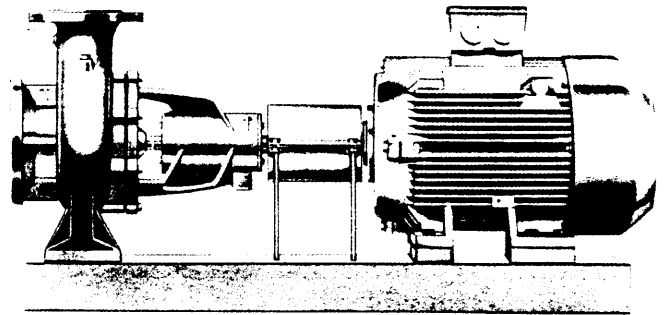


# **Volute Casing Centrifugal Pumps PN10 Series NT according to DIN 24 255 and Additional Sizes**



### Usage and main fields of application

In cooling and heating circuits in circulating, water supply, water treatment, irrigation, desalinization, dedusting and spray painting installations as well as in air-conditioning, refrigerating, swimming pool and industrial engineering. For pumping pure water, industrial water, sea water, condensate, oils, brines, lyes, hot water, just to mention a few. The fluids to be pumped must not contain any abrasive particles nor chemically attack the pump materials.

### Design and series construction

Horizontal volute casing centrifugal pump with axial inlet, single-flow, single or two-stage, in back pull-out design.

Series construction according to the unit assembly system. Shaft bearing in a bearing bracket which can be provided with a support foot, except for size 25-160 (with sizes on bearing bracket size 585 serial equipment, with all other sizes available on request only). Volute casing with cast-on feet.

The additional two-stage sizes correspond in their outer dimensions to the respective single-stage sizes. Due to the two-stage type, relatively small delivery flows are achieved with great delivery heads, good efficiencies and low NPSH values.

### Branch positions/flanges

Suction branch: axial  
 Delivery branch: radially upwards  
 Flanges: up to DN 150 according to DIN 2533  
 DN 200 and above according to DIN 2532

### Pump power output

With the sizes according to DIN 24 255, the pump power output exceeds the standard nominal output considerably. By 15 additional sizes, the coverage chart acc. to DIN was increased.

### Shaft sealing

By uncooled, asbestos-free stuffing box or by uncooled, maintenance-free standard mechanical seal in unbalanced or balanced design in different materials (see page 2).

### Bearing and lubrication

Sizes on bearing bracket sizes 228, 360 and 470  
 2 grooved ball bearings 2ZC3 DIN 625, grease-lubricated.  
 Sizes on bearing bracket sizes 530 and 585  
 2 grooved ball bearings C3 DIN 625, grease-lubricated.

### Dismantling of the built-in unit

When using a shaft coupling with spacer, the built-in unit can be dismantled towards the motor side, whereas the volute casing and the motor may remain on the base plate and the pipelines on the volute casing.

### Connections

The following connections are always provided:

- FD Draining
- FF Filling ①
- LO Leakage outlet
- PM2 Pressure gauge

and depending upon the type of the shaft sealing:

- BI External sealing of the stuffing box

① Connection FF not provided in sizes 25-200 and 2/25-200. Refilling possible at connection PM2.

### Shaft coupling and protection against accidental contact

Shaft coupling according to DIN 740 without or with spacer. A coupling guard as a protection against accidental contact according to DIN 31001 is also supplied as soon as the scope of supply comprises pump, base plate and shaft coupling.

### Base plates

Using couplings without spacer:  
 Base plates of steel, U-beam. Details see installation plan in this descriptive literature.  
 Base plates with drip channel of cast iron or fabricated steel (material depending on size) see separate installation plans VM 538 E/... 3010-3016.

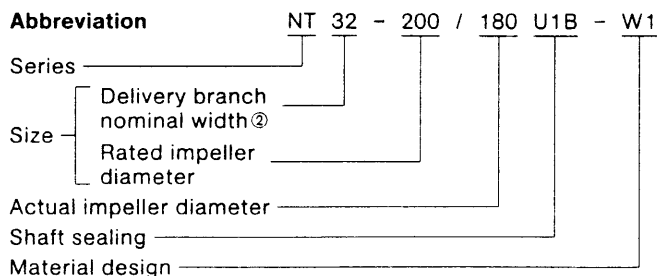
Using coupling with spacer:  
 Base plates of steel, U-beam, see separate installation plans VM 538 E/... 3020-3026.  
 Base plates with drip channel of cast iron or fabricated steel (material depending on size) see separate installation plans VM 538 E/... 3030-3036.

### Drive

Surface-cooled, three-phase squirrel-cage induction motors, IMB3 type of construction, enclosure IP 44/IP 54 according to IEC standard, class B insulation, performances and main dimensions according to DIN 42673.

### Special designs

NT pumps of special design, e.g. for attachment to internal combustion engines or with special shaft sealings or other material designs on request.



This abbreviation is entered on the rating plate. With the two-stage additional sizes, the actual impeller diameter relates to the second stage.

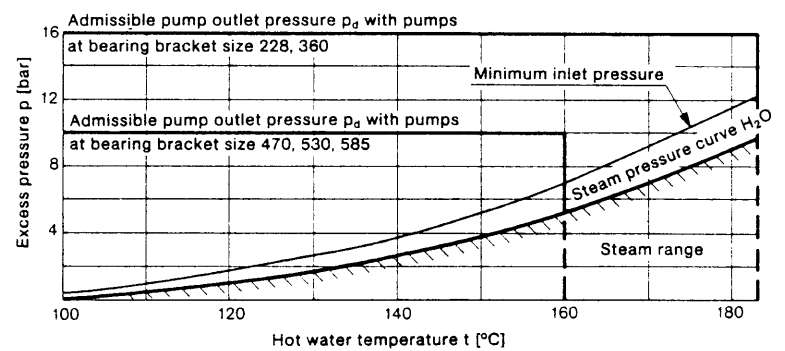
② With the two-stage additional sizes, the number of stages is placed with a slash in front of the delivery branch nominal width, e.g. NT 2/32-200/...

**Shaft sealings with temperature and pressure limits**  
Valid for all material designs of the pumps.

Mechanical seal, uncooled	unbalanced										balanced
	internal flushing						internal flushing bore				
Flushing	internal flushing						internal flushing bore				
Abbreviation	U3D	U3.1D	U3.9D	U3.12D	U3.10D	U3.11D	U3.10K	U3.11K	U3.8K	U2.4K	
Rotating seal ring	Hard carbon, resin impregnated		Carbon, surface siliconized		Hard carbon, resin impregnated		Hard carbon, resin impregnated		Silicone carbide, reaction bound		
Stationary seal ring	Oxide ceramics		Carbon, surface siliconized		Silicone carbide		Silicone carbide		Hard carbon, antimony impregnated		
Metal parts	CrNi-steel		CrNiMo-steel		CrNi-steel		CrNi-steel		CrNiMo-steel		
O-rings	EPDM	Viton	EPDM	Viton	EPDM	Viton	EPDM	Viton	EPDM ③	EPDM/PTFE ④	
Bellow	-	-	EPDM	Viton	-	-	-	-	-	-	
Material key, DIN 24960	BVEFF	BVVFF	UUEGG	UUVGG	BUEFF	BUVFF	BUEFF	BUVFF	UAEGG	UAMGG	
Centrifugal pumps at bearing bracket size	Admissible temperature (°C) of pumped liquid and pump outlet pressure p <sub>d</sub> (bar)										
		°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar
228		140 / 10	140 / 10 ①	120 / 10 ②	120 / 10 ①	-	-	120 / 16	120 / 16 ①	-	-
		-	-	-	-	-	-	140 / 12	140 / 12 ①	-	-
360	single-stage	140 / 10	140 / 10 ①	120 / 10 ②	120 / 10 ①	-	-	120 / 16	120 / 16 ①	160 / 16	183 / 16
	two-stage	-	-	-	-	-	-	140 / 12	140 / 12 ①	-	-
470		140 / 10	140 / 10 ①	120 / 10 ②	120 / 10 ①	-	-	-	-	160 / 10	-
530		140 / 10	140 / 10 ①	120 / 10 ②	120 / 10 ①	-	-	-	-	160 / 10	-
585		140 / 10	140 / 10 ①	120 / 10 ②	120 / 10 ①	-	-	-	-	160 / 10	-

- ① with water max. 100°C      ③ EPDM peroxide-cured
- ② with water max. 110°C      ④ EPDM/PTFE covered

The diagram below shows operating limits as a function of temperature and admissible pump outlet pressure. To secure the shaft sealing function, e.g. when pumping hot water the minimum inlet pressure as shown in the diagram must be observed (necessary safety against evaporation).  
With other liquids pumped the temperature limits and the minimum inlet pressure may change according to the corresponding steam pressure curve.  
Inlet pressure plus maximum delivery head must not exceed the admissible pump outlet pressure.



Stuffing box	uncooled		
Sealing	without	internal	external
Abbreviation	U1A	U1B	U1C
Packing rings	Graphite PTFE basis (asbestos-free)		
Centrifugal pumps at bearing bracket size	Admissible temperature (°C) of pumped liquid and pump outlet pressure p <sub>d</sub> (bar)		
	°C / bar	°C / bar	°C / bar
228	183 / 16	125 / 16	125 / 16
360	single-stage	183 / 16	125 / 16
	two-stage	-	-
470	160 / 10	125 / 10	125 / 10
530	160 / 10	125 / 10	125 / 10
585	160 / 10	125 / 10	125 / 10

**Materials**

Denomination	Parts No.		Material design						
	1 stage	2 stage	W1	W2	W3	W10	W18	W64	W88
Volute casing	102...	102...	GG-25	GG-25	G-CuAl10Ni	GGG-40	GG-25	GG-25	GGG-40
Impeller (s)	230...	230...	GG-20	G-CuAl10Ni	G-CuAl10Ni	GG-20	G-CuAl10Ni	1.4408	G-CuAl10Ni
Diffuser	-	171...	GG-20	G-CuAl10Ni	G-CuAl10Ni	GG-20	G-CuAl10Ni	-	G-CuAl10Ni
Stage casing	-	108...	GG-25	GG-25	G-CuAl10Ni	GG-25	GG-25	-	GG-25
Casing cover	161...	161...	GG-25	GG-25	G-CuAl10Ni	GGG-40	GG-25	GG-25	GGG-40
Shaft ①	210...	210...	1.4021	1.4021	1.4401	1.4021	1.4401	1.4401	1.4401
Bearing bracket	330...	330...	GG-25	GG-25	GG-25	GG-25	GG-25	GG-25	GG-25
Bearing cover	360...	360...	GG-25	GG-25	GG-25	GG-25	GG-25	GG-25	GG-25
Gland	452...	-	GG-25	GG-25	G-CuAl10Ni	GG-25	GG-25	GG-25	GG-25
Lantern ring	458...	-	1.4301	1.4301	1.4301	1.4301	1.4301	1.4301	1.4301
Intermediate ring	509...	-	GG-25	GG-25	G-CuAl10Ni	GGG-40	GG-25	GG-25	GGG-40
Spacer sleeve	525...	525...	GG-25	GG-25	G-CuSn12	GG-25	G-CuSn12	G-CuSn12	G-CuSn12
Impeller nut	922...	922...	5	5	1.4571	5	1.4571	1.4571	1.4571

① With bearing bracket size 585 the pump side (fluid contact) in the material stated above / motor side in 1.7139

**Material designs and combination of component parts**

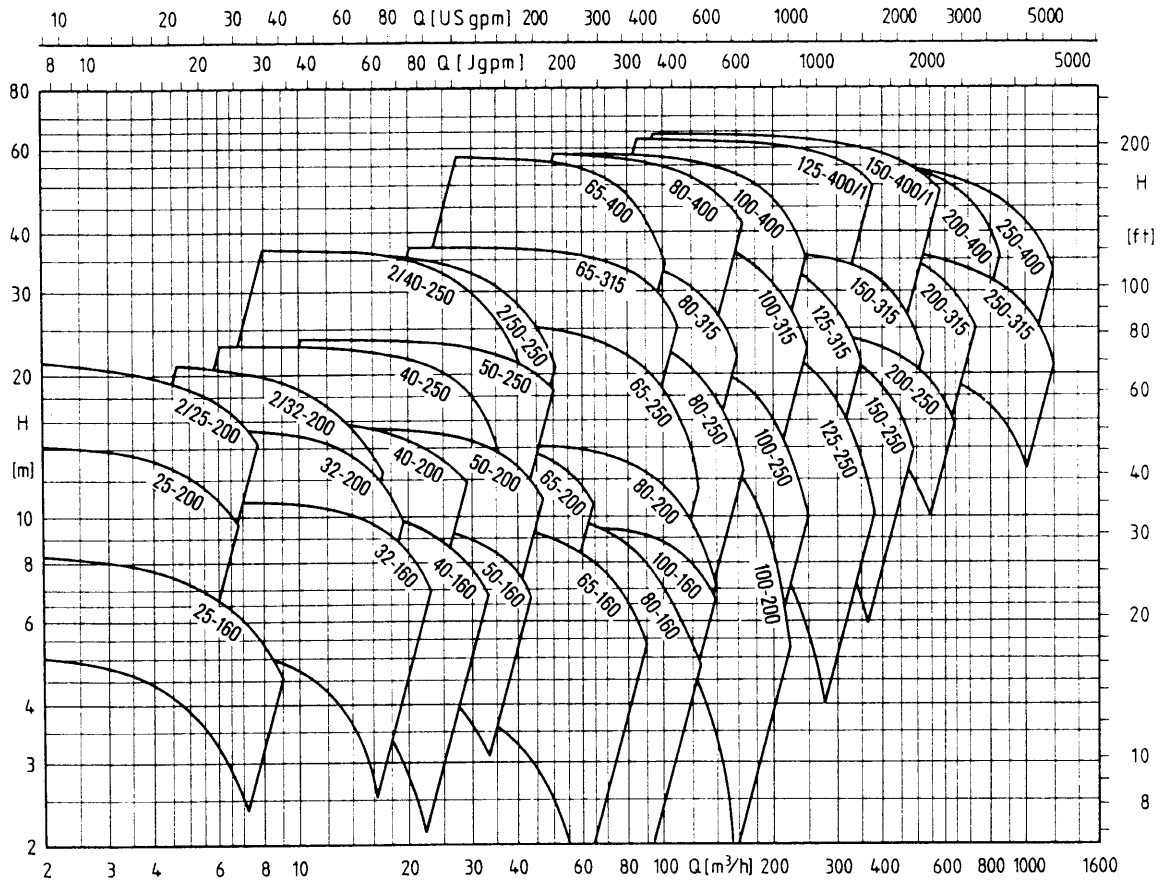
The table below shows the possible material designs (not mentioned practicabilities upon request) as well as the combination possibilities of component and piece parts of the standard sizes including additional sizes.

The unit assembly system allows a reduced stockkeeping of spare parts.

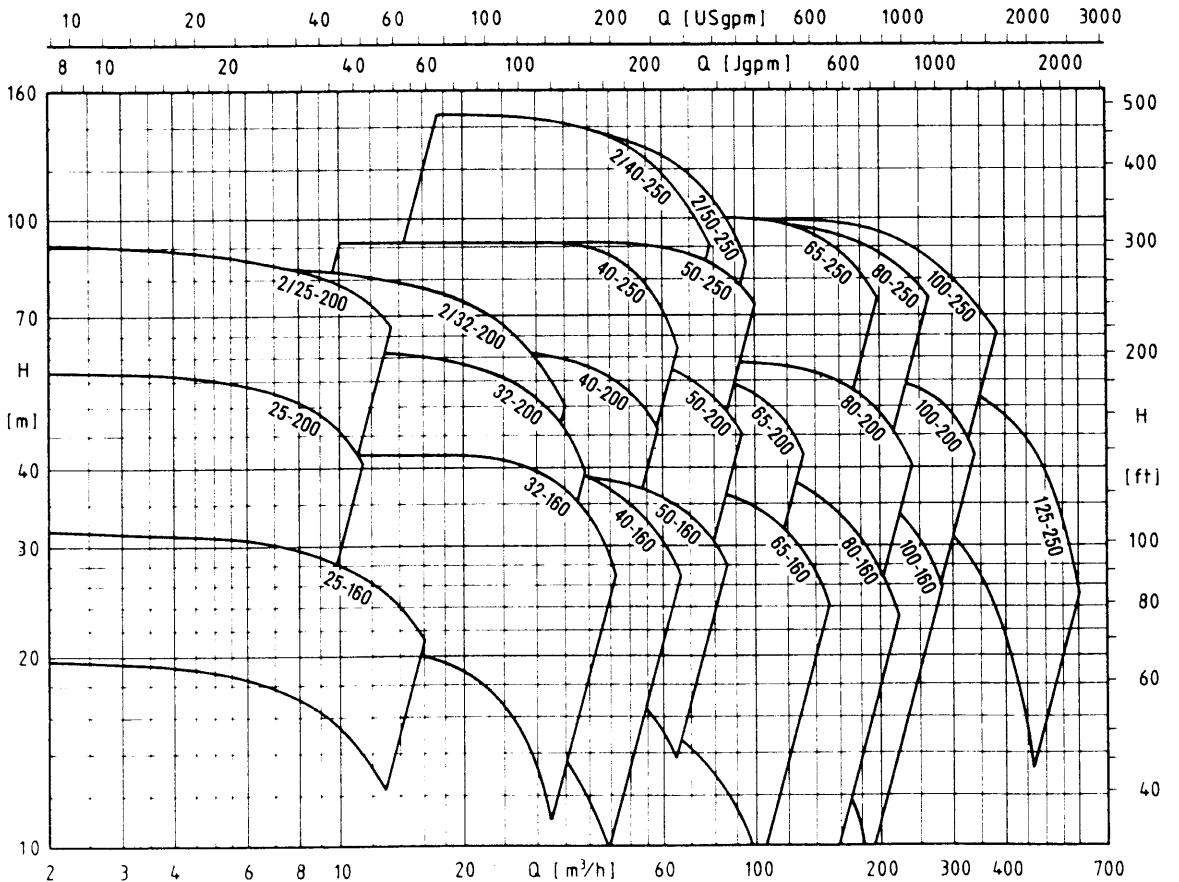
Bearing bracket size	Pump size		Material design			Within a vertical column, parts with identical numbers are exchangeable																
	acc. to DIN 24 255 NT	Additional size NT	W 1 W 2 W 3 W 18	W 10 W 88	W 64	Volute casing	Impeller	Impeller		Diffuser	Stage casing	Inter-mediate ring	Casing cover	Bearing bracket	Shaft	Support foot						
								1st stage	2nd stage													
228	-	25-160	●	●		1	1	-	-	-	-	-	1	1	1	-						
360	-	25-200	●	●	●	2	2	-	-	-	-	-	2	2	2	1						
	-	2/25-200	●	●			-	1	1	1	1		3		3							
	32-160	-	●	●	●	3	3	-	-	-	-		2		2	2						
	32-200	-	●	●	●	4	4	-	-	-	-		2		2	1						
	-	2/32-200	●	●			-	1	1	1	1		3		3	3						
	40-160	-	●	●	●	5	5	-	-	-	-		-		2	2	2	2				
	40-200	-	●	●	●	6	6									1	1	1	1	2	1	
	40-250	-	●	●		7	7									-	-	-	-	2	2	1
	-	2/40-250	●	●			-									2	2	2	2	4	4	3
	50-160	-	●	●	●	8	8	-	-	-	-		-		2	2	2	1				
	50-200	-	●	●	●	9	9									1	1	1	1	2	2	3
	50-250	-	●	●		10	10									-	-	-	-	4	4	3
	-	2/50-250	●	●			-									3	2	2	2	4	4	3
	65-160	-	●	●		11	11	-	-	-	-		-		2	2	2	1				
	65-200	-	●	●		12	12									2	2	2	2	2	3	
	80-160	-	●	●		13	13									3	3	3	3	3	4	
-	100-160	●	●		14	14	4					4		4		4	4	4				
470	65-250	-	●	●	●	15	15	-	-	-	-	-	5	3	4	5						
	65-315	-	●			16	16									2	2	2	2	6		
	-	65-400	●			17	17									3	3	3	3	7		
	80-200	-	●	●	●	18	18									4	4	4	4	8		
	80-250	-	●	●	●	19	19									5	5	5	5	5		
	80-315	-	●			20	20									6	6	6	6	7		
	100-200	-	●	●	●	21	21									7	7	7	7	5		
	100-250	-	●	●	●	22	22									8	8	8	8	6		
	100-315	-	●			23	23									9	9	9	9	7		
	125-250	-	●	●		24	24									10	10	10	10	7		
530	-	80-400	●			25	25	-	-	-	-	-	4	4	5	9						
	100-400	-	●			26	26									4	4	4	4	9		
	125-315	-	●			27	27									5	5	5	5	10		
	125-400/1	-	●			28	28									6	6	6	6	10		
	-	150-250	●		●	29	29									7	7	7	7	9		
	150-315	-	●			30	30									8	8	8	8	10		
	150-400/1	-	●			31	31									9	9	9	9	10		
	-	200-250	●		●	32	32									10	10	10	10	11		
585	-	200-315	●	●	●	33	33	-	-	-	-	-	8	5	6	12						
	-	200-400	●	●	●	34	34									11	11	11	11	13		
	-	250-315	●	●	●	35	35									12	12	12	12	13		
	-	250-400	●	●		36	36									13	13	13	13	13		

Performance graph

n = 1450 1/min



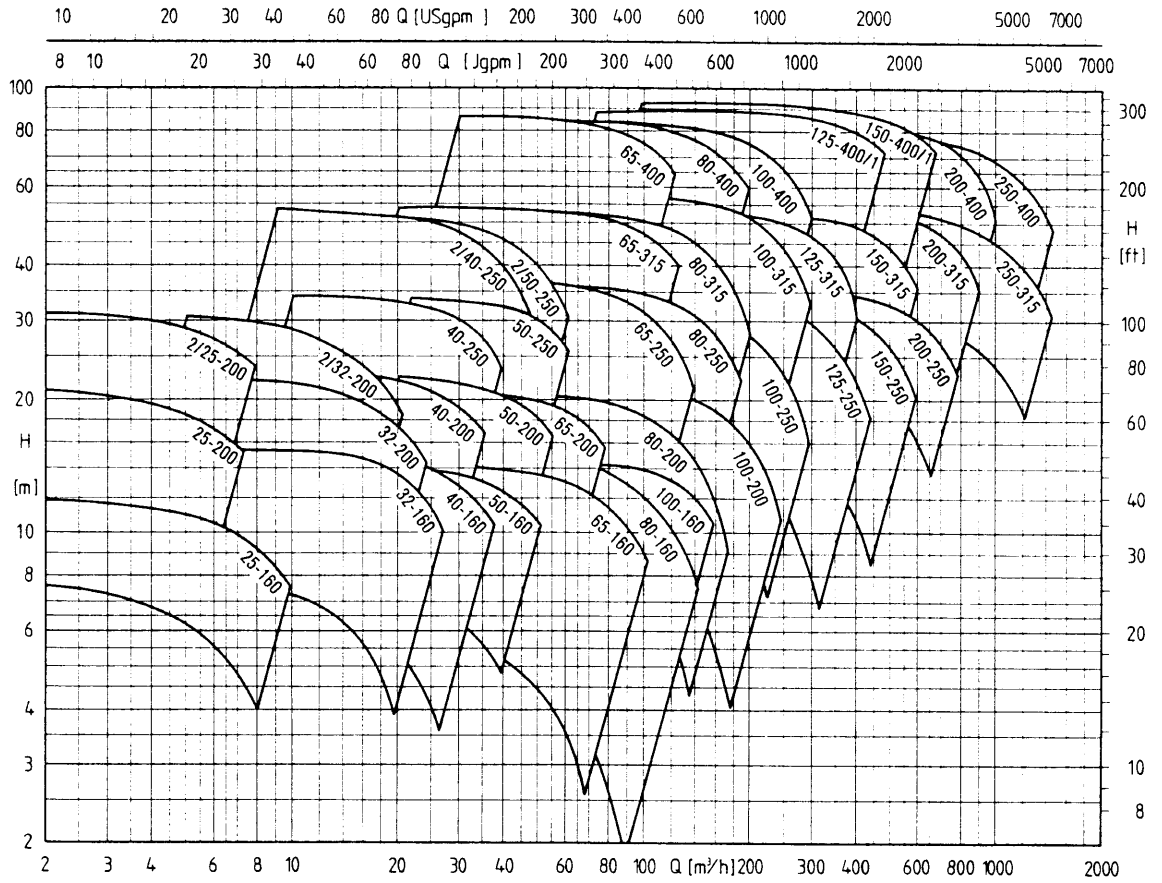
n = 2900 1/min



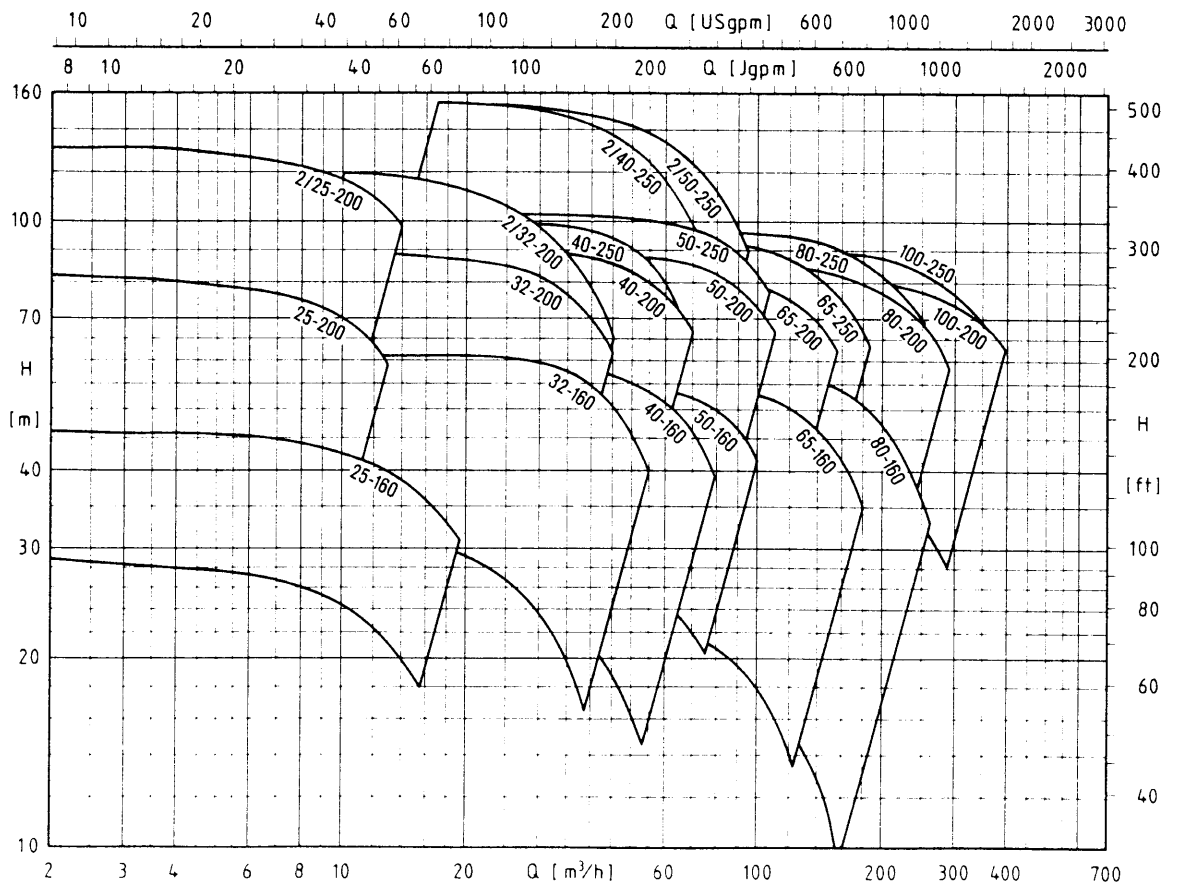
For exact performance data, please refer to the individual characteristics.

Performance graph

n = 1750 1/min

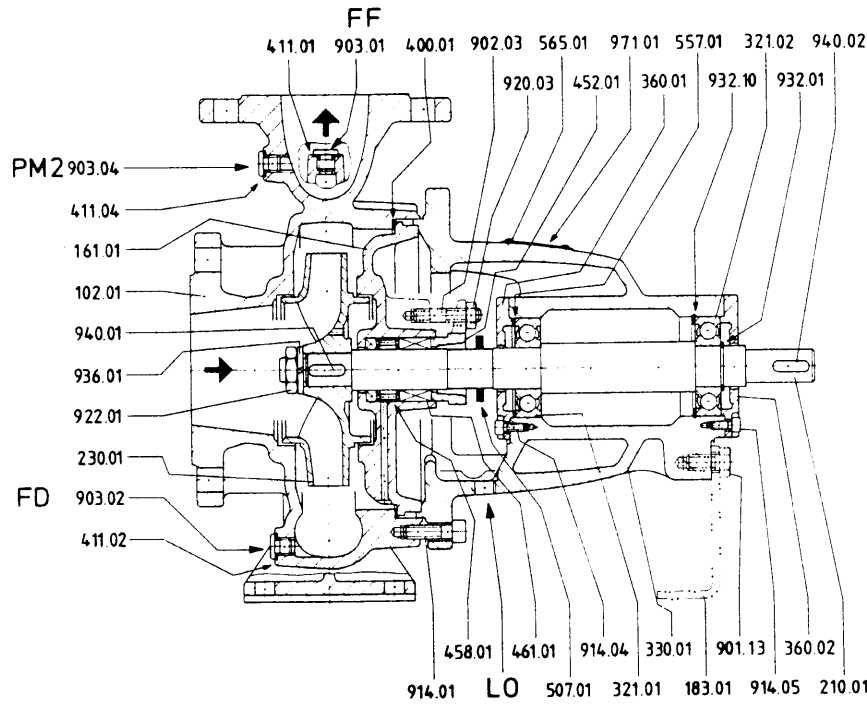


n = 3500 1/min

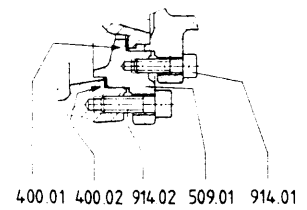
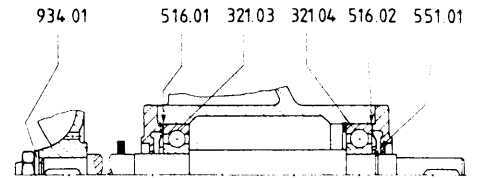


For exact performance data, please refer to the individual characteristics.

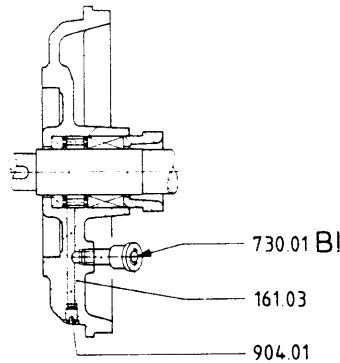
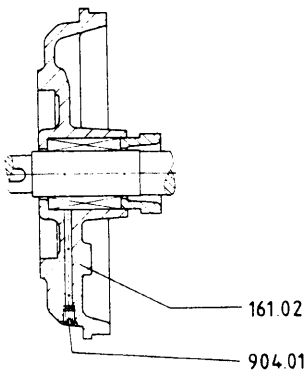
Sectional drawing for single-stage sizes  
 Sizes on bearing bracket sizes 360, 470 and 530



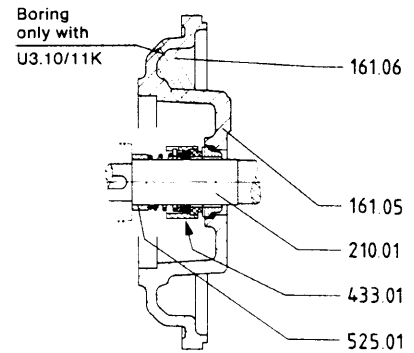
Type of bearing and impeller safety mechanism with bearing bracket size 530



Shaft sealing: Stuffing box with internal sealing  
 Abbreviation: **U1B**



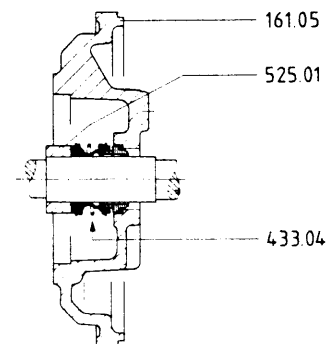
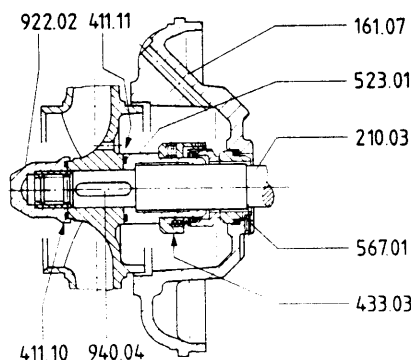
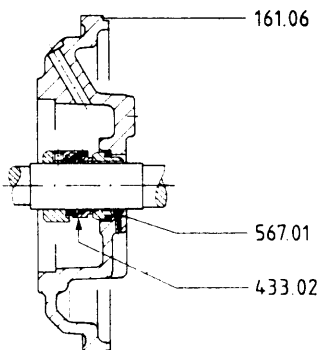
Model with intermediate ring



Stuffing box without sealing  
 U1A

Stuffing box with external sealing  
 U1C

Mechanical seal unbalanced  
**U3D, U3.1D or U3.10/11K**  
 U3.10/11K with bearing bracket size 360 only

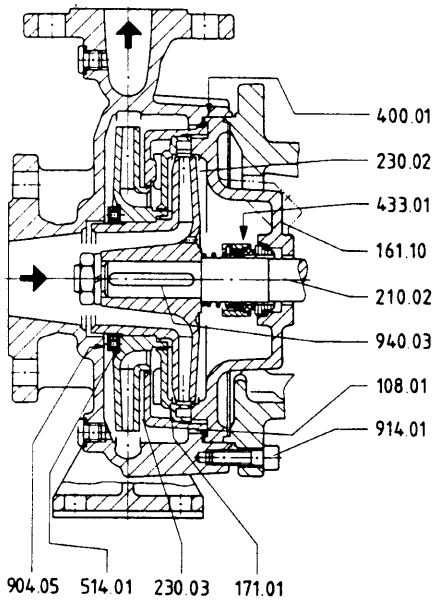


Mechanical seal unbalanced  
**U3.8K**

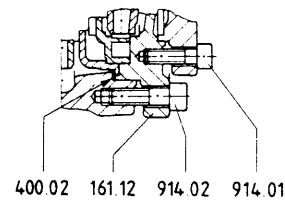
Mechanical seal unbalanced  
**U2.4K**  
 with bearing bracket size 360 only

Mechanical seal unbalanced  
**U3.9D, U3.12D**

Sectional drawing for two-stage sizes  
 Sizes on bearing bracket size 360



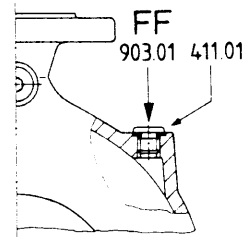
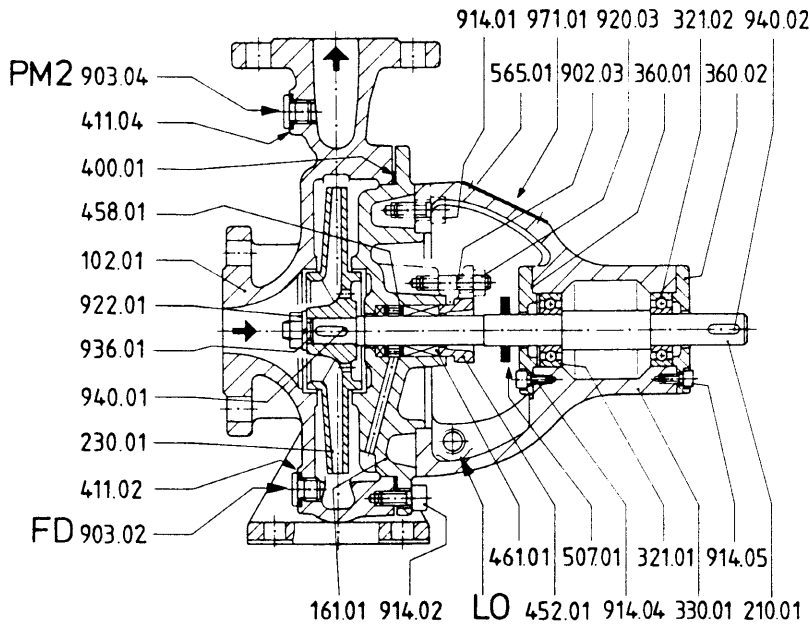
Mechanical seal unbalanced  
**U3D, U3.1D or U3.10/11D**



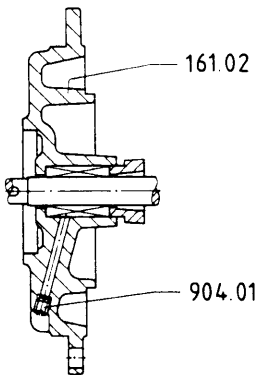
Casing cover design  
 with sizes 2/40-250 and 2/50-250

Denomination	Part No.	Denomination	Part No.	Connections
Volute casing	102.01	Lantern ring	458.01	BI External sealing
Stage casing	108.01	Packing ring	461.01	FD Draining
Casing cover	161.01	Splash ring	507.01	FF Filling
Casing cover	161.02	Intermediate ring	509.01	LO Leakage outlet
Casing cover	161.03	Threaded ring	514.01	PM2 Pressure gauge
Casing cover	161.05	Nilos ring	516.01	
Casing cover	161.06	Nilos ring	516.02	
Casing cover	161.07	Shaft sleeve	523.01	
Casing cover	161.10	Spacer sleeve	525.01	
Casing cover	161.12	Support disk	551.01	
Diffuser	171.01	Compensating disk	557.01	
Support foot	183.01	Blind rivet	565.01	
Shaft	210.01	Spring dowel	567.01	
Shaft	210.02	Long bend	730.01	
Shaft	210.03	Hexagonal screw	901.13	
Impeller	230.01	Stud bolt	902.03	
Impeller 1st stage	230.02	Screwed plug	903.01	
Impeller 2nd stage	230.03	Screwed plug	903.02	
Groove ball bearing	321.01	Screwed plug	903.04	
Groove ball bearing	321.02	Grub screw	904.01	
Groove ball bearing	321.03	Grub screw	904.05	
Groove ball bearing	321.04	Socket-head cap screw	914.01	
Bearing bracket	330.01	Socket-head cap screw	914.02	
Bearing cover	360.01	Socket-head cap screw	914.04	
Bearing cover	360.02	Socket-head cap screw	914.05	
Gasket	400.01	Hexagonal nut	920.03	
Gasket	400.02	Impeller nut	922.01	
Joint ring	411.01	Impeller nut	922.02	
Joint ring	411.02	Circlip	932.01	
Joint ring	411.04	Circlip	932.10	
Joint ring	411.10	Spring washer	934.01	
Joint ring	411.11	Spring lock washer	936.01	
Mechanical seal	433.01	Key	940.01	
Mechanical seal	433.02	Key	940.02	
Mechanical seal	433.03	Key	940.03	
Mechanical seal	433.04	Key	940.04	
Gland	452.01	Rating plate	971.01	

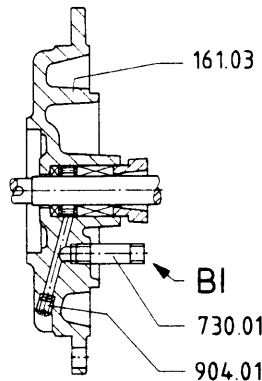
Sectional drawing  
Size 25-160 on bearing bracket size 228



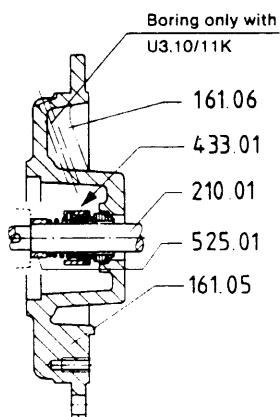
Shaft sealing: Stuffing box with internal sealing  
 Abbreviation: **U1B**



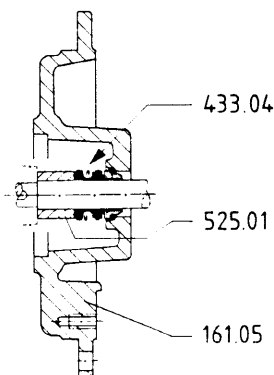
Stuffing box  
without sealing  
**U1A**



Stuffing box  
with external sealing  
**U1C**



Mechanical seal  
unbalanced  
**U3D, U3.1D or U3.10/11K**



Mechanical seal  
unbalanced  
**U3.9D, U3.12D**

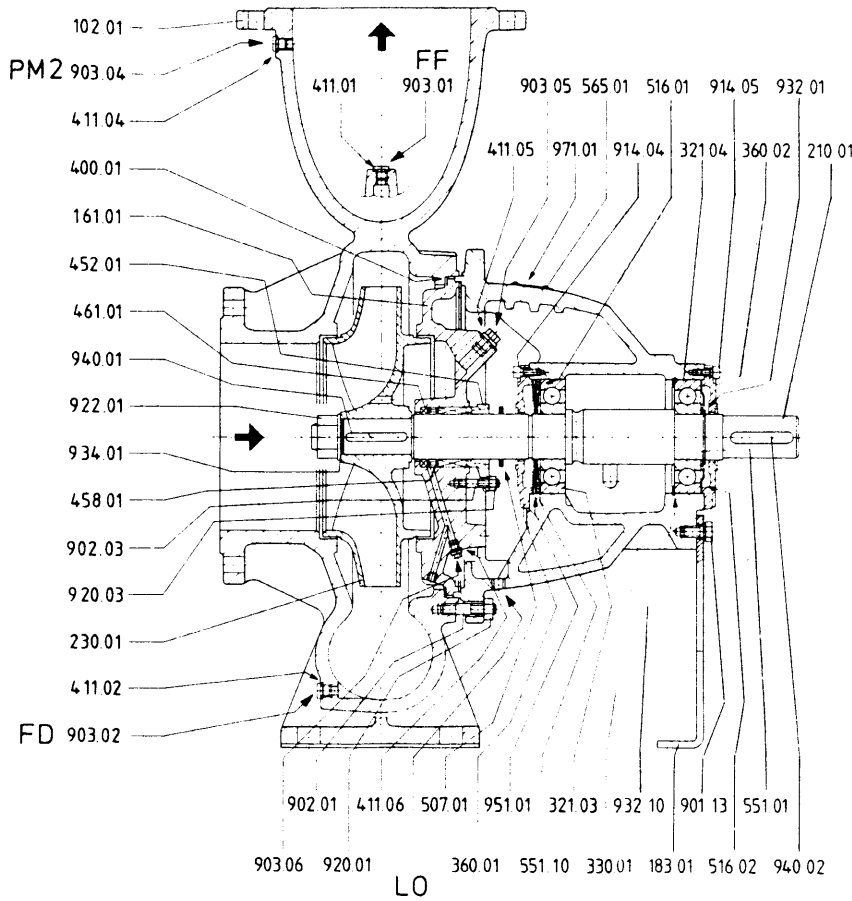
Denomination	Part No.
Volute casing	102.01
Casing cover	161.01
Casing cover	161.02
Casing cover	161.03
Casing cover	161.05
Casing cover	161.06
Shaft	210.01
Impeller	230.01
Groove ball bearing	321.01
Groove ball bearing	321.02
Bearing bracket	330.01
Bearing cover	360.01
Bearing cover	360.02
Gasket	400.01
Joint ring	411.01
Joint ring	411.02
Joint ring	411.04
Mechanical seal	433.01
Mechanical seal	433.04
Gland	452.01
Lantern ring	458.01
Packing ring	461.01
Splash ring	507.01
Spacer sleeve	525.01
Blind rivet	565.01
Nipple joint	730.01
Stud bolt	902.03
Screwed plug	903.01
Screwed plug	903.02
Screwed plug	903.04
Grub screw	904.01
Socket-head cap screw	914.01
Socket-head cap screw	914.02
Socket-head cap screw	914.04
Socket-head cap screw	914.05
Hexagonal nut	920.03
Impeller nut	922.01
Spring washer	936.01
Key	940.01
Key	940.02
Rating plate	971.01

Connections

BI	External sealing
FD	Draining
FF	Filling
LO	Leakage outlet
PM2	Pressure gauge

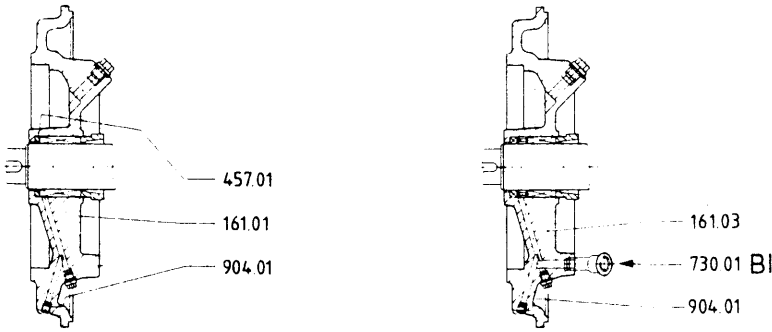


**Sectional drawing**  
**Sizes on bearing bracket size 585**



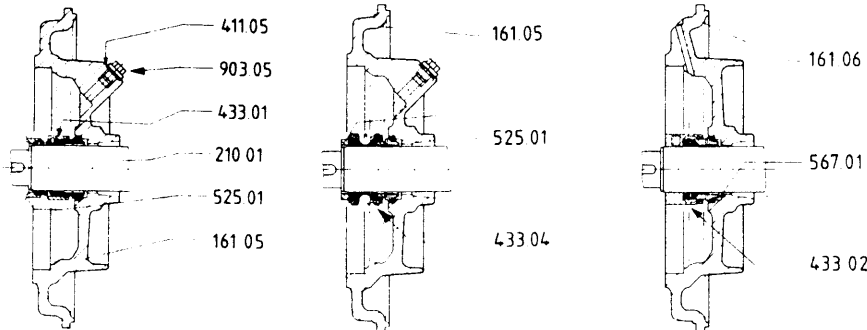
Denomination	Part No.
Volute casing	102.01
Casing cover	161.01
Casing cover	161.03
Casing cover	161.05
Casing cover	161.06
Support foot	183.01
Shaft	210.01
Impeller	230.01
Groove ball bearing	321.03
Groove ball bearing	321.04
Bearing bracket	330.01
Bearing cover	360.01
Bearing cover	360.02
Gasket	400.01
Joint ring	411.01
Joint ring	411.02
Joint ring	411.04
Joint ring	411.05
Joint ring	411.06
Mechanical seal	433.01
Mechanical seal	433.02
Mechanical seal	433.04
Gland	452.01
Base ring	457.01
Lantern ring	458.01
Packing ring	461.01
Splash ring	507.01
Nilos ring	516.01
Nilos ring	516.02
Spacer sleeve	525.01
Support disk	551.01
Support disk	551.10
Blind rivet	565.01
Spring dowel	567.01
Long bend	730.01
Hexagonal screw	901.13
Stud bolt	902.01
Stud bolt	902.03
Screwed plug	903.01
Screwed plug	903.02
Screwed plug	903.04
Screwed plug	903.05
Screwed plug	903.06
Grub screw	904.01
Socket-head cap screw	914.04
Socket-head cap screw	914.05
Hexagonal nut	920.01
Hexagonal nut	920.03
Impeller nut	922.01
Circlip	932.01
Circlip	932.10
Spring lock washer	934.01
Key	940.01
Key	940.02
Cup spring	951.01
Rating plate	971.01

Shaft sealing: Stuffing box with internal sealing  
 Abbreviation: **U1B**



Stuffing box  
 without sealing  
**U1A**

Stuffing box  
 with external sealing  
**U1C**



Mechanical seal  
 unbalanced  
**U3D, U3.1D**

Mechanical seal  
 unbalanced  
**U3.9D, U3.12D**

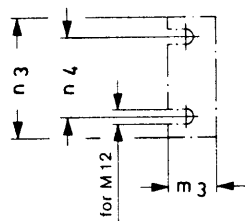
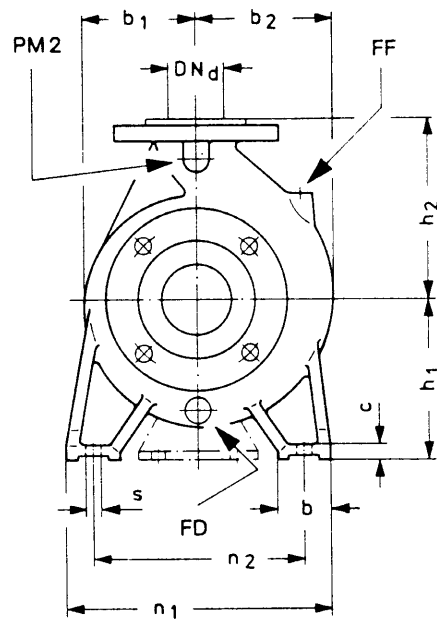
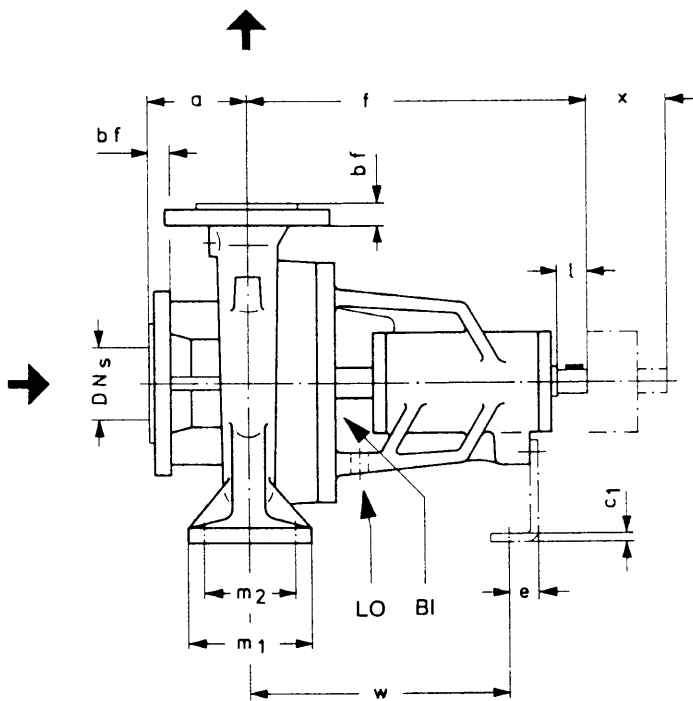
Mechanical seal  
 unbalanced  
**U3.8K**

**Connections**

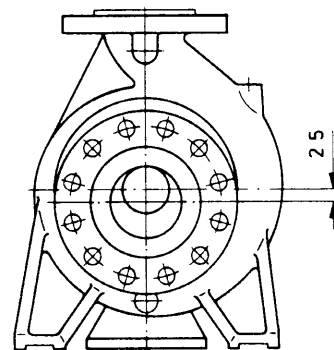
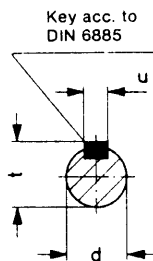
BI	External sealing
FD	Draining
FF	Filling
LO	Leakage outlet
PM2	Pressure gauge

Pump dimensions

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



Sense or rotation: clockwise, as seen from the driving side

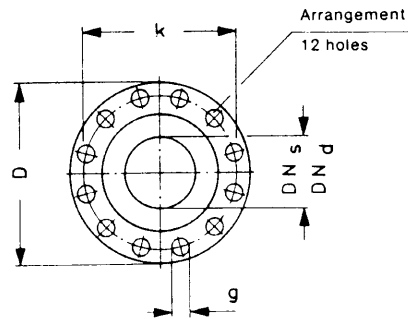
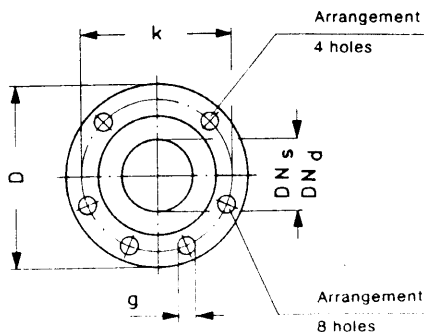


With size 250-400 only

Bearing bracket size	Connections				
	External sealing	Draining	Filling	Leakage outlet	Pressure gauge
	BI	② FD	① FF	③ LO	PM 2
228	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4
360	G 1/4	G 1/4	G 1/4	G 3/8	G 1/4
470	G 1/4	G 3/8	G 3/8	G 3/8	G 3/8
530	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
585	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
2nd stage size	-	G 1/4	G 1/4	G 3/8	G 1/4

- ① Connection FF not provided in sizes 25-200 and 2/25-200. Filling possibility at connection PM 2.
- ② Connection FD in sizes 25-200 and 2/25-200 each G 1/2.
- ③ Lateral with size 25-160.

Flanges up to DN 150 acc. to DIN 2533 DN 200 and above acc. to DIN 2532					
DN_s DN_d	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



Tolerances of the companion dimensions according to VDMA 24 275

Dimensions in mm without commitment.

Bear- ing brack- et size	Size	Suc- tion flange  DN <sub>s</sub>	Deliv- ery flange  DN <sub>d</sub>	Pump dimensions								Foot dimensions												Exten- sion dimen- sion  x	Shaft end  acc. to DIN 748			
				a	f	b <sub>1</sub>	b <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	b	c	c <sub>1</sub>	e	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	n <sub>1</sub>	n <sub>2</sub>	n <sub>3</sub>	n <sub>4</sub>	w	s	d		l	t	u	
228	25-160	25	25	63	228	100	108	112	160	50	12	-	-	100	70	-	220	180	-	-	-	M 10	60	17	28	19	5	
	25-200	40	25	80	360	132	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	2/25-200	40	25	80	360	132	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	32-160	50	32	80	360	123	123	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	32-200	50	32	80	360	124	130	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	2/32-200	50	32	80	360	124	130	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	40-160	65	40	80	360	123	123	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	80	24	50	27	8	
	40-200	65	40	100	360	125	135	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	80	24	50	27	8	
	40-250	65	40	100	360	150	156	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	80	24	50	27	8	
	2/40-250	65	40	100	360	150	156	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	80	24	50	27	8	
	50-160	65	50	100	360	123	130	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	80	24	50	27	8	
	50-200	65	50	100	360	133	145	160	200	50	15	4	28	100	70	45	265	212	160	110	260	M 12	80	24	50	27	8	
	50-250	65	50	100	360	156	169	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	80	24	50	27	8	
	2/50-250	65	50	100	360	156	169	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	80	24	50	27	8	
65-160	80	65	100	360	133	162	160	200	65	15	4	28	125	95	45	280	212	160	110	260	M 12	80	24	50	27	8		
65-200	80	65	100	360	148	170	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	100	24	50	27	8		
80-160	100	80	125	360	136	170	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	100	24	50	27	8		
100-160	125	100	125	360	165	200	200	280	65	15	4	28	125	95	45	320	250	160	110	260	M 12	100	24	50	27	8		
360	65-250	80	65	100	470	164	184	200	250	80	18	4	28	160	120	45	360	280	160	110	340	M 16	100	32	80	35	10	
	65-315	80	65	125	470	202	219	225	280	80	25	6	30	160	120	47	400	315	160	110	340	M 16	100	32	80	35	10	
	65-400	80	65	125	470	239	255	250	355	80	25	6	30	160	120	47	420	335	160	110	340	M 16	100	32	80	35	10	
	80-200	100	80	125	470	163	188	180	250	65	18	4	28	125	95	45	345	280	160	110	340	M 12	100	32	80	35	10	
	80-250	100	80	125	470	182	208	200	280	80	18	4	28	160	120	45	400	315	160	110	340	M 16	100	32	80	35	10	
	80-315	100	80	125	470	210	231	250	315	80	25	6	30	160	120	47	400	315	160	110	340	M 16	100	32	80	35	10	
	100-200	125	100	125	470	165	203	200	280	80	18	4	28	160	120	45	360	280	160	110	340	M 16	120	32	80	35	10	
	100-250	125	100	140	470	189	224	225	280	80	18	6	30	160	120	47	400	315	160	110	340	M 16	120	32	80	35	10	
	100-315	125	100	140	470	220	250	250	315	80	25	6	30	160	120	47	400	315	160	110	340	M 16	120	32	80	35	10	
	125-250	150	125	140	470	212	255	250	355	80	18	6	30	160	120	47	400	315	160	110	340	M 16	120	32	80	35	10	
470	80-400	100	80	125	530	246	265	280	355	80	25	6	31	160	120	47	435	355	160	110	370	M 16	140	42	110	45	12	
	100-400	125	100	140	530	256	272	280	355	100	27	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	
	125-315	150	125	140	530	226	252	280	355	100	27	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	
	125-400/1	150	125	140	530	264	283	315	400	100	27	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	
	150-250	200	150	160	530	231	283	280	375	100	27	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	
	150-315	200	150	160	530	239	271	280	400	100	27	6	31	200	150	47	550	450	160	110	370	M 20	140	42	110	45	12	
	150-400/1	200	150	160	530	277	305	315	450	100	27	6	31	200	150	47	550	450	160	110	370	M 20	140	42	110	45	12	
	200-250	200	200	180	530	262	330	355	425	100	27	6	31	200	150	47	550	450	160	110	370	M 20	140	42	110	45	12	
530	200-315	250	200	200	585	270	335	355	450	110	27	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	
	200-400	250	200	180	585	315	374	355	500	100	30	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	
	250-315	300	250	250	585	325	408	400	560	130	30	10	42	260	190	65	690	560	250	200	410	M 24	180	60	105	64	18	
	250-400	300	250	225	585	350	440	400	600	120	30	10	42	280	200	65	630	500	250	200	410	M 27	180	60	105	64	18	



Sizes on bearing bracket sizes 228, 360, 470, 530 and 585 with shaft coupling according to DIN 740 without spacer

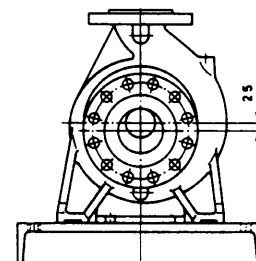
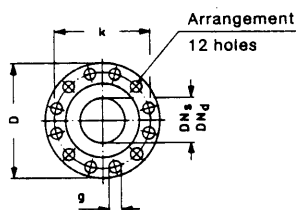
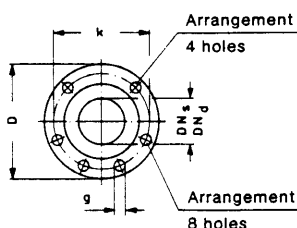
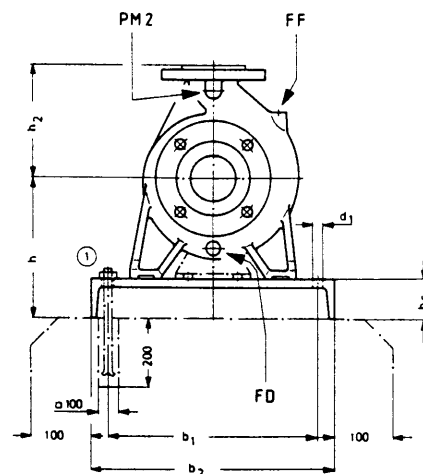
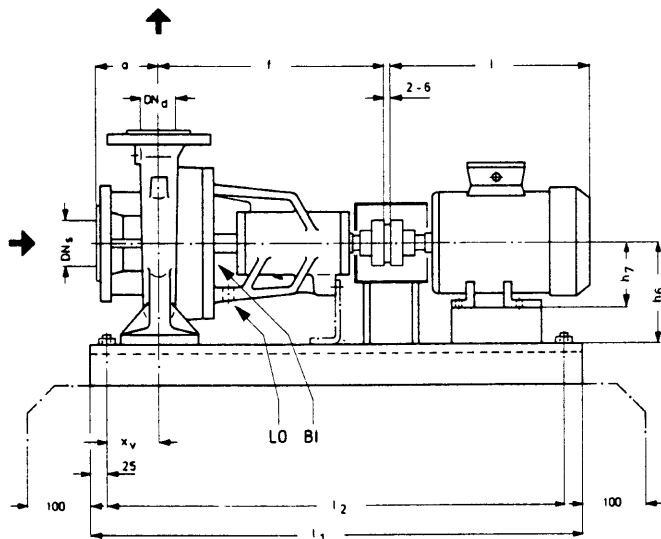
**Aggregates with steel base plates, U-beam**

Aggregates – base plates with drip channel in cast iron or fabricated steel (material desing depending on size) see separate installation plans VM 538 E/...3010–3016.

**Possible driving motors and allocation to the pump sizes**

The motor dimensions as indicated are approximate dimensions. Exact data depend in the motor make.

When using special motors, it must be noted that depending upon the enclosures, different performances are allocated to the individual sizes. The main dimensions are changed accordingly. In case of order, binding tables of motor dimensions must be transmitted to us.



With size 250–400 only

Flanges up to DN 150 acc. to DIN 2533 DN 200 and above acc. to DIN 2532				
DN <sub>s</sub> DN <sub>d</sub>	D	k	g	No. of holes
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	8
250	395	350	22	12
300	445	400	22	12

Connections	
BI	External sealing
FD	Draining
FF	Filling
LO	Leakage outlet
PM2	Pressure gauge

For the connection sizes, refer to pump dimensions.

Sense of rotation: clockwise, as seen from the driving side.

Dimensions in mm without commitment.

Base plate size ①	Stone bolt C DIN 529	Base plate size ①	Stone bolt C DIN 529	Base plate size ①	Stone bolt C DIN 529
Steel	Size	Steel	Size	Steel	Size
U 4.0 U 5.1 U 6.1 U 6.2 U 6.3 U 7.1 U 7.2 U 7.3	M 12 x 250	U 8.3 U 8.4 U 9.3 U 9.4 U 9.5 U 10.3 U 10.4 U 10.5 U 10.6	M 16 x 250	U 11.5 U 11.6 U 12.5 U 12.6 U 13.6 U 13.7 U 14.6 U 14.7 U 15.8	M 16 x 250

Pump size	Motor				Coupling		Pump					Base plate											
	Performance in kW at speed		Size	Approx. acc. to motor make	Rating size at speed		Flanges			Size													
	1450 1750	2900 3500			1450 1750	2900 3500	DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Steel											
	1/min		Numb. = h <sub>7</sub>	l	1/min																		
											b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>8</sub>				
25-160	0,25/0,37	0,37/0,55	71	240	K01	K01	25	25	63	228	160	U 4.0	150	220	14,5	80	630	580	75	192	112		
	0,55/0,75	0,75/1,1	80	274	K01	K01																	
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
25-200 2/25-200	0,25/0,37	0,37/0,55	71	240	K01	K01	40	25	80	360	180	U 5.1	170	240	14,5	85	710	660	75	245	160		
	0,55/0,75	0,75/1,1	80	274	K01	K01																	
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
7,5	-	132 M	493	K04	-																		
	11	11/15	160 M	635	K05	K05																	
32-160	0,25/0,37	0,37/0,55	71	240	K01	K01	50	32	80	360	160	U 5.1	170	240	14,5	85	710	660	75	217	132		
	0,55/0,75	0,75/1,1	80	274	K01	K01																	
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
7,5	-	132 M	493	K04	-																		
	11	11/15	160 M	635	K05	K05																	
32-200 2/32-200	0,55/0,75	0,75/1,1	80	274	K01	K01	50	32	80	360	180	U 6.1	170	240	14,5	85	800	750	75	245	160		
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
	7,5	-	132 M	493	K04	-																	
	11	11/15	160 M	635	K05	K05																	
	15	18,5	160 L	635	K05	K05																	
	18,5	22	180 M	720	K06	K06																	
40-160	0,25/0,37	0,37/0,55	71	240	K01	K01	65	40	80	360	160	U 5.1	170	240	14,5	85	710	660	75	217	132		
	0,55/0,75	0,75/1,1	80	274	K01	K01																	
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
7,5	-	132 M	493	K04	-																		
	11	11/15	160 M	635	K05	K05																	
40-200	0,55/0,75	0,75/1,1	80	274	K01	K01	65	40	100	360	180	U 6.2	210	280	14,5	95	800	750	75	255	160		
	1,1	1,5	90 S	332	K02	K02																	
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
	7,5	-	132 M	493	K04	-																	
	11	11/15	160 M	635	K05	K05																	
	15	18,5	160 L	635	K05	K05																	
	18,5	22	180 M	720	K06	K06																	
	22	-	180 L	720	K06	-																	
	30	30/37	200 L	775	K07	K07																	
40-250 2/40-250	1,1	1,5	90 S	332	K02	K02	65	40	100	360	225	U 6.3	280	350	14,5	100	800	750	87	280	180		
	1,5	2,2	90 L	332	K02	K02																	
	2,2/3	3	100 L	372	K03	K03																	
	4	4	112 M	395	K03	K03																	
	5,5	5,5/7,5	132 S	493	K04	K04																	
	7,5	-	132 M	493	K04	-																	
	11	11/15	160 M	635	K05	K05																	
	15	18,5	160 L	635	K05	K05																	
		18,5	22	180 M	720	K06																K06	
	22	-	180 L	720	K06	-																	
	30	30/37	200 L	775	K07	K07																	
	45	45	225 M	835	K08	K07																	

Pump size	Motor				Coupling		Pump					Base plate									
	Performance in kW at speed		Size	Approx. acc. to motor make	Rating size at speed		Flanges					Size									
	1450	2900			1450	2900															
	1750	3500	1450	1750	2900	3500															
1/min	Numb. = h <sub>7</sub>	l	1/min	DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Steel	b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>6</sub>			
50-160	0,55/0,75	0,75/1,1	80	274	K01	K01	65	50	100	360	180	U 6.2	210	280	14,5	95	800	750	75	255	160
	1,1	1,5	90 S	332	K02	K02															
	1,5	2,2	90 L	332	K02	K02															
	2,2/3	3	100 L	372	K03	K03															
	4	4	112 M	395	K03	K03															
	5,5	5,5/7,5	132 S	493	K04	K04															
	7,5	-	132 M	493	K04	-															
	11	11/15	160 M	635	K05	K05															
	15	18,5	160 L	635	K05	K05															
	18,5	22	180 M	720	K06	K06															
22	-	180 L	720	K06	-																
30	30/37	200 L	775	K07	K07																
50-200	0,55/0,75	0,75/1,1	80	274	K01	K01	65	50	100	360	200	U 6.2	210	280	14,5	95	800	750	75	255	160
	1,1	1,5	90 S	332	K02	K02															
	1,5	2,2	90 L	332	K02	K02															
	2,2/3	3	100 L	372	K03	K03															
	4	4	112 M	395	K03	K03															
	5,5	5,5/7,5	132 S	493	K04	K04															
	7,5	-	132 M	493	K04	-															
	11	11/15	160 M	635	K05	K05															
	15	18,5	160 L	635	K05	K05															
	18,5	22	180 M	720	K06	K06															
22	-	180 L	720	K06	-																
30	30/37	200 L	775	K07	K07																
50-250 2/50-250	1,1	1,5	90 S	332	K02	K02	65	50	100	360	225	U 6.3	280	350	14,5	100	800	750	87	280	180
	1,5	2,2	90 L	332	K02	K02															
	2,2/3	3	100 L	372	K03	K03															
	4	4	112 M	395	K03	K03															
	5,5	5,5/7,5	132 S	493	K04	K04															
	7,5	-	132 M	493	K04	-															
	11	11/15	160 M	635	K05	K05															
	15	18,5	160 L	635	K05	K05															
	18,5	22	180 M	720	K06	K06															
	22	-	180 L	720	K06	-															
30	30/37	200 L	775	K07	K07																
45	45	225 M	835	K08	K07																
55	55	250 M	930	K09	K08																
65-160	0,55/0,75	0,75/1,1	80	274	K01	K01	80	65	100	360	200	U 6.2	210	280	14,5	95	800	750	87	255	160
	1,1	1,5	90 S	332	K02	K02															
	1,5	2,2	90 L	332	K02	K02															
	2,2/3	3	100 L	372	K03	K03															
	4	4	112 M	395	K03	K03															
	5,5	5,5/7,5	132 S	493	K04	K04															
	7,5	-	132 M	493	K04	-															
	11	11/15	160 M	635	K05	K05															
	15	18,5	160 L	635	K05	K05															
	18,5	22	180 M	720	K06	K06															
22	-	180 L	720	K06	-																
30	30/37	200 L	775	K07	K07																
65-200	1,1	1,5	90 S	332	K02	K02	80	65	100	360	225	U 6.3	280	350	14,5	100	800	750	87	280	180
	1,5	2,2	90 L	332	K02	K02															
	2,2/3	3	100 L	372	K03	K03															
	4	4	112 M	395	K03	K03															
	5,5	5,5/7,5	132 S	493	K04	K04															
	7,5	-	132 M	493	K04	-															
	11	11/15	160 M	635	K05	K05															
	15	18,5	160 L	635	K05	K05															
	18,5	22	180 M	720	K06	K06															
	22	-	180 L	720	K06	-															
30	30/37	200 L	775	K07	K07																

Pump size	Motor				Coupling		Pump					Base plate									
	Performance in kW at speed		Size	Approx. acc. to motor make.	Rating size at speed		Flanges					Size									
	1450	2900			1450	2900															
	1750	3500	1750	3500																	
1/min	1/min	1/min	1/min	DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Steel	b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>5</sub>			
65-250	2,2/3 4	3 4	100 L 112 M	372 395	K03 K03	K03 K03	80	65	100	470	250	U 8.4	330	400	18,5	110	1000	950	105	310	200
	5,5 7,5	5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -						U 9.4	330	400	18,5	110	1120	1070	105	310	200
	11 15 18,5 22	11/15 18,5 22 -	160 M 160 L 180 M 180 L	635 635 720 720	K05 K05 K06 K06	K05 K05 K06 -						U 10.4	330	400	18,5	110	1250	1200	105	310	200
	30	30/37	200 L	775	K07	K07						U 10.5	410	500	18,5	104	1250	1200	105	304	200
	37 45	- 45	225 S 225 M	835 835	K08 K08	- K07						U 11.5	410	500	18,5	104	1320	1270	105	329	225
	55	55	250 M	930	K09	K08						U 12.6	540	630	18,5	104	1400	1350	105	354	250
	75 90	75 90	280 S 280 M	1005 1005	K10 K10	K09 K09						U 13.6	540	630	18,5	104	1600	1550	105	384	280
65-315	4	-	112 M	395	K03	-	80	65	125	470	280	U 8.4	330	400	18,5	110	1000	950	105	335	225
	5,5 7,5	-	132 S 132 M	493 493	K04 K04	-						U 9.4	330	400	18,5	110	1120	1070	105	335	225
	11 15 18,5 22	-	160 M 160 L 180 M 180 L	635 635 720 720	K05 K05 K06 K06	-						U 10.4	330	400	18,5	110	1250	1200	105	335	225
	30	-	200 L	775	K07	-						U 10.5	410	500	18,5	104	1250	1200	105	329	225
	5,5 7,5	-	132 S 132 M	493 493	K04 K04	-						U 9.5	410	500	18,5	104	1120	1070	105	354	250
65-400	11 15 18,5 22 30	-	160 M 160 L 180 M 180 L 200 L	635 635 720 720 775	K05 K05 K06 K06 K07	-	80	65	125	470	355	U 10.5	410	500	18,5	104	1250	1200	105	354	250
	37 45	-	225 S 225 M	835 835	K08 K08	-						U 11.5	410	500	18,5	104	1320	1270	105	354	250
	1,1 1,5	1,5 2,2	90 S 90 L	332 332	K02 K02	K02 K02						U 6.3	280	350	14,5	100	800	750	87	280	180
	2,2/3 4	3 4	100 L 112 M	372 395	K03 K03	K03 K03						U 7.3	280	350	14,5	100	900	850	87	280	180
80-160	5,5 7,5	5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -	100	80	125	360	225	U 9.3	280	350	18,5	100	1120	1070	87	280	180
	11 15	11/15 18,5	160 M 160 L	635 635	K05 K05	K05 K05						U 9.4	330	400	18,5	110	1120	1070	87	290	180
	18,5 22	22 -	180 M 180 L	720 720	K06 K06	K06 -						U 9.5	410	500	18,5	104	1120	1070	87	304	200
	30	30/37	200 L	775	K07	K07						U 10.5	410	500	18,5	104	1250	1200	87	329	225
	37 45	- 45	225 S 225 M	835 835	K08 K08	- K07						U 10.5	410	500	18,5	104	1250	1200	87	329	225
	2,2/3 4	3 4	100 L 112 M	372 395	K03 K03	K03 K03						U 8.3	280	350	18,5	100	1000	950	87	280	180
	5,5 7,5	5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -						U 9.3	280	350	18,5	100	1120	1070	87	280	180
80-200	11 15	11/15 18,5	160 M 160 L	635 635	K05 K05	K05 K05	100	80	125	470	250	U 10.3	280	350	18,5	100	1250	1200	87	280	180
	18,5 22	22 -	180 M 180 L	720 720	K06 K06	K06 -						U 10.4	330	400	18,5	110	1250	1200	87	290	180
	30	30/37	200 L	775	K07	K07						U 10.5	410	500	18,5	104	1250	1200	87	304	200
	37 45	- 45	225 S 225 M	835 835	K08 K08	- K07						U 11.5	410	500	18,5	104	1320	1270	87	329	225
	55	55	250 M	930	K09	K08						U 12.6	540	630	18,5	104	1400	1350	87	354	250
	75	75	280 S	1005	K10	K09						U 13.6	540	630	18,5	104	1600	1550	87	384	280





Pump size	Motor				Coupling		Pump					Base plate									
	Performance in kW at speed		Size	Approx. acc. to motor make	Rating size at speed		Flanges		a	f	h <sub>2</sub>	Steel	Size								
	1450 1750	2900 3500			1450 1750	2900 3500	DN <sub>s</sub>	DN <sub>d</sub>					b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>6</sub>
	1/min		Numb. = h <sub>7</sub>	l	1/min		DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Steel	b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>6</sub>
80-250	4	4	112 M	395	K03	K03	100	80	125	470	280	U 8.4	330	400	18,5	110	1000	950	105	310	200
	5,5 7,5	5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -						U 9.4	330	400	18,5	110	1120	1070	105	310	200
	11 15 18,5 22	11/15 18,5 22 -	160 M 160 L 180 M 180 L	635 635 720 720	K05 K05 K06 K06	K05 K05 K06 -						U 10.4	330	400	18,5	110	1250	1200	105	310	200
	30	30/37	200 L	775	K07	K07						U 10.5	410	500	18,5	104	1250	1200	105	304	200
	37 45	- 45	225 S 225 M	835 835	K08 K08	- K07						U 11.5	410	500	18,5	104	1320	1270	105	329	225
	55	55	250 M	930	K09	K08						U 12.6	540	630	18,5	104	1400	1350	105	354	250
	75 90	75 90	280 S 280 M	1005 1005	K10 K10	K09 K09						U 13.6	540	630	18,5	104	1600	1550	105	384	280
	80-315	4	-	112 M	395	K03						-	100	80	125	470	315	U 8.4	330	400	18,5
5,5 7,5		-	132 S 132 M	493 493	K04 K04	-	U 9.4	330	400	18,5	110	1120						1070	105	360	250
11 15 18,5 22		-	160 M 160 L 180 M 180 L	635 635 720 720	K05 K05 K06 K06	-	U 10.4	330	400	18,5	110	1250						1200	105	360	250
30		-	200 L	775	K07	-	U 10.5	410	500	18,5	104	1250						1200	105	354	250
37		-	225 S	835	K08	-	U 11.5	410	500	18,5	104	1320						1270	105	354	250
80-400		11 15	-	160 M 160 L	635 635	K05 K05	-	100	80	125	530	355						U 10.5	410	500	18,5
	18,5 22 30	-	180 M 180 L 200 L	720 720 775	K06 K06 K07	-	U 11.5						410	500	18,5	104	1320	1270	105	384	280
	37 45	-	225 S 225 M	835 835	K08 K08	-	U 12.5						410	500	18,5	104	1400	1350	105	384	280
	55	-	250 M	930	K09	-	U 12.6						540	630	18,5	104	1400	1350	105	384	280
100-160	1,1 1,5	1,5 2,2	90 S 90 L	332 332	K02 K02	K02 K02	125	100	125	360	280	U 6.3	280	350	14,5	100	800	750	87	300	200
	2,2/3 4	3 4	100 L 112 M	372 395	K03 K03	K03 K03						U 7.3	280	350	14,5	100	900	850	87	300	200
	5,5 7,5	5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -						U 9.3	280	350	18,5	100	1120	1070	87	300	200
	11 15	11/15 18,5	160 M 160 L	635 635	K05 K05	K05 K05						U 9.4	330	400	18,5	110	1120	1070	87	310	200
	18,5 22	22 -	180 M 180 L	720 720	K06 K06	K06 -						U 9.5	410	500	18,5	104	1120	1070	87	304	200
	30	30/37	200 L	775	K07	K07						U 9.5	410	500	18,5	104	1120	1070	87	304	200
	100-200	2,2/3 4	3 4	100 L 112 M	372 395	K03 K03						K03 K03	125	100	125	470	280	U 8.4	330	400	18,5
5,5 7,5		5,5/7,5 -	132 S 132 M	493 493	K04 K04	K04 -	U 9.4	330	400	18,5	110	1120						1070	105	310	200
11 15 18,5 22		11/15 18,5 22 -	160 M 160 L 180 M 180 L	635 635 720 720	K05 K05 K06 K06	K05 K05 K06 -	U 10.4	330	400	18,5	110	1250						1200	105	310	200
30		30/37	200 L	775	K07	K07	U 10.5	410	500	18,5	104	1250						1200	105	304	200
37 45		- 45	225 S 225 M	835 835	K08 K08	- K07	U 11.5	410	500	18,5	104	1320						1270	105	329	225
55		55	250 M	930	K09	K08	U 12.6	540	630	18,5	104	1400						1350	105	354	250
75 90		75 90	280 S 280 M	1005 1005	K10 K10	K09 K09	U 13.6	540	630	18,5	104	1600						1550	105	384	280
110		110	315 S	1140	K11	K09	U 13.7	620	710	18,5	104	1600						1550	105	419	315

Pump size	Motor				Coupling		Pump					Base plate									
	Performance in kW at speed		Size	Approx. acc. to motor make	Rating size at speed		Flanges					Size									
	1450	2900			1450	2900	DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Steel	b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>	h	h <sub>6</sub>
	1750	3500	1750	3500																	
1/min		Numb. = h <sub>7</sub>	l	1/min																	
100-250	5,5	5,5/7,5	132 S	493	K04	K04	125	100	140	470	280	U 9.4	330	400	18,5	110	1120	1070	105	335	225
	7,5	-	132 M	493	K04	-						U 10.4	330	400	18,5	110	1250	1200	105	335	225
	11	11/15	160 M	635	K05	K05						U 10.5	410	500	18,5	104	1250	1200	105	329	225
	15	18,5	160 L	635	K05	K05						U 11.5	410	500	18,5	104	1320	1270	105	329	225
	18,5	22	180 M	720	K06	K06						U 12.6	540	630	18,5	104	1400	1350	105	354	250
	22	-	180 L	720	K06	-						U 13.6	540	630	18,5	104	1600	1550	105	384	280
	30	30/37	200 L	775	K07	K07						U 13.7	620	710	18,5	104	1600	1550	105	419	315
	37	-	225 S	835	K08	-															
45	45	225 M	835	K08	K07																
55	55	250 M	930	K09	K08																
75	75	280 S	1005	K10	K09																
90	90	280 M	1005	K10	K09																
110	110	315 S	1140	K11	K09																
132	132	315 M	1140	K11	K09																
100-315	15	-	160 L	635	K05	-	125	100	140	470	315	U 10.4	330	400	18,5	110	1250	1200	105	360	250
	18,5	-	180 M	720	K06	-						U 10.5	410	500	18,5	104	1250	1200	105	354	250
	22	-	180 L	720	K06	-						U 11.5	410	500	18,5	104	1320	1270	105	354	250
	30	-	200 L	775	K07	-															
37	-	225 S	835	K08	-																
45	-	225 M	835	K08	-																
100-400	15	-	160 L	635	K05	-	125	100	140	530	355	U 11.5	410	500	18,5	104	1320	1270	125	384	280
	18,5	-	180 M	720	K06	-						U 12.5	410	500	18,5	104	1400	1350	125	384	280
	22	-	180 L	720	K06	-						U 13.6	540	630	18,5	104	1600	1550	125	384	280
	30	-	200 L	775	K07	-															
37	-	225 S	835	K08	-																
45	-	225 M	835	K08	-																
55	-	250 M	930	K09	-																
125-250	5,5	5,5/7,5	132 S	493	K04	K04	150	125	140	470	355	U 9.4	330	400	18,5	110	1120	1070	105	360	250
	7,5	-	132 M	493	K04	-						U 10.4	330	400	18,5	110	1250	1200	105	360	250
	11	11/15	160 M	635	K05	K05						U 10.5	410	500	18,5	104	1250	1200	105	354	250
	15	18,5	160 L	635	K05	K05						U 11.5	410	500	18,5	104	1320	1270	105	354	250
	18,5	22	180 M	720	K06	K06						U 12.6	540	630	18,5	104	1400	1350	105	354	250
	22	-	180 L	720	K06	-						U 13.6	540	630	18,5	104	1600	1550	105	384	280
	30	30/37	200 L	775	K07	K07						U 13.7	620	710	18,5	104	1600	1550	105	419	315
	37	-	225 S	835	K08	-															
45	45	225 M	835	K08	K07																
55	55	250 M	930	K09	K08																
75	75	280 S	1005	K10	K09																
90	90	280 M	1005	K10	K09																
110	110	315 S	1140	K11	K09																
132	132	315 M	1140	K11	K09																
125-315	22	-	180 L	720	K06	-	150	125	140	530	355	U 11.5	410	500	18,5	104	1320	1270	125	384	280
	30	-	200 L	775	K07	-						U 12.5	410	500	18,5	104	1400	1350	125	384	280
	37	-	225 S	835	K08	-						U 13.6	540	630	18,5	104	1600	1550	125	384	280
	45	-	225 M	835	K08	-															
55	-	250 M	930	K09	-																
125-400/1	30	-	200 L	775	K07	-	150	125	140	530	400	U 12.5	410	500	18,5	104	1400	1350	125	419	315
	37	-	225 S	835	K08	-						U 13.6	540	630	18,5	104	1600	1550	125	419	315
	45	-	225 M	835	K08	-						U 14.7	620	710	18,5	104	1800	1750	125	419	315
	55	-	250 M	930	K09	-															
	75	-	280 S	1005	K10	-															
90	-	280 M	1005	K10	-																
110	-	315 S	1140	K11	-																
150-250	7,5	-	132 M	493	K04	-	200	150	160	530	375	U 9.5	410	500	18,5	104	1120	1070	125	384	280
	11	-	160 M	635	K05	-						U 11.5	410	500	18,5	104	1320	1270	125	384	280
	15	-	160 L	635	K05	-						U 12.5	410	500	18,5	104	1400	1350	125	384	280
	18,5	-	180 M	720	K06	-						U 13.6	540	630	18,5	104	1600	1550	125	384	280
	22	-	180 L	720	K06	-						U 13.7	620	710	18,5	104	1600	1550	125	384	280
	30	-	200 L	775	K07	-															
37	-	225 S	835	K08	-																
45	-	225 M	835	K08	-																
55	-	250 M	930	K09	-																

Pump size	Motor				Coupling		Pump					Base plate										
	Performance in kW at speed		Size	Approx. acc. to motor make	Rating size at speed		Flanges		DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>2</sub>	Size								
	1450	2900			1450	2900									Steel	b <sub>1</sub>	b <sub>2</sub>	d <sub>1</sub>	h <sub>5</sub>	l <sub>1</sub>	l <sub>2</sub>	x <sub>v</sub>
	1750	3500			1750	3500			1/min	Numb. = h <sub>7</sub>	l	1/min										
150-315	22	-	180 L	720	K06	-							U 11.6	540	630	18,5	104	1320	1270	125	384	280
	30	-	200 L	775	K07	-							U 12.6	540	630	18,5	104	1400	1350	125	384	280
	37	-	225 S	835	K08	-																
	45	-	225 M	835	K08	-																
	55	-	250 M	930	K09	-							U 13.6	540	630	18,5	104	1600	1550	125	384	280
	75	-	280 S	1005	K10	-																
90	-	280 M	1005	K10	-																	
150-400/1	45	-	225 M	835	K08	-							U 12.6	540	630	18,5	104	1400	1350	125	419	315
	55	-	250 M	930	K09	-																
	75	-	280 S	1005	K10	-							U 13.6	540	630	18,5	104	1600	1550	125	419	315
	90	-	280 M	1005	K10	-																
110	-	315 S	1140	K11	-							U 14.7	620	710	18,5	104	1800	1750	125	419	315	
132	-	315 M	1140	K11	-																	
200-250	11	-	160 M	635	K05	-							U 11.6	540	630	18,5	104	1320	1270	125	459	355
	15	-	160 L	635	K05	-																
	18,5	-	180 M	720	K06	-																
	22	-	180 L	720	K06	-																
	30	-	200 L	775	K07	-							U 12.6	540	630	18,5	104	1400	1350	125	459	355
	37	-	225 S	835	K08	-																
45	-	225 M	835	K08	-																	
55	-	250 M	930	K09	-							U 13.6	540	630	18,5	104	1600	1550	125	459	355	
75	-	280 S	1005	K10	-																	
200-315	22	-	180 L	720	K08	-							U 12.6	540	630	18,5	104	1400	1350	125	459	355
	30	-	200 L	775	K08	-																
	37	-	225 S	835	K08	-							U 13.6	540	630	18,5	104	1600	1550	125	459	355
	45	-	225 M	835	K08	-																
	55	-	250 M	930	K09	-							U 14.6	540	630	18,5	104	1800	1750	125	459	355
	75	-	280 S	1005	K10	-																
90	-	280 M	1005	K10	-																	
110	-	315 S	1140	K11	-							U 14.7	620	710	18,5	104	1800	1750	125	459	355	
132	-	315 M	1140	K11	-																	
200-400	37	-	225 S	835	K08	-							U 13.6	540	630	18,5	104	1600	1550	125	459	355
	45	-	225 M	835	K08	-																
	55	-	250 M	930	K09	-																
	75	-	280 S	1005	K10	-							U 14.6	540	630	18,5	104	1800	1750	125	459	355
	90	-	280 M	1005	K10	-																
	110	-	315 S	1140	K11	-							U 14.7	620	710	18,5	104	1800	1750	125	459	355
132	-	315 M	1140	K11	-																	
160	-	315 L	1280	K11	-																	
250-315	22	-	180 L	720	K08	-							U 13.7	620	710	18,5	104	1600	1550	160	504	400
	30	-	200 L	775	K08	-																
	37	-	225 S	835	K08	-																
	45	-	225 M	835	K08	-																
	55	-	250 M	930	K09	-							U 14.7	620	710	18,5	104	1800	1750	160	504	400
	75	-	280 S	1005	K10	-																
90	-	280 M	1005	K10	-																	
110	-	315 S	1140	K11	-																	
132	-	315 M	1140	K11	-																	
160	-	315 L	1280	K11	-																	
250-400	45	-	225 M	835	K08	-							U 13.6	540	630	18,5	104	1600	1550	165	504	400
	55	-	250 M	930	K09	-																
	75	-	280 S	1005	K10	-							U 14.6	540	630	18,5	104	1800	1750	165	504	400
	90	-	280 M	1005	K10	-																
	110	-	315 S	1140	K11	-							U 14.7	620	710	18,5	104	1800	1750	165	504	400
	132	-	315 M	1140	K11	-																
160	-	315 L	1280	K11	-																	
200	-	315 L	1280	K11	-																	
250	-	355 L	1515	K13	-							U 15.8	710	800	18,5	104	2000	1950	165	504	400	

Subject to technical alterations.

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The stated performance data are to be understood only as an outline of performance of our products. For exact limits of application please refer to the quotation and acceptance of order.