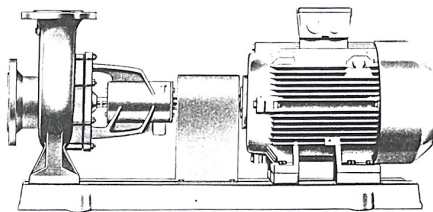


Volute Casing Centrifugal Pumps PN 16 Series CLT



Utilization

For handling partly or fully desalinated water, chlorinated and/or ozonized bath waters (even at high temperatures), thermal water, mineral water, varnishes, phosphatizing solutions, cataphoresis and anaphoresis varnishes, ultrafiltrates and pickling solutions. Moreover, non-aggressive, aggressive, cold or hot liquids can be handled in chemical engineering plants.

Main fields of application

In air conditioning, surface engineering and electroplating, pulp industry, pharmaceutical and chemical industry, foodstuff and beverage industry, in sea-water desalination plants and in swimming-pool engineering.

Moreover, for applications of the most varied kind in all industrial branches, especially wherever pumps of corrosion-resistant materials are specified.

Type and series construction

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

Series construction according to the unit assembly system, shaft bearing in a bearing bracket which can be provided with a support foot (for pumps with bearing bracket size 585 standard, in case of all other sizes, available on request only).

Volute casing with cast-on feet. Main dimensions (volute casing only) and rated performances according to DIN 24 256.

Branch positions/flanges

Suction branch: axial

Delivery branch: radially upwards

Flanges: with material type W20 - DIN 2543 PN 16
with material type W22 - DIN 2534 PN 25
with material type W23 - DIN 2544 PN 25

Other flange dimensions/types are possible (extra charge).

Shaft sealing

All sizes by uncooled stuffing box. Packing rings on graphite PTFE basis

All sizes by uncooled, maintenance-free standard mechanical seal of the unbalanced type according to DIN 24 960.

Shaft sealing			
Abbreviation	Standard material design for water up to 100°C		Material key DIN 24 960
U3.1 D	Rotating seal ring	Hard carbon, synthetic resin impregnated	B
	Stationary seal ring	Oxide ceramics	V
	O-rings	Fluor caoutchouc (Viton)	V
	Spring	CrNi steel	F
	Other structural components	CrNi steel	F
U3.1 HD	Rotating seal ring	Hard carbon, synthetic resin impregnated	B
	Stationary seal ring	Silicon carbide	U
	O-rings	Fluor caoutchouc (Viton)	V
	Spring	CrNi steel	F
	Other structural components	CrNi steel	F
Abbreviation	Standard material design for water over 100°C		Material key DIN 24 960
U3 D	Rotating seal ring	Hard carbon, synthetic resin impregnated	B
	Stationary seal ring	Oxide ceramics	V
	O-rings	EP caoutchouc	E
	Spring	CrNi steel	F
	Other structural components	CrNi steel	F

Temperature and pressure limits

Valid for all material designs as a function of the mechanical seal

Material design	Abbreviation of mechanical seal	Temperature t ①	Internal pump pressure p
W 20	U 3.1 D	100°C	10 bar
W 22	U 3.11 D	100°C	16 bar
W 23	U 3 D	140°C	10 bar

Extended field of application for temperatures over 140°C by shaft seals U 3.8 D and U 2.4 D. Refer to Hot Water Brochure VM 643 E.

As a function of the material design and stuffing box

Material design	Abbreviation of stuffing box	Temperature t ①	Internal pump pressure p
W 20 W 22 W 23	U 1.1 A U 1.1 B U 1.1 C	125°C	16 bar
W 20	U 1.1 A	183°C	14 bar
W 22 W 23			16 bar

① The admissible temperatures apply to water. In case of other fluids to be pumped, the temperature limits may change.

Admissible inlet pressure Inlet pressure plus max. delivery head must not exceed the admissible internal pump pressure.
For shaft seals U 1.1 B and U 1.1 C: Inlet pressure ≤ 5 bar.

Bearing and lubrication

Bearing bracket size	Grooved ball bearing (DIN 625) Pump and motor side	Lubrication
360	6306 - 2ZC3	grease lubricated
470	6308 - 2ZC3	
530	6410 - C3	
585	6413 - C3	

Dismantling of built-in unit

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

Combination of components

The table on page 5 shows the combination possibilities of components of all CLT sizes.

The unit assembly allows simplified spare parts stocking.

Connections

- BI Blocking – Inlet with shaft sealing U 1.1 C only
- FD Fluid drainage
- LO Leakage outlet
- PM 2 Pressure measurement only with sizes at bearing bracket sizes 360 and 470
- PM 3 Pressure measurement only with sizes at bearing bracket sizes 530 and 585

Shaft coupling and coupling guard

Shaft coupling according to DIN 740 without or with spacer. A coupling guard as a protection against accidental contact according to DIN 24 295 will also be supplied as soon as the scope of supply includes pump, base plate and shaft coupling.

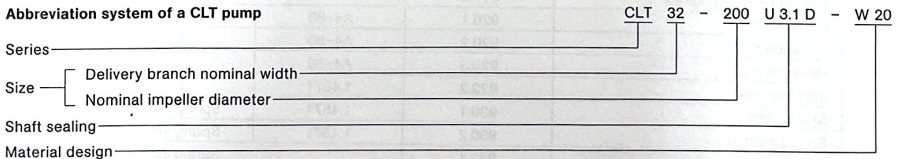
Base plate

Of cast iron or steel. Material design depending upon size. For data, please refer to the installation plan.

Drive

Surface-cooled three-phase squirrel-cage induction motors, IMB3 type of construction, enclosure IP44/IP54 according to IEC Standard, class B insulation, capacities and main dimensions according to DIN 42673.

Abbreviation system of a CLT pump



The abbreviation is entered on the name plate.

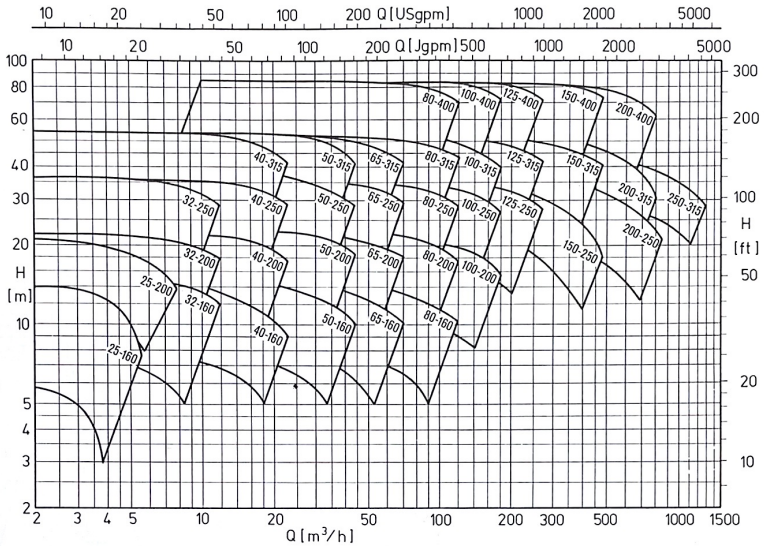
Table Combination of Components

The table below shows the combination possibilities of structural parts and components of the CLT sizes

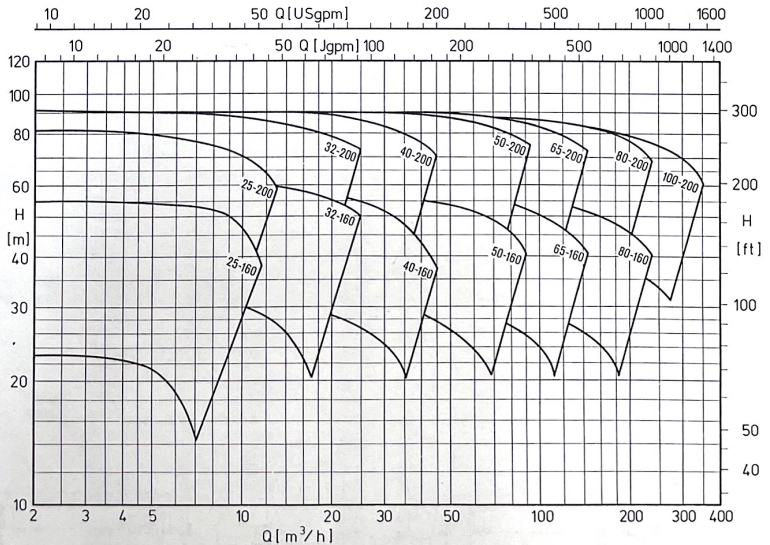
Bearing bracket size	Pump size	Denomination												
		Casing cover	Support foot	Shaft	Groove ball bearing	Groove ball bearing	Bearing bracket	Gland	Lantern ring	Stuffing box	Mechanical seal rot. part	Stationary seal ring	Intermediate ring	Impeller nut
		Part number												
		161.1	183.1	210.1	321.1	321.2	330.1	452.1	458.1	461.1	470.1	475.1	509.1	922.2
360	25-160		1											
	25-200		2											
	32-160		1											
	32-200		2											
	40-160	1	1	1	1	1	1	1	1	1	1	-	1	
	40-200		2											
	50-160		2											
	50-200		2											
	65-160		2											
80-160		3												
470	32-250		4									-		
	40-250		4									-		
	40-315		5									1		
	50-250		4									-		
	50-315		6									1		
	65-200	2	4	2	2	2	2	2	2	2	2	-	2	
	65-250		5									-		
	80-200		4									-		
	80-250		6									-		
100-200		5									-			
530	65-315	3	7									-		
	80-315	3	8									-		
	80-400	3	9									2		
	100-250	4	7									-		
	100-315	3	8									-		
	100-400	3	9	3	3	3	3	3	3	3	3	2	3	
	125-250	4	8									-		
	125-315	3	9									-		
	125-400	3	10									2		
150-250	4	9									-			
200-250	4	11									-			
585	150-315		12									-		
	150-400		12									-		
	150-500		13									3		
	200-315	5	14	4	4	4	4	4	4	4	4	-	4	
	200-400		14									-		
	250-315		15									3		
			16								-			

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

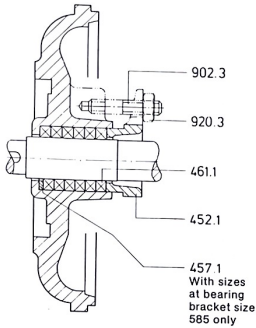
Performance graph
1750 1/min



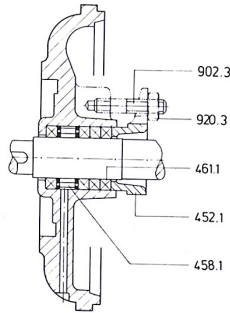
Performance graph
3500 1/min



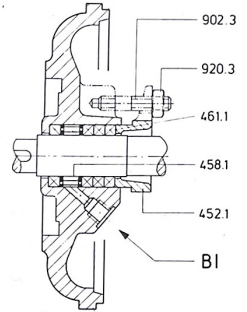
For exact performance data, please refer to the individual characteristics.



Stuffing box without blocking
U 1.1 A



Stuffing box with internal blocking
U 1.1 B



Stuffing box with external blocking
U 1.1 C

Denomination	DIN No.	Part No.	Denomination	DIN No.	Part No.	Connections
Volute casing		102.1	Spacer sleeve		525.2	BI Blocking - inlet
Casing cover		161.1	Distance washer	988	551.1	FD Fluid drainage
Support foot		183.1	Distance washer	988	551.2	LO Leakage - outlet
Shaft		210.1	Grooved stud	1476	560.1	PM2 Pressure measurement with sizes at bearing bracket sizes 360 and 470 only
Impeller		230.1	Hexagon screw	933	901.13	PM3 Pressure measurement with sizes at bearing bracket sizes 530 and 585 only
Groove ball bearing	625	321.1	Stud bolt	939	902.1	
Groove ball bearing	625	321.2	Stud bolt	939	902.2	
Bearing bracket		330.1	Stud bolt	939	902.3	
Bearing cover		360.1	Screw plug	910	903.1	
Bearing cover		360.2	Screw plug	910	903.2	
Gasket		400.1	Socket head cap screw	912	914.4	
Gasket		400.2	Hexagon nut	934	920.1	
Joint ring	7603	411.1	Hexagon nut	934	920.2	
Joint ring	7603	411.2	Hexagon nut	934	920.3	
O-ring		412.16	Impeller nut	936	922.2	
Gland		452.1	Impeller nut	936	922.2	
Junk ring		457.1	Spring ring	127	930.1	
Lantern ring		458.1	Spring washer	137	930.2	
Packing ring		461.1	Circlip	472	932.1	
Mechanical seal, rotating part		470.1	Circlip	471	932.2	
Stationary seal ring		475.1	Key	6885	940.1	
Greasing chamber		500.3	Key	6885	940.2	
Greasing chamber		500.4	Ball bearing compensating disk		950.1	
Thrower		507.1	Cup spring		950.2	
Intermediate ring		509.1	Name plate		970.1	

Pump dimensions

Tolerances of the companion dimensions acc. to VDMA 24 275.

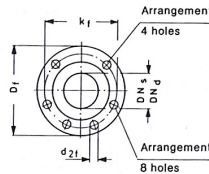
Dimensions in mm.
Subject to alterations.

Size	Suction flange DN _s	Pressure flange DN _d	Pump dimensions								Foot dimensions										Extension dimension x	Shaft end				Corresponds to DIN 24 255		
			a	f	b ₁	b ₂	h ₁	h ₂	b	c	c ₁	e	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	W		S	acc. to DIN 748	d	l		t	u
25-160	40	25	80	360	128	128	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	100	24	50	27	8	
25-200	40	25	80	360	132	132	160	180		50	15	4	28	100	70	45	240	190	160	110	260	M 12	100	24	50	27	8	
32-160	50	32	80	360	130	130	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	100	24	50	27	8	●
32-200	50	32	80	360	130	135	160	180		50	15	4	28	100	70	45	240	190	160	110	260	M 12	100	24	50	27	8	●
32-250	50	32	100	470	170	170	180	225	280	65	15	4	28	125	95	45	320	250	160	110	340	M 12	100	32	80	35	10	●
40-160	65	40	80	360	130	130	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	100	24	50	27	8	●
40-200	65	40	100	360	130	140	160	180		50	15	4	28	100	70	45	265	212	160	110	260	M 12	100	24	50	27	8	●
40-250	65	40	100	470	170	170	180	225	280	65	15	4	28	125	95	45	320	250	160	110	340	M 12	100	32	80	35	10	●
40-315	65	40	125	470	200	200	200	250	280	65	15	4	28	125	95	45	345	280	160	110	340	M 12	100	32	80	35	10	●
50-160	80	50	100	360	130	130	160	180	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	100	24	50	27	8	●
50-200	80	50	100	360	135	150	160	200	200	50	15	4	28	100	70	45	265	212	160	110	260	M 12	100	24	50	27	8	●
50-250	80	50	125	470	170	170	180	225	280	65	15	4	28	125	95	45	320	250	160	110	340	M 12	100	32	80	35	10	●
50-315	80	50	125	470	200	200	225	280	280	65	15	4	28	125	95	47	345	280	160	110	340	M 12	100	32	80	35	10	●
65-160	100	65	100	360	130	155	160	200	200	65	15	4	28	125	95	45	280	212	160	110	260	M 12	100	24	50	27	8	●
65-200	100	65	100	470	170	170	180	225	280	65	15	4	28	125	95	45	320	250	160	110	340	M 12	140	32	80	35	10	●
65-250	100	65	125	470	170	190	200	250	280	80	18	4	28	160	120	45	360	280	160	110	340	M 16	140	32	80	35	10	●
65-315	100	65	125	530	200	230	225	280	280	80	20	6	31	160	120	47	460	315	160	110	370	M 16	140	42	110	45	12	●
80-160	125	80	125	360	145	180	180	225	280	65	15	4	28	125	95	45	320	250	160	110	260	M 12	140	24	50	27	8	●
80-200	125	80	125	470	170	190	180	250	280	65	15	4	28	125	95	45	345	280	160	110	340	M 12	140	32	80	35	10	●
80-250	125	80	125	470	185	210	225	280	280	80	18	6	30	160	120	47	400	315	160	110	340	M 16	140	32	80	35	10	●
80-315	125	80	125	530	210	255	250	315	315	80	20	6	31	160	120	47	400	315	160	110	370	M 16	140	42	110	45	12	●
80-400	125	80	125	530	245	260	280	355	355	80	20	6	31	160	120	47	435	355	160	110	370	M 16	140	42	110	45	12	●
100-200	125	100	125	470	170	205	200	280	280	80	18	4	28	160	120	45	360	280	160	110	340	M 16	140	32	80	35	10	●
100-250	125	100	140	530	200	230	225	280	280	80	20	6	31	160	120	47	400	315	160	110	370	M 16	140	42	110	45	12	●
100-315	125	100	140	530	210	260	250	315	315	80	20	6	31	160	120	47	400	315	160	110	370	M 16	140	42	110	45	12	●
100-400	125	100	140	530	250	295	280	355	355	100	20	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	●
125-250	150	125	140	530	210	260	250	355	355	80	20	6	31	160	120	47	400	315	160	110	370	M 16	140	42	110	45	12	●
125-315	150	125	140	530	215	255	280	355	355	100	20	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	●
125-400	150	125	140	530	265	320	315	400	400	100	20	6	31	200	150	47	500	400	160	110	370	M 20	140	42	110	45	12	●
150-250	200	150	160	530	225	285	280	375	375	100	20	6	31	200	150	47	550	400	160	110	370	M 20	180	42	110	45	12	●
150-315	200	150	160	585	265	280	315	400	400	100	22	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	●
150-400	200	150	160	585	300	330	315	450	450	100	22	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	●
150-500	200	150	160	585	320	360	375	500	500	100	25	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	●
200-250	200	200	180	530	265	340	355	425	425	100	27	6	31	200	150	47	550	450	160	110	370	M 20	180	42	110	45	12	●
200-315	250	200	200	585	275	350	355	450	450	100	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	370	355	500	500	100	30	10	42	200	150	65	550	450	250	200	410	M 20	180	60	105	64	18	●
200-500	250	200	200	585	360	440	425	560	560	100	25	10	42	200	150	65	600	560	250	200	410	M 20	180	60	105	64	18	●
250-315	300	250	250	585	315	445	400	560	560	130	30	10	42	260	190	65	690	560	250	200	410	M 24	180	60	105	64	18	●

Flanges PN 16, DIN 2543 with material design W 20					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	18	145	4	18
80	200	20	160	8	18
100	220	20	180	8	18
125	250	22	210	8	18

Flanges PN 25, DIN 2534 with material design W 22					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	20	100	4	18
40	150	20	110	4	18
50	165	22	125	4	18
65	185	24	145	8	18
80	200	26	160	8	18
100	235	28	190	8	22
125	270	30	220	8	26

Flanges PN 25, DIN 2544 with material design W 23					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	22	145	8	18
80	200	24	160	8	18
100	235	24	190	8	22
125	270	26	220	8	26



Size at bearing bracket size 470

Dimensions in mm.
Subject to alterations.

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

Base plate dimensions

Size Steel	Weight kg	Base plate dimensions												a ₂	Stone bolt
		b ₁	b ₂	d ₁	d ₂	h ₄	h ₅	l ₁	l ₂	l ₃	l ₄	l ₅			
8.1	45	400	430	14.5	G 1/2	7	72	900	630	-	-	135			M 12 x 160
9.1	58	445	465	18.5	G 1/2	7	87	1000	710	-	-	145			M 16 x 250
10.1	68	470	510	18.5	G 1/2	7	87	1120	900	450	-	110			M 16 x 250
11.1	93	520	560	18.5	G 1/2	7	90	1250	1190	595	-	30			M 16 x 250
12.1	123	575	615	18.5	G 3/4	8	115	1400	1340	-	-	440	30		M 16 x 250
12.3	142	645	685	18.5	G 3/4	8	115	1400	1340	-	-	440	30		M 16 x 250
14.1	162	675	715	18.5	G 3/4	8	115	1600	1540	-	-	500	30		M 16 x 250

Pump dimensions

Pump size	Weight kg	Pump dimensions							
		DN _s	DN _d	a	f	h ₁	h ₂	a ₂	
32-250	75	50	32	100	470	180	225	70	
40-250	76	65	40	100	470	180	225	70	
40-315	92	65	40	125	470	200	250	70	
50-250	78	80	50	125	470	180	225	70	
50-315	95	80	50	125	470	225	280	70	
65-200	65	100	65	100	470	180	225	70	
65-250	80	100	65	125	470	200	250	90	
80-200	74	125	80	125	470	180	250	70	
100-200	80	125	100	125	470	200	280	90	
80-250	85	125	80	125	470	225	280	90	

Overall height h₃ / Base plate and coupling allocation

Pump size	Motor Coupling size	Size IEC l approx. 4-pole 2-pole	90 S	90 L	100 L	112 M	132 S	132 M	160 M	160 L	180 M	180 L	200 L	225 S	225 M	250 M	280 S	280 M	315 S	315 M						
			A 32	A 32	A 32	A 32	A 38	A 38	A 42	A 42	A 48	A 48	A 55	A 60	A 60	A 65	A 65	A 75	A 75	A 85	A 85					
32-250	h ₃		252	252	252	252	267	267	267	267	267	267	-	290	-	-	-	-	-	-						
40-250	h ₃		252	252	252	252	267	267	267	267	267	267	-	290	-	315	-	-	-	-						
40-315	h ₃			272	272	272	287	287	287	287	287	287	-	-	-	-	-	-	-	-						
50-250	h ₃		252	252	252	252	267	267	267	267	267	267	-	290	-	315	365	-	-	-						
50-315	h ₃				297	297	312	312	312	312	312	312	-	-	-	-	-	-	-	-						
65-200	h ₃		252	252	252	252	267	267	267	267	267	267	-	290	-	315	365	395	395	-						
65-250	h ₃			272	272	272	287	287	287	287	287	287	-	290	-	315	365	395	395	-						
80-200	h ₃			252	252	267	267	267	267	267	267	267	-	290	-	315	365	395	395	430	430					
100-200	h ₃			272	272	272	287	287	287	287	287	287	-	290	-	315	365	395	395	430	430					
Base plate size			8.1				9.1				10.1				11.1				12.1				14.1			
80-250	h ₃				312	312	312	312	312	312	312	312	315	-	315	365	375	395	395	430	430					
Base plate size			9.1				10.1				11.1				12.1				14.1							

**Flanges PN 16, DIN 2543
with material design W 20**

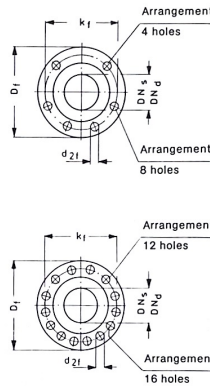
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	22	145	4	18
80	200	20	160	8	18
100	220	20	180	8	18
125	250	22	210	8	18
150	285	22	240	8	22
200	340	24	295	12	22
250	405	26	355	12	26
300	460	28	410	12	26

**Flanges PN 25, DIN 2534
with material design W 22**

DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	20	100	4	18
40	150	20	110	4	18
50	165	22	125	4	18
65	185	24	145	8	18
80	200	26	160	8	18
100	235	28	190	8	22
125	270	30	220	8	26
150	300	34	250	8	26
200	360	34	310	12	26
250	425	36	370	12	30
300	485	40	430	16	30

**Flanges PN 25, DIN 2544
with material design W 23**

DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	22	145	8	18
80	200	24	160	8	18
100	235	24	190	8	22
125	270	26	220	8	26
150	300	28	250	8	26
200	360	30	310	12	26
250	425	32	370	12	30
300	485	34	430	16	30



Dimensions in mm.
Subject to alterations.

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

Size at bearing bracket size 585

Base plate dimensions

Size	Steel	Weight	Base plate dimensions											Stone bolt
			b ₁	b ₂	d ₁	d ₂	h ₄	h ₅	l ₁	l ₂	l ₃	l ₄	l ₅	
11.4	108	595	835	18.5	G 1/2	7	90	1250	1160	595	-	30	Refer to table	M 16 x 250
12.3	142	645	685	18.5	G 3/4	8	115	1400	1340	-	440	30	Pump dimensions	M 16 x 250
14.1	162	675	715	18.5	G 3/4	8	115	1600	1540	-	500	30	Pump dimensions	M 16 x 250
14.3	164	675	715	18.5	G 3/4	8	115	1650	1590	-	530	30	Pump dimensions	M 16 x 250
13 S	240	670	720	26	G 1	16	142	1665	1110	-	-	277,5	Pump dimensions	M 24 x 320

Pump dimensions

Pump size	Weight	Pump dimensions							
		DN _s	DN _d	a	f	h ₁	h ₂	a ₂	
150-315	215	200	150	160	585	315	400	110	
150-400	265	200	150	160	585	315	450	110	
150-500	335	200	150	180	585	375	500	110	
200-315	265	250	200	200	585	355	450	110	
200-400	365	250	200	180	585	355	500	110	
200-500	385	250	200	200	585	425	560	117,5	
250-315	315	300	250	250	585	400	560	147,5	

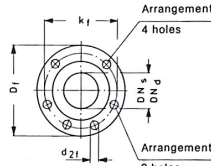
Overall height h₃ / Base plate and coupling allocation

Pump size	Motor Coupling size	Size IEC 1 approx. 4-pole 2-pole	160 L	160 M	160 L	200 L	225 S	225 M	250 M	280 S	280 M	315 S	315 M
			670	700	740	790	830	875	960	1020	1064	1030	1200
			A 55	A 55	A 55	A 55	A 60	A 60	A 65	A 75	A 75	A 85	A 85
150-315	h ₃		405	430	430	430	430	430	430	430	430	430	430
150-400	h ₃		405	430	430	430	430	430	430	430	430	430	430
150-500	h ₃				490	490	490	490	490	490	490	490	490
200-315	h ₃		445	470	470	470	470	470	470	470	470	470	470
200-400	h ₃						470	470	470	470	470	470	470
Base plate size			11.4			12.3				14.1		14.3	
200-500	h ₃						542	542	567	567	567	567	567
250-315	h ₃						542	542	542	542	542	542	542
Base plate size							13 S						

Flanges PN 16, DIN 2543 with material design W 20					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	20	145	4	18
80	200	20	160	8	18
100	220	20	180	8	18
125	250	22	210	8	18

Flanges PN 25, DIN 2534 with material design W 22					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	20	100	4	18
40	150	20	110	4	18
50	165	22	125	4	18
65	185	24	145	8	18
80	200	26	160	8	18
100	235	28	190	8	22
125	270	30	220	8	26

Flanges PN 25, DIN 2544 with material design W 23					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	22	145	8	18
80	200	24	160	8	18
100	235	24	190	8	22
125	270	26	220	8	26



Dimensions in mm.
Subject to alterations.

Size at bearing bracket size 470

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

Base plate dimensions

Size Steel	Weight kg	Base plate dimensions											Stone bolt	
		b ₁	b ₂	d ₁	d ₂	h ₄	h ₅	l ₁	l ₂	l ₃	l ₄	l ₅		a ₂
9.1	58	445	485	18.5	G 1/2	7	87	1000	710	-	-	145	Refer to table Pump dimen- sions	M 16 x 250
10.1	68	470	510	18.5	G 1/2	7	87	1120	900	450	-	110		M 16 x 250
11.1	93	520	560	18.5	G 1/2	7	90	1250	1190	595	-	30		M 16 x 250
12.1	123	575	615	18.5	G 3/4	8	115	1400	1340	-	440	30		M 16 x 250
13.1	139	575	615	18.5	G 3/4	8	115	1600	1540	-	500	30		M 16 x 250
14.1	162	675	715	18.5	G 3/4	8	115	1600	1540	-	500	30		M 16 x 250

Pump dimensions

Pump size	Weight kg	Pump dimensions							
		DN _s	DN _d	a	l	h ₁	h ₂	x	a ₂
32-250	75	50	32	100	470	180	225	100	70
40-250	76	65	40	100	470	180	225	100	70
40-315	92	65	40	125	470	200	250	100	70
50-250	78	80	50	125	470	180	225	100	70
50-315	95	80	50	125	470	200	250	100	70
65-200	65	100	65	100	470	180	225	140	70
80-200	74	125	80	125	470	180	250	140	70
65-250	80	100	65	125	470	200	250	140	90
80-250	85	125	80	125	470	225	280	140	90
100-200	90	125	100	125	470	200	280	140	90

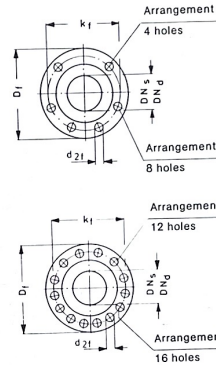
Overall height h₃ / Base plate and coupling allocation

Pump size	Motor Coupling size	Size IEC I approx. 4-pole 2-pole	90 S	90 L	100 L	112 M	132 S	132 M	160 M	160 L	180 M	180 L	200 L	225 S	225 M	250 M	280 S	280 M	315 S	315 M					
			310	335	385	415	475	515	625	670	700	740	790	830	875	960	1020	1064	1030	1200					
			AZ 32	AZ 32	AZ 32	AZ 32	AZ 38	AZ 38	AZ 42	AZ 42	AZ 48	AZ 48	AZ 55	AZ 60	AZ 60	AZ 65	AZ 75	AZ 75	AZ 85	AZ 85					
32-250	h ₃		267	267	267	267	267	267	270	270	270	-	290	-											
40-250	h ₃		267	267	267	267	267	267	270	270	270	-	290	-	340										
40-315	h ₃		287	287	287	287	287	287	290	290	290	-													
50-250	h ₃		267	267	267	267	267	267	270	270	270	-	290	-	340	365									
50-315	h ₃				312	312	312	312	315	315	315	315													
Base plate size			9.1											11.1		12.1									
65-200	h ₃		267	267	267	267	267	267	270	270	270	-	315	-	340	365	395	395							
80-200	h ₃		267	267	267	267	267	267	270	270	270	-	315	-	340	365	395	395	430	430					
Base plate size			9.1											10.1		11.1		12.1							
65-250	h ₃		287	287	287	287	287	287	290	290	290	-	315	-	340	365	395	395							
80-250	h ₃				312	312	312	312	315	315	315	315	340	-	340	365	395	395	430	430					
100-200	h ₃		287	287	287	287	287	287	290	290	290	315	-	340	365	395	395	430	430						
Base plate size			9.1			10.1			11.1			12.1			13.1			14.1							

Flanges PN 16, DIN 2543 with material design W 20					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	18	145	4	18
80	200	20	160	8	18
100	220	20	180	8	18
125	250	22	210	8	18
150	285	22	240	8	22
200	340	24	295	12	22
250	405	26	355	12	26
300	460	28	410	12	26

Flanges PN 25, DIN 2534 with material design W 22					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	20	100	4	18
40	150	20	110	4	18
50	165	22	125	4	18
65	185	24	145	8	18
80	200	26	160	8	22
100	235	28	190	8	26
125	270	30	220	8	26
150	300	34	250	8	26
200	360	34	310	12	26
250	425	36	370	12	30
300	485	40	430	16	30

Flanges PN 25, DIN 2544 with material design W 23					
DN _s /DN _d	D _f	b _f	k _f	No. of holes	d _{2f}
25	115	18	85	4	14
32	140	18	100	4	18
40	150	18	110	4	18
50	165	20	125	4	18
65	185	22	145	8	18
80	200	24	160	8	18
100	235	24	190	8	22
125	270	26	220	8	26
150	300	28	250	8	26
200	360	30	310	12	26
250	425	32	370	12	30
300	485	34	430	16	30



Dimensions in mm.
Subject to alterations.

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

Size at bearing bracket size 585

Base plate dimensions

Size	Weight	Base plate dimensions											a ₂	Stone bolt
		b ₁	b ₂	d ₁	d ₂	h ₄	h ₅	l ₁	l ₂	l ₃	l ₄	l ₅		
14 L	162	675	715	18,5	G 3/4	8	115	1600	1540	-	500	30	Refer to table Pump dimensions	M 16 x 250
16.3	165	675	715	18,5	G 3/4	8	115	1600	1740	-	580	30		M 16 x 250
9 S	241	670	720	26	G 1	16	142	1815	1200	-	-	307,5		M 24 x 320
10 S	364	815	870	26	G 1	17	184	1915	1200	-	-	307,5		M 24 x 320
11 S	398	815	870	26	G 1	17	184	2015	1300	-	-	357,5		M 24 x 320
13 S	240	670	720	26	G 1	16	142	1665	1110	-	-	217,5		M 24 x 320

Pump dimensions

Pump size	Weight	Pump dimensions							
		DN _s	DN _d	a	f	h ₁	h ₂	x	a ₂
150-315	215	200	150	160	585	315	400	180	110
150-400	265	200	150	160	585	315	450	180	110
150-500	335	200	150	180	585	375	500	180	110
200-315	265	250	200	200	585	355	500	180	110
200-400	305	250	200	200	585	425	560	180	117,5
200-500	385	250	200	200	585	425	560	180	117,5
250-315	315	300	250	250	585	400	560	180	147,5

Overall height h₃ / Base plate and coupling allocation

Pump size	Motor	Size IEC approx.	Coupling size										
			160 L	180 M	180 L	200 L	225 S	225 M	250 M	280 S	280 M	315 S	315 M
			AZ 55	AZ 55	AZ 55	AZ 55	AZ 60	AZ 60	AZ 65	AZ 75	AZ 75	AZ 85	AZ 85
150-315	h ₃		430	430	430	430	430	430	430	430	430	430	430
150-400	h ₃		430	430	430	430	430	430	430	430	430	430	430
150-500	h ₃				490	490	490	490	490	490	490	490	490
200-315	h ₃		470	470	470	470	470	470	470	470	470	470	470
200-400	h ₃						470	470	470	470	470	470	470
Base plate size			14.1										
200-500	h ₃								567	567	567	567	567
Base plate size			13 S										
250-315	h ₃					542	542	542	542	584	584	584	584
Base plate size			13 S										
										10 S		11 S	