													
	-	15,00	160M			173	1050													
	-	18,50	160L			217	1112													
						540	660	490	170	1000										
050160	0,55	-	80	S301	B68	48	84				390	480	350	125		225	405	736	730	M16x200
	0,75	-	80				84											736		
	1,10	-	90S				87											794		
	-	2,20	90L				89											794		
	-	3,00	100L	S342	B80	99	856													
	-	4,00	112M			100	932													
	-	5,50	132S			137	932													
	-	7,50	132S			137	1050													
-	11,00	160M	S383	B95	163	1050														
						450	540	400	140	240	420	820								
						490	600	440	160											
050200	0,75	-	80	S301	B68	46	82	50			390	480	350	125		225	425	736	730	M16x200
	1,10	-	90S				85											794		
	1,50	-	90L				87											794		
	2,20	3,00	100L				98											835		
	-	4,00	112M	S342	B80	98	856													
	-	5,50	132S			135	932													
	-	7,50	132S			135	932													
	-	11,00	160M			161	1050													
-	15,00	160M	S383	B95	161	1050														
-	18,50	160L	S344		166	1112														
						450	600	440	160	240	440	820								
						490	600	440	160											
050250	1,50	-	90L	S383	B68	58	114				490	600	440	160		260	485	794	920	M20x400
	2,20	-	100L				125											835		
	3,00	-	100L				125											835		
	4,00	-	112M				126											856		
	-	11,00	160M	S434	B95	173	1050													
	-	15,00	160M			173	1050													
	-	18,50	160L			217	1112													
	-	22,00	180M			230	1174													
-	30,00	200L	S435	B125	297	1232														
						540	660	490	170	280	505	1140								
							740	200												
065160	0,75	-	80	S342	B68	54	98				450	540	400	140		240	440	736	820	M20x400
	1,10	-	90S				101											794		
	1,50	-	90L				103											794		
	2,20	-	100L				113											835		
	-	5,50	132S	S383	B95	143	932													
	-	7,50	132S			143	932													
	-	11,00	160M			169	1050													
	-	15,00	160M			169	1050													
						490	600	440	160	240	440	820								
						490	600	440	160											
065200	1,10	-	90S	S383	B68	63	117	65	80		490	600	440	160		260	485	794	920	M20x400
	1,50	-	90L				119											794		
	2,20	-	100L				130											835		
	3,00	-	100L				130											835		
	4,00	-	112M	S434	B80	131	856													
	-	11,00	160M			178	1050													
	-	15,00	160M			178	1050													
	-	18,50	160L			222	1112													
-	22,00	180M		235	1174															
-	30,00	200L	S435	B125	302	1232														
						490	600	440	160	75	260	485	856	1050	1050	1050	1050	1050	1050	
						490	600	440	160											
065250	2,20	-	100L	S434	B80	90	173				540	660	490	170		280	530	945	1000	M24x400
	3,00	-	100L				173											945		
	4,00	-	112M				174											945		
	5,50	-	132S				202											1042		
	-	18,50	160L	S435	B95	256	1222													
	-	22,00	180M			269	1284													
	-	30,00	200L			336	1342													
	-	37,00	200L			336	1342													
-	45,00	225M	S486	B125	413	1342														
						540	660	490	170	90	280	530	1222	1284	1342	1342	1342	1342	1342	
						610	840	215												
							740	200												
080160	0,75	-	80	S383	B68	55	106				490	600	440	160		260	485	761	920	M20x400
	1,10	-	90S				109											819		
	1,50	-	90L				111											819		
	2,20	-	100L				122											860		
	3,00	-	100L	S434	B95	122	860													
	-	7,50	132S			151	957													
	-	11,00	160M			170	1075													
	-	15,00	160M			170	1075													
-	18,50	160L	S434	B110	214	1137														
-	22,00	180M			227	1199														
							540	660	490	170	75	260	485	860	860	860	860	860	860	860
							540	660	490	170										
080200	1,50	-	90L	S383	B80	91	148				490	600	440	160		260	510	929	920	M20x400
	2,20	-	100L				158											970		
	3,00	-	100L				158											970		
	4,00	-	112M				159											991		
	5,50	-	132S	S434	B95	203	1067													
	-	15,00	160M			222	1185													
	-	18,50	160L			257	1247													
	-	22,00	180M			270	1309													
-	30,00	200L	S435	B110	337	1367														
-	37,00	200L			337	1367														
							540	660	490	170	200	280	530	1367	1367	1367	1367	1367	1367	
							540	740	200											
							840	215												

ZHND Size	Motor Speed		Size	Base-plate No.	Coupling	Weight (kg)		DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	w*	w ₁	Rag bolt size									
	1450	2900				kW	Pump														Unit								
080250	3,00	-	100L	S486	B80	97	80	100			610	840	550	205		300	580	205	1250	M24x400									
	4,00	-	112M															206											
	5,50	-	132S															235											
	7,50	-	132M															238											
	-	22,00	180M		295																								
	-	30,00	200L		355																								
	-	37,00	200L		355																								
	-	45,00	225M		420																								
-	55,00	250M	S607	B140	642	730	940	670	230	325	605	1397	1400																
100160	2,20	-	100L	S434	B80	94					540	660	170		280	560	177	1000	M20x400										
	3,00	-	100L														177												
	4,00	-	112M														178												
	5,50	-	132S														206												
	-	18,50	160L		S435												B110			260	740	200	124						
	-	22,00	180M		273												840			215	1309	1140							
	-	30,00	200L		S436												B125			340	1367	1270							
	-	37,00	200L		340												1367			1367	1270								
2,20	-	100L	S434	B80	92	100	125				540	660	170		280	560	175	1000	M20x400										
3,00	-	100L															175												
4,00	-	112M															176												
5,50	-	132S															204												
7,50	-	132M		207													740			200	1067	1140							
-	18,50	160L		S435													B110			258	1247	1270							
-	22,00	180M		271													1309			1367	1270								
-	30,00	200L		S436													B125			338	1367	1270							
-	37,00	200L	338	1367	1367	1270																							
-	45,00	225M	S486		415	1397	1006																						
100250	4,00	-	112M	S486	B80	103					610	840	550	205		325	605	212	1250	M24x400									
	5,50	-	132S															241											
	7,50	-	132M															244											
	11,00	-	160M															259											
	-	30,00	200L		S607													B140			361	730	940	670	230	350	630	1542	1400
	-	37,00	200L		361													744			1200	696	300	380	660	1642	1800		
	-	45,00	225M		426													1382			1412	1250							
	-	55,00	250M		S609A													B160			648	1108	1200	1262	1542	1400			
-	75,00	280S	917	1382	1412	1250																							
125200	7,50	-	132M	S486	B95	117	125	150	140		610	840	550	205		350	665	258	1250	M24x400									
	11,00	-	160M															274											
	15,00	-	160L															303											
	-	55,00	250M		S607													B140			662	730	940	670	230	350	665	1542	1400
	-	75,00	280S		S609A													B160			931	744	1200	696	300	380	695	1642	1800
7,50	-	132M	S486	B95	124						610	840	550	205		350	705	265	1250	M24x400									
11,00	-	160M																281											
15,00	-	160L																310											
150200	7,50	-	132M	S605	B95	128	150	200	160		730	740	670	190		380	780	286	1120	M24x400									
	11,00	-	160M															302											
	15,00	-	160L															332											
	18,50	-	180M															344											
150250	15,00	-	160L	S606	B125	147					840		205					351	1250	M24x400									
	18,50	-	180M															353											
	22,00	-	180L															390											
	30,00	-	200L															434											

* 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 60Hz on request.

Foundation plan for units with spacer coupling



Dimensions in mm

ZHND Size	Motor Speed		Size	Base plate No.	Coupling	Weight (kg) Pump unit	DN ₂	DN ₁	a	b ₂	e ₁	e ₂	v	f ₁	h ₃	h ₄	x	w*	w ₁	Rag bolt size										
	1450 KW	2900 KW																												
032160	0,37	-	71	S301	H80	50	32	50	80	390	480	350	125	197	357	107	780	730	820	M16x200										
	0,55	1,10	80	S272																	89	360	540	320	140	107	814	730		
	-	1,50	90S																		92								1010	920
	-	2,20	90L																		94									
	-	3,00	100L																		104									
	-	4,00	112M	S303																	105	390	600	350	160	107	1010	920		
	-	5,50	132S																		107									
-	7,50	132S	107																											
032200	0,55	-	80	S272	H80	55	32	50	80	360	540	320	140	60	225	405	110	814	730	820	M16x200									
	0,75	-	80																			94								
	1,10	1,50	90S																			97								
	1,50	2,20	90L																			99								
	-	3,00	100L																			109								
	-	4,00	112M																			110								
	-	5,50	132S																			143								
	-	7,50	132S																			143								
	-	11,00	160M																			174								
	-	15,00	160M																			174								
032250	0,75	-	80	S383	H80	56	40	65	100	490	600	440	160	75	260	485	100	834	730	920	M20x400									
	1,10	-	90S																			112								
	1,50	-	90L																			114								
	2,20	-	100L																			124								
	-	7,50	132S																			153								
	-	11,00	160M																			188								
	-	15,00	160M																			188								
040160	0,37	-	71	S301	H80	44	40	65	80	390	480	350	125	60	240	400	107	780	730	820	M16x200									
	0,55	-	80	83																										
	0,75	1,10	80	83																										
	1,10	1,50	90S	86																										
	-	2,20	90L	88																										
	-	3,00	100L	98																										
	-	4,00	112M	99																										
	-	5,50	132S	132																										
	-	7,50	132S	132																										
	-	11,00	160M	167																										
040200	0,55	-	80	S342	H80	46	40	65	100	450	540	400	140	240	420	107	834	730	820	M20x400										
	0,75	-	80																		92									
	1,10	-	90S																		95									
	1,50	-	90L																		97									
	-	3,00	100L																		107									
	-	4,00	112M																		108									
	-	5,50	132S																		134									
	-	7,50	132S																		134									
	-	11,00	160M																		163									
	-	15,00	160M																		163									

ZHND Size	Motor Speed		Size	Base plate No.	Coup-ling	Weight (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 size
	1450	2900				Pump	unit														
040250	1,10	-	90S	S383	H80	58	40	40	65	100	490	600	440	160	75	260	485	100	892	920	M20x400
	1,50	-	90L																892		
	2,20	-	100L																933		
	3,00	-	100L																933		
	-	7,50	132S	1030																	
	-	11,00	160M	1148																	
	-	15,00	160M	1148																	
-	18,50	160L	S385	H95	190	220	220	490	740	440	200	1210	1140								
050160	0,55	-	80	S342	H80	48	48	65	50	100	450	540	400	140	60	240	420	100	834	820	M16x200
	0,75	-	80																834		
	1,10	-	90S																892		
	-	2,20	90L																892		
	-	3,00	100L	933																	
	-	4,00	112M	954																	
	-	5,50	132S	S303	H95	136	136	390	600	350	160	225	405	1030	920						
-	7,50	132S	S344	H95	165	165	-	660	-	180	-	420	1030	1020							
-	11,00	160M	S344	H95	165	165	450	540	400	140	240	440	1148	1020							
050200	0,75	-	80	S342	H80	46	46	65	50	100	450	540	400	140	60	240	440	100	834	820	M16x200
	1,10	-	90S																892		
	1,50	-	90L																892		
	2,20	3,00	100L																107		
	-	4,00	112M	108																	
	-	5,50	132S	S303	H95	134	134	390	600	350	160	225	425	1030	920						
	-	7,50	132S	S344	H95	163	163	450	660	400	180	240	440	1148	1020						
-	15,00	160M	S385	H95	163	163	-	740	-	200	-	440	1148	1020							
-	18,50	160L	S385	H95	198	198	490	600	440	160	260	485	1210	1140							
050250	1,50	-	90L	S383	H80	58	58	65	80	100	490	600	440	160	75	260	485	100	892	920	M20x400
	2,20	-	100L																933		
	3,00	-	100L																933		
	4,00	-	112M																954		
	-	11,00	160M	S434	H95	190	190	540	660	490	170	280	505	1148	1000						
	-	15,00	160M	S434	H95	190	190	490	740	440	200	280	505	1148	1000						
	-	18,50	160L	S385	H95	220	220	540	740	490	200	280	505	1210	1140						
-	22,00	180M	S435	H110	239	239	-	-	-	-	-	-	1272	1140							
-	30,00	200L	S435	H125	300	300	-	-	-	-	-	-	1330	1140							
065160	0,75	-	80	S342	H80	54	54	65	80	100	450	540	400	140	60	240	440	100	834	820	M20x400
	1,10	-	90S																892		
	1,50	-	90L																892		
	2,20	-	100L																933		
	-	5,50	132S	S383	H95	151	151	490	600	440	160	260	485	1030	920						
	-	7,50	132S	S383	H95	151	151	490	600	440	160	260	485	1030	920						
	-	11,00	160M	S344	H95	171	171	450	660	400	180	240	440	1148	1020						
-	15,00	160M	S344	H95	171	171	450	660	400	180	240	440	1148	1020							
065200	1,10	-	90S	S383	H80	63	63	65	80	100	490	600	440	160	75	260	485	100	932	920	M20x400
	1,50	-	90L																932		
	2,20	-	100L																973		
	3,00	-	100L																973		
	4,00	-	112M	131																	
	-	11,00	160M	S383	H95	197	197	490	600	440	160	260	485	994	920						
	-	15,00	160M	S385	H95	197	197	490	600	440	160	260	485	1188	1140						
-	18,50	160L	S385	H95	225	225	540	740	490	200	280	530	1188	1140							
-	22,00	180M	S435	H110	244	244	610	940	550	240	300	550	1250	1420							
-	30,00	200L	S436	H125	312	312	730	940	550	230	325	575	1312	1400							
065250	2,20	-	100L	S434	H80	90	90	65	80	100	540	660	490	170	90	280	530	100	1083	1000	M24x400
	3,00	-	100L																1083		
	4,00	-	112M																1175		
	5,50	-	132S																1210		
	-	18,50	160L	S435	H95	264	264	540	660	490	170	280	530	1104	1140						
	-	22,00	180M	S436	H110	278	278	610	940	550	240	300	550	1180	1140						
	-	30,00	200L	S436	H110	278	278	610	940	550	240	300	550	1360	1270						
-	37,00	200L	S487	H125	374	374	730	940	550	230	325	575	1422	1420							
-	45,00	225M	S607	H125	457	457	730	940	550	230	325	575	1480	1400							
080160	0,75	-	80	S383	H80	55	55	80	100	125	490	600	440	160	75	260	485	100	899	920	M20x400
	1,10	-	90S																911		
	1,50	-	90L																913		
	2,20	-	100L																923		
	3,00	-	100L	923																	
	-	7,50	132S	S434	H95	168	168	540	660	490	170	280	530	998	1000						
	-	11,00	160M	S434	H95	189	189	540	660	490	170	280	530	998	1000						
-	15,00	160M	S385	H95	189	189	490	740	440	200	260	485	1213	1140							
-	18,50	160L	S385	H95	217	217	490	740	440	200	260	485	1213	1140							
-	22,00	180M	S435	H110	236	236	610	940	550	240	300	550	1275	1420							
080200	1,50	-	90L	S434	H80	91	91	65	80	100	540	660	490	170	90	280	530	100	1067	1000	M20x400
	2,20	-	100L																1108		
	3,00	-	100L																1108		
	4,00	-	112M																1176		
	5,50	-	132S	S435	H95	211	211	540	660	490	170	280	530	1108	1140						
	-	15,00	160M	S435	H95	230	230	540	660	490	170	280	530	1108	1140						
	-	18,50	160L	S436	H110	264	264	610	940	550	240	300	550	1129	1140						
-	22,00	180M	S436	H110	278	278	610	940	550	240	300	550	1205	1270							
-	30,00	200L	S487	H125	374	374	610	940	550	240	300	550	1385	1270							
-	37,00	200L	S487	H125	374	374	610	940	550	240	300	550	1447	1420							

ZHND Size	Motor Speed		Size	Base plate No.	Coupling	Weight (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 size										
	1450	1900				Pump	unit																								
080250	3,00	-	100L	S486	H80	97	207	80	100	610	840	550	205	300	580	325	605	1108	1250	M24x400											
	4,00	-	112M		H95																208										
	5,50	-	132S		H110																236										
	7,50	-	132M	S487	H125																239	240									
	-	22,00	180M																		297										
	-	30,00	200L																		381										
	-	37,00	200L	S607	H140																381	230									
	-	45,00	225M																		467										
	-	55,00	250M																		664										
-	-	-	S608		730	1060	670	270	350	630	1505	1400	1535	1400																	
-	-	-									1665	1600																			
100160	2,20	-	100L	S434	H80	94	178	125	125	540	660	490	170	280	560	300	580	1108	1000	M20x400											
	3,00	-	100L		H95																178										
	4,00	-	112M		H110																179										
	5,50	-	132S	S436	H125																214	200									
	-	18,50	160L																		268										
	-	22,00	180M																		282										
	-	30,00	200L	S487	H125																378	215									
	-	37,00	200L																		378										
	-	-	-																					610	940	550	240	300	580	1505	1420
-	-	-																													
100200	2,20	-	100L	S434	H80	92	176	100	125	540	660	490	170	280	560	300	580	1108	1000	M20x400											
	3,00	-	100L		H95																176										
	4,00	-	112M		H110																177										
	5,50	-	132S	S436	H125																212	200									
	7,50	-	132M																		215										
	-	18,50	160L																		266										
	-	22,00	180M	S487	H125																280	215									
	-	30,00	200L																		376										
	-	37,00	200L																		376										
-	45,00	225M	S607		459	610	940	550	240	300	580	1505	1420	1505	1420																
-	-	-																													
100250	4,00	-	112M	S486	H80	103	214	140	140	610	840	550	205	325	605	350	630	1144	1250	M24x400											
	5,50	-	132S		H95																242										
	7,50	-	132M		H110																245										
	11,00	-	160M	S487	H125																261	240									
	-	30,00	200L																		387										
	-	37,00	200L																		387										
	-	45,00	225M	S607																	470	730	1060	670	230	350	630	1550	1400	1550	1400
	-	55,00	250M	S608																	670	744	1200	696	300	380	660	1680	1600	1780	1800
	-	75,00	280S	S609A																	923										
125200	7,50	-	132M	S486	H95	117	259	125	150	610	840	550	205	350	665	380	695	1246	1250	M24x400											
	11,00	-	160M		H110																275										
	15,00	-	160L		H140																305										
	-	55,00	250M	S608	684																										
	-	75,00	280S	S609A	937																										
125250	7,50	-	132M	S486	H95	124	266	125	150	610	840	550	205	350	705	380	695	1246	1250	M24x400											
	11,00	-	160M		H110																282										
	15,00	-	160L		H140																312										
150200	7,50	-	132M	S605	H95	128	287	150	200	160	730	840	670	205	110	380	780	1266	1120	M24x400											
	11,00	-	160M																		314										
	15,00	-	160L																		345										
	18,50	-	180M	S606																	357										
150250	15,00	-	160L	S607	H110	147	411	150	200	160	730	840	670	205	110	380	780	1423	1250	M24x400											
	18,50	-	180M																			436									
	22,00	-	180L																			462									
30,00	-	200L				564					940		230				1484	1400													
																		1540													

* 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 60Hz on request.

Data regarding pump size

Type + Pump size	Hydraulic + Bearing	Shaft sealing	Material desing	Casing gasket	
	A hydraulic 1 B hydraulic 2 A grease lubricated reinforced antifriction bearing and one internal liquid flushed sleeve bearing	BJ3 unbalanced standard mechanical seal	1B main parts of spheroidal cast iron	2 confined flat gasket of graphite with A4 insertion	
ZHND	032160	BJ3	1B	2	
	032160				
	032200				
	032200				
	032250				
	040160				
	040200				
	040250				
	050160				
	050200				
	050250				
	065160				
	065200				
	065250				
	080160				AA
	080200				
	080250				
	100160				
	100200				
	100250				
125200					
125250					
150200					
150250					

Any changes in the interest of the technical development are reserved.

Supplied by
Prime Fluid Management
0800 482 747 | info@primefluid.co.nz | primefluid.co.nz

Sterling SIHI (Spain), S.L.
Vereda de los Zapateros s/n, Pozuelo de Alarcón 28223 Madrid, Spain.
Telephone +34 91 709 1310 Telefax +34 91 715 9700
www.sihi.com