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Tel : 064/320373 Fax : 064/320373

Aswan :
Elsadat Road – Khalid Ben Waleed District
Building No 4
Tel : 079/324350 Fax : 079/324350

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أبراج أجاخان- ١٣٧٣ كورنيش النيل- شبرا المظلات- القاهرة
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العاشر من رمضان- المنطقة الصناعية ب٢
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٢ شارع المدارس "برج العمدة"
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فرع القناة وسيناء بالإسماعيلية:
٧ شارع ٢٣ من شارع صبري مبدى- أمام عمارات الشرطة
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فرع أسوان:
طريق السادات حي خالد بن الوليد-عمارة ٤
ت : ٠٩٧/٣٢٤٣٥٠ فاكس : ٠٩٧/٣٢٤٣٥٠

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■ Centrifugal Horizontal Volute Casing Pumps ■ Series NT According to DIN EN 733

With additional sizes technical requirements
according to DIN ISO 9905



Products..



ALLWEILER - FARID PUMPS

Produces Various Pump Types - with production capacity of 15000 pumps yearly – for different applications:: Centrifugal pumps for irrigation, industry, agriculture, housing and drinking water. :: Multi-stage pumps, high pressure and self - priming suitable for boilers, painting units and power plants :: pumps driven by diesel engines tractors, or electric motors:: chemicals pumps from stainless steel, which are being used for acids and alkalies ::special pumps suitable for petroleum refineries



For All Applications.

Fire fighting:: steam boilers:: power plants:: irrigation systems:: food and pharmaceutical: pumping system for housing ::general building and tourism villages :: chemicals & petroleum & mining , cooling &Air conditioning cycles ::drinking water stations and water treatment, sanitary drainage, mud & industrial waste water:: pumping station for irrigation and agricultural draining.





Design and series construction



Horizontal single-stage, single-flow volute casing centrifugal pumps with axial inlet.

Series construction on the building-block principle; shaft bearing in a bearing bracket which can be provided with a supporting foot (serial equipment with pumps with bearing bracket size 585 and 700 with all other sizes available on request only). Volute casing with cast-on feet.

The additional sizes NT 2/32-200, 2/40-250 and 2/50-250 are of the two-stage type, however, their outer dimensions correspond to the respective single-stage sizes according to DIN 24255. by means of the two-stage design, relatively small delivery flows at high delivery heads, good efficiencies and low NPSH values are reached.

Abbreviation	NT	100	400	02	420	U1B	W1
Series							
Delivery branch ⁽¹⁾							
Impeller Rated diameter							
Hydraulics							
Impeller actual diameter							
Shaft sealing							
Material design							

(1) With the two-stage additional pump sizes, the number of the stages is placed with a slash in front of the delivery branch nominal width, e.g. NT 2/32-200/01
This abbreviation is entered on the nameplate. With the two-stage additional pump sizes, the actual impeller diameter relates to the second stage.

Capacity

With the sizes according to DIN EN 733, the pump capacity exceeds the required rated power considerably. By additional sizes, the performance range acc. to DIN EN is increased.

Performance data

Flow	Q	up to	2300 m ³ /h
Delivery head	H	up to	140 m
Temperature of the liquid pumped	t	up to	160 °C
Inlet pressure	ps ⁽¹⁾		
Outer pressure	pd	up to	10/16 bar ⁽²⁾

(1) inlet pressure plus maximum delivery head must not exceed the outlet pressure.

(2) dependent on material

Branch positions and flanges

Suction branch:	axial
Delivery branch:	radially upwards
Flanges:	up to DN 150 acc. To EN 1092-2 PN 16 DN 200 and above acc. to EN 1092-2PN 10

Series NT

Shaft coupling and safety guarding

Shaft coupling and safety guarding

Safety guarding according to DIN EN 294 is supplied as soon as the scope of supply includes pump, base plate and shaft coupling (acc. to DIN 740 with or without spacer element). The safety standards acc. to DIN EN 809 are met.

Bearing and lubricating

by two grooved ball bearings acc. To DIN 625, grease-lubricated for the whole service life, bearing clearance C3. For series NT and CNT

Or by oily bath with constant oiler with indicator for series NT-H and CNT-H

Drive

Standard: surface-cooled, three-phase squirrel-cage motors, IM B3 type of construction , degree of protection IP 55 according to IEC standard, class F insulation. Performances and main dimensions according to DIN 42673.

Diesel engine , explosion proof motor and Further drive options are possible.

Connections

The following connections are provided:

A1	Filling ⁽¹⁾
B1	Draining
D1	Leakage drain
M2	Pressure gauge

and, depending upon the type of shaft sealing:

S1	External sealing of stuffing box
K1,K2	Cooling of shaft sealing
E3	Venting

(1) Connection A1 not provided with size 25-200. filling possibility at connection M2

Base plates

Standard: channel steel base plate.



Series NT

High Temperature and Pressure Limits

Applicable to all material designs

Admissible temperature with ⁽²⁾

Stuffing box uncooled	125°C
Stuffing box cooled	160°C
Mechanical seal uncooled	140°C

Admissible internal pump pressure with:

Design with stuffing box

Sizes for bearing bracket sizes 228 and 360 ≤ 16 bar

Sizes for bearing bracket sizes 470, 530 and 585 ≤ 10bar

Design with unbalanced mechanical seal:

All sizes, except two-stage additional sizes ≤ 10 bar

Two-stage additional sizes ≤ 16 bar

Admissible inlet pressure:

inlet pressure plus maximum delivery head must not exceed the admissible internal pump pressure.

(2) The permissible temperatures apply to water. The fluids to be pumped being different the temperature limits may change.

Materials

Denomination	Part-No		Material code				
	1 st stage	2 nd stage	W1	W2	W3	W4	W5
Volute casing	102	102	GG-25	GG-25	ST.ST.	GG-25	GGG-40
Impeller(s)	230	230	GG-20	G-CUAL10NI	ST.ST.	ST.ST.	GGG-40
Diffuser	--	171	GG-25	GG-25	ST.ST.	GG-25	GG-25
Stage casing	--	108	GG-25	GG-25	ST.ST.	GG-25	GG-25
Casing cover	161	161	GG-25	GG-25	ST.ST.	GG-25	GG-25
Shaft	210	210	1.4021	1.4021	ST.ST.316	ST.ST.316	1.4021
Bearing bracket	330 ...	330 ...	GG-25	GG-25	GG-25	GG-25	GG-25



Combination of structural components

The table below shows the combination possibilities of structural components and parts of the standard sizes including additional sizes.

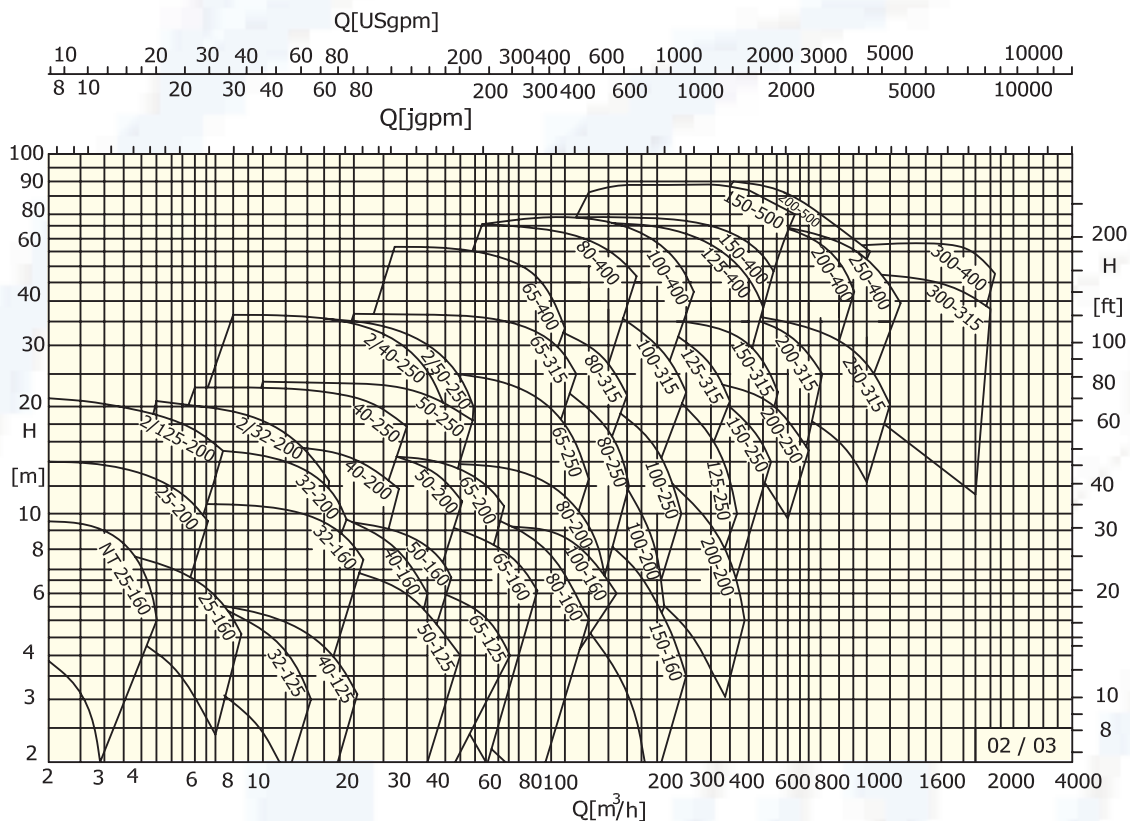
Within a vertical column, parts with identical numbers are interchangeable.

The modular system allows a reduced stock keeping of spare parts.

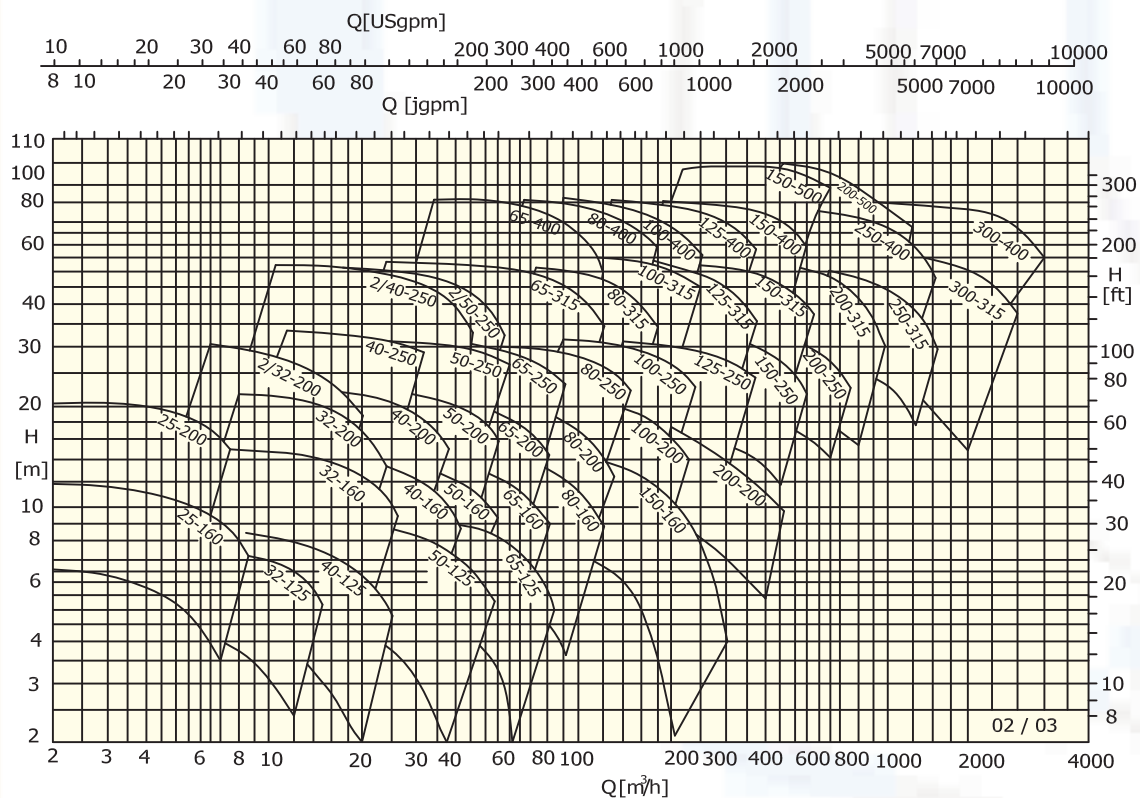
Bearing housing size	Pump size		Volute casing	Impeller	Impeller		Diffuser	Stage casing	Intermediate ring	Casing cover	Bearing housing	Shaft	Support root	Shaft sealing	
	acc. to DIN EN 733 NT	Additional size WT			1 st stage	2 nd stage								Mechanics seal Ø	Gland packing
228				1	-	-	-	-	-	1	1	1	-	16	16
	-	25-160	1												
360	-	-	2	2	-	-	-	-	-	2		2	1		30
	-	25-200	2	-	1	1	1	1	-	3		3			-
	32-160	-	3	3	-	-	-	-	-				2		30
	32-200	-	4	4	-	-	-	-	-	2		2			-
	-	-	4	-	1	1	1	1	-	3		3	1		-
	40-160	-	5	5	-	-	-	-	-				2		30
	40-200	-	6	6	-	-	-	-	-	2		2	1		-
	40-250	-	7	7	-	-	-	-	1				3		30
	-	2/40-250		-	2	2	2	2	-	4	2	3	3		-
	50-160	-	8	8	-	-	-	-	-				1		30
	50-200	-	9	9	-	-	-	-	1	2		2			-
	50-250	-	10	10	-	-	-	-	-				3		30
	-	2/50-250	10	-	3	2	2	2	-	4		3	3		-
	65-160	-	11	11	-	-	-	-	-				1		30
	65-200	-	12	12	-	-	-	-	1				3		-
	80-160	-	13	13	-	-	-	-	-	2		2	4		-
	-	100-160	14	14	-	-	-	-	-						-
470	65-250	-	15	15	-	-	-	-	-				5		40
	65-315	-	16	16	-	-	-	-	2				6		-
	-	65-400	17	17	-	-	-	-	3				7		-
	80-200	-	18	18	-	-	-	-	-	5	3	4	8		40
	80-250	-	19	19	-	-	-	-	2				5		-
	80-315	-	20	20	-	-	-	-	-				7		-
	100-200	-	21	21	-	-	-	-	-				5		-
	100-250	-	22	22	-	-	-	-	-				6		-
	100-315	-	23	23	-	-	-	-	2						-
	125-200	-	24	24	-	-	-	-	-				7		-
	125-250	-	25	25	-	-	-	-	-				8		-
	200-200	-	26	26	-	-	-	-	-						-
530	-	80-400	27	27	-	-	-	-	-						-
	100-400	-	28	28	-	-	-	-	-				9		-
	125-315	-	29	29	-	-	-	-	-	6			10		-
	125-400	-	30	30	-	-	-	-	-	7			9		-
	-	150-250	31	31	-	-	-	-	-						-
	150-315	-	32	32	-	-	-	-	-	6	4	5	10		50
	150-400	-	33	33	-	-	-	-	-	7			11		-
	-	200-250	34	34	-	-	-	-	-						-
	-	80-400/02,03	35	35	-	-	-	-	-				12		-
	-	100-400/02,03	36	36	-	-	-	-	-				13		-
	-	125-400/02,03	37	37	-	-	-	-	-						-
	-	150-400/02,03	38	38	-	-	-	-	-	8					-
585	-	200-315	39	39	-	-	-	-	-	9			14		65
	-	200-400	40	40	-	-	-	-	-						-
	-	250-315	41	41	-	-	-	-	-						-
	-	250-400	42	42	-	-	-	-	-						-
	-	150-500	43	43	-	-	-	-	-		5	6			-
	-	200-500	44	44	-	-	-	-	-						-
-	300-315	-	45	45	-	-	-	-	-	9	6	7	14	80	80
	300-400	-	46	46	-	-	-	-	-						-



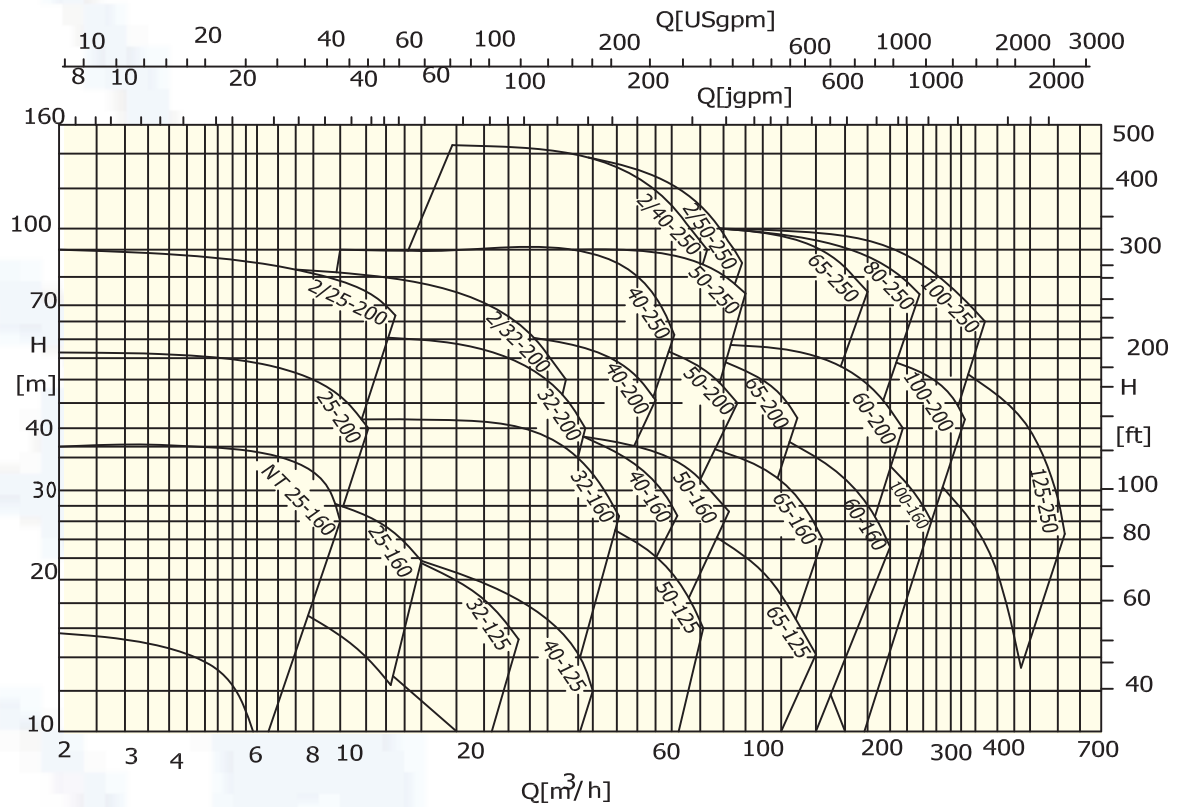
Characteristic
field
1450 1/min



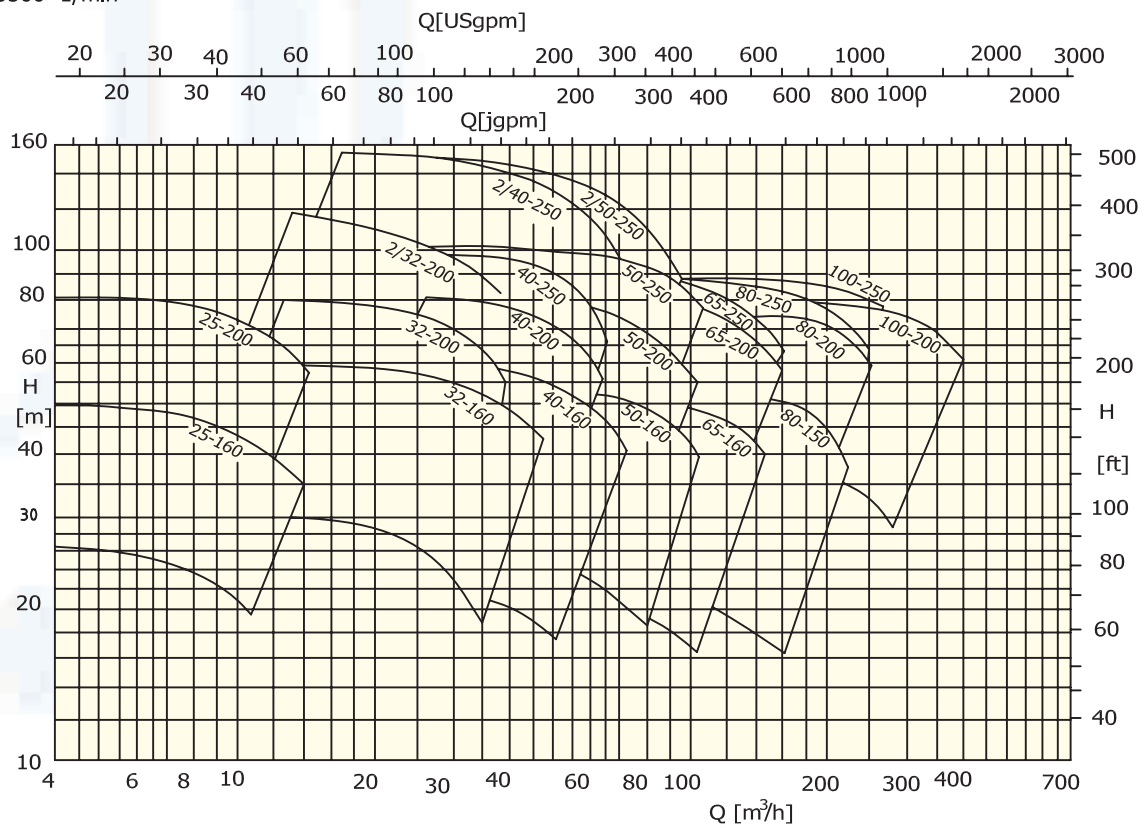
Characteristic
field
1750 1/min



Characteristic
field
2900 1/min



Characteristic
field
3500 1/min



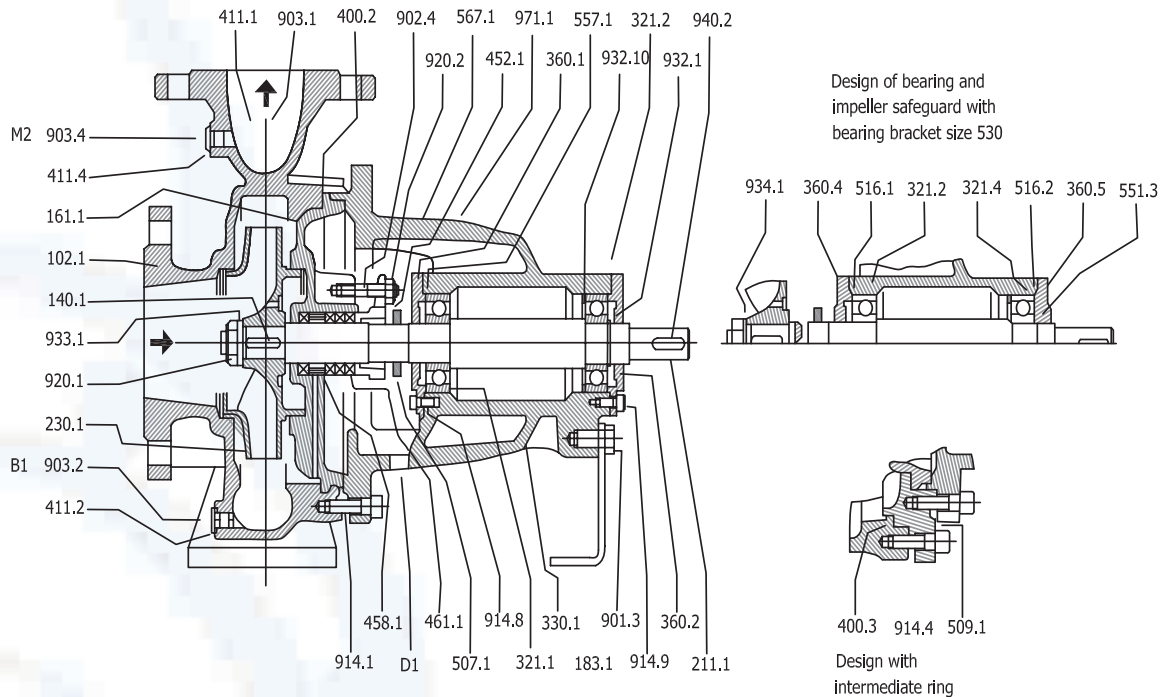


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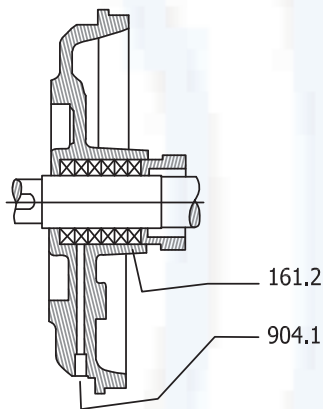
Size	Motor			Pump													Base Plate							
	KW	Size	1 appr	Suction flange acc. To DIN 2533					Delivery flange acc. To DIN 2533					a	f	h ₂	I ₁	I ₂	I ₃	I ₄	I ₅	X _V	X _h	
		Factor -h7		DN _s	D	k	g	Number of holes	DN _d	D	k	g	Number of holes											
2/40-250 40-250	11/15	160M	625														900	630	-	-	135	-	70	
	18.5	160L	670														1000	710	-	-	145	-	80	
	22	180M	700	65	185	145	18	4	40	150	110	18	4	100	360	225	1000	710	450	-	145	-	80	
	30/37	200L	790														1120	900	595	-	110	-	45	
	45	225M	875														1250	1100			39	-		
50-160	3.0	80 90S 90L	385														815	560			127		70	
	4.0		415	65	185	145	18	4	50	165	125	18	4	100	360	180	815	560	-	-	127	-	70	
	5.5/7.5		475														815	560			127		70	
	11		625														900	900			135		85	
50-200	4.0	112M 132S 160M 160L	415														815	560			127		70	
	5.5/7.5		475	65	185	145	18	4	50	165	125	18	4	100	360	200	815	560	-	-	127	-	70	
	11/15		625														900	630			135		85	
	18.5		670														1000	710			145		80	
2/50-250 50-250	11/15	160M 160L 180M 200L 225M	625														900	630	-	-	135	-	70	
	18.5		670														1000	710	-	-	145	-	80	
	22		700	65	185	145	18	4	50	165	125	18	4	100	360	225	1000	710	-	-	145	-	80	
	30/3		790														1120	900	450	-	110	-	45	
	7 45		875														1250	1190	595		30	40	-	
65-160	4	112M 132S 160M	415														815	560			127		55	
	5.5/7.5		475	80	200	160	18	4	65	185	145	18	4	100	360	200	815	560	-	-	127	-	55	
	11/15		625														900	630			135		70	
65-200	11/15	160M 180L 180M	625														900	630			135		70	
	18.5		670	80	200	160	18	4	65	185	145	18	4	100	360	225	1000	710	-	-	145	-	80	
	22		700														1000	710			145		80	
65-250	22	180M 200L	700														1120	900	450	-	110	-	30	
	30/37		790	80	200	160	18	4	65	185	145	18	4	100	470	250	1250	1190	595		30	135	-	

Sectional drawing

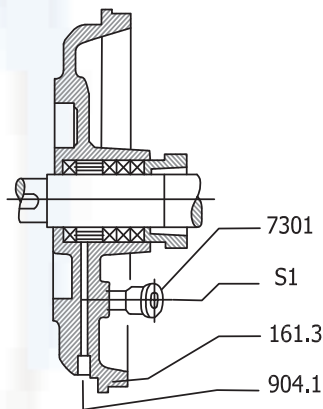
Sizes for bearing bracket sizes 360,470 and 530



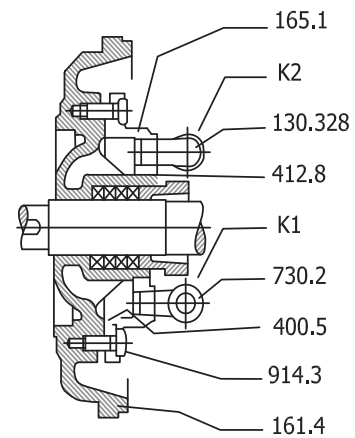
shaft sealing: stuffing box with internal sealing
Abbreviation: U1B



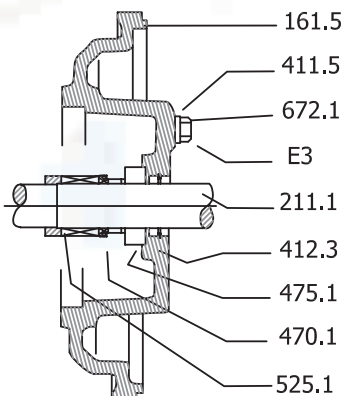
Stuffing box
without sealing
U1A



Stuffing box with
external sealing
U1C



Stuffing box
cooled
G1A



Mechanical seal
unbalanced
U3D

Connections

The following connections are provided:

- A1 Filling ⁽¹⁾
- B1 Draining
- D1 Leakage drain
- M2 Pressure gauge

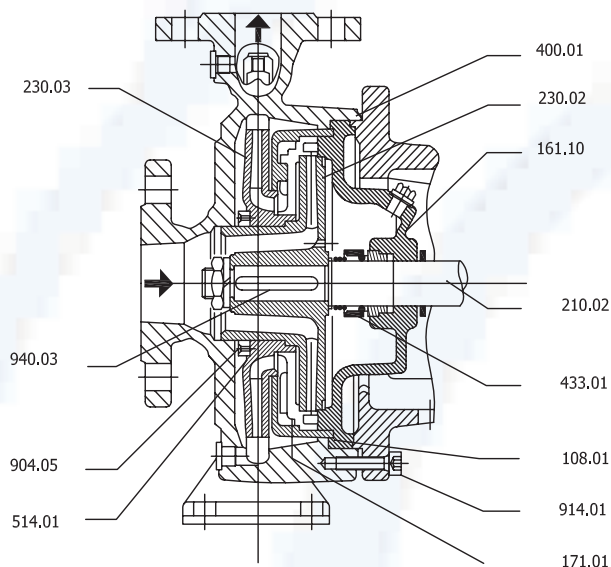
and, depending upon the type of shaft sealing:

- S1 External sealing of stuffing box
- K1,K2 Cooling of shaft sealing
- E3 Venting

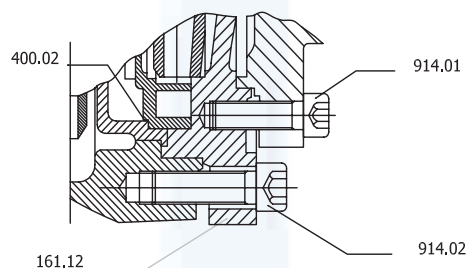
(1) Connection A1 not provided with size 25-200, filling possibility at connection M2

Sizes for bearing bracket size 360 two-stage additional sizes

Series NT



Bearing housing size 360, two stage,
U3 D - mechanical seal unbalanced



casing cover design
with sizes 2/40-250 and 2/50-250

Connections

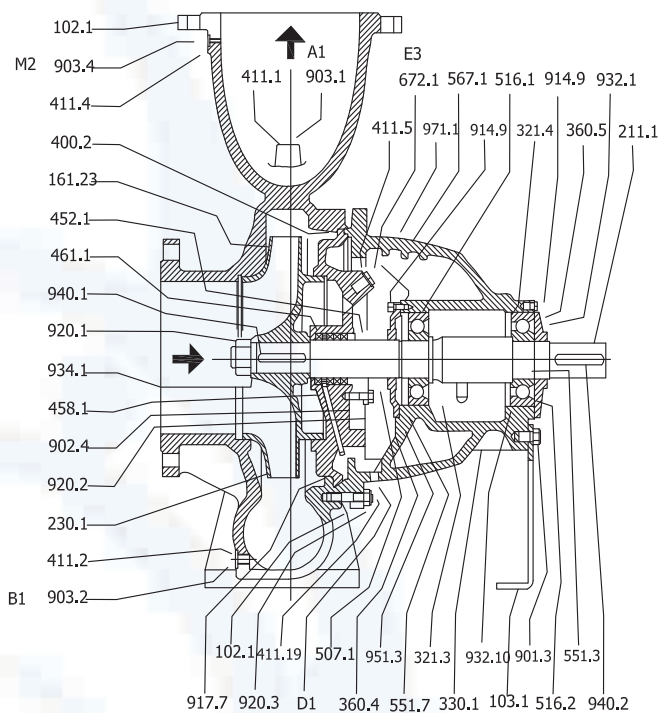
A1	Filling
B1	Draining
D1	Leakage drain
E3	venting
K1	Cooling inlet
K2	Cooling outlet
M2	pressure gauge
S1	External sealing

Denomination	DIN NO.	part NO.
volute casing		102.1
stage casing		108.1
casing cover		161.1
casing cover		161.2
casing cover		161.3
casing cover		161.4
casing cover		161.5
casing cover		161.7
casing cover		161.16
cooling chamber cover		165.1
Diffuser		171.1
Support foot		183.1
shaft		211.1
impeller		230.1
impeller 1st stage		230.2
impeller 2nd stage		230.3
impeller 1st stage		230.8
impeller 2nd stage		230.9
Grooved ball bearing	625	321.1
Grooved ball bearing	625	321.2
Grooved ball bearing	625	321.3
Grooved ball bearing	625	321.4
Bearing bracket		330.1
Bearing cover		360.1
Bearing cover		360.2
Bearing cover		360.4
Bearing cover		360.5
Gasket		400.2
Gasket		400.3
Gasket		400.5
joint washer	7603	411.1
joint washer	7603	411.2
joint washer	7603	411.4
joint washer	7603	411.5
o-ring		412.3
o-ring		412.8
Gland		452.1
Seal ring		458.1
Packing ring		461.1
Mechanical seal		
rotating part		470.1
stationary seal ring		475.1
Splash ring		507.1
Intermediat ring		509.1
Threaded ring		514.1
Nilos ring		516.1
Nilos ring		516.2
Distance sleeve		525.1
Supporting disk	988	551.3
Ball-bearing tension disk		557.1
Blind rivet		567.1
venting screw	910	672.1
Long bow	2950	730.1
Angle	2950	730.2
Angle	2950	730.3
Hexagonal screw	558	901.3
stud	939	902.4
Threaded plug	908	903.1
Threaded plug	908	903.2
Threaded plug	908	903.4
Threaded pin	551	904.1
Threaded pin	916	904.5
socket head cap screw	912	914.1
socket head cap screw	912	914.3
socket head cap screw	912	914.4
socket head cap screw	912	914.8
socket head cap screw	912	914.9
Hexagonal nut	936	920.1
Hexagonal nut	555	920.2
Circlip	471	932.1
Circlip (Seeger-L)		932.2
Circlip	472	932.10
Spring washer	127	933.1
Spring disk	137	934.1
Key	6885	940.1
Key	6885	940.2
Raling plate		971.1

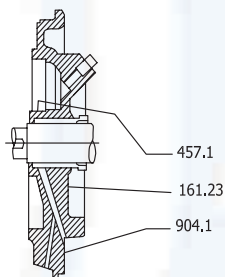


Sectional drawing

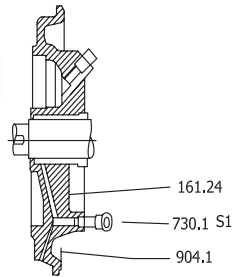
Sizes for bearing bracket sizes 585 (additional size)



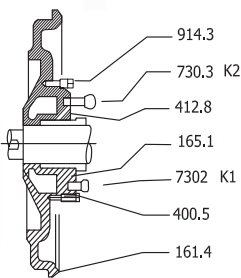
Shaft sealing: stuffing box with internal sealing
Abbreviation: U1B



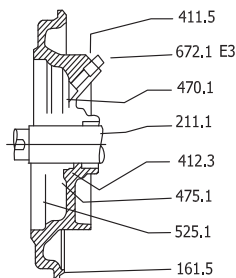
Stuffing box
without sealing
U1A



Stuffing box with
external sealing
U1C



stuffing box
cooled
G1A



Mechanical seal
unbalanced
U3D

Denomination DIN NO. part NO.

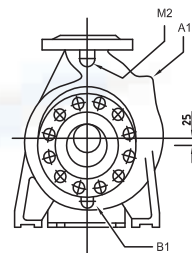
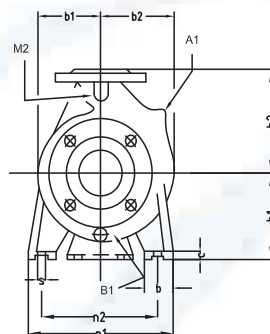
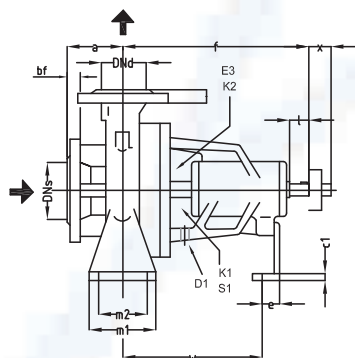
volute casing		102.1
casing cover		161.4
casing cover		161.5
casing cover		161.23
casing cover		161.24
cooling chamber cover		165.1
support foot		183.1
shaft		211.1
impeller		230.1
Grooved ball bearing	625	321.3
Grooved ball bearing	625	321.4
Bearing bracket		330.1
Bearing cover		360.4
Bearing cover		360.5
Gasket		400.2
Gasket		400.5
joint washer	7603	411.1
joint washer	7603	411.2
joint washer	7603	411.4
joint washer	7603	411.5
joint washer	7603	411.19
o-ring		412.3
o-ring		412.8
Gland		452.1
junk ring		457.1
Seal ring		458.1
Packing ring		461.1
Mechanical seal		
rotating part		470.1
stationary seal ring		475.1
Splash ring		507.1
Nilos ring		516.1
Nilos ring		516.2
Distance sleeve		525.1
supporting disk	988	551.3
supporting disk	988	551.7
Blind rivet		567.1
venting screw	910	672.1
Long bow	2950	730.1
Long bow	2950	730.2
Long bow	2950	730.3
Hexagonal screw	933	901.3
stud	939	902.1
stud	939	902.4
Threaded plug	908	903.1
Threaded plug	908	903.2
Threaded plug	908	903.4
Threaded pin	551	904.1
socket head cap screw	912	914.3
socket head cap screw	912	914.8
socket head cap screw	912	914.9
Threaded plug	910	917.7
Hexagonal nut	934	920.1
Hexagonal nut	934	920.2
Hexagonal nut	934	920.3
circlip	471	932.1
circlip	472	932.10
Spring disk	137	934.1
Key	6885	940.1
Key	6885	940.2
cup spring		951.3
Ralling plate		971.1

Connections

A1	Filling
B1	Draining
D1	Leakage drain
E3	venting
K1	Cooling outlet
K2	Cooling outlet
M2	pressure gauge
S1	External sealing

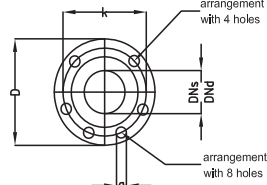
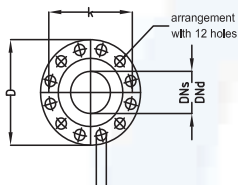
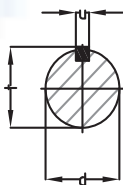
Pump dimensions

Sizes for bearing bracket sizes 228,360,470,530 and 585



with size NT 250-400 only

Sense of rotation: clock wise as seen from the driving side



F flanges up to D N 150 acc. to D IN 2533 from D N 200 acc. to D IN 2532					
DNd DNs	D	bf	k	g	Ns. of holes
25	115	16	85	14	4
32	140	18	100	18	4
40	150	18	110	18	4
50	165	20	125	18	4
65	185	20	145	18	4
80	200	22	160	18	8
100	220	24	180	18	8
125	250	26	210	18	8
150	285	26	240	22	8
200	340	26	295	22	8
250	395	28	350	22	12
300	445	28	400	22	12

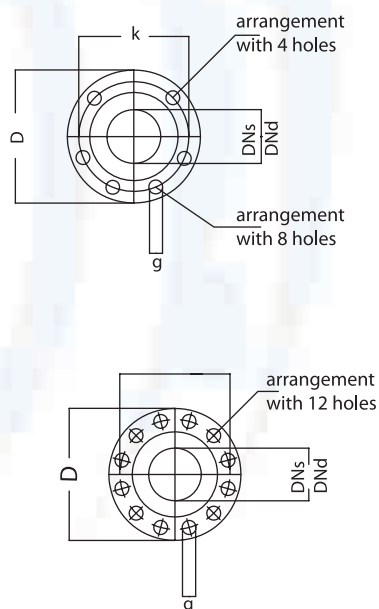
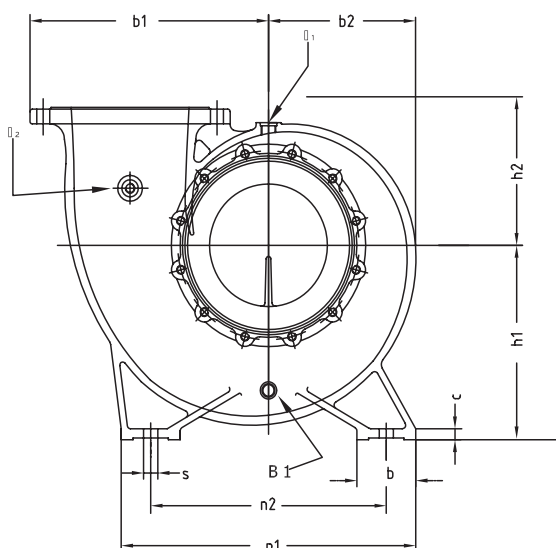
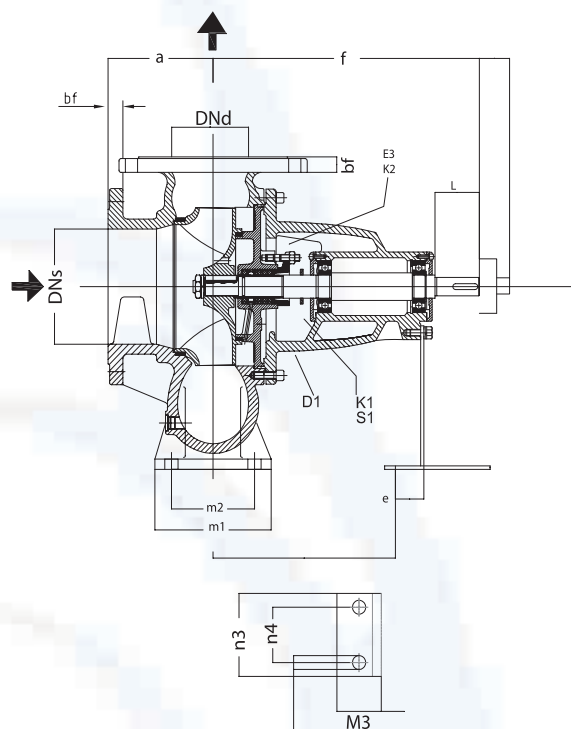
Dimensions in mm

Alteration of dimensions reserved

size	Suction flange		Delivery flange	Pump dimensions								Foot measures												Shaft end				Connections												
	DNs	DNd		a	f	b1	b2	h1	h2	b	c	c1	e	m1	m2	m3	n1	n2	n3	n4	w	s	x	d	l	t	u	acc. to DIN 748				Filling	Draining	Leakage drain	Venting		Cooling		Pressure gauge	External sealing
																												A1	B1	D1	E3				K1	K2	M2	s1		
25-160	25	25	63	228	100	108	112	160	50	12	-	-	100	70	-	220	180	-	-	-	-	110	60	17	28	19	5	G 1/4	G 1/4	G 1/4	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	
32-160	50	32	80	360	123	123	132	160	50	15	4	28	100	70	45	240	190	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4		
40-160	65	40	80	360	123	130	160	180	50	15	4	28	100	70	45	240	190	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4		
50-160	65	50	100	360	123	156	180	225	65	15	4	28	100	70	45	265	212	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4		
65-160	80	65	100	360	133	169	180	225	65	15	4	28	125	95	45	280	212	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4			
80-160	100	80	125	360	136	255	250	355	80	25	6	30	125	95	45	320	250	160	110	260	112	100	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4			
25-200	40	25	80	360	132	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	112	80	24	50	27	8	-	G 1/2	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
32-200	50	32	80	360	124	130	160	180	50	15	4	28	100	70	45	240	190	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
40-200	65	40	100	360	125	123	132	160	50	15	4	28	100	70	45	265	212	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
50-200	65	50	100	360	133	130	160	180	50	15	4	28	100	70	45	265	212	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
65-200	80	65	100	360	148	162	160	200	65	15	4	28	125	95	45	320	250	160	110	260	112	100	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
80-200	100	80	125	470	163	170	180	225	65	15	4	28	125	95	45	345	280	160	110	340	112	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4			
100-200	125	100	125	470	165	265	280	355	80	25	6	31	160	120	45	360	280	160	110	340	116	120	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4			
40-250	65	40	100	360	150	135	160	180	50	15	4	28	125	95	45	320	250	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4			
2/40-250	65	40	100	360	150	156	180	225	65	15	4	28	125	95	45	320	250	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	-	-	G 1/4	-	G 1/4	-				
50-250	65	50	100	360	156	145	160	280	50	15	4	28	125	95	45	320	250	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4				
2/50-250	65	50	100	360	156	169	180	225	65	15	4	28	125	95	45	320	250	160	110	260	112	80	24	50	27	8	G 1/4	G 1/4	G 3/8	G 1/4	-	-	G 3/8	-	G 3/8	-				
65-250	80	65	100	470	164	170	180	225	65	15	4	28	160	120	45	360	280	160	110	340	116	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4				
80-250	100	80	125	470	182	188	180	250	65	18	4	28	160	120	45	400	315	160	110	340	116	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4				
100-250	125	100	140	470	189	203	200	280	80	18	4	28	160	120	47	400	315	160	110	340	116	120	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4				
125-250	150	125	140	470	212	272	280	355	100	27	6	31	160	120	47	400	315	160	110	340	116	120	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 1/4				
150-250	200	150	160	530	231	283	315	400	100	27	6	31	200	150	47	500	400	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
200-250	200	200	160	530	262	305	315	450	100	27	6	31	200	150	47	550	450	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
65-315	80	65	125	470	202	184	200	250	80	18	4	28	160	120	47	400	315	160	110	340	116	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
80-315	100	80	125	470	210	208	200	280	80	18	4	28	160	120	47	400	315	160	110	340	116	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
100-315	125	100	140	470	220	224	225	280	80	18	6	30	160	120	47	400	315	160	110	340	116	120	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
125-315	150	125	140	530	226	255	250	355	80	18	6	30	200	150	47	500	400	160	110	370	116	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
150-315	200	150	160	530	239	283	280	375	100	27	6	31	200	150	47	550	450	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
200-315	250	200	200	585	270	330	355	425	100	27	6	31	200	150	65	550	450	250	200	410	120	180	60	105	64	18	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
250-315	300	250	250	585	325	328	355	450	110	27	10	42	260	190	65	690	560	250	200	410	124	180	60	105	64	18	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
65-400	80	65	125	470	239	219	225	280	80	25	6	30	160	120	47	420	335	160	110	340	116	100	32	80	35	10	G 3/8	G 3/8	G 3/8	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
80-400	100	80	125	530	246	231	250	315	80	25	6	30	160	120	47	435	355	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
80-400/03	100	80	125	530	265	285	280	355	80	25	6	31	160	120	47	435	355	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
100-400	125	100	140	530	256	250	250	315	80	25	6	30	200	150	47	500	400	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
100-400/02	125	100	140	530	270	295	280	355	100	27	6	31	200	150	47	500	400	160	110	370	124	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
125-400	150	125	140	530	264	252	280	355	100	27	6	31	200	150	47	500	400	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
125-400/02	150	125	140	530	284	315	315	400	100	27	6	31	200	150	47	500	400	160	110	370	124	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
150-400	200	150	160	530	277	271	280	400	100	27	6	31	200	150	47	550	450	160	110	370	120	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
150-400/02	200	150	160	530	277	305	315	450	100	27	6	31	200	150	47	500	450	160	110	370	124	140	42	110	45	12	G 3/8	G 3/8	G 3/8	G 1/2	G 1/4	G 1/4	G 3/8	G 1/4	G 1/4	G 3/8				
200-4																																								

Pump dimensions

Sizes for bearing bracket size 470



Sense of rotation: Clock wise as seen from the driving side

F flanges up to D N 150 acc. to DIN 2533 from d N 200 acc. To DIN 2532					
DNd DNs	D	bf	k	g	No. of holes
25	115	16	85	14	4
32	140	18	100	18	4
40	150	18	110	18	4
50	165	20	125	18	4
65	185	20	145	18	4
80	200	22	160	18	8
100	220	24	180	18	8
125	250	26	210	18	8
150	285	26	240	22	8
200	340	26	295	22	8
250	395	28	350	22	12
300	445	28	400	22	12

Dimensions in mm Alteration of dimensions reserved

size	Suction flange DNs	Delivery flange DNd	Pump dimensions							Foot measures														Design Dimensions x	Shaft end				Connections									
																									acc. to DIN 748				Filling A1	Leakage drain B1	Leakage drain D1	Venting E3	Cooling		Pressure gauge M2	External sealing s1		
			a	f	b1	b2	h1	h2	b	c	c1	e	m1	m2	m3	n1	n2	n3	n4	w	s	d	l		t	u	K1	K2										
200-200	200	200	189.5	470	405	250	317	225	100	18	6	30	210	150	47	500	400	160	110	340	M24	120	32	80	35	10	G3/8	G3/8	G3/8	G1/4	G1/4	G1/4	G3/8	G1/4				

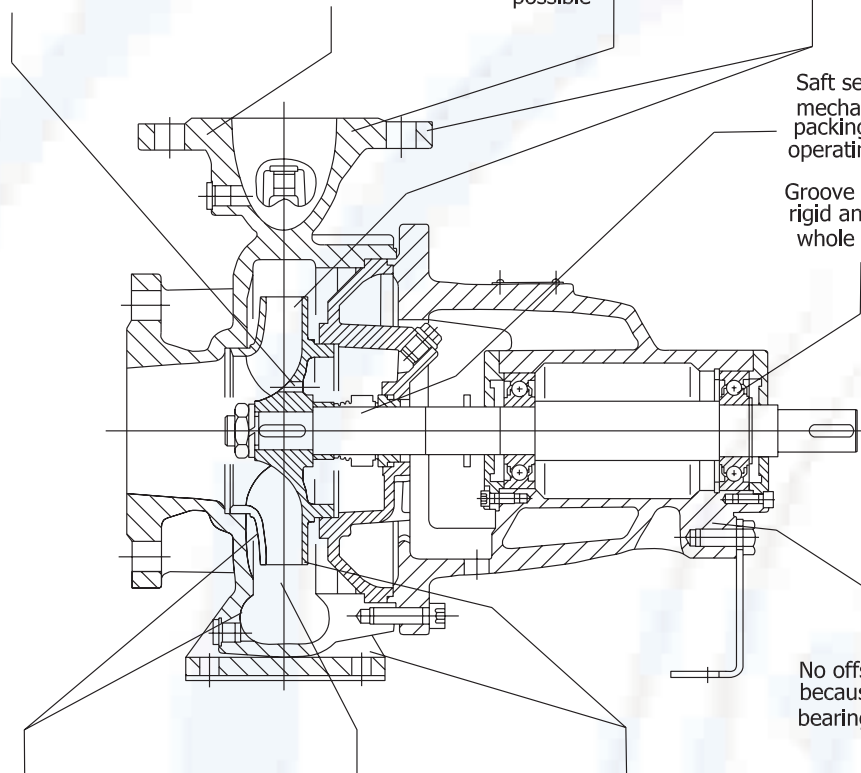


Negligible axial thrust
by fine adaptation of the
relief bores

Pressure safe casing
parts designed for high
reliability of operation

Flanges according to
DIN EN 1092-2 PN 10/16
other flanges designs
possible

Connection dimensions
and capacities according
to DIN EN 733



Soft sealing by
mechanical seal or gland
packing according to the
operating conditions

Groove ball bearings
rigid and lubricated for the
whole service life

No offset of the shaft
because of one-piece
bearing housing

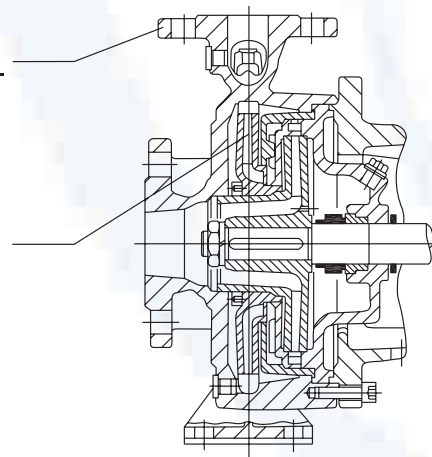
Optimized hydraulic parts
according to DIN EN 733
with very good efficien-
cies and NPSH values

Adeptation to changing
operating conditions
possible by turning
down the impeller

Large selection of ma-
terials

Two-stage sizes with
their outer dimensions
correspond to the respec-
tive single-stage sizes

Large delivery heads
with two-stage sizes
(2/25-200/01, 2/32-200/01,
2/40-250/01, 2/50-250/01)
the connection dimensions
correspond with the single
stage design



Process design; when
dismounting the pump
the volute casing remains
in the piping

By additional pump
sizes performance
range according to DIN
EN 733 is increased

Reduced stockkeeping
of spare parts due to use
of as much non-variable
parts as possible
(modular system)

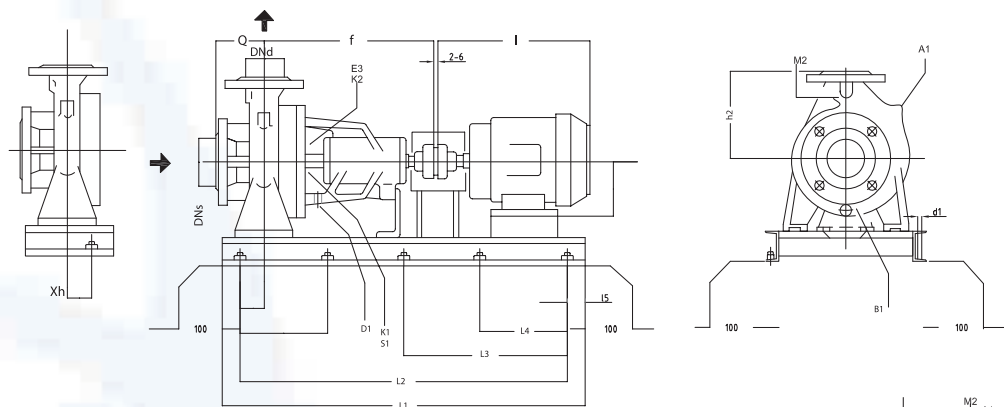


Series NT

Installation Plan

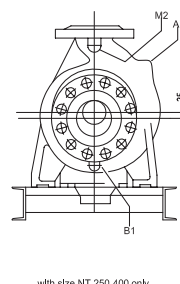
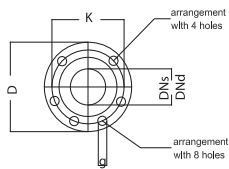
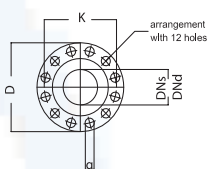
NT with shaft coupling acc. to DIN 740 without spacer

n = 1450 1/min (rpm)



connections

A 1	Filling
B 1	Draining
D 1	Leakage drain
E 3	Venting
K 1	Cooling inlet
K 2	Cooling outlet
M 2	pressure gauge
S 1	External sealing



with size NT 250-400 only

For size of connections.
refer to pump dimensions

- stone bolt M 12 x 160 DIN 529 for base plates up to size 4 as well as 8,1
stone bolt M 16 x 160 DIN 529 for base plates of sizes 5 and 6
stone bolt M 16 x 250 DIN 529 for base plates of sizes 9,1 to 16,3
- Leakage drain at base plate upon request only

Dimensions in mm

Alteration of dimensions reserved

Size	Motor			Pump												Base plate								
	Size	factor -h7	I approx.	Suction flange acc. to DIN 2533					Delivery flange acc. to DIN 2533															
				DN _s	D	K	g	Number of holes	DN _d	D	K	g	Number of holes	a	f	h2	I1	I2	I3	I4	I5	Xv	Xh	
25-160	0.37 0.55	71 80	265 290	25	115	85	14	4	25	115	85	14	4	63	228	160	515	315	-	-	100	-	40	
25-200	0.37 0.55	80 80	290 290	40	150	110	18	4	25	115	85	14	4	80	360	180	725	500	-	-	112	-	55	
32-160	0.37 0.55/0.75 1.1	71 80 90	265 290 310	50	165	125	18	4	32	140	100	18	4	80	360	160	725	500	-	-	112	-	55	
32-200	0.55/0.75 1.1 1.5	80 90 90	290 310 335	50	165	125	18	4	32	140	100	18	4	80	360	180	725	500	-	-	112	-	55	
40-160	0.37 0.55/0.75 1.1 1.5	71 80 90 90	265 290 310 225	65	185	145	18	4	40	150	110	18	4	80	360	160	725	500	-	-	112	-	55	
40-200	1.1 1.5 2.2	90 90 90	310 335 385	65	185	145	18	4	40	150	110	18	4	100	360	180	725 725 815	500 500 560	-	-	112 112 127	-	55 55 70	
40-250 2/40-250	1.5 2.2/3.0 4.0 5.5	90 100 112 132	335 385 415 475	65	185	145	18	4	40	150	110	18	4	100	360	225	815	560	-	-	127	-	55	
50-160	0.55/0.75 1.1 1.5	80 90 90	290 310 335	65	185	145	18	4	50	165	125	18	4	100	360	180	725	500	-	-	112	-	55	
50-200	1.1 1.5 2.2 3.0	90 90 100 100	310 335 385 385	65	185	145	18	4	50	165	125	18	4	100	360	200	725 725 815	500 500 560	-	-	112 112 127	-	55 55 70	
50-250 2/50-250	1.5 2.2/3.0 4.0 5.5	90 100 112 132	335 385 415 475	65	185	145	18	4	50	165	125	18	4	100	360	225	815	560	-	-	127	-	55	
65-160	0.75 1.1 1.5 2.2	80 90 90 100	290 310 335 385	80	200	160	18	8	65	185	145	18	4	100	360	200	725 725 815	500 500 560	-	-	112 112 127	-	40 40 55	
65-200	1.5 2.2/3.0 4.0	90 100 112	335 385 415	80	200	160	18	8	65	185	145	18	4	100	360	225	815	560	-	-	127	-	55	
65-250	4.0 5.5 7.5	112 132 132	415 475 515	80	200	160	18	8	65	185	145	18	4	100	470	250	900 900 1000	630 630 710	-	-	135 135 145	-	55 55 65	



size	Motor			Pump													Base plate										
	KW	Size	I approx.	Suction flange acc. to DIN 2533					Delivery flange acc. to DIN 2533																		
		Factor -h7		DN _s	D	K	g	Number of holes	DN _d	D	K	g	Number of holes														
65-315	5.5	132 S	475	80	200	160	18	8	65	185	145	18	4	125	470	280	1000	710	-	-	145	-	65				
	7.5	132 S	515														1000	710	-	-	145	-	65				
	11.0	160 M	625														1120	900	450	-	110	-	30				
	15.0	160 L	670														1120	900	450	-	110	-	30				
65-400	11.0	160 M	625	80	200	160	18	8	65	185	145	18	4	125	470	355	1120	900	450	-	110	-	30				
	15.0	160 L	670														1120	900	450	-	110	-	30				
	18.5	180 M	700														1120	900	450	-	110	-	30				
	22.0	180 L	740														1120	900	450	-	110	-	30				
80-160	1.1	90 S	310	100	220	180	18	8	80	200	160	18	8	125	360	225	815	560	-	-	127	-	55				
	1.5	90 L	335																								
	2.2/3.0	100 L	385																								
80-200	3.0	100 L	385	100	220	180	18	8	80	200	160	18	8	125	470	250	900	630	-	-	135	-	70				
	4.0	112 M	415																								
	5.5	132 S	475																								
80-250	5.5	132 S	475	100	220	180	18	8	80	200	160	18	8	125	470	280	1000	710	-	-	145	-	65				
	7.5	132 M	515														1000	710	-	-	145	-	65				
	11.0	160 M	625														1120	900	450	-	110	-	30				
80-315	7.5	132 M	515	100	220	180	18	8	80	200	160	18	8	125	470	315	1120	900	450	-	110	-	30				
	11.0	160 M	625														1120	900	450	-	110	-	30				
	15.0	160 L	670														1120	900	450	-	110	-	30				
80-400	11.0	160 M	625	100	220	180	18	8	80	200	160	18	8	125	530	355	1250	1190	595	-	-	145	-	65			
	15.0	160 L	670														1250	1190	595	-	-	145	-	65			
	18.5	180 M	700														1250	1190	595	-	-	145	-	65			
	22.0	180 L	740														1250	1190	595	-	-	145	-	65			
	30.0	200 L	790														1400	1340	-	-	440	-	30	-			
100-200	2.2/3.0	100 L	385	125	250	210	18	8	100	220	180	18	8	125	470	280	900	630	-	-	135	-	55				
	4.0	112 M	415														900	630	-	-	135	-	55				
	5.5	132 S	475														1000	710	-	-	145	-	65				
100-250	7.5	132 M	515	125	250	210	18	8	100	220	180	18	8	140	470	280	1000	710	-	-	145	-	65				
	11.0	160 M	625														1120	900	450	-	110	-	30				
	15.0	160 L	670														1120	900	450	-	110	-	30				
100-315	15.0	160 L	670	125	250	210	18	8	100	220	180	18	8	140	470	315	1120	900	450	-	110	-	30				
	18.5	180 M	700														1120	900	450	-	110	-	30				
	22.0	180 L	740														1120	900	450	-	110	-	30				
	30.0	200 L	790														1250	1190	595	-	145	-	65				
100-400	15.0	160 L	670	125	250	210	18	8	100	220	180	18	8	140	530	355	1250	1190	595	-	-	145	-	65			
	18.5	180 M	700														1250	1190	595	-	-	145	-	65			
	22.0	180 L	740														1400	1340	-	-	440	-	30	-			
	30.0	200 L	790														1400	1340	-	-	440	-	30	-			
	37.0	225 S	830														1400	1340	-	-	440	-	30	-			
125-250	7.5	132 M	515	150	285	240	22	8	125	250	210	22	8	140	470	355	1000	710	-	-	145	-	65				
	11.0	160 M	625														1120	900	450	-	110	-	30				
	15.0	160 L	670														1120	900	450	-	110	-	30				
	18.5	180 M	700														1120	900	450	-	110	-	30				
125-315	22.0	180 L	740	150	285	240	22	8	125	250	210	22	8	140	530	355	1250	1190	595	-	-	145	-	65			
	30.0	200 L	790														1400	1340	-	-	440	-	30	-			
	37.0	225 S	830														1400	1340	-	-	440	-	30	-			
125-400	30.0	200 L	790	150	285	240	22	8	125	250	210	22	8	140	530	400	1400	1340	-	440	30	70	-	-			
	37.0	225 S	830														1400	1340	-	440	30	70	-	-			
	45.0	225 M	875														1400	1340	-	440	30	70	-	-			
	55.0	250 M	960														1400	1340	-	440	30	70	-	-			
150-250	7.5	132 M	515	200	340	295	22	8	150	285	240	22	8	160	530	375	1250	1190	595	-	-	145	-	65			
	11.0	160 M	625														1250	1190	595	-	-	145	-	65			
	15.0	160 L	670														1250	1190	595	-	-	145	-	65			
	18.5	180 M	700														1250	1190	595	-	-	145	-	65			
	22.0	180 L	740														1250	1190	595	-	-	145	-	65			
30.0	200 L	790														1400	1340	-	440	30	70	-	-				
150-315	22.0	180 M	740	200	340	295	22	8	150	285	240	22	8	160	530	400	1250	1190	595	-	-	145	-	65			
	30.0	200 L	790														1400	1340	-	440	30	70	-	-			
	37.0	225 L	830														1400	1340	-	440	30	70	-	-			
	45.0	225 M	875														1400	1340	-	440	30	70	-	-			
	55.0	250 M	960														1400	1340	-	440	30	70	-	-			
150-400	45.0	225 M	875	200	340	295	22	8	150	285	240	22	8	160	530	450	1400	1340	-	440	30	70	-	-			
	55.0	250 M	960														1600	1540	500	500	500	500	500	500			
	75.0	280 S	1020														1600	1540	500	500	500	500	500	500			
	90.0	280 M	1064														1600	1540	500	500	500	500	500	500			
200-250	11.0	160 M	625	200	340	295	22	8	200	340	295	22	8	180	530	425	1250	1190	595	-	-	-	-	-	-		
	15.0	160 L	670														1250	1190	595	-	-	-	-	-	-	-	-
	18.5	180 M	700														1250	1190	595	-	-	-	-	-	-	-	-
	22.0	180 L	740														1250	1190	595	-	-	-	-	-	-	-	-
	30.0	200 L	790														1400	1340	-	440	30	70	-	-	-	-	-
	37.0	225 S	830														1400	1340	-	440	30	70	-	-	-	-	-
	45.0	225 M	875														1400	1340	-	440	30	70	-	-	-	-	-
55.0	250 M	960	1400	1340	-	440	30	70	-	-	-	-	-														
200-315	22.0	180 L	740	250	395	350	22	12	200	340	295	22	8	200	585	450	1400	1340	-	440	30	70	-	-			
	30.0	200 L	790														1400	1340	-	440	30	70	-	-	-	-	
	37.0	225 S	830														1400	1340	-	440	30	70	-	-	-	-	
	45.0	225 M	875														1400	1340	-	440	30	70	-	-	-	-	
	55.0	250 M	960														1600	1540	500	500	500	500	500	500	500		
	75.0	280 S	1020														1600	1540	500	500	500	500	500	500	500		
	90.0	280 M	1064														1600	1540	500	500	500	500	500	500	500		
250-315	22.0	180 L	740	300	445	400	22	12	250	395	350	22	12	250	585	560	1400	1340	-	440	30	100	-	-			
	30.0	200 L	790														1400	1340	-	440	30	100	-	-	-	-	
	37.0	225 S	830														1400	1340	-	440	30	100	-	-	-	-	
	45.0	225 M	875														1400	1340	-	440	30	100	-	-	-	-	
	55.0	250 M	960														1600	1540	500	500	500	500	500	500	500		
	75.0	280 S	1020														1600	1540	500	500	500	500	500	500	500		
	90.0	280 M	1064														1600	1540	500	500	500	500	500	500	500		
250-400	45.0	225 M	875	300	445	400	22	12	250	395	350	22	12	225	585	600	1600	1540	-	500	30	110	-	-			
	55.0	250 M	960														1600	1540	-	500	30	110	-	-	-	-	

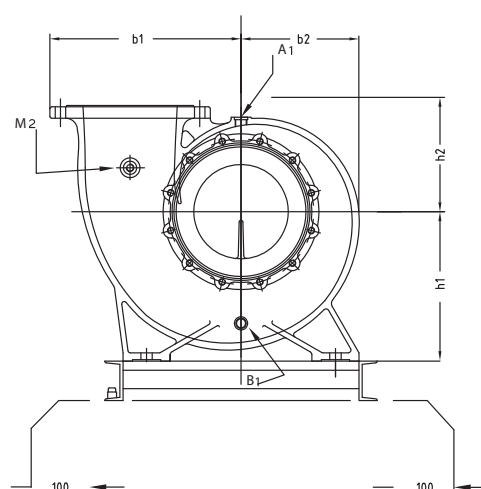
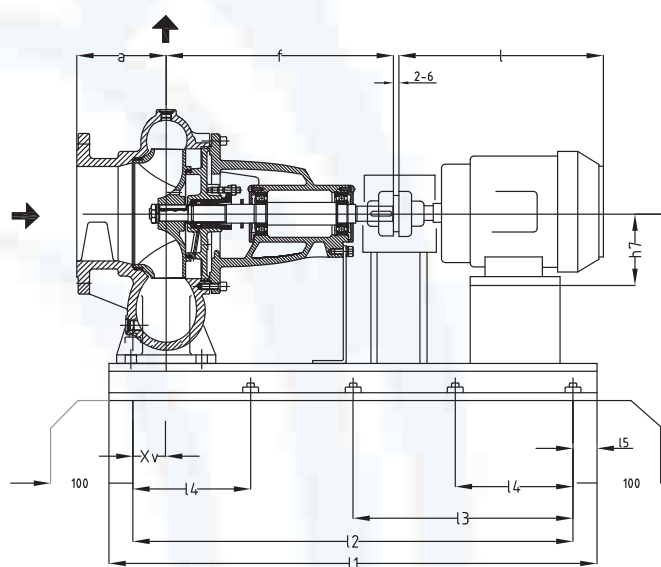


Series NT

Installation Plan

NT with shaft coupling acc. to DIN 740 without spacer

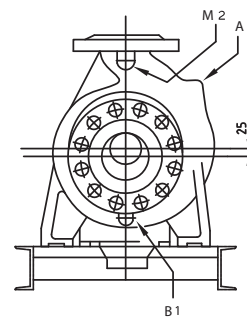
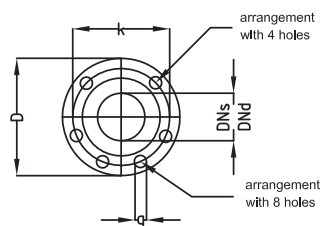
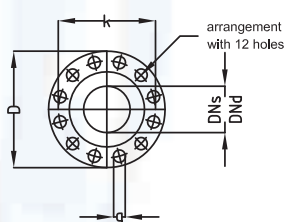
$n = 1450 \text{ 1/min (rpm)}$



Connections

A1	Filling
B1	Draining
D1	Leakage drain
E3	Venting
K1	Cooling inlet
K2	Cooling outlet
M2	Pressure gauge
S1	External sealing

For size of connections,
refer to pump dimensions



with size NT 250-400 only

① Stone bolt M 12x160 DIN 529 for base plates up to size 4 as well as 8.1

Stone bolt M 16x160 DIN 529 for base plates of sizes 5 and 6

Stone bolt M 16x250 DIN 529 for base plates of sizes 9.1 to 16.3

② Leakage drain at base plate upon request only

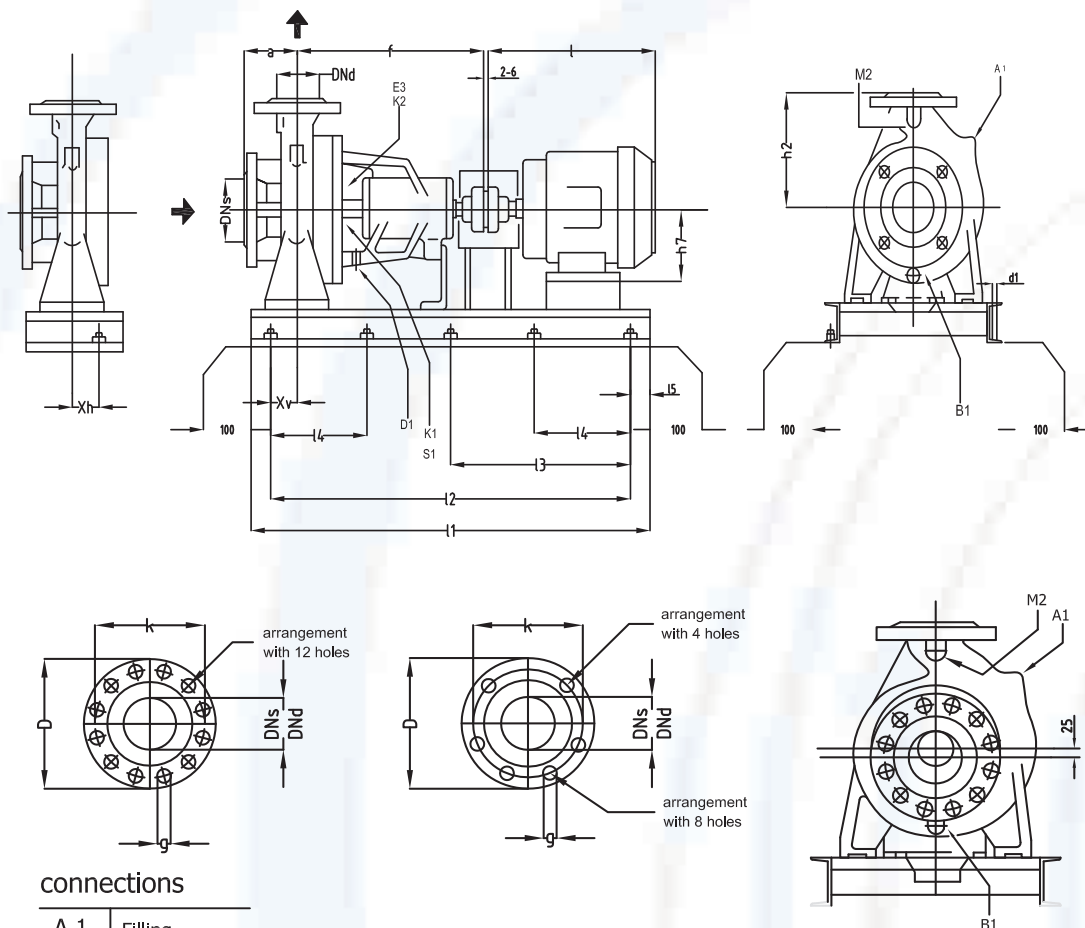
Dimensions in mm Alteration of dimensions reserved

size	Motor			Pump												Base plate								
	Kw	size	I approx.	suction flange acc. to DIN 2533					Delivery flange acc. to DIN 2533															
		factor -h7		DNs	D	k	g	Number of holes	DNd	D	k	g	Number of holes											
200-200	15	160 M	1064	200	340	295	22	8	200	340	295	22	8	189.5	470	225	1600	1540	-	500	30	70	-	

Installation Plan

NT with shaft coupling acc. to DIN 740 without spacer

n = 1450 1/min (rpm)



connections

A 1	Filling
B 1	Draining
D 1	Leakage drain
E 3	Venting
K 1	Cooling inlet
K 2	Cooling outlet
M 2	pressure gauge
S 1	External sealing

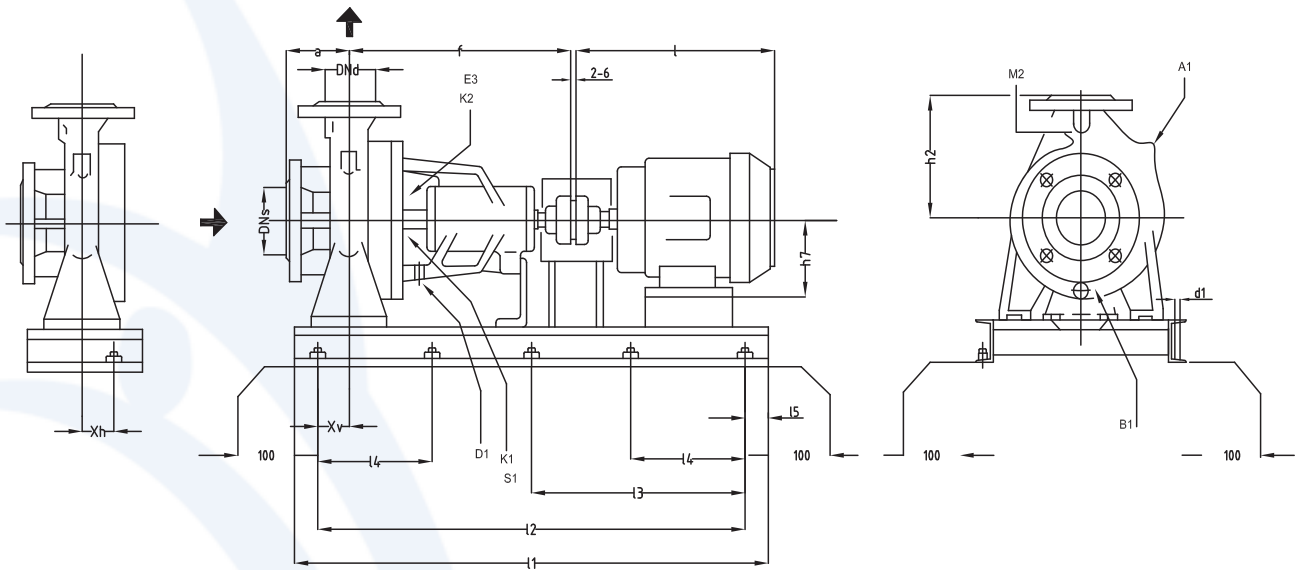
For size of connections,
refer to pump dimensions

- ① stone bolt M 12 x 160 DIN 529 for base plates up to size 4 as well as 8.1
stone bolt M 16 x 160 DIN 529 for base plates of sizes 5 and 6
stone bolt M 16 x 250 DIN 529 for base plates of sizes 9.1 to 16.3
- ② Leakage drain at base plate upon request only

Dimensions in mm Alteration of dimensions reserved

Size	Motor			Pump												Base plate								
		Size	I approx.	Suction flange acc. to DIN 2533					Delivery flange acc. to DIN 2533															
		factor -h7		DN _s	D	K	g	Number of holes	DN _d	D	K	g	Number of holes											
200-400	90	280 M	1064	250	395	350	22	12	200	340	295	22	8	180	585	90	1600	1540	-	500	30	70	-	
150-500	90 110	280 M 315 S	-	200	340	295	22	8	150	285	265	22	8	189,5	470	225	1600	1540	-	500	30	70	-	

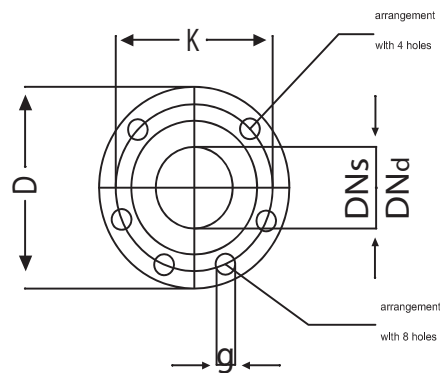
NT With shaft Coupling Acc. To DIN 740 Without Spacer

$$n = 2900 \text{ 1/min (rpm)}$$


connections

A 1	Filling
B 1	Draining
D 1	Leakage drain
E 3	Venting
K 1	Cooling inlet
K 2	Cooling outlet
M 2	pressure gauge
S 1	External sealing

For size of connections.
refer to pump dimensions



- ① stone bolt M 12 x 160 DIN 529 for base plates up to size 4 as well as 8.1
 stone bolt M 16 x 160 DIN 529 for base plates of sizes 5 and 6
 stone bolt M 16 x 250 DIN 529 for base plates of sizes 9.1 to 14.1
- ② Leakage drain at base plate upon request only

Dimensions in mm

Alteration of dimensions reserved





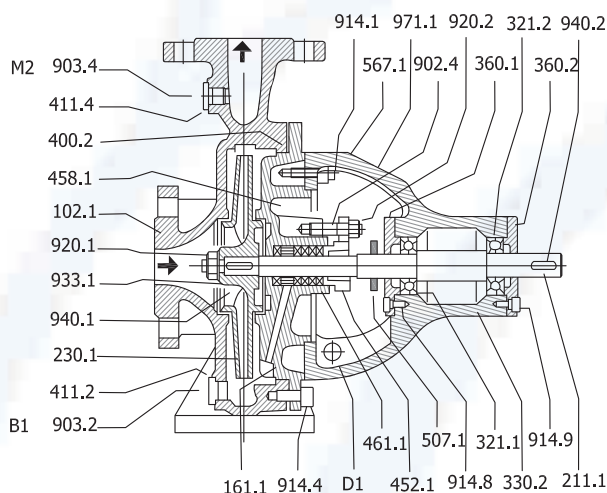
Size	Motor			Pump											Base Plate								
	KW	Size	1 appr	Suction flange acc. To DIN 2533					Delivery flange acc. To DIN 2533					a	f	h ₂	I ₁	I ₂	I ₃	I ₄	I ₅	X _v	X _h
		Factor -h7		DN _s	D	k	g	Number of holes	DN _d	D	k	g	Number of holes										
25-160	1.1	80	290														515	315			100		40
	1.5	90S	310	25	115	85	14	4	25	115	85	14	4	63	228	160	575	355	-	-	110	-	50
	2.2	90L	335														575	355			110		50
25-200	3.0	100L	385																				
	4.0	112M	415	40	150	110	18	4	25	115	85	14	4	80	360	180	815	560	-	-	127	-	70
	5.5	132S	475																				
32-160	1.2	90S	310														725	500			112		55
	2.2	90L	335														725	500			112		55
	3.0	100L	385	50	165	125	18	4	32	140	100	18	4	80	360	160	815	560	-	-	127	-	70
	4.0	112M	415														815	560			127		70
	5.5/7.5	132S	475														815	560			127		70
32-200	2.2	90L	335														725	500			112		55
	3.0	100L	385														815	560			127		70
	4.0	112M	415	50	165	125	18	4	32	140	100	18	4	80	360	180	815	560	-	-	127	-	70
	5.5/7.5	132S	475														815	560			127		70
	11	160M	625														900	630			135		85
40-160	2.2	90L	335														725	500			112		55
	3.0	100L	385														815	560			127		70
	4.0	112M	415														815	560			127		70
	5.5	112M	475	65	185	145	18	4	40	150	110	18	4	80	360	180	815	560	-	-	127	-	70
	7.5	132S	475														815	560			127		70
	11	160M	625														900	630			135		75
40-200	5.5/7.5	132S	475														815	560			127		70
	11	160M	625	65	185	145	18	4	40	150	110	18	4	100	360	180	900	630	-	-	135	-	85
	15	160M	625														900	630			135		85



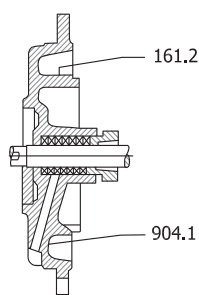
Series NT

Sectional drawing

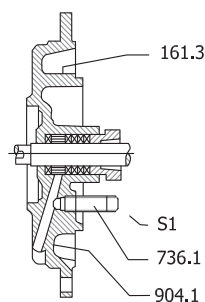
Size 25-160 for bearing bracket size 228 (additional size)



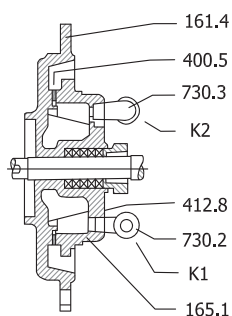
shaft sealing: stuffing box with internal sealing
Abbreviation: U1B



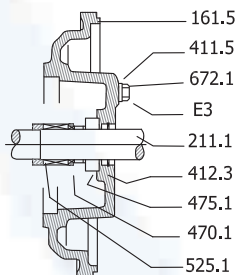
stuffing box
without sealing
U1A



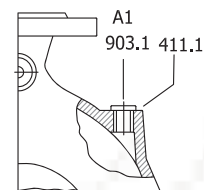
stuffing box with
external sealing
U1C



stuffing box
cooled
G1A



Mechanical seal
unbalanced
U3D



Denomination	DIN NO.	part NO.
volute casing		102.1
casing cover		161.1
casing cover		161.2
casing cover		161.3
casing cover		161.4
casing cover		161.5
cooling chamber cover		165.1
shaft		211.1
impeller		230.1
Grooved ball bearing	625	321.1
Grooved ball bearing	625	321.2
Bearing bracket		330.2
Bearing cover		360.1
Bearing cover		361.2
Gasket		400.2
Gasket		400.5
joint washer	7603	411.1
joint washer	7603	411.2
joint washer	7603	411.4
joint washer	7603	411.5
O-ring		412.3
O-ring		412.8
Gland		452.1
Seal ring		458.1
Packing ring		461.1
Mechanical seal		
rotating part		470.1
stationary seal ring		475.1
Splash ring		507.1
Distance sleeve		525.1
Blind rivet		567.1
venting screw	910	672.1
Angle	2950	730.2
Angle	2950	730.3
Nipple joint	2982	736.1
stud	939	902.4
Threaded plug	908	903.1
Threaded plug	908	903.2
Threaded plug	908	903.4
Threaded plug	551	904.1
socket head cap screw	912	914.1
socket head cap screw	912	914.4
socket head cap screw	912	914.8
socket head cap screw	912	914.9
Hexagonal nut	936	920.1
Hexagonal nut	555	920.2
Spring washer	127	933.1
Key	6885	940.1
Key	6885	940.2
Raling plate		971.1

Connections

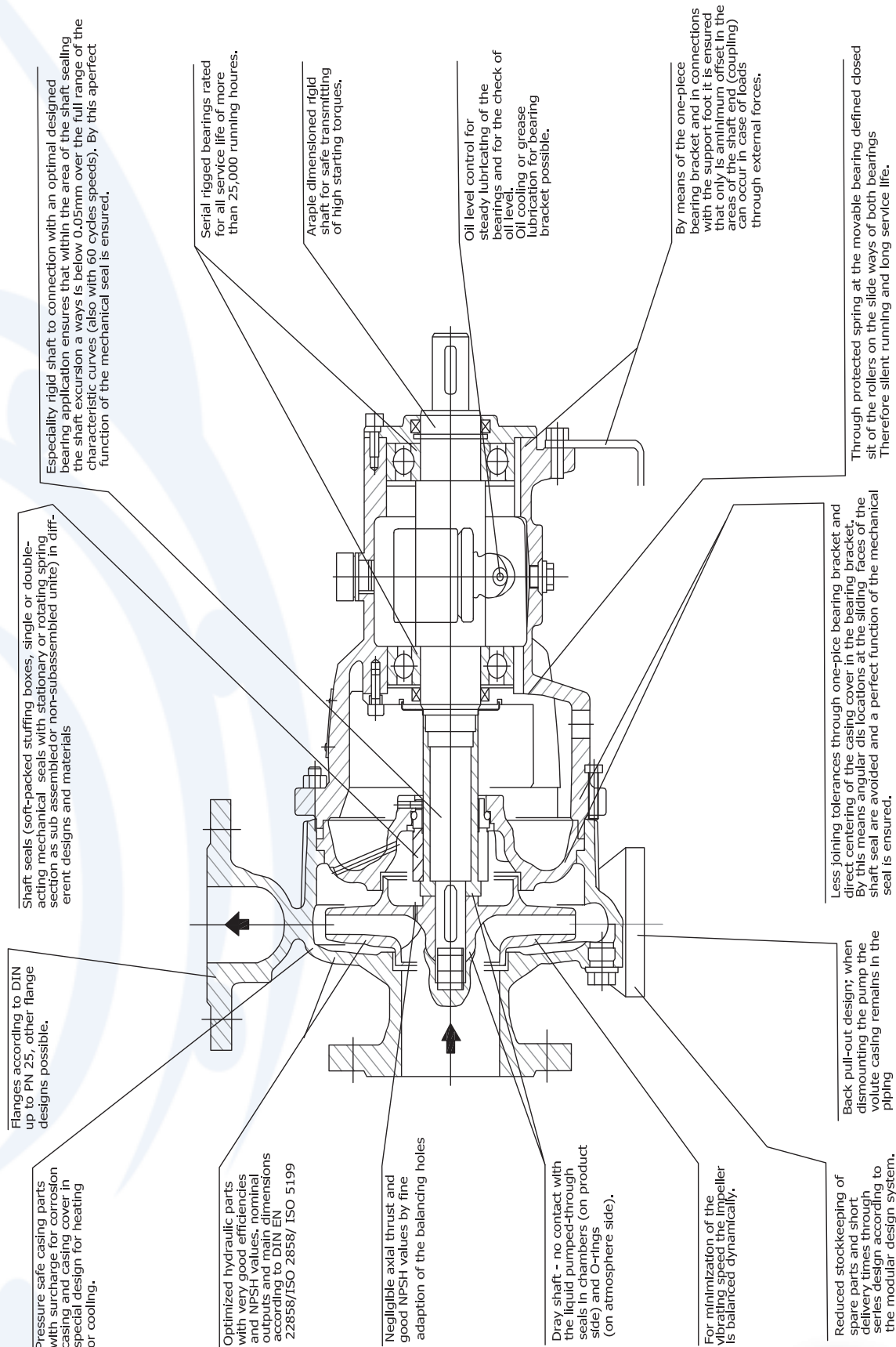
A1	Filling
B1	Draining
D1	Leakage drain
E3	venting
K1	Cooling inlet
K2	Cooling outlet
M2	pressure gauge
S1	External sealing





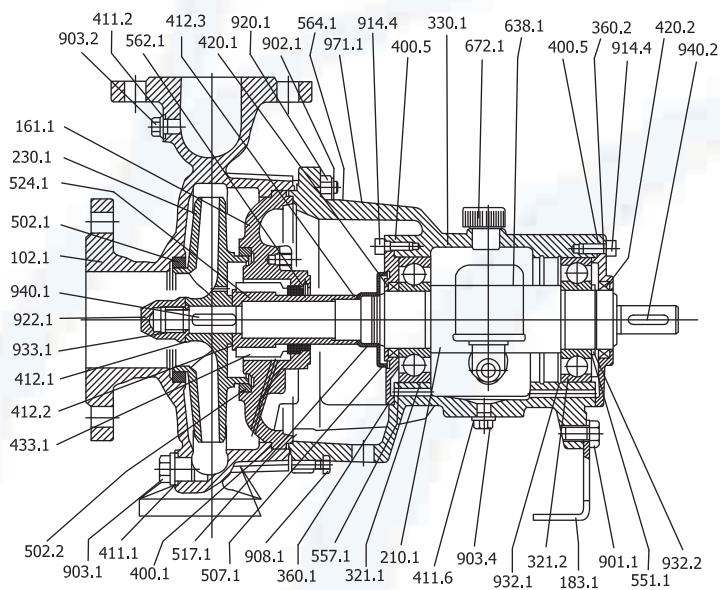
Size	Motor			Pump													Base Plate							
	KW	Size	1 appr	Suction flange acc. To DIN 2533					Delivery flange acc. To DIN 2533					a	f	h ₂	I ₁	I ₂	I ₃	I ₄	I ₅	X _v	X _h	
		Factor -h7		DN _s	D	k	g	Number of holes	DN _d	D	k	g	Number of holes											
80-160	5.5/7.5	132S	475														815	560			127	55		
	11/15	160M	625	100	220	180	18	8	80	200	160	18	4	125	360	225	900	630	-	-	135	70		
	18.5	160L	670														1000	710			145	80		
	22	180M	700														1000	710			145	80		
80-200	15	160M	625	100	220	180	18	8	80	200	160	18	4	125	470	250	1120	900	450		110	-	45	
	18.5	160L	670														1120	900	450	-	110	-	45	
	22	180M	700														1120	900	450		110	-	45	
	30/37	200L	790														1250	1190	595		30	135	-	
80-250	30/37	200L	750	100	220	180	18	8	80	200	160	18	4	125	470	280	1250	1190	595	-		135		
	45	225M	870	100	220	180	18	8	80	200	160	18	4	125	470	280	1250	1190	595	-	30	120	-	
	55	250M	960														1400	1340	-	440		180		
100-200	18.5	160L	670														1120	900	450	-	110	-	30	
	22	180M	700														1120	900	450	-	110	-	30	
	30/37	200L	790	125	250	210	18	8	100	220	180	18	8	125	470	280	1250	1190	595	-	30	135	-	
	45	225M	875														1250	1190	595	-	30	120	-	
	55	250M	960														1400	1340	-	440	30	180	-	
100-250	37	200L	790														1250	1190	595	-		135		
	45	225M	875														1250	1190	595	-		120		
	55	250M	960	125	250	210	18	8	100	220	180	18	8	125	470	280	1400	1340	-	440	30	180	-	
	75	280S	1020														1400	1340	-	440		120		
	90	280M	1064														1400	1340	-	440		120		
	110	315S	1130														1600	1540	-	500		225		
125-250	37	200L	790														1250	1190	595	-		135		
	45	225M	875														1250	1190	595	-	30	100	-	
	55	250M	960	150	285	240	22	8	125	250	210	18	8	140	470	355	1400	1340	-	440		180		
	75	280S	1020														1400	1340	-	440		120		

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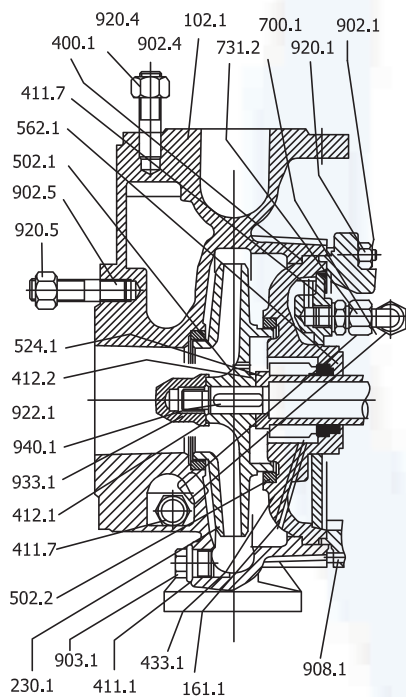


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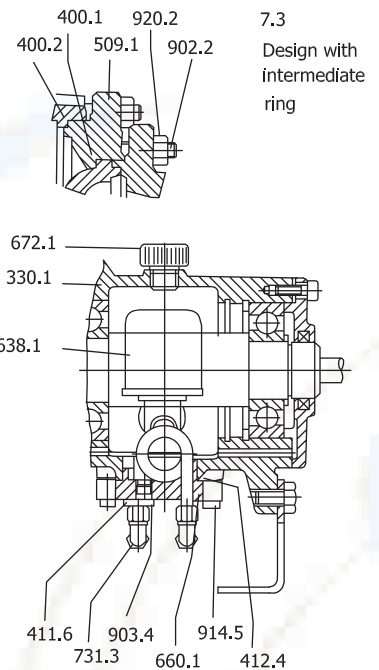
Sectional drawings and list of components



7.1 CNH-B with single-acting balanced mechanical seal KB basic design without sealing cover, with internal circulation



7.2 CNH-B heatable on both sides, with single-acting unbalanced mechanical seal KU, basic design without sealing cover, with internal circulation



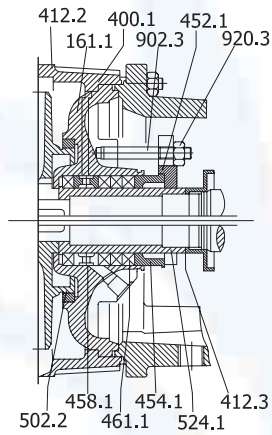
7.3 Design with intermediate ring

Part No.	Denomination	DIN No.
102.1	Volute casing	
161.1	Casing cover	
183.1	Supporting foot	
210.1	Shaft	
230.1	Impeller	
321.1	Grooved ball bearing	625
321.2	Grooved ball bearing	625
330.1	Bearing bracket	
360.1	Bearing cover	
360.2	Bearing cover	
400.1	Gasket	
400.2	Gasket	
400.3	Gasket	
400.4	Gasket	
400.5	Gasket	
411.1	Joint washer	7603
411.2	Joint washer	7603
411.6	Joint washer	7603
411.7	Joint washer	7603
412.1	O-ring	
412.2	O-ring	
412.3	O-ring	
412.4	O-ring	
420.1	Shaft steel	3760
420.2	Shaft steel	3760
433.1	Mechanical seal complete	24960
433.2	Mechanical seal complete	24960
452.1	Stuffing box gland	
454.1	Follower	
456.1	Neck bush	
458.1	Lantern ring	
461.1	Packing ring	
471.1	Sealing cover	
471.2	Sealing cover	
502.1	Casing wear ring	
502.2	Casing wear ring	
507.1	Splash ring	
509.1	Intermediate ring	
517.1	Tolerance ring	
524.1	Shaft sleeve	

7.4 Cooled bearing bracket

Part No.	Denomination	DIN No.
542.1	Throttle bush	
542.2	Throttle bush	
551.1	Support disk	988
557.1	Ball bearing	
562.1	balancing disk	
562.2	Cylindrical pin	7
564.1	Cylindrical pin	7
638.1	Grooved stud	1476
660.1	Oil level control	
672.1	Cooling system	
700.1	Vent plug	
731.2	Pipeline	
731.3	Union piece	
901.1	Union piece	
901.1	Hexagonal screw	933
902.1	Stud	939
902.2	Stud	939
902.3	Stud	939
902.4	Stud	939
902.5	Stud	939
903.1	Threaded plug	910
903.2	Threaded plug	910
903.4	Threaded plug	910
908.1	Set screw	933
914.3	Socket-head cap screw	912
914.4	Socket-head cap screw	912
914.5	Socket-head cap screw	912
914.6	Socket-head cap screw	912
920.1	Hexagonal nut	934
920.2	Hexagonal nut	934
920.3	Hexagonal nut	934
920.4	Hexagonal nut	934
920.5	Hexagonal nut	934
922.1	Impeller nut	
932.1	Circlip	472
932.2	Circlip	471
933.1	Locking insert	
940.1	Key	6885
940.2	Key	6885
971.1	Rating plate	

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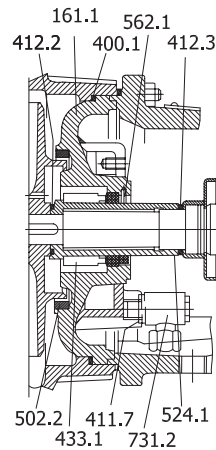


7.5

Stuffing box with
internal
circulation
(internal sealing)

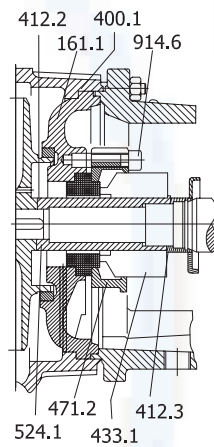
7.6

Stuffing box with
external sealing



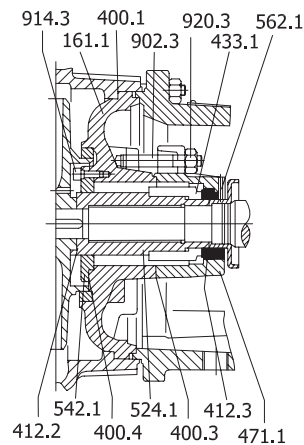
7.7

Single-acting
unbalanced
mechanical seal
KU, cooled



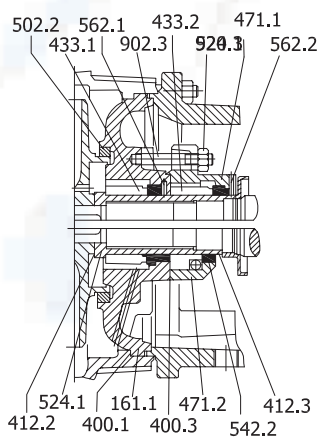
7.8

Externally arranged
single-acting
balanced
mechanical seal



7.9

Single-acting
balanced
mechanical seal
KB, with throttle
bush, basic design
with sealing
cover and
external flushing

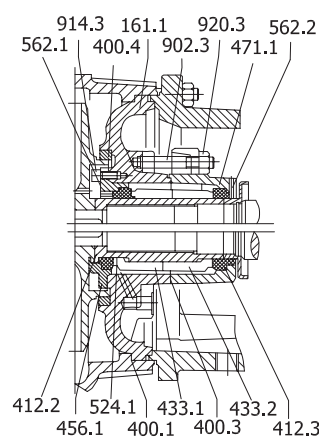


7.10

Single-acting
unbalanced
mechanical seal
of tandem design
KU + KU

7.11

Single-acting
unbalanced
mechanical seal
and quench
KU + quench



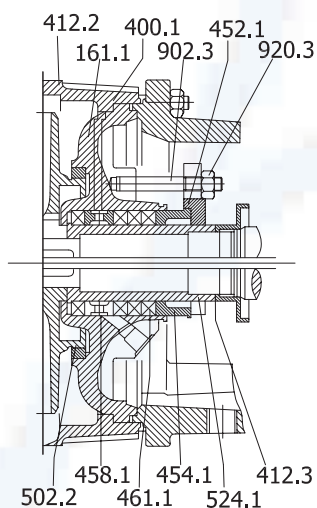
7.12

Double-acting
unbalanced
mechanical seal
UU, pump and
atmosphere sides
unbalanced

7.13

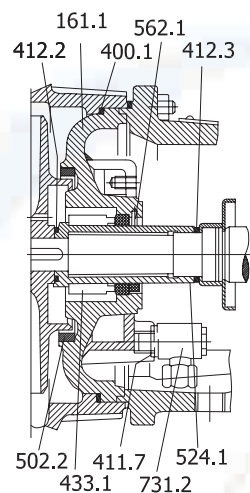
Double-acting
balanced
mechanical seal
BB, pump and
atmosphere sides
balanced

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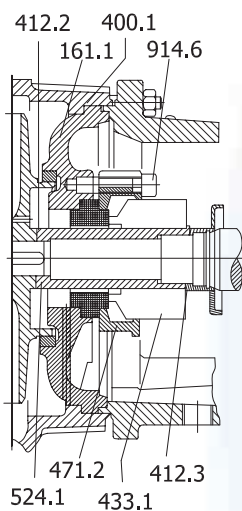


7.5
Stuffing box with
internal
circulation
(internal sealing)

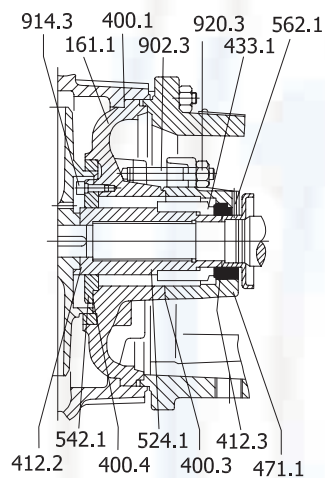
7.6
Stuffing box with
external sealing



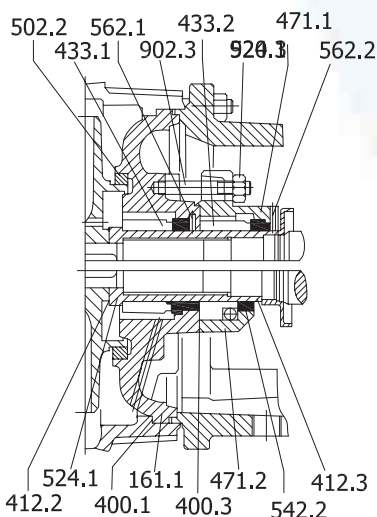
7.7
Single-acting
unbalanced
mechanical seal
KU, cooled



7.8
Externally arranged
single-acting
balanced
mechanical seal

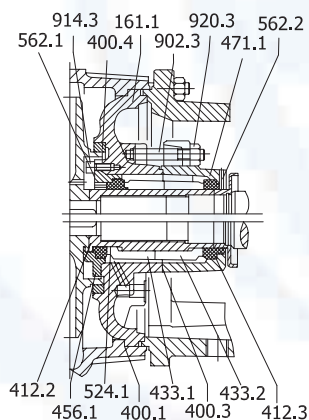


7.9
Single-acting
balanced
mechanical seal
KB, with throttle
bush, basic design
with sealing
cover and
external flushing



7.10
Single-acting
unbalanced
mechanical seal
of tandem design
KU + KU

7.11
Single-acting
unbalanced
mechanical seal
and quench
KU + quench



7.12
Double-acting
unbalanced
mechanical seal
UU, pump and
atmosphere sides
unbalanced

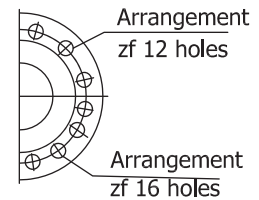
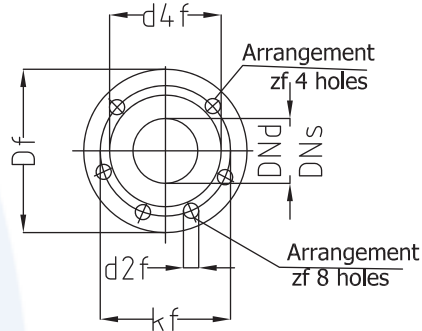
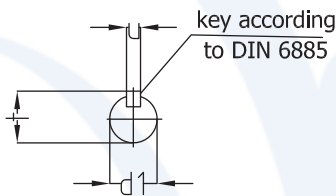
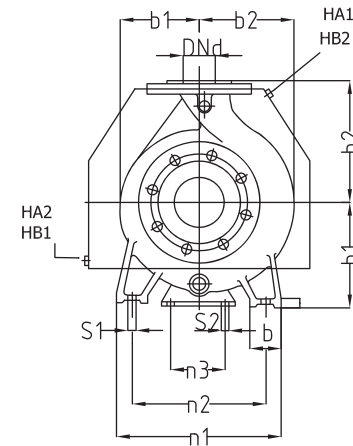
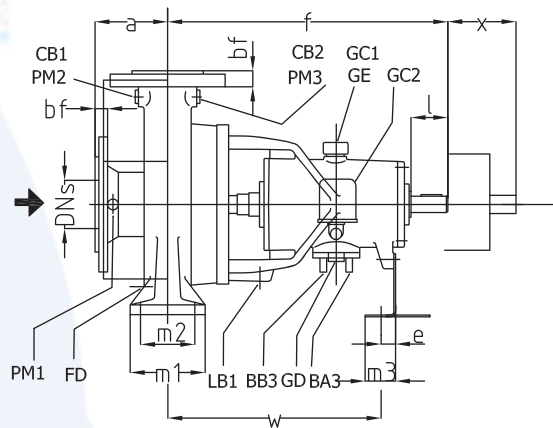
7.13
Double-acting
balanced
mechanical seal
BB, pump and
atmosphere sides
balanced





Tables of dimensions

Pump dimensions and auxiliary connections



Dimensions in mm
Subject to alterations

Flanges PN 16 , DIN 2543						
DNs/DNd	Df	bf	kf	d4f	zf	d2f ①
25	115	18	85	68	4	14
32	140	18	100	78	4	18
40	150	18	100	88	4	18
50	165	20	125	102	4	18
65	185	18	145	122	4	18
80	200	20	160	138	8	18
100	220	20	180	158	8	18
125	250	22	210	188	8	18
150	285	22	240	212	8	22
200	340	24	295	268	12	22
250	405	26	355	320	12	26
300	460	28	410	378	12	26

Sense of rotation :clockwise as seen
from the driving side

Flanges PN 16 , DIN 2533						
DNs/DNd	Df	bf	kf	d4f	zf	d2f
25	115	16	85	68	4	14
32	140	18	100	78	4	18
40	150	18	110	88	4	18
50	165	20	125	102	4	18
65	185	20	145	122	4	18
80	200	22	160	138	8	18
100	220	24	180	158	8	18
125	250	26	210	188	8	18
150	285	26	240	212	8	22
200	340	30	295	268	12	22
250	405	32	355	320	12	26
300	460	32	410	378	12	26

Flanges PN 25 , DIN 2544						
DNs/DNd	Df	bf	kf	d4f	zf	d2f ①
25	115	18	85	68	4	14
32	140	18	100	78	4	18
40	150	18	110	88	4	18
50	165	20	125	102	4	18
65	185	22	145	122	8	18
80	200	24	160	138	8	18
100	235	24	190	162	8	22
125	270	26	220	188	8	26
150	300	28	250	218	8	26
200	360	30	310	278	12	26
250	425	32	370	335	12	30
300	485	34	430	395	16	30

Flanges PN 25 , DIN 2534						
DNs/DNd	Df	bf	kf	d4f	zf	d2f
25	115	18	85	68	4	14
32	140	20	100	78	4	18
40	150	20	110	88	4	18
50	165	22	125	102	4	18
65	185	24	145	122	8	18
80	200	26	160	138	8	18
100	235	28	190	162	8	22
125	270	30	220	188	8	26
150	300	34	250	218	8	26
200	360	34	310	278	12	26
250	425	36	370	335	12	30
300	485	40	430	395	16	30

① Studs for heatable designs will also be supplied

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Dimensions in mm
subject to alteration

size	pump dimensions								Foot dimensions														Extension dimension X	Shaft end			
	DNs	DNd	a	f	b1	b2	h1	h2	b	c	c1	e	m1	m2	m3	n1	n2	n3	w	s1	s2	d1		l	t	u	
25-160	40	25	80	385	128	128	132	160	50	15	4	28	100	70	45	240	190	110	285	M 12	M 12	100	24	50	27	8	
25-200	40	25	80	385	132	132	160	180	50	15	4	28	100	70	45	240	190	110	285	M 12	M 12	100	24	50	27	8	
32-160	50	32	80	385	130	130	132	160	50	15	4	30	100	70	45	240	190	110	285	M 12	M 12	100	24	50	27	8	
32-200	50	32	80	385	130	135	160	180	50	15	4	30	100	70	45	240	190	110	285	M 12	M 12	100	24	50	27	8	
32-250	50	32	100	500	170	170	180	225	65	15	6	24	125	95	40	320	250	110	370	M 12	M 12	100	32	80	35	10	
40-160	65	40	80	385	130	130	132	160	50	15	4	30	100	70	45	240	190	110	285	M 12	M 12	100	24	50	27	8	
40-200	65	40	100	385	130	140	160	180	50	15	4	30	100	70	45	265	212	110	285	M 12	M 12	100	24	50	27	8	
40-250	65	40	100	500	170	170	180	225	65	15	6	24	125	95	40	320	250	110	370	M 12	M 12	100	32	80	35	10	
40-315	65	40	125	500	200	200	200	250	65	20	6	24	125	95	40	345	280	110	370	M 12	M 12	100	32	80	35	10	
50-160	80	50	100	385	130	130	160	180	50	15	4	30	100	70	45	265	212	110	285	M 12	M 12	100	24	50	27	8	
50-200	80	50	100	385	135	150	160	200	50	15	4	30	100	70	45	265	212	110	285	M 12	M 12	100	24	50	27	8	
50-250	80	50	125	500	170	170	180	225	65	15	6	24	125	95	40	320	250	110	370	M 12	M 12	100	32	80	35	10	
50-315	80	50	125	500	200	200	225	280	65	20	6	24	125	95	40	345	280	110	370	M 12	M 12	100	32	80	35	10	
65-180	100	65	100	500	130	155	160	200	65	15	4	30	125	95	45	280	212	110	370	M 12	M 12	100	32	80	35	10	
65-200	100	65	100	500	170	170	180	225	65	15	6	24	125	95	40	320	250	110	370	M 12	M 12	140	32	80	35	10	
65-250	100	65	125	500	170	190	200	250	80	18	6	24	160	120	40	360	280	110	370	M 16	M 12	140	32	80	35	10	
65-315	100	65	125	530	200	230	225	280	80	20	6	31	160	120	56	400	315	110	370	M 16	M 12	140	42	110	45	12	
80-160	125	80	125	500	145	180	180	225	65	15	4	30	125	95	45	320	250	110	370	M 12	M 12	140	32	80	35	10	
80-200	125	80	125	500	170	190	180	250	65	18	6	24	125	95	40	345	280	110	370	M 12	M 12	140	32	80	35	10	
80-250	125	80	125	500	185	210	225	280	80	18	6	24	160	120	40	400	315	110	370	M 16	M 12	140	32	80	35	10	
80-315	125	80	125	530	210	255	250	315	80	20	6	31	160	120	56	400	315	110	370	M 16	M 12	140	42	110	45	12	
80-400	125	80	125	530	245	260	280	355	80	20	6	31	160	120	56	435	355	110	370	M 16	M 12	140	42	110	45	12	
100-200	125	100	125	500	170	205	200	280	80	18	6	24	160	120	40	360	280	110	370	M 16	M 12	140	32	80	35	10	
100-250	125	100	140	530	200	230	225	280	80	20	6	31	160	120	56	400	315	110	370	M 16	M 12	140	42	110	45	12	
100-315	125	100	140	530	210	280	250	315	80	20	6	31	180	120	56	400	315	110	370	M 16	M 12	140	42	110	45	12	
100-400	125	100	140	530	250	295	280	355	100	20	6	31	200	150	56	500	400	110	370	M 20	M 12	140	42	110	45	12	
125-250	150	125	140	530	210	260	250	355	80	20	6	31	160	120	56	400	315	110	370	M 16	M 12	140	42	110	45	12	
125-315	150	125	140	530	215	255	280	355	100	20	6	31	200	150	56	500	400	110	370	M 20	M 12	140	42	110	45	12	
125-400	150	125	140	530	265	320	315	400	100	20	6	31	200	150	56	500	400	110	370	M 20	M 12	140	42	110	45	12	
150-250	200	150	160	530	225	285	280	375	100	20	6	31	200	150	56	500	400	110	370	M 20	M 12	180	42	110	45	12	
150-315	200	150	160	670	265	280	315	400	100	22	8	33	200	150	58	550	450	140	500	M 20	M 16	180	48	110	51,5	14	
150-400	200	150	160	670	300	330	315	450	100	22	8	33	200	150	58	550	450	140	500	M 20	M 16	180	48	110	51,5	14	
150-500	200	150	180	670	320	380	315	500	100	25	8	33	200	150	58	550	450	140	500	M 20	M 16	180	48	110	51,5	14	
200-250	200	200	180	530	265	340	355	425	100	27	6	31	200	150	56	550	450	110	370	M 20	M 12	180	42	110	45	12	
200-315	250	200	200	670	275	350	355	450	100	27	8	33	200	150	58	550	450	140	500	M 20	M 16	180	48	110	51,5	14	
200-400	250	200	180	670	315	370	355	500	100	30	8	33	200	150	58	550	450	140	500	M 20	M 16	180	48	110	51,5	14	
200-500	250	200	200	670	360	440	425	560	100	25	8	33	200	150	58	660	560	140	500	M 20	M 16	180	48	110	51,5	14	
250-315	300	250	250	670	315	445	400	560	130	30	8	33	260	190	58	690	560	140	500	M 24	M 18	180	48	110	51,5	14	

① does not apply to heatable designs

