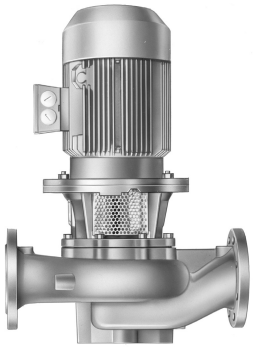
ALLWEILER

Volute Casing Centrifugal Pumps of Inline Design

Series NI

ATEX 100 a



Application

For pumping pure water, industrial water, sea water, condensates, oils, brines, lyes and hot water.

The fluids to be pumped must not contain any abrassive particles nor chemically attack the pump materials.

Main fields of application

In cooling and heating systems, in circulating, water supply, water treatment, sea-water desalination, dedusting and spray painting plants as well as in air-conditioning, cooling, swimming pool and industrial engineering.

Design and series construction

Volute casing centrifugal pump, single entry, single or two-stage, of inline design. Pump size according to DIN EN 733.

Stub and motor shaft are rigidly coupled together. Shaft bearing in the motor by means of grease-lubricated groove ball bearings. The mating dimensions of the two-stage sizes 2/25–200/01, 2/32–200/01, 2/40–250/01, 2/50–250/01, except for dimensions f and l depending upon the driving motors, correspond to the single-stage designs.

Horizontal or vertical installation, motor arrangement downwards is not admissible.

Performance data

Delivery	Q	up to	380 m^3/h
Delivery head	H	up to	145 m
Temperature of the fluid pumped	t	up to	140 °C
Inlet pressure	p_s	①	
Pump outlet pressure as a function of the shaft diameter and the shaft seal ②			
with diameter 16, 24, 30	p_d	up to	16 bar ③
with diameter 40	p_d	up to	10 bar
Drive power	P	0,25 up to	37 kW
Nominal diameter, delivery flange	DN_d	25 up to 150	

Branch position/flanges

Suction and outlet branch opposite in one line.
Flanges: up to DN 150 acc. to EN 1092-2 PN 16
up to DN 200 acc. to EN 1092-2 PN 10

Contact protection

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

Shaft seal

By maintenance-free mechanical seal in unbalanced design (main dimensions acc. to DIN EN 12 756, design K, shape U).

Combination of components

The table on page 3 shows the combination possibilities of components of all NI sizes. The unit assembly system allows reduced stockkeeping of spare parts.

Explosion protection

The pump fulfils the requirements according to EC Explosion Protection Directive 94/9EG (ATEX 100a) for equipment and equipment group II, category 2 G. Categorisation into temperature classes according to EN 13463-1 depends on the temperature of the pumped medium. The max. permissible temperature of the pumped medium for the respective temperature classes are shown in the specific order data sheet.

Note: In case of the operation of a category 2 pump, the unacceptable heating of the pump surfaces caused by a possible operational fault must be prevented by a control mechanism. In case of an operation with constant parameters (pressure, temperature, speed = const.), a pump performance controller can be supplied with the pump to detect any operational faults.

Drive

Surface-cooled three-phase squirrel-cage induction motors, with locating-type bearing, IM V1 type of construction, enclosure IP55 according to IEC Standard, class F insulation, performances and main dimensions according to DIN 42 677, up to 2.2 kW 230/400V, from 3 kW 400/690 V.

Attention: Motors provided by customers must also have a locating-type bearing!

Dismantling the driving unit

When dismantling the driving unit, the volute casing may remain in the piping.

Connections

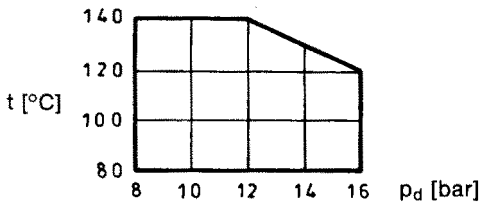
The following auxiliary connections are always provided:

FD	Draining
FF	Filling
FV	Venting
PM1 ④	Pressure measurement pump
PM2	Pressure measurement pump

① inlet pressure plus maximum delivery head must not exceed the admissible pump outlet pressure

② allocation pump size / shaft diameter at the shaft seal, refer to pages 10 to 16

③ in case the temperature of fluids pumped exceeds 120°C, the admissible pump outlet pressure changes as follows:



④ Connection PM1 only with shaft diameter 40 at the shaft seal

Shaft seals with temperature and pressure limits

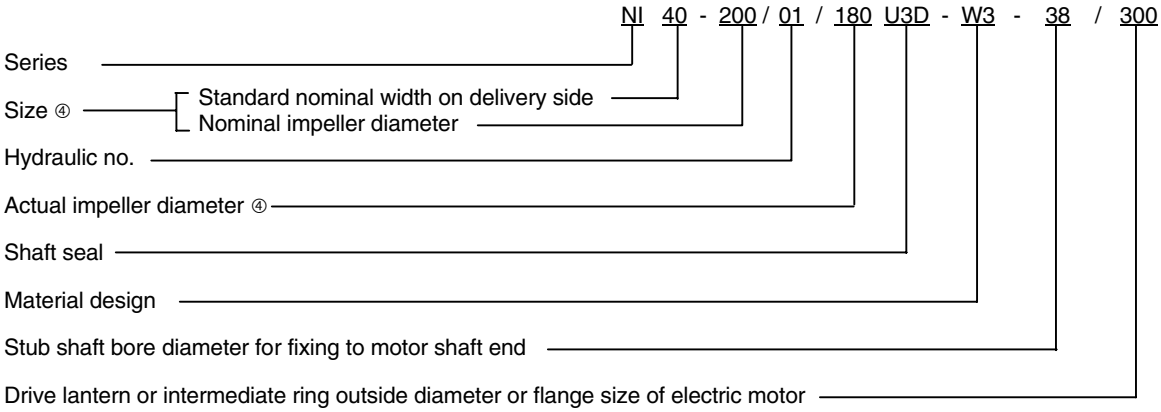
Available for all material designs

Mechanical seal, uncooled	Unbalanced						
Flushing	Internal flushing					Internal flushing bores	
Abbreviation	U3D	U3.1D	U 3.9D	U3.12D	U3.20D	U3.10K ②	U3.11K ②
Rotating seal ring	Hard carbon, synthetic resin impregnated		Silicon carbide		Hard carbon, antimony impregnated	Hard carbon, synthetic resin impregnated	
Stationary seal ring	Oxide ceramics		Silicon carbide			Silicon carbide	
Metal parts	CrNiMo steel		CrNiMo steel			CrNiMo steel	
O-rings	EPDM	FPM	EPDM	FPM	EPDM	EPDM	Viton
Bellows	-	-	EPDM	FPM	-	-	-
Material key, DIN EN 12 756	BVEGG	BVVGG	Q1Q1EGG	Q1Q1VGG	AQ1EGG	BQ1EGG	BQ1VGG
Volute casing centrifugal pumps at bearing bracket size	Admissible temperature of the fluid pumped (°C) and admissible pump outlet pressure p_d (bar)						
	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar	°C / bar
single-stage	100 / 10 -	100 / 10 ① -	100 / 10 -	100 / 10 ① -	140 / 10	120 / 16 140 / 12	120 / 16 ① 140 / 12 ①
two-stage	100 / 16 ③	100 / 16 ① ③	100 / 10	100 / 10 ①	140 / 16	-	-

① applies to water max. 90 °C
② only possible for sizes with shaft diameters 16, 24, 30 (at the shaft seal)
③ in case of inlet pressure > 5 bar, shaft seal U3.20 D or U3.10 K must be provided

Other mechanical seal designs on inquiery.

Abbreviation system



④ The actual impeller diameter of two-stage sizes relates to the second stage. The number of stages is placed in front of the nominal width of the outlet branch, e.g. 2/40–200/...

Materials

Denomination	Part No.		Material designs				
	single-stage	two-stage	W 3	W 18	W 19	W 88	W 97
Volute casing	102...	102...	CC333G	EN-GJL-250	EN-GJL-250	EN-GJS-400-15	EN-GJS-400-15
Impeller	230...	-	CC333G	CC333G	EN-GJL-200	CC333G	EN-GJL-200
Impeller 1st stage	-	230...	CC333G	CC333G	EN-GJL-200	CC333G	EN-GJL-200
Impeller 2nd stage	-	230...	CC333G	CC333G	EN-GJL-200	CC333G	EN-GJL-200
Diffuser	-	171...	CC333G	CC333G	EN-GJL-200	CC333G	EN-GJL-200
Stage casing	-	108...	CC333G	EN-GJL-250	EN-GJL-250	EN-GJS-400-15	EN-GJS-400-15
Casing cover	161...	161...	CC333G	EN-GJL-250	EN-GJL-250	EN-GJS-400-15	EN-GJS-400-15
Stub shaft	220...	220...	1.4571/1.7139 ⑤	1.4571/1.7139 ⑤	1.4571/1.7139 ⑤	1.4571/1.7139 ⑤	1.4571/1.7139 ⑤
Drive lantern	341...	341...	EN-GJL-250	EN-GJL-250	EN-GJL-250	EN-GJL-250	EN-GJL-250
Intermediate ring	509.01	-	CC333G	EN-GJL-250	EN-GJL-250	EN-GJS-400-15	EN-GJS-400-15
Intermediate ring	509.02	-	EN-GJL-250 or St	EN-GJL-250 or St	EN-GJL-250 or St	EN-GJL-250 oder St	EN-GJL-250 oder St

⑤ in contact with fluids 1.4571/ motor side 1.7139

Combination of components

The following table shows the combination possibilities of components or spare parts of the NI sizes.
Within a vertical column, parts with identical numbers are interchangeable.

Shaft diameter at the shaft seal	Pump size	Volute casing	Impeller	Impeller		Diffuser	Stage casing	Inter-mediate ring	Casing cover	Stub shaft	Drive lantern	Intermediate ring
				1st stage	2nd stage					The allocation to the sizes depends on speed, motor performance and motor design.		
mm	NI											
16	20-160/01	1	1	-	-	-	-	-	1	16-14 16-19 16-24 16-28	16-160 16-200 16-250	-
24	32-125/01	2	2	-	-	-	-	-	2	24-14 24-19 24-24 24-28 24-38 24-42	24-160 24-200 24-250 24-300 24-350	-
	40-125/01	3	3									
	50-125/01	4	4									
	65-125/01	5	5									
30	25-200/01	6	6	-	-	-	-	-	3	30-19 30-24 30-28 30-38 30-42 30-48 30-55	30-200 30-250 30-300 30-350 30-400	-
	32-160/01	7	7									
	32-200/01	8	8									
	40-160/01	9	9									
	40-200/01	10	10									
	40-250/01	11	11					1				
	50-160/01	12	12					-				
	50-200/01	13	13									
	50-250/01	14	14					1				
	65-160/01	15	15					-				
	65-200/01	16	16									
	80-160/01	17	17									
30 two stage	2/25-200/01	6	-	1	1	1	1	-	4	2/30-19 2/30-24 2/30-28 2/30-38 2/30-42 2/30-48 2/30-55	30-200 30-250 30-300 30-350 30-400	-
	2/32-200/01	8	-									
	2/40-250/01	11	-	2	2	2	2		5			
	2/50-250/01	14	-	3								
40	65-250/01	18	18	-	-	-	-	-	6	40-28 40-38 40-42 40-48 40-55	40-360	280.180.0 280.230.20 280.250.50 280.300.50
	65-315/01	19	19					2				
	65-400/01	20	20					3				
	80-200/01	21	21					-				
	80-250/01	22	22									
	80-315/01	23	23					2				
	100-200/01	24	24					-				
	100-250/01	25	25									
	100-315/01	26	26					2				
	125-250/01	27	27					-				

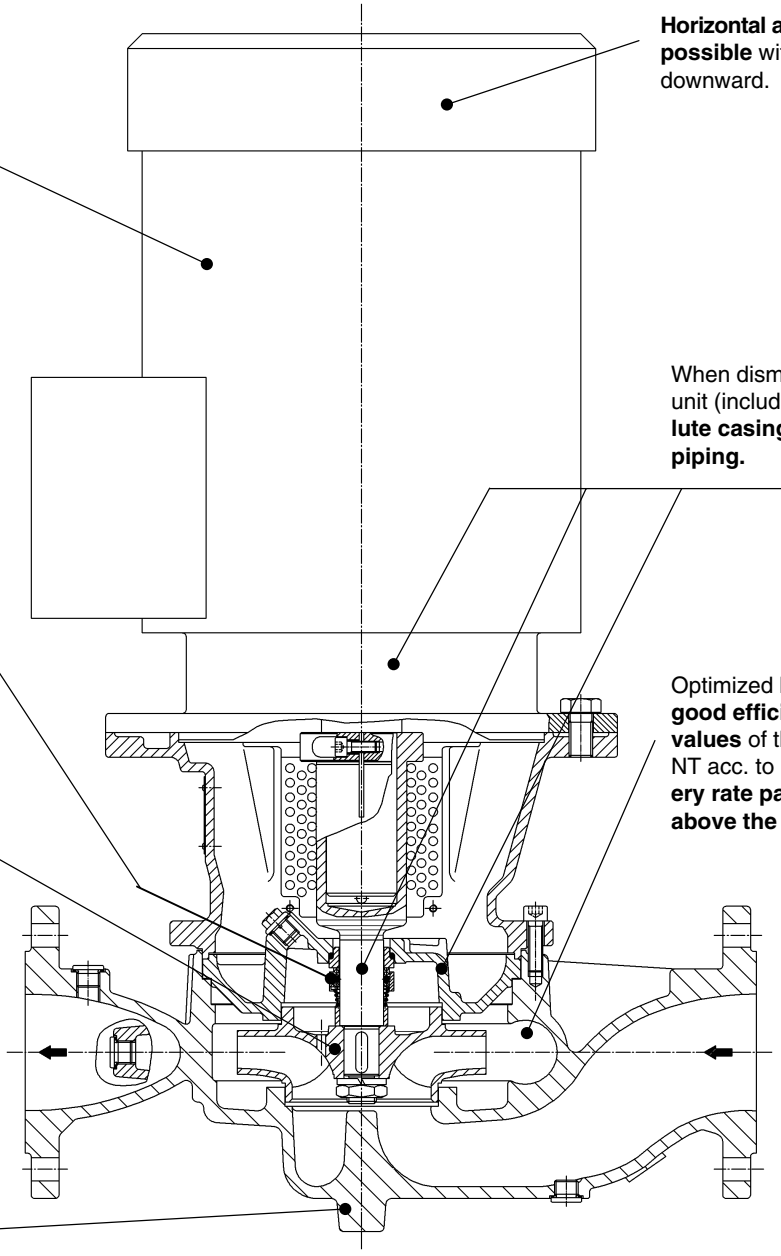
Commercial standard motors with locating-type bearing, construction IM V1, all types of enclosures and speeds of rotation possible.

Horizontal and vertical mounting possible with exception of motor downward.

Uncooled, unbalanced mechanical seal for cavities according to DIN EN 12 756, design K, form U.

When dismantling the driving unit (including impeller) the **volute casing remains in the piping.**

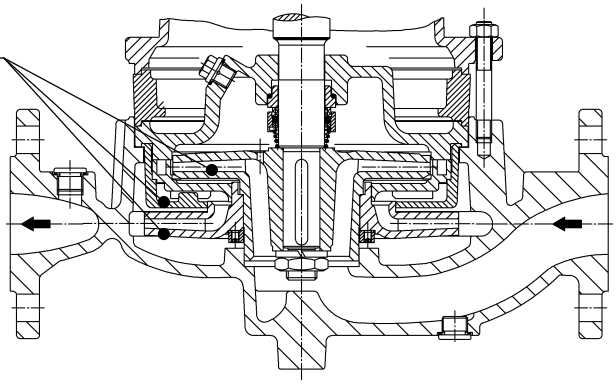
Optimized hydraulic with **very good efficiencies and NPSH-values** of the standard series NT acc. to DIN EN 733, **delivery rate partly considerable above the standard demands.**



Negligible axial thrust by fine adaption of the balancing holes.

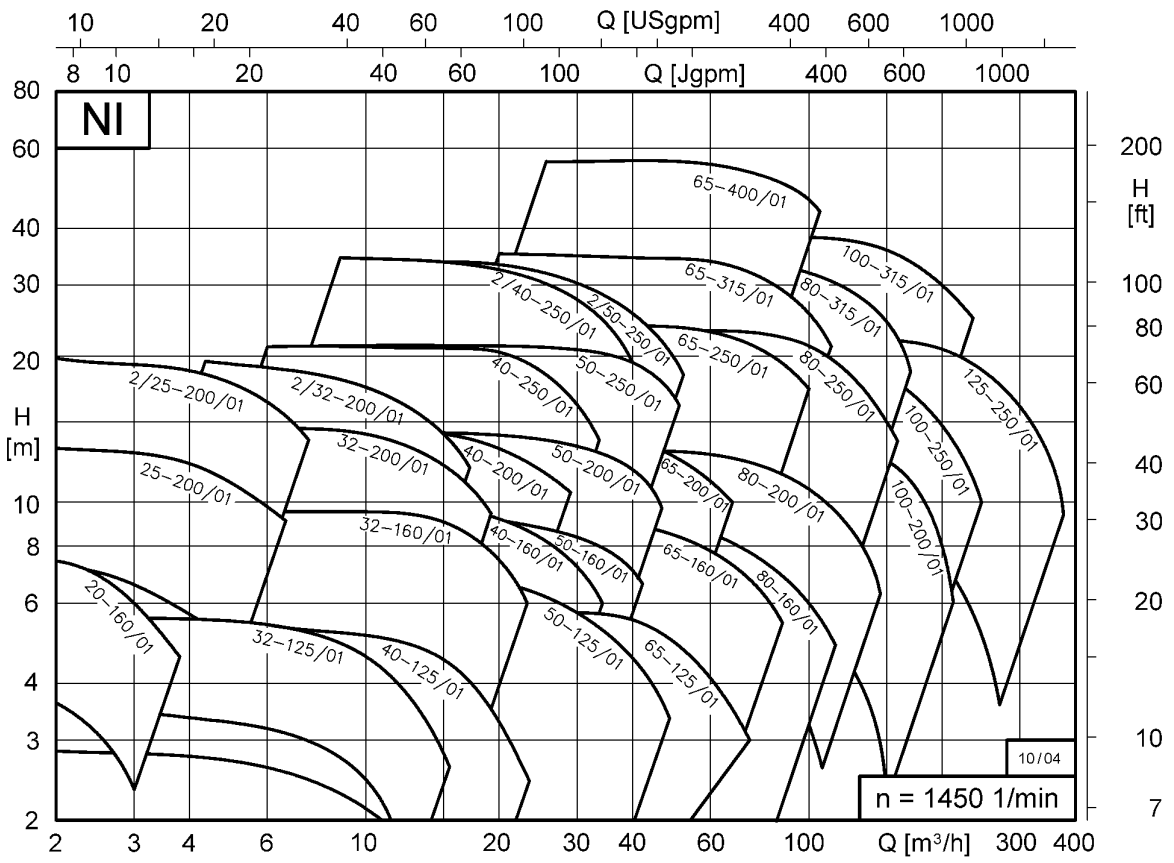
No foundation necessary.

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

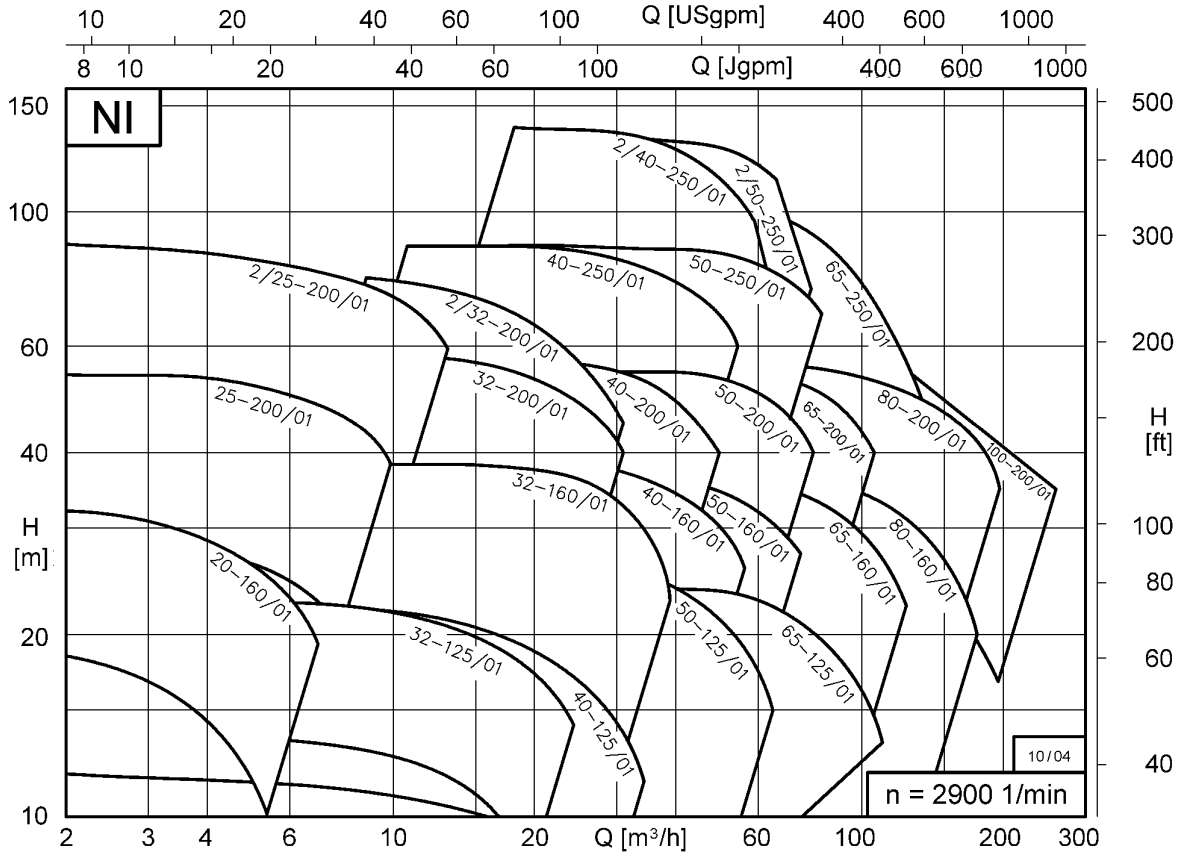


Performance graphs

n = 1450 1/min

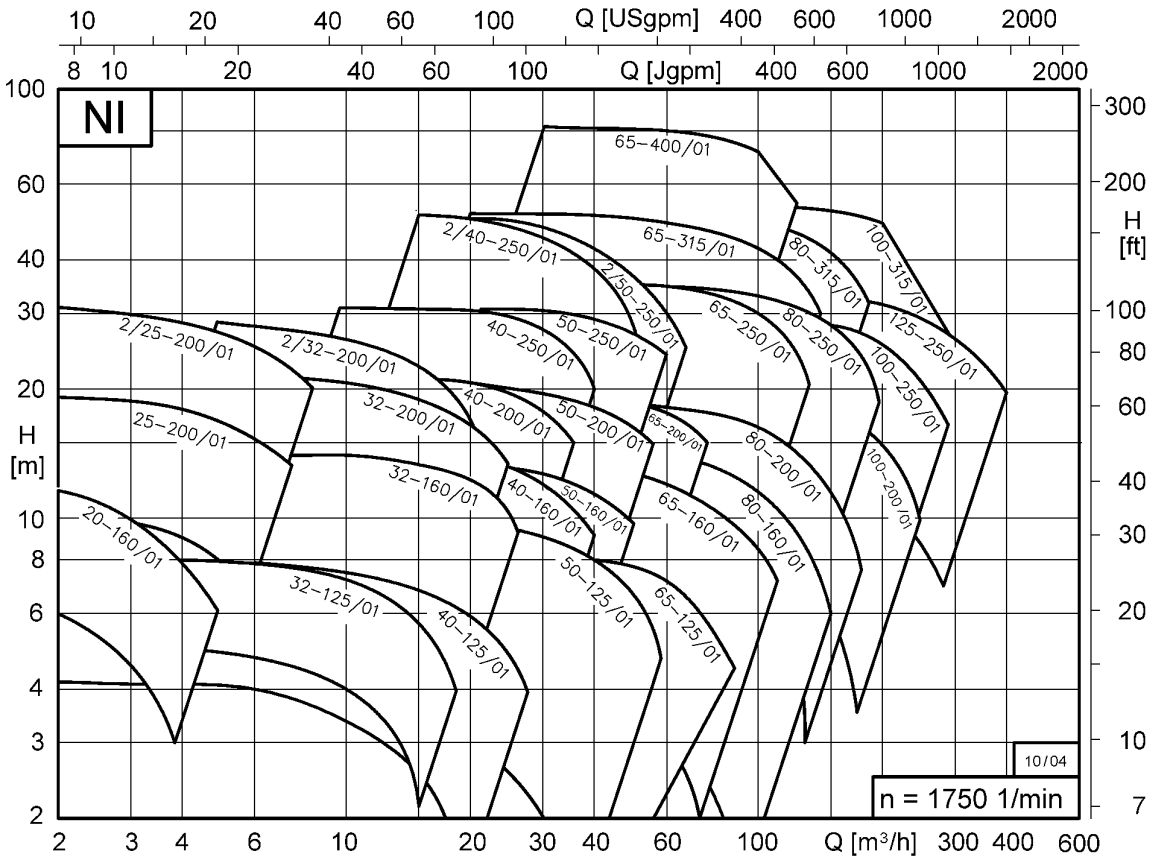


n = 2900 1/min

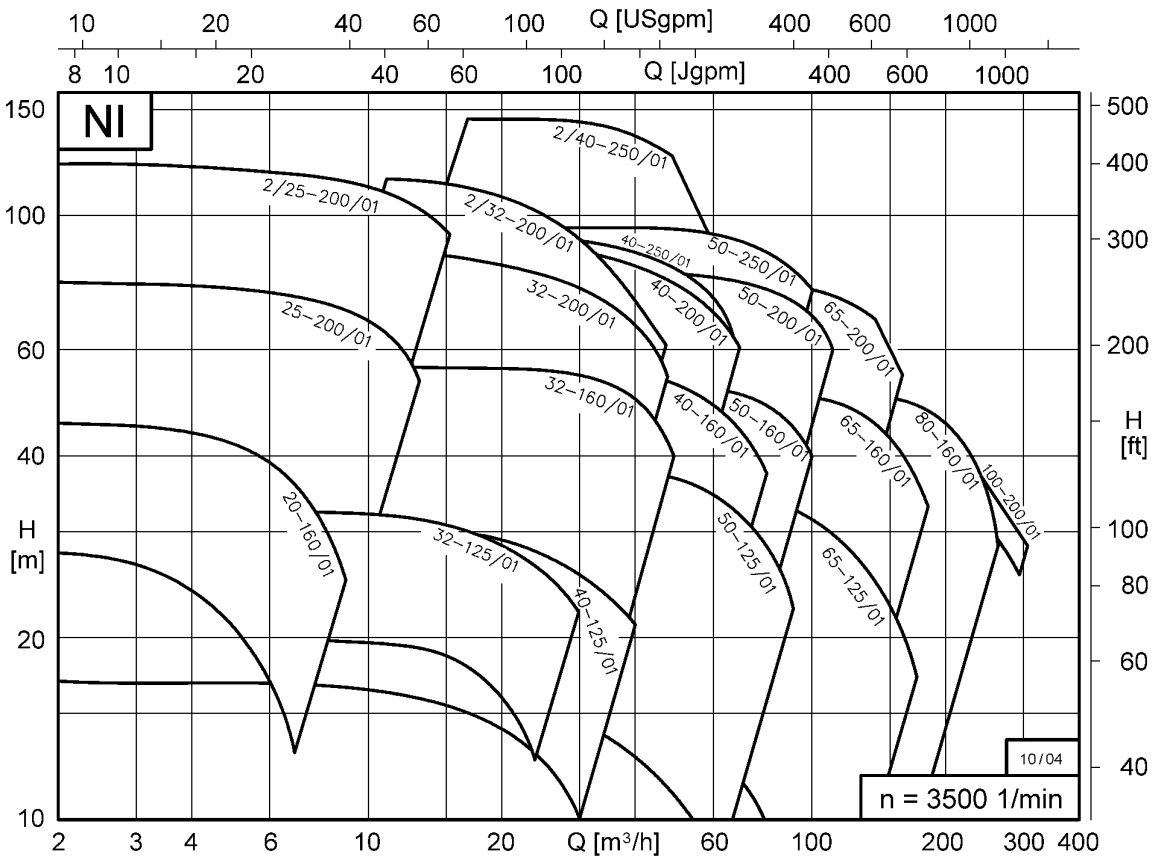


For exact performance data, please refer to the individual characteristics.
Valid for ρ = 1 kg/dm³ and ν = 1 mm²/s

n = 1750 1/min

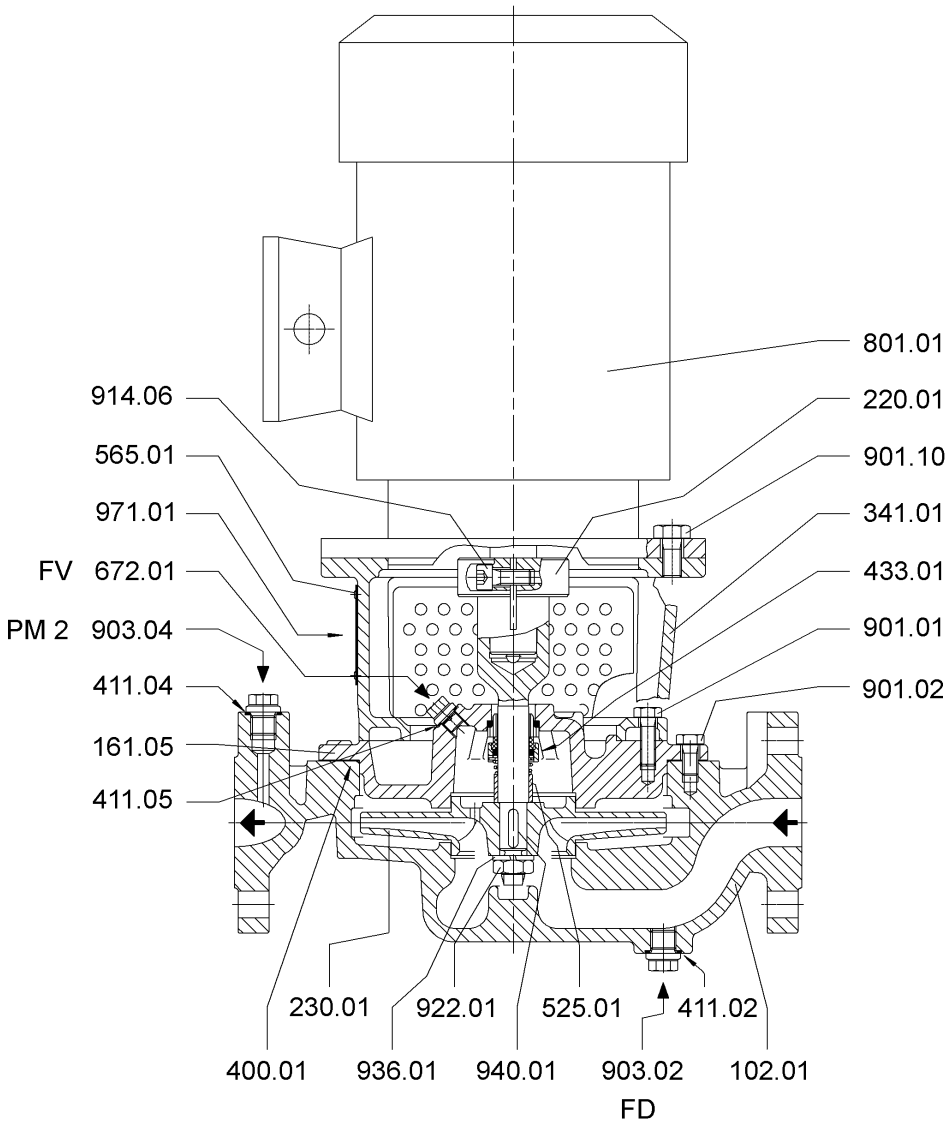


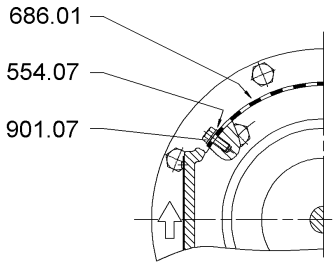
n = 3500 1/min



For exact performance data, please refer to the individual characteristics.
Valid for ρ = 1 kg/dm³ and ν = 1 mm²/s

Sectional drawing
Single-stage sizes with shaft diameter 16 at the shaft seal





Fixing of guard plate to the drive lantern. Protection against accidental contact acc. to DIN EN 809

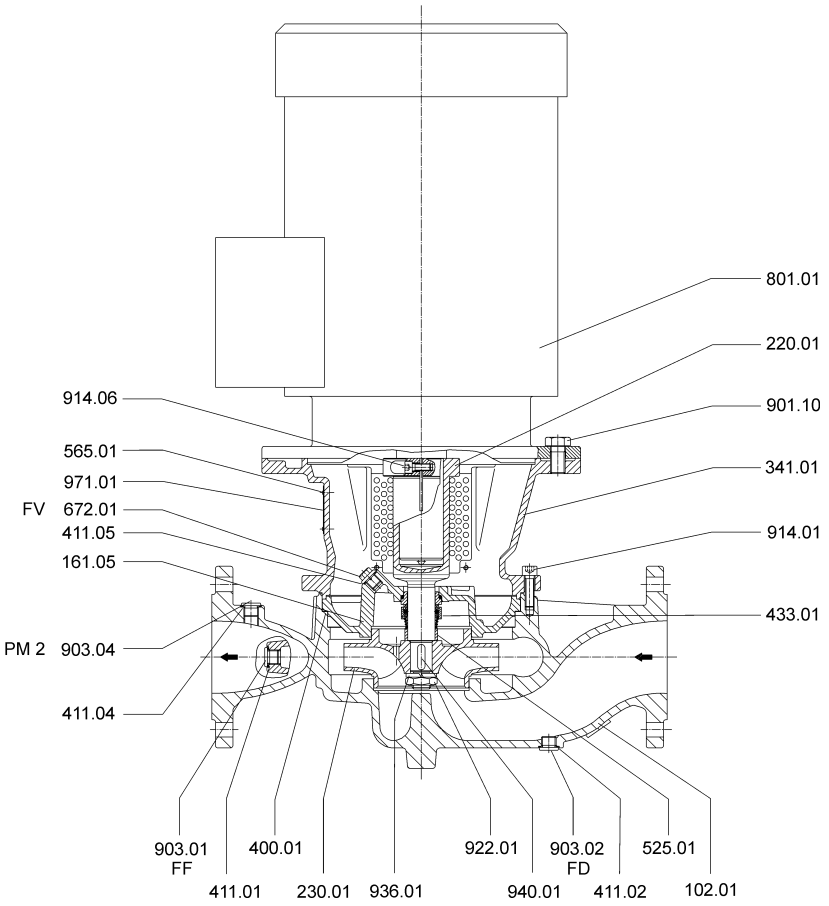
Denomination	Part No.
Volute casing	102.01
Casing cover	161.05
Stub shaft	220.01
Impeller	230.01
Drive lantern	341.01
Gasket	400.01
Joint ring	411.02
Joint ring	411.04
Joint ring	411.05
Mechanical seal	433.01
Spacer sleeve	525.01

Denomination	Part No.
Washer	554.07
Rivet	565.01
Bleeder screw	672.01
Guard plate	686.01
Flange-mounted motor	801.01
Hexagonal screw	901.01
Hexagonal screw	901.02
Hexagonal screw	901.07
Hexagonal screw	901.10
Screwed plug	903.02
Screwed plug	903.04

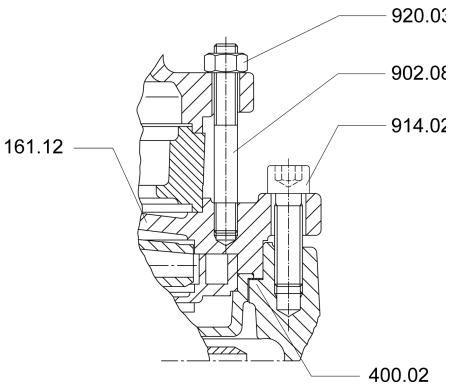
Denomination	Part No.
Socket head cap screw	914.06
Impeller nut	922.01
Spring washer	936.01
Key	940.01
Rating plate	971.01

Connections	
FD	Drainage
FV	Venting
PM2	Pressure measurement

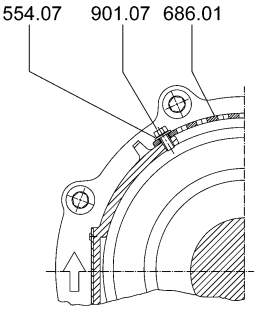
Sectional drawing
Single-stage sizes with shaft diameters 24 and 30 at the shaft seal



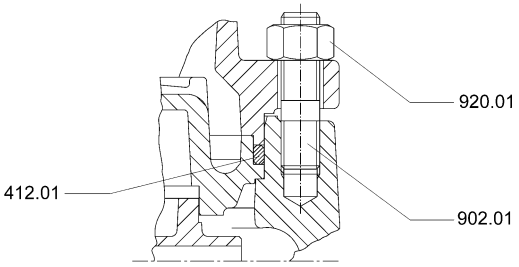
Shaft seal: uncooled, unbalanced mechanical seal
Abbreviation: **U 3 D**



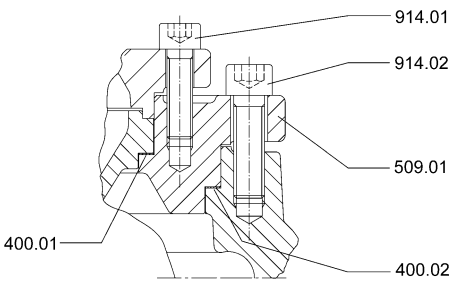
Casing cover design at
sizes 2/40-250/01 and 2/50-250/01



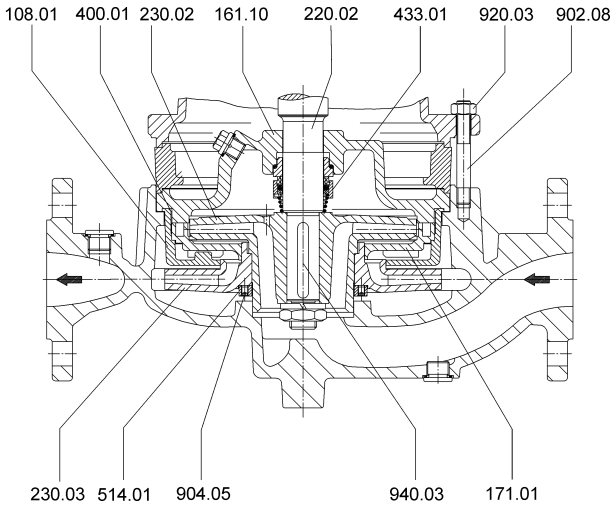
Fixing of guard plate to the drive lantern.
Protection against accidental contact acc. to DIN EN 809



Sizes with shaft seal diameter 24 at the shaft seal

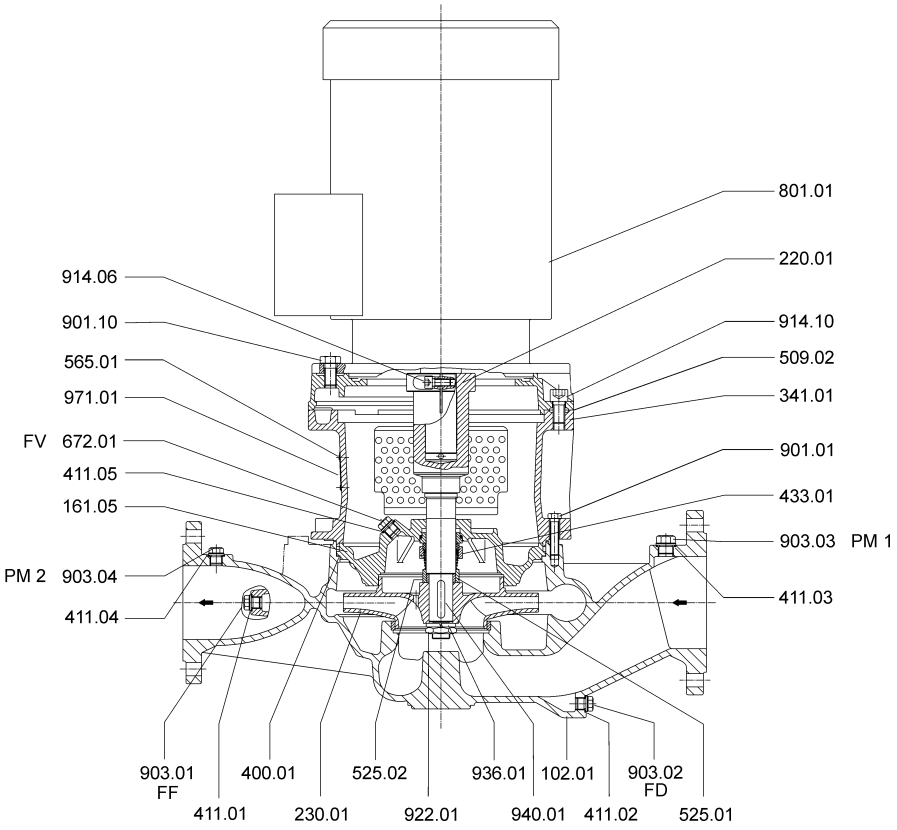


Design with intermediate ring,
sizes 40-250/01 and 50-250/01

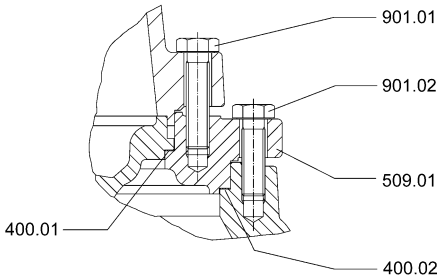


Two-stage sizes with shaft diameter 30 at the
shaft seal, uncooled, unbalanced mechanical seals
U 3 D and U 3.20 D

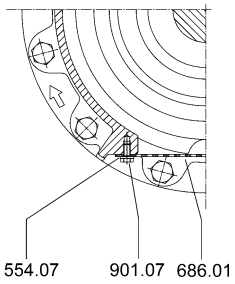
Sectional drawing Sizes with shaft diameter 40 at the shaft seal



Shaft seal: uncooled, unbalanced mechanical seal
Abbreviation: **U 3 D**



Design with intermediate ring, sizes 65-315/01, 80-315/01, 100-315/01, 65-400/01



Fixing of guard plate to the drive lantern. Protection against accidental contact acc. to DIN EN 809

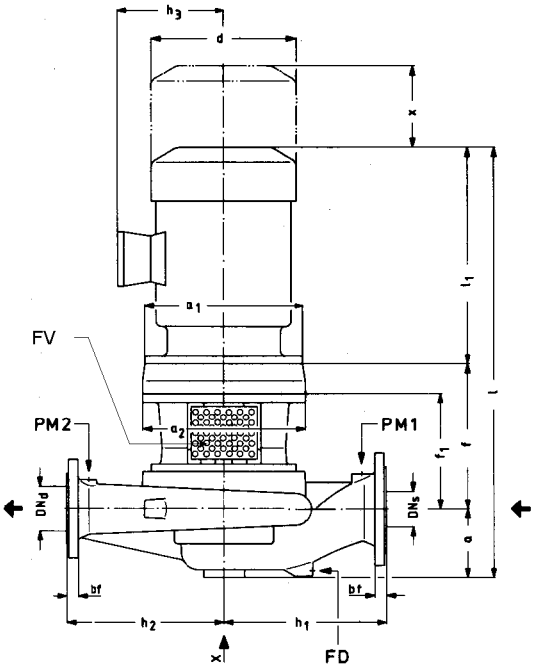
Denomination	Part No.
Volute casing	102.01
Stage casing	108.01
Casing cover	161.05
Casing cover	161.10
Casing cover	161.12
Diffuser	171.01
Stub shaft	220.01
Stub shaft	220.02
Impeller	230.01
Impeller 1st stage	230.02
Impeller 2nd stage	230.03
Drive lantern	341.01
Gasket	400.01
Gasket	400.02
Joint ring	411.01
Joint ring	411.02
Joint ring	411.03
Joint ring	411.04
Joint ring	411.05
O-ring	412.01
Mechanical seal	433.01

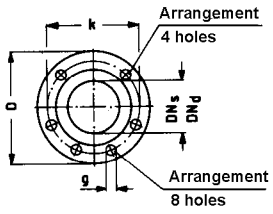
Denomination	Part No.
Intermediate ring	509.01
Intermediate ring	509.02
Threaded ring	514.01
Spacer sleeve	525.01
Spacer sleeve	525.02
Washer	554.07
Rivet	565.01
Bleeder screw	672.01
Guard plate	686.01
Flange-mounted motor	801.01
Hexagonal screw	901.01
Hexagonal screw	901.02
Hexagonal screw	901.07
Hexagonal screw	901.10
Stud bolt	902.01
Stud bolt	902.08
Screwed plug	903.01
Screwed plug	903.02
Screwed plug	903.03
Screwed plug	903.04
Grub screw	904.05

Denomination	Part No.
Socket head cap screw	914.01
Socket head cap screw	914.02
Socket head cap screw	914.06
Socket head cap screw	914.10
Hexagonal nut	920.01
Hexagonal nut	920.03
Impeller nut	922.01
Spring washer	936.01
Key	940.01
Key	940.03
Rating plate	971.01

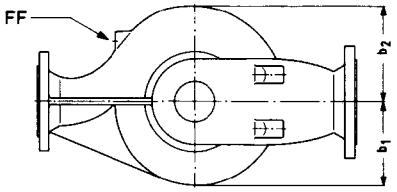
Connections	
FD	Drainage
FF	Filling
FV	Venting
PM1	Pressure measurement
PM2	Pressure measurement

Aggregate dimensions Sizes with shaft diameters 16, 24, 30, and 40 at the shaft seal





View X



Flanges acc. to EN 1092-2 PN 16

DN_d DN_s	D	bf	k	g	No. of holes
25	115	16	85	14	4
32	140	18	100	19	4
40	150	18	110	19	4
50	165	20	125	19	4
65	185	20	145	19	4
80	200	22	160	19	8
100	220	24	180	19	8

Shaft diameter at the shaft seal	Connections				
	Drain-ing	Fill-ing	Vent-ing	Pressure measurement	
mm	FD	FF	FV	PM1	PM2
16	G 1/4	-	G 1/8	-	G 1/4
24, 30	G 3/8	G 3/8	G 1/4	-	G 3/8
40	G 3/8	G 3/8	G 3/8	G 1/2	G 3/8

Tolerances of companion dimensions acc. to DIN EN 735

Sense of rotation: clockwise as seen from the driving side

Dimensions in mm without commitment

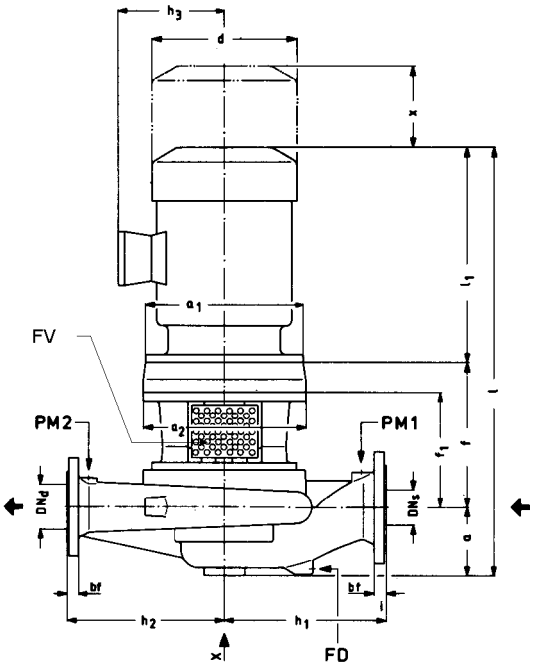
Shaft diameter at shaft seal	Pump size	Motor size	Performance		Aggregate dimensions															Allocation stub shaft/ drive lantern
					Pump dimensions									Motor dimensions approx. dimensions varying depending upon manufacturer					Exten-sion dimen-sion	Contained in abbreviation, v. page 2
					Flanges															
mm			kW		DN_s	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
16	20-160/01	71	0,25	0,37	25	25	75	118	-	108	108	-	150	145	160	145	116	210	403	62	14/160
		80	0,55	0,75				138							200	162	124	234	447		19/200
24	32-125/01	71	0,25	0,37	40	40	95	148	-	96	96	-	180	160	160	145	116	237	480	89	14/160
		80	0,55	0,75											200	162	124	234	477		19/200
		90 S	1,1												200	181	130	282	525		24/200
	40-125/01	71	0,25	0,37	50	50	105	148	-	96	110	-	205	170	160	145	116	237	490	89	14/160
		80	0,55	0,75											200	162	124	234	487		19/200
		90 S	1,1												200	181	130	282	535		24/200
	50-125/01	71	0,25	0,37	65	65	114	148	-	110	130	-	220	180	160	145	116	237	499	89	14/160
		80	0,55	0,75											200	162	124	234	496		19/200
		90 S	1,1												200	181	130	282	544		24/200
		90 L	1,5												200	181	130	282	544		24/200
		100 L	2,2	3											250	203	158	312	574		28/250
	65-125/01	71	0,25	0,37	80	80	120	148	-	120	148	-	250	200	160	145	116	237	505	95	14/160
		80	0,55	0,75											200	162	124	234	502		19/200
		90 S	1,1												200	181	130	282	550		24/200
		90 L	1,5												200	181	130	282	550		24/200
		100 L	2,2	3											250	203	158	312	580		28/250
30	25-200/01	80	0,55	0,75	32	32	91	149	-	132	132	-	190	180	200	162	124	234	474	102	19/200
		90 S	1,1												200	181	130	282	522		24/200
		90 L	1,5												200	181	130	282	522		24/200
	2/25-200/01	80	0,55	0,75	32	32	91	183	-	132	132	-	190	180	200	162	124	234	508	102	19/200
		90 S	1,1												200	181	130	282	556		24/200
		90 L	1,5												200	181	130	282	556		24/200
		100 L	2,2	3				193							250	203	158	312	596		28/250
	32-160/01	80	0,55	0,75	40	40	99	149	-	123	123	-	200	190	200	162	124	234	482	102	19/200
		90 S	1,1												200	181	130	282	530		24/200
		90 L	1,5												200	181	130	282	530		24/200
		100 L	2,2	3											250	203	158	312	560		28/250
	32-200/01	80	0,55	0,75	40	40	95	149	-	124	130	-	200	190	200	162	124	234	478	102	19/200
		90 S	1,1												200	181	130	282	526		24/200
		90 L	1,5												200	181	130	282	526		24/200
		100 L	2,2	3											250	203	158	312	556		28/250

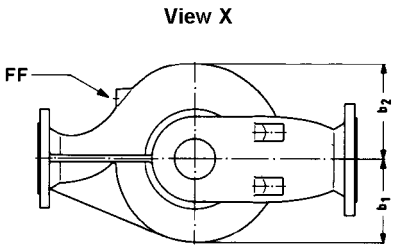
Shaft diameter at shaft seal	Pump size	Motor size	Performance	Aggregate dimensions																	Allocation stub shaft/ drive lantern/ intermediate ring
				Pump dimensions										Motor dimensions approx. dimensions varying depending upon manufacturerr					Extension-dimension	Contained in abbreviation, v. page 2
				Flanges																	
mm			kW	DN_S	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
30	2/32-200/01	80	0,55 0,75	40	40	95	183	-	124	130	-	200	190	200	162	124	234	512	102	19/200
		90 S	1,1											200	181	130	282	560		24/200
		90 L	1,5											200	181	130	282	560		24/200
		100 L	2,2 3				193							250	203	158	312	600		28/250
	40-160/01	80	0,55 0,75	50	50	105	149	-	123	123	-	210	200	200	162	124	234	488	102	19/200
		90 S	1,1											200	181	130	282	536		24/200
		90 L	1,5											200	181	130	282	536		24/200
		100 L	2,2 3											250	203	158	312	566		28/250
	40-200/01	80	0,55 0,75	50	50	105	149	-	125	135	-	220	205	200	162	124	234	488	102	19/200
		90 S	1,1											200	181	130	282	536		24/200
		90 L	1,5											200	181	130	282	536		24/200
		100 L	2,2 3											250	203	158	312	566		28/250
		112 M	4											250	228	171	335	589		28/250
	40-250/01	90 S	1,1	50	50	105	149	-	148	156	-	240	225	200	181	130	282	536	85	24/200
		90 L	1,5											200	181	130	282	536		24/200
		100 L	2,2 3											250	203	158	312	566		28/250
		112 M	4											250	228	171	335	589		28/250
	2/40-250/01	100 L	2,2 3	50	50	105	193	-	148	156	-	240	225	250	203	158	312	610	85	28/250
		112 M	4											250	228	171	335	633		28/250
		132 S	5,5				238							300	266	196	375	718		38/300
		132 M	7,5											300	266	196	375	718		38/300
		160 M	11				274							350	320	234	481	860		42/350
	50-160/01	80	0,55 0,75	65	65	114	149	-	125	130	-	230	220	200	162	124	234	497	102	19/200
		90 S	1,1											200	181	130	282	545		24/200
		90 L	1,5											200	181	130	282	545		24/200
		100 L	2,2 3											250	203	158	312	575		28/250
	50-200/01	80	0,55 0,75	65	65	114	149	-	132	146	-	240	225	200	162	124	234	497	102	19/200
		90 S	1,1											200	181	130	282	545		24/200
		90 L	1,5											200	181	130	282	545		24/200
		100 L	2,2 3											250	203	158	312	575		28/250
		112 M	4											250	228	171	335	598		28/250
		132 S	5,5				204							300	266	196	375	693		38/300
	50-250/01	90 L	1,5	65	65	114	149	-	156	165	-	265	245	200	181	130	282	545	85	24/200
		100 L	2,2 3											250	203	158	312	575		28/250
		112 M	4											250	228	171	335	598		28/250
		132 S	5,5				204							300	266	196	375	693		38/300
		132 M	7,5											300	266	196	375	693		38/300
		160 M	11				219							350	320	234	481	814		42/350
	2/50-250/01	100 L	2,2 3	65	65	114	193	-	156	165	-	265	245	250	203	158	312	619	85	28/250
		112 M	4											250	228	171	335	642		28/250
		132 S	5,5				238							300	266	196	375	727		38/300
		132 M	7,5											300	266	196	375	727		38/300
		160 M	11				274							350	320	234	481	869		42/350
		160 L	15											350	320	234	481	869		42/350
	65-160/01	80	0,55 0,75	80	80	123	149	-	133	162	-	270	230	200	162	124	234	506	102	19/200
		90 S	1,1											200	181	130	282	554		24/200
		90 L	1,5											200	181	130	282	554		24/200
		100 L	2,2 3											250	203	158	312	584		28/250
		112 M	4											250	228	171	335	607		28/250
	65-200/01	90 S	1,1	80	80	122	149	-	147	170	-	275	235	200	181	130	282	553	102	24/200
		90 L	1,5											200	181	130	282	553		24/200
		100 L	2,2 3											250	203	158	312	583		28/250
		112 M	4											250	228	171	335	606		28/250
		132 S	5,5				204							300	266	196	375	701		38/300
		132 M	7,5											300	266	196	375	701		38/300
40	65-250/01	100 L	2,2 3	100	80	143	261	360	212	212	261	355	350	250	203	158	312	716	123	28/250
		112 M	4											250	228	171	335	739		28/250
		132 S	5,5				281							300	266	196	375	799		38/300
		132 M	7,5											300	266	196	375	799		38/300
		160 M	11				311							350	320	234	481	935		42/350
		160 L	15											350	320	234	481	935		42/350
		180 M	18,5											350	375	275	610	1064		48/350

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

When using spezial motors, make sure that other performances are allocated to the individual sizes, depending upon the enclosure. The main dimensions change accordingly. In case of order, binding tables of motor dimensions must be supplied to us.

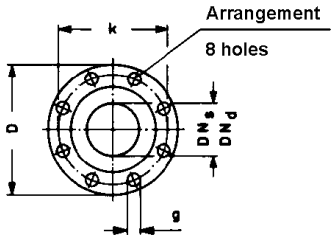
Aggregate dimensions Sizes with shaft diameter 30 and 40 at the shaft seal





Flanges up to DN 150 acc. to EN 1092-2 PN 16
up to DN 200 acc. to EN 1092-2 PN 10

DN_d DN_s	D	bf	k	g	No. of holes
80	200	22	160	19	8
100	220	24	180	19	8
125	250	26	210	19	8
150	285	26	240	23	8
200	340	26	295	23	8



Shaft diameter at shaft seal	Connections				
	Drain-ing	Fill-ing	Vent-ing	Pressure measurement	
mm	FD	FF	FV	PM1	PM2
30	G 3/8	G 3/8	G 1/4	-	G 3/8
40	G 3/8	G 3/8	G 3/8	G 1/2	G 3/8

Tolerances of companion dimensions acc. to DIN EN 735

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

Dimensions in mm without commitment

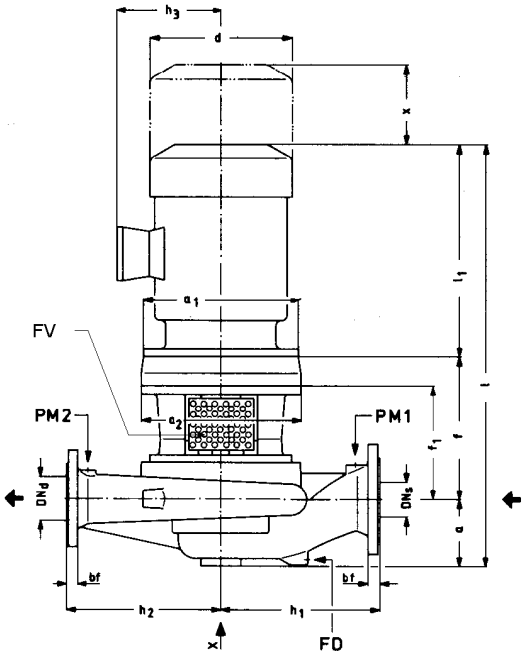
Shaft diameter at the shaft seal	Pump size	Motor size	Performance	Aggregate dimensions															Allocation stub shaft/ drive lantern/ intermediate ring
				Pump dimensions										Motor dimensions approx. dimensions varying depending upon manufacturer					Extension dimension
				Flanges															
mm			kW	DN_S	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	Contained in abbreviation v. page 2
40	65-315/01	112 M	4	100	80	138	261	360	238	238	261	385	375	250	228	171	335	734	105	28/250
		132 S	5,5				281							300	266	196	375	794		38/300
		132 M	7,5											300	266	196	375	794		38/300
		160 M	11				311							350	320	234	481	930		42/350
		160 L	15											350	320	234	481	930		42/350
		180 M	18,5											350	375	275	610	1059		48/350
		180 L	22											350	375	275	610	1059		48/350
		200 L	30											400	415	310	665	1114		55/400
	65-400/01	132 M	7,5	100	80	143	281	360	283	283	261	425	415	300	266	196	375	799	105	38/300
		160 M	11				311							350	320	234	481	935		42/350
		160 L	15											350	320	234	481	935		42/350
		180 M	18,5											350	375	275	610	1064		48/350
		180 L	22											350	375	275	610	1064		48/350
		200 L	30											400	415	310	665	1119		55/400
30	80-160/01	80	0,55 | 0,75	100	100	132	149	-	136	170	-	275	245	200	162	124	234	515	102	19/200
		90S	1,1											200	181	130	282	563		24/200
		90 L	1,5											200	181	130	282	563		24/200
		100 L	2,2 | 3											250	203	158	312	593		28/250
		112 M	4											250	228	171	335	616		28/250
		132 S	5,5				204							300	266	196	375	711		38/300
		132 M	7,5											300	266	196	375	711		38/300

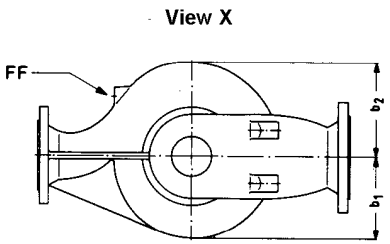
Shaft diameter at the shaft seal	Pump size	Motor size	Performance	Aggregate dimensions																	Allocation stub shaft/ intermediate ring
				Pump dimensions										Motor dimensions approx. dimensions varying depending upon manufacturer					Extension dimension	Contained in abbreviation v. page 2
				Flanges																	
mm			kW	DN_S	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
40	80-200/01	100 L	2,2 | 3	125	100	144	261	360	212	212	261	360	350	250	203	158	312	717	123	28/250
		112 M	4											250	228	171	335	740		28/250
		132 S	5,5				281							300	266	196	375	800		38/300
		132 M	7,5											300	266	196	375	800		38/300
		160 M	11				311							350	320	234	481	936		42/350
	80-250/01	112 M	4	125	100	156	261	360	212	212	261	360	350	250	228	171	335	752	123	28/250
		132 S	5,5				281							300	266	196	375	812		38/300
		132 M	7,5											300	266	196	375	812		38/300
		160 M	11											350	320	234	481	948		42/350
		160 L	15											350	320	234	481	948		42/350
		180 M	18,5				311							350	375	275	610	1077		48/350
		180 L	22											350	375	275	610	1077		48/350
		200 L	30											400	415	310	665	1132		55/400
	80-315/01	132 S	5,5	125	100	156	281	360	238	238	261	390	375	300	266	196	375	812	105	38/300
		132 M	7,5											300	266	196	375	812		38/300
		160 M	11											350	320	234	481	948		42/350
		160 L	15				311							350	320	234	481	948		42/350
		180 M	18,5											350	375	275	610	1077		48/350
		180 L	22											350	375	275	610	1077		48/350
		200 L	30											400	415	310	665	1132		55/400
	100-200/01	100 L	2,2 | 3	150	125	173	261	360	212	212	261	380	350	250	203	158	312	746	133	28/250
		112 M	4											250	228	171	335	769		28/250
		132 S	5,5				281							300	266	196	375	829		38/300
		132 M	7,5											300	266	196	375	829		38/300
		160 M	11				311							350	320	234	481	965		42/350
		160 L	15											350	320	234	481	965		42/350
	100-250/01	112 M	4	150	125	173	261	360	212	224	261	400	350	250	228	171	335	769	133	28/250
		132 S	5,5				281							300	266	196	375	829		38/300
		132 M	7,5											300	266	196	375	829		38/300
		160 M	11											350	320	234	481	965		42/350
		160 L	15											350	320	234	481	965		42/350
		180 M	18,5				311							350	375	275	610	1094		48/350
		180 L	22											350	375	275	610	1094		48/350
		200 L	30											400	415	310	665	1149		55/400
	100-315/01	132 M	7,5	150	125	175	281	360	238	250	261	425	420	300	266	196	375	831	112	38/300
		160 M	11											350	320	234	481	967		42/350
		160 L	15				311							350	320	234	481	967		42/350
		180 M	18,5											350	375	275	610	1096		48/350
		180 L	22											350	375	275	610	1096		48/350
		200 L	30											400	415	310	665	1151		55/400
	125-250/01	132 M	7,5	200	150	199	281	360	212	255	261	440	355	300	266	196	375	855	143	38/300
		160 M	11											350	320	234	481	991		42/350
		160 L	15				311							350	320	234	481	991		42/350
		180 M	18,5											350	375	275	610	1120		48/350
		180 L	22											350	375	275	610	1120		48/350
		200 L	30											400	415	310	665	1175		55/400

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

When using special motors, make sure that other performances are allocated to the individual sizes, depending upon the enclosure. The main dimensions change accordingly. In case of order, binding tables of motor dimensions must be supplied to us.

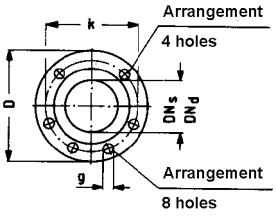
Aggregate dimensions Sizes with shaft diameters 16, 24, 30 and 40 at the shaft seal





Flanges acc. to EN 1092-2 PN 16

DN_d DN_s	D	bf	k	g	No. of holes
25	115	16	85	14	4
32	140	18	100	19	4
40	150	18	110	19	4
50	165	20	125	19	4
65	185	20	145	19	4
80	200	22	160	19	8
100	220	24	180	19	8
125	250	26	210	19	8
150	285	26	240	23	8



Shaft diameter at the shaft seal	Connections				
	Drain-ing	Fill-ing	Vent-ing	Pressure measurement	
mm	FD	FF	FV	PM1	PM2
16	G 1/4	-	G 1/8	-	G 1/4
24, 30	G 3/8	G 3/8	G 1/4	-	G 3/8
40	G 3/8	G 3/8	G 3/8	G 1/2	G 3/8

Tolerances of companion dimensions acc. to DIN EN 735

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

Dimensions in mm without commitment

Shaft diameter at shaft seal	Pump size	Motor size	Performance	Aggregate dimensions																Allocation stub shaft/ drive lantern
				Pump dimensions									Motor dimensions approx. dimensions varying depending upon manufacturer					Exten-sion dimen sion	Contained in abbreviation v. page 2
				Flanges															
mm			kW	DN_s	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
16	20-160/01	80	0,75 1,1	25	25	75	138	-	108	108	-	150	145	200	162	124	234	447	62	19/200
		90 S	1,5											200	181	130	282	495		24/200
		90 L	2,2											200	181	130	282	495		24/200
		100 L	3				148							250	203	158	313	536		28/250
		112 M	4											250	228	171	334	557		28/250
24	32-125/01	80	0,75 1,1	40	40	95	148	-	96	96	-	180	160	200	162	124	234	477	89	19/200
		90 S	1,5											200	181	130	282	525		24/200
		90 L	2,2											200	181	130	282	525		24/200
		100 L	3											250	203	158	312	555		28/250
		112 M	4											250	228	171	335	578		28/250
		132 S	5,5 7,5				188							300	266	196	375	658		38/300
	40-125/01	80	0,75 1,1	50	50	105	148	-	96	110	-	205	170	200	162	124	234	487	89	19/200
		90 S	1,5											200	181	130	282	535		24/200
		90 L	2,2											200	181	130	282	535		24/200
		100 L	3											250	203	158	312	565		28/250
		112 M	4											250	228	171	335	588		28/250
		132 S	5,5 7,5				188							300	266	196	375	668		38/300
	50-125/01	90 S	1,5	65	65	114	148	-	110	130	-	220	180	200	181	130	282	544	89	24/200
		90 L	2,2											200	181	130	282	544		24/200
		100 L	3											250	203	158	312	574		28/250
		112 M	4											250	228	171	335	597		28/250
		132 S	5,5 7,5				188							300	266	196	375	677		38/300
		160 M	11 15				223							350	320	234	481	818		42/350
	65-125/01	90 L	2,2	80	80	120	148	-	120	148	-	250	200	200	181	130	282	550	95	24/200
		100 L	3											250	203	158	312	580		28/250
		112 M	4											250	228	171	335	603		28/250
		132 S	5,5 7,5				188							300	266	196	375	683		38/300
		160 M	11 15				223							350	320	234	481	824		42/350
		160 L	18,5											350	320	234	481	824		42/350

Shaft diameter at shaft seal	Pump size	Motor size	Performance	Aggregate dimensions										Allocation stub shaft/ drive lantern
				Pump dimensions									Motor dimensions approx. dimensions varying depending upon manufacturer					Extension dimension	Contained in abbreviation v. page 2
				Flanges															
mm			kW	DN_S	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
30	25-200/01	100 L	3	32	32	91	149	-	132	132	-	190	180	250	203	158	312	552	102	28/250
		112 M	4											250	228	171	335	575		28/250
		132 S	5,5 7,5				204							300	266	196	375	670		38/300
		160 M	11 15				219							350	320	234	481	791		42/350
	2/25-200/01	112 M	4	32	32	91	193	-	132	132	-	190	180	250	228	171	335	619	102	28/250
		132 S	5,5 7,5				238							300	266	196	375	704		38/300
		160 M	11 15				274							350	320	234	481	846		42/350
		160 L	18,5											350	320	234	481	846		42/350
	32-160/01	100 L	3	40	40	99	149	-	123	123	-	200	190	250	203	158	312	560	102	28/250
		112 M	4											250	228	171	335	583		28/250
		132 S	5,5 7,5				204							300	266	196	375	704		38/300
		160 M	11 15				219							350	320	234	481	846		42/350
	32-200/01	100 L	3	40	40	95	149	-	124	130	-	200	190	250	203	158	312	556	102	28/250
		112 M	4											250	228	171	335	579		28/250
		132 S	5,5 7,5				204							300	266	196	375	678		38/300
		160 M	11 15				219							350	320	234	481	799		42/350
		160 L	18,5											350	320	234	481	799		42/350
		180 M	22											350	375	275	610	924		48/350
	2/32-200/01	112 M	4	40	40	95	193	-	124	130	-	200	190	250	228	171	335	623	102	28/250
		132 S	5,5 7,5				238							300	266	196	375	708		38/300
		160 M	11 15				274							350	320	234	481	805		42/350
		160 L	18,5											350	320	234	481	805		42/350
		180 M	22											350	375	275	610	979		48/350
		200 L	30 37											400	415	310	665	1034		55/400
	40-160/01	100 L	3	50	50	105	149	-	123	123	-	210	200	250	203	158	312	566	102	28/250
		112 M	4											250	228	171	335	589		28/250
		132 S	5,5 7,5				204							300	266	196	375	684		38/300
		160 M	11 15				219							350	320	234	481	805		42/350
		160 L	18,5											350	320	234	481	805		42/350
	40-200/01	100 L	3	50	50	105	149	-	125	135	-	220	205	250	203	158	312	566	102	28/250
		112 M	4											250	228	171	335	589		28/250
		132 S	5,5 7,5				204							300	266	196	375	684		38/300
		160 M	11 15				219							350	320	234	481	805		42/350
		160 L	18,5											350	320	234	481	805		42/350
		180 M	22											350	375	275	610	934		48/350
		200 L	30 37											400	415	310	665	989		55/400
	40-250/01	132 S	5,5 7,5	50	50	105	204	-	148	156	-	240	225	300	266	196	375	684	85	38/300
		160 M	11 15				219							350	320	234	481	805		42/350
		160 L	18,5											350	320	234	481	805		42/350
		180 M	22											350	375	275	610	934		48/350
		200 L	30 37											400	415	310	665	989		55/400
	2/40-250/01	160 M	11 15	50	50	105	274	-	148	156	-	240	225	350	320	234	481	860	85	42/350
		160 L	18,5											350	320	234	481	860		42/350
		180 M	22											350	375	275	610	989		48/350
		200 L	30 37											400	415	310	665	1044		55/400
	50-160/01	100 L	3	65	65	114	149	-	125	130	-	230	220	250	203	158	312	575	102	28/250
		112 M	4											250	228	171	335	598		28/250
		132 S	5,5 7,5				204							300	266	196	375	693		38/300
		160 M	11 15				219							350	320	234	481	814		42/350
		160 L	18,5											350	320	234	481	814		42/350
		180 M	22											350	375	275	610	943		48/350

Shaft diameter at shaft seal	Pump size	Motor size	Performance	Aggregate dimensions																Allocation stub shaft/ drive lantern/ intermediate ring
				Pump dimensions									Motor dimensions approx. dimensions varying depending upon manufacturer					Extension dimension	
				Flanges															Contained in abbreviation v. page 2
mm			kW	DN_S	DN_d	a	f	a_2	b_1	b_2	f_1	h_1	h_2	a_1	d	h_3	l_1	l	x	
30	50-200/01	112 M	4	65	65	114	149	-	132	146	-	240	225	250	228	171	335	598	102	28/250
		132 S	5,5 7,5				204							300	266	196	375	693		38/300
		160 M	11 15				219							350	320	234	481	814		42/350
		160 L	18,5											350	320	234	481	814		42/350
		180 M	22											350	375	275	610	943		48/350
		200 L	30 37											400	415	310	665	998		55/400
	50-250/01	132 S	5,5 7,5	65	65	114	204	-	156	165	-	265	245	300	266	196	375	693	85	38/300
		160 M	11 15				219							350	320	234	481	814		42/350
		160 L	18,5											350	320	234	481	814		42/350
		180 M	22											350	375	275	610	943		48/350
		200 L	30 37											400	415	310	665	998		55/400
	2/50-250/01	160 M	11 15	65	65	114	274	-	156	165	-	265	245	350	320	234	481	869	85	42/350
		160 L	18,5											350	320	234	481	869		42/350
		180 M	22											350	375	275	610	998		48/350
		200 L	30 37											400	415	310	665	1053		55/400
	65-160/01	112 M	4	80	80	123	149	-	133	162	-	270	230	250	228	171	335	607	102	28/250
		132 S	5,5 7,5				204							300	266	196	375	702		38/300
		160 M	11 15				219							350	320	234	481	823		42/350
		160 L	18,5											350	320	234	481	823		42/350
		180 M	22											350	375	275	610	952		48/350
		200 L	30 37											400	415	310	665	1007		55/400
	65-200/01	132 S	5,5 7,5	80	80	122	204	-	147	170	-	275	235	300	266	196	375	701	102	38/300
		160 M	11 15				219							350	320	234	481	822		42/350
		160 L	18,5											350	320	234	481	822		42/350
		180 M	22											350	375	275	610	951		48/350
		200 L	30 37											400	415	310	665	1006		55/400
40	65-250/01	160 L	18,5	100	80	143	311	360	212	212	261	355	350	350	320	234	481	935	123	42/350
		180 M	22											350	375	275	610	1064		48/350
		200 L	30 37											400	415	310	665	1119		55/400
30	80-160/01	112 M	4	100	100	132	149	-	136	170	-	275	245	250	228	171	335	616	102	28/250
		132 S	5,5 7,5				204							300	266	196	375	711		38/300
		160 M	11 15				219							350	320	234	481	832		42/350
		160 L	18,5											350	320	234	481	832		42/350
		180 M	22											350	375	275	610	961		48/350
		200 L	30 37											400	415	310	665	1016		55/400
40	80-200/01	160 M	11 15	125	100	144	311	360	212	212	261	360	350	350	320	234	481	936	123	42/350
		160 L	18,5											350	320	234	481	936		42/350
		180 M	22											350	375	275	610	1065		48/350
		200 L	30 37											400	415	310	665	1120		55/400
	100-200/01	160 M	11 15	150	125	173	311	360	212	212	261	380	350	350	320	234	481	965	133	42/350
		160 L	18,5											350	320	234	481	965		42/350
		180 M	22											350	375	275	610	1094		48/350
		200 L	30 37											400	415	310	665	1149		55/400

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

When using special motors, make sure that other performances are allocated to the individual sizes, depending upon the enclosure. The main dimensions change accordingly. In case of order, binding tables of motor dimensions must be supplied to us.

Subject to technical alterations.

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