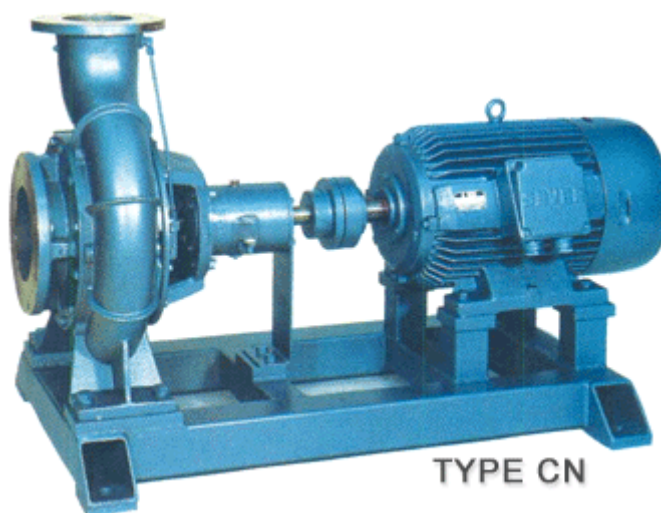


# Centrifugal Pumps



## Horizontal & Vertical end suction & in-line centrifugal pumps

Type CN(X)  
CNM  
CNL  
CNLX  
CNLB(X)  
CNV(X)  
CNHB(X)  
CNBV(X)  
CNDV/630



TYPE CN

### APPLICATIONS

- General Fresh and Sea Water Service in Marine and Industrial Applications.
- General Water Supply.
- Fire Fighting.
- District Heating.



TYPE CNL



TYPE CNLB



TYPE CNHB

### DESIGN FEATURES

- Horizontal pumps are of end suction back pull out design in accordance with DIN 24255 and ISO 2858.
- Pumping range from 5 to 1000 m<sup>3</sup>/h (CNDV/630: app. 3500 m<sup>3</sup>/h).
- Models for close rigid coupling, flexible coupling and spacer coupling.
- Various special seal arrangement in X-type pumps - max. 200 °C.
- Standard IEC-motors to be used also for close coupled models.
- Combination of design, materials, mounting, shaft seal and bearings according to application.

# Materials

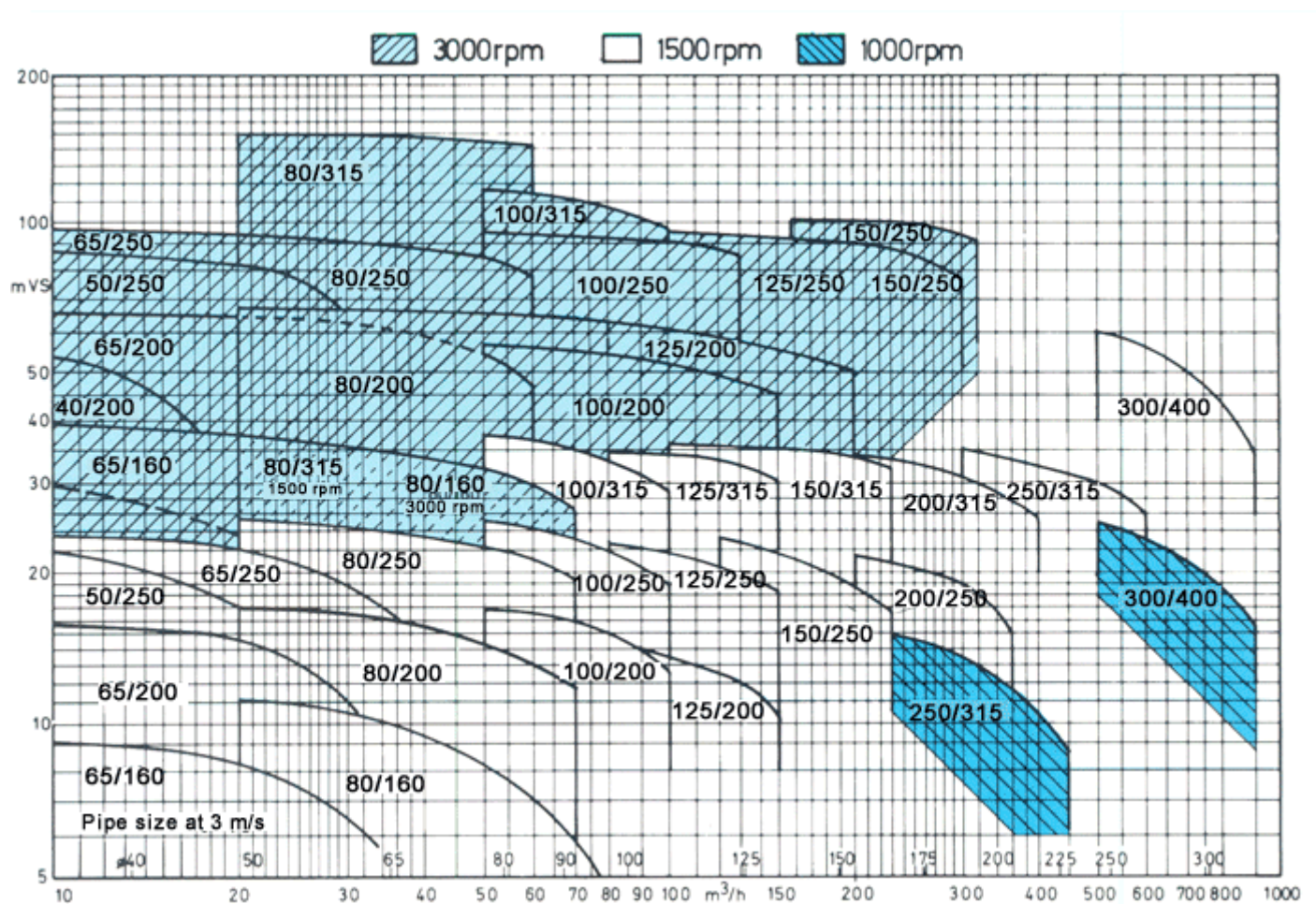
The below material list is based on our experience in manufacturing water pumps through many years. The listed standard materials are all in current use in our production and can be supplied with short delivery time. Special materials according to customer's requirements can be delivered upon request.

Material	Factory Type	Physical Data	Density kg/dm <sup>3</sup>	Tensile Strength kg/mm <sup>2</sup>	Elongation %	DIN-Standard (Comparable Standards)
Grey Cast Iron	GG25	Flake-Graphite	7.2	25	0-1	DIN 1691 GG25 (BS 1452 Grade 260) (ASTM A48 Class 35/40 B)
Nodular Cast Iron	GGG50	Spheroidal-Graphite	7.2	50	7	DIN 1693 GGG50 (BS 2781 Grade 50) (ASTM A536 80-55-06)
Nodular Cast Iron	GGG40.3	Spheroidal-Graphite	7.2	40	20	DIN 1693 GGG40.3 (BS 2781 Grade 24-17) (ASTM A536 60-40-18)
Ni-Resist Cast Iron	SG D-2	Spheroidal-Graphite 20 Ni-2 Cr	7.3	37-39	7-15	DIN 1664 GGG NiCr 20-2 (BS 3468 S-NiCr 20-2) (ASTM A439 type D-2)
Cast Steel	GS52.3		7.8	52	18	DIN 1681 GS52.3 (BS 3100 A2) (ASTM A27-58 Grade 70-36)
Cast Steel	GS45.3		7.8	45	22	DIN 1681 GS45.3 (BS 3100 A1) (ASTM A27-58 Grade 60-30)
Cast Bronze	RG5	85-5-5-5 Cu-Sn-Pb-Zn	8.8	21-25	18-30	DIN 1705 RG5 (BS 1400 LG2) (ASTM B30-4A)
Cast Bronze	RG6	86-2-3,5-6,5-2 Cu-Ni-Pb-Sn-Zn	8.6	27	15	DIN 1705 RG6 (BS 1400 LG4) (NS 16 532-01)
Cast Bronze	RG9	85-9-2-4 Cu-Sn-Pb-Zn	8.8	22-29	15-20	- - -
Cast Bronze	RG10	88-10-2 Cu-Sn-Zn	8.7	24-29	15-20	DIN 1705 RG10 (BS 1400 G1) (ASTM B30-1A)
Cast Bronze	88-10-2Pb	88-10-2 Cu-Sn-Pb	8.7	29	20	- - ASTM B30 C 92700
Cast Bronze	90-10	90-10 Cu-Sn	8.8	24-27	15-25	DIN 1705 G-SnBz10 (BS 1400 CT1) -
Cast NiAl-bronze	NiAlBz	79-9,5-5-5-1,5 Cu-Al-Fe-Ni-Mn	7.6	64-70	18-25	DIN 1714 G-NiAlBz F 60 (BS 1400 AB2) (ASTM B30-9D)
Aluminium Alloy	Hy51	94-5-1 Al-Mg-Si	2.7	12-16	0-3	DIN 1725 G-ALMg5Si - (ASTM B179 GS42A)
Cast Stainless Steel	1.4008	13-1,5-0,5 Cr-Ni-Mo	7.7	59-79	15-20	Werkstoff Nr. 1.4008 (SIS 2302) (AISI 410)
Cast Stainless Steel	1.4401	18-10-2,5 Cr-Ni-Mo	8.0	49	20	Werkstoff Nr. 1.4401 (SIS 2347) (AISI 316)
Cast Stainless Steel	1.4460	26-6,5-1,5 Cr-Ni-Mo	7.7	60-80	15-20	Werkstoff Nr. 1.4460 (SIS 2324) (AISI 329)
Stainless Steel Bars (standard shaft steel)	1.4460	26-6-1,5 Cr-Ni-Mo	7.7	50-70	20-30	Werkstoff Nr. 1.4460 (SIS 2324) (AISI 329)

# Factory Standard Material Combination

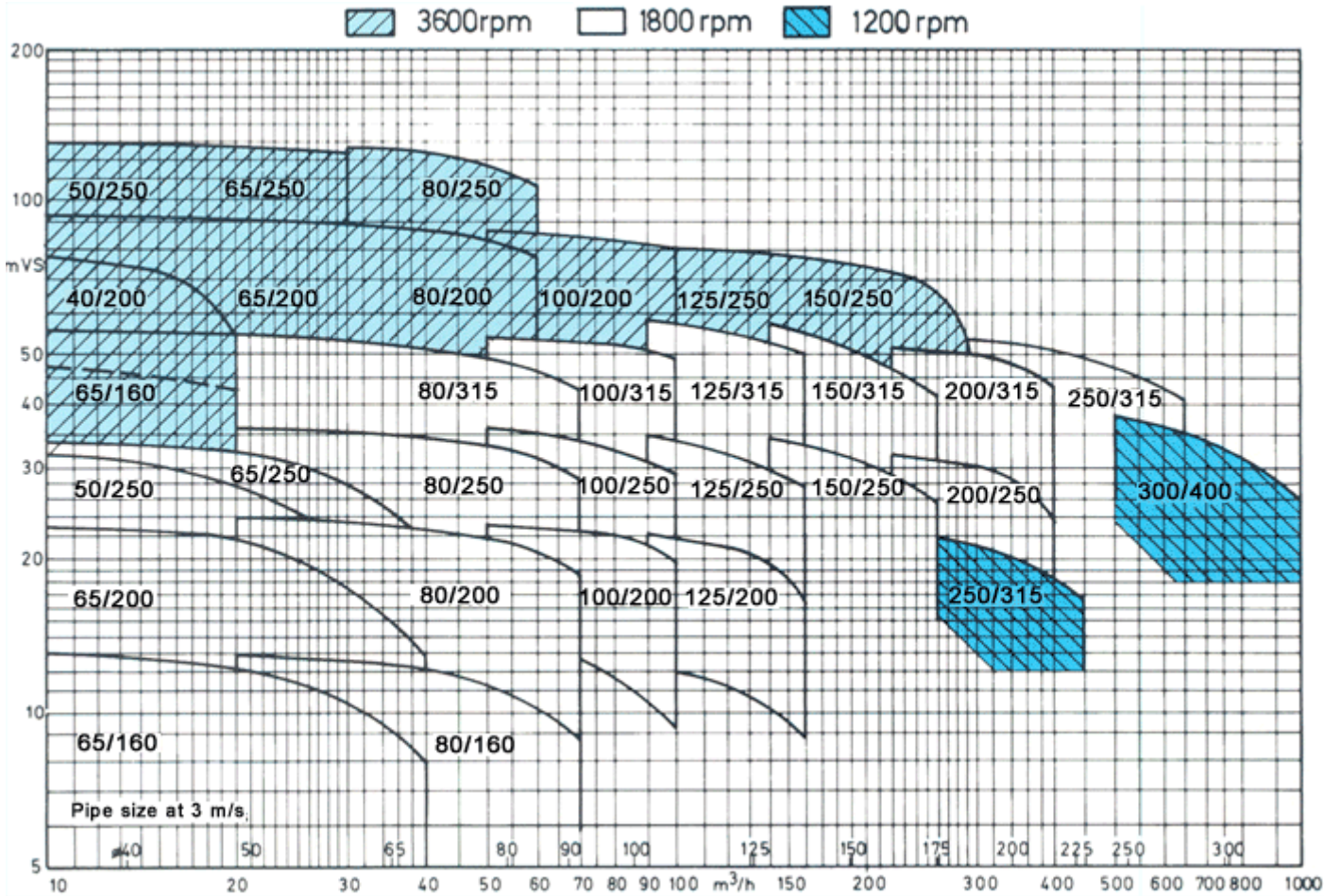
Pump Part	Application		
	Fresh water max. 120°	High temperature water	Sea water
Pump casing	Grey cast iron GG25	Nodular cast iron GGG40.3	Cast bronze RG9 (RG5)
Impeller/casing wear rings	NiAl-bronze NiAlBz	Nodular cast iron GGG40	NiAl-bronze NiAlBz
Shaft	Stainless steel 1.4460	Stainless steel 1.4460	Stainless steel 1.4460

## Performance curves at 50 Hz



For detailed performance refer to individual performance curve.

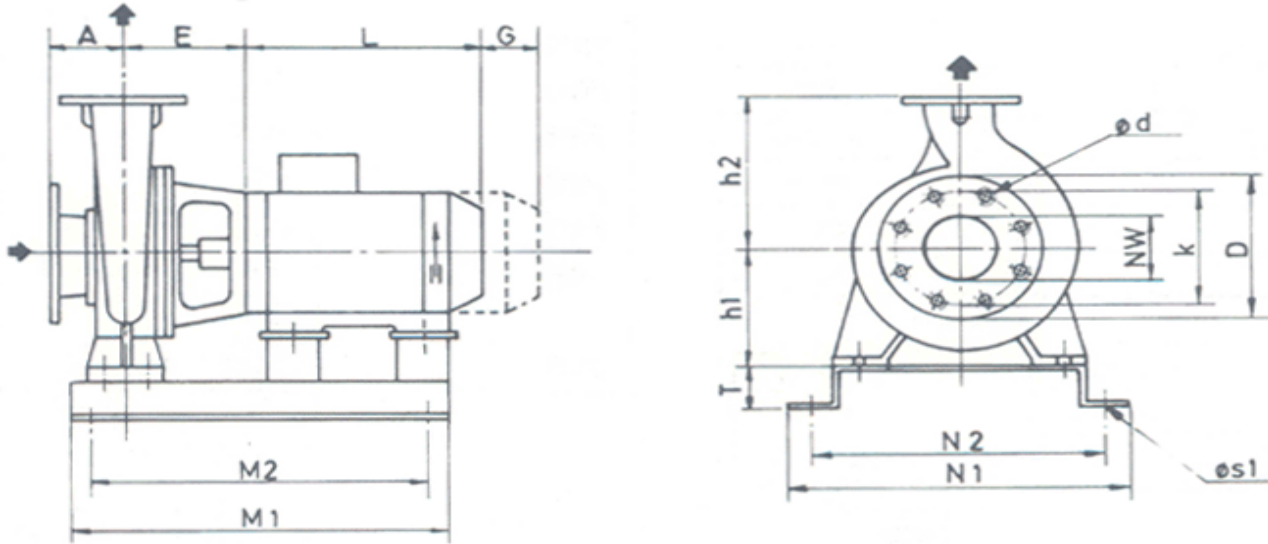
# Performance curves at 60Hz



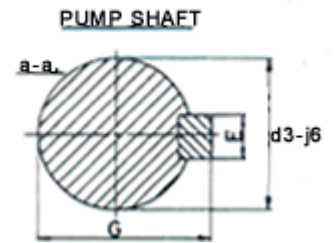
For detailed performance refer to individual performance curve.

# Type CN(X)

Dimensional drawing (Bare shaft model)



Bare shaft end suction back pull out standard pumps designed in accordance with DIN 24255 and ISO 2858. Common base plate for pump and driver including guarded flexible (spacer) coupling supplied upon request. The dimensional drawing for type CN (standard pump cover) and type CNX (Combicover) are alike. As a standard on horizontal pumps the discharge flange is one size smaller than the suction flange. Upon request the discharge flange can be drilled same size as the suction flange.



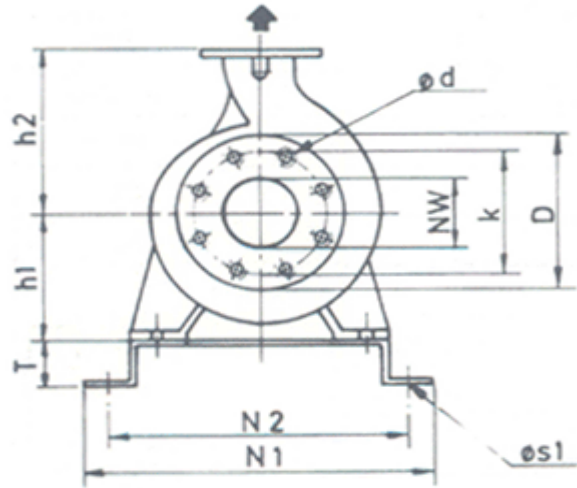
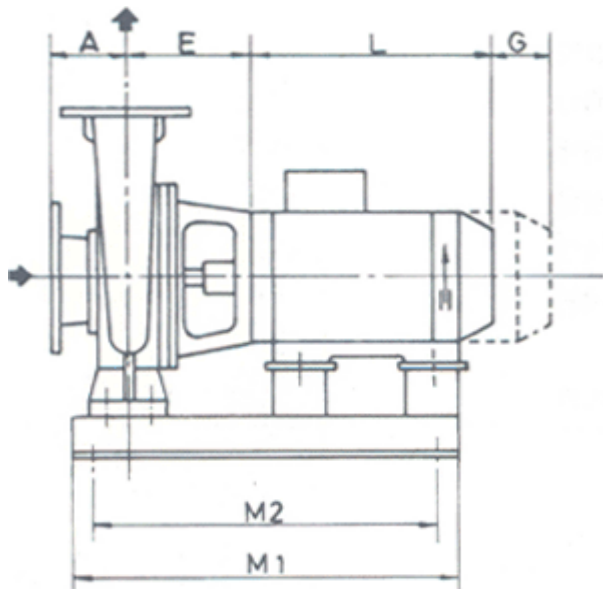
PUMP SIZE	SUCTION FLANGE				DELIVERY FLANGE				OUTLINE DIMENSION														SHAFT END					PUMP WEIGHT KG
	NW	k	D	ed	NW	k	D	ed	A	b	F	h1	h2	m1	m2	n1	n2	n3	aS1	aS2	W	l	G	E	d3			
65- 50/160	65	145	185	4-18	50	125	165	4-18	100	50	360	160	180	100	70	265	212				260	50	27,3	8	24	35		
80- 65/160	80	160	200	8-18	65	145	185	4-18		65			180	125	95	280	212									14	40	
40- 32/200	40	110	150	4-18	32	100	140	4-18	80	50			180	100	70	240	190									40		
65- 50/200	65	145	185	4-18	50	125	165	4-18	100				200	265	212	50	60											
80- 65/200	80	160	200	8-18	65	145	185	4-18	100	65	180	225	125	95	320	250										60		
100- 80/200	100	180	220	8-18	80	160	200	8-18				125	250	345	280	60												
125-100/200	125	210	250	8-18	100	180	220	8-18	125	80	470	200	280	160	120	360	280									75		
50- 32/250	50	125	165	4-18	32	100	140	4-18				100	185	225	125	95	320									250	110	14
50- 40/250	50	125	165	4-18	40	110	150	4-18	65																	70		
65- 50/250	65	145	185	4-18	50	125	165	4-18																		125	200	250
80- 65/250	80	160	200	8-18	65	145	185	4-18	125																	85		
100- 80/250	100	180	220	8-18	80	160	200	8-18																		140	225	280
125-100/250	125	210	250	8-18	100	180	220	8-18	140																	150		
150-125/250	150	240	285	8-22	125	210	250	8-18																		160	280	450
200-150/250	200	295	340	8-22	150	240	285	8-22	160	80																180		
80- 65/315	80	160	200	8-18	65	145	185	4-18																		125	225	280
100- 80/315	100	180	220	8-18	80	160	200	8-18	125		530	250	315	110	45,3	12	42	150										
125-100/315	125	210	250	8-18	100	180	220	8-18				140	280	355	500	400	160	160										
150-125/315	150	240	285	8-22	125	210	250	8-18	160																	170		
200-150/315	200	295	340	8-22	150	240	285	8-22																		180	315	450
250-200/315	250	350	395	12-22	200	295	340	8-22	180	100	565	315	500	140	18	375												
300-250/400	300	400	445	12-22	250	350	395	12-22				250	125	805	400	560	250	180	670	550	595	59,3	16	55	475			

Dimensions are given in millimetres.

# Type CNM

## Dimensional drawing

Close coupled end suction back pull out pump. The supply usually include common base plate and motor. Only standard cover and standard shaft seal are available.

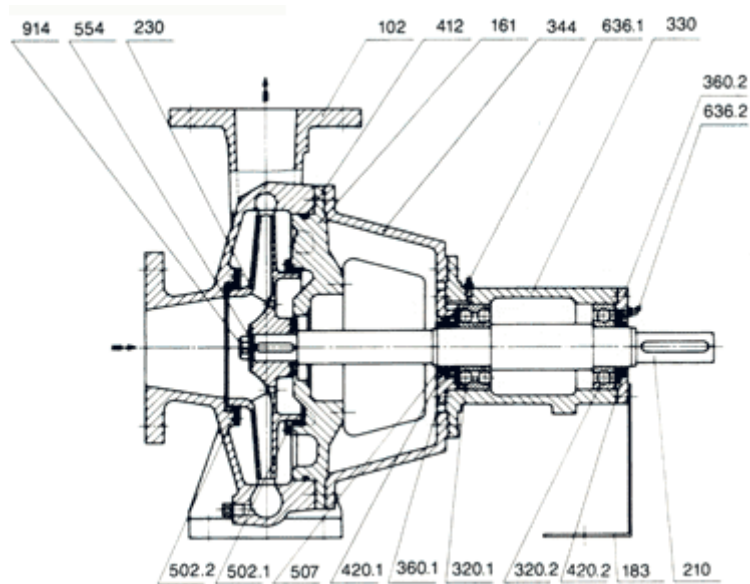


PUMP SIZE	SUCTION FLANGE				DELIVERY FLANGE				OUTLINE DIMENSION											PUMP WEIGHT KG		
	NW	k	D	ød	NW	k	D	ød	A	E	G	h1	h2	L	M1	M2	N1	N2	øS1		T	
65- 50/160	65	145	185	4-18	50	125	165	4-18	100	150	90		180									25
80- 65/160	80	160	200	8-18	65	145	185	4-18					160	200								
40- 32/200	40	110	150	4-18	32	100	140	4-18	80	155		160	180									35
65- 50/200	65	145	185	4-18	50	125	165	4-18					100	200								
80- 65/200	80	160	200	8-18	65	145	185	4-18	100	165	120	180	225									45
100- 80/200	100	180	220	8-18	80	160	200	8-18					125	250								
125-100/200	125	210	250	8-18	100	180	220	8-18	125	215		200	280									60
50- 32/250	50	125	165	4-18	32	100	140	4-18	100	220		185	225									55
50- 40/250	50	125	165	4-18	40	110	150	4-18						180	250							
65- 50/250	65	145	185	4-18	50	125	165	4-18	125	220		200	250									50
80- 65/250	80	160	200	8-18	65	145	185	4-18						125	280							
100- 80/250	100	180	220	8-18	80	160	200	8-18	140	245		225	280									60
125-100/250	125	210	250	8-18	100	180	220	8-18						140	315							
150-125/250	150	240	285	8-22	125	210	250	8-18	160	245		250	355									85
200-150/250	200	295	340	8-22	150	240	285	8-22						160	450							
80- 65/315	80	160	200	8-18	65	145	185	4-18	125	255	160	225	280									120
100- 80/315	100	180	220	8-18	80	160	200	8-18						125	315							
125-100/315	125	210	250	8-18	100	180	220	8-18	140	275		250	315									145
150-125/315	150	240	285	8-22	125	210	250	8-18						140	355							
200-150/315	200	295	340	8-22	150	240	285	8-22	160	450												195
250-200/315	250	350	395	12-22	200	295	340	8-22	180	310		500										240
300-250/400	300	400	445	12-22	250	350	395	12-22	250	400	230	400	560									380

Dimensions are given in millimetres.

# Type CNX

## Sectional view (combi-cover)



## Part list CNX

Pos. no.	Description	Pcs.	Material
102	Pump casing	1	c.i./brz.
161	Cover	1	c.i./brz.
183	Pump base	1	steel
210	Pump shaft	1	stainl.steel
230	Impeller	1	brz.
320.1	Radial ball bearing	1	
320.2	Radial ball bearing	1	
330	Bearing housing	1	c.i.
344	Bearing bracket	1	c.i.
360.1	Bearing cover	1	c.i.
360.2	Bearing cover	1	c.i.
412	O-ring	1	viton
420.1	Shaft seal ring	1	nitril
420.2	Shaft seal ring	1	nitril
502.1	Casing wear ring	1	brz.
502.2	Casing wear ring	1	brz.
507	Thrower	1	nitril
554	Washer	1	stainl.steel
636.1	Grease nipple	1	
636.2	Grease nipple	1	
914	Impeller screw	1	stainl.steel

## Standard Shaft Seal

All pumps - horizontal as well as vertical types - are in their standard execution equipped with the standard pump cover including a standard mechanical shaft seal designed for max. 10 bar discharge head (see type CNM sectional view).

The max. medium temperature of this seal is:

- with NITRIL below 80 °C and
- with VITON and EPDM below 120 °C.

Non-standard seals - high temperature seals, double seals and conventional stuffing box - are being allowed for by using the special combi-cover (see type CNX sectional view). The various non-standard seal arrangements are shown on page 16.

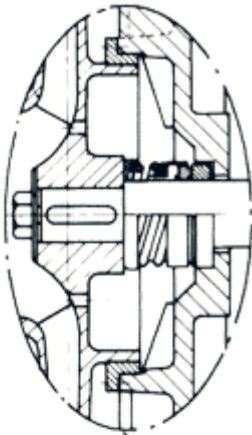
## Max. casing design pressure

Model CN(X), CNM, CNV(X), CNBV(X) all sizes

- cast steel and nodular cast iron PN16
- grey cast iron and bronze PN10

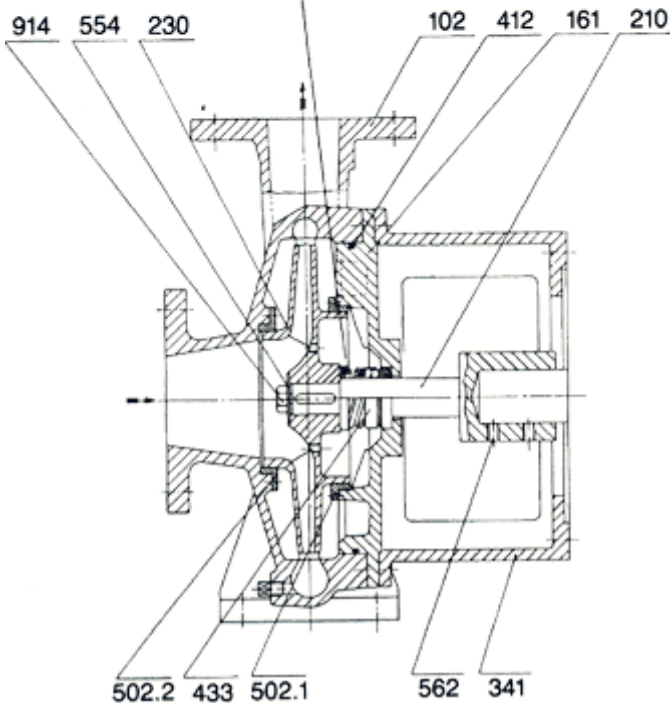
Model CNL(X), CNLB(X), CNHB(X)

Pump size	cast steel and nodular cast iron	grey cast iron and bronze
all size/160	PN16	PN10
all size/200	PN16	PN10
50-50 /250	PN16	PN10
65-65 /250	PN16	PN10
80-80 /250	PN16	PN10
100-100/250	PN16	PN10
125-125/250	PN25	PN16
150-150/250	PN16	PN10
200-200/250	PN25	PN16
80-80 /315	PN16	PN10
100-100/315	PN16	PN10
125-125/315	PN16	PN10
150-150/315	PN16	PN10
200-200/315	PN16	PN10
250-250/315	PN25	PN16
300-300/400	PN25	PN16



## Type CNM

Sectional view  
(standard cover)



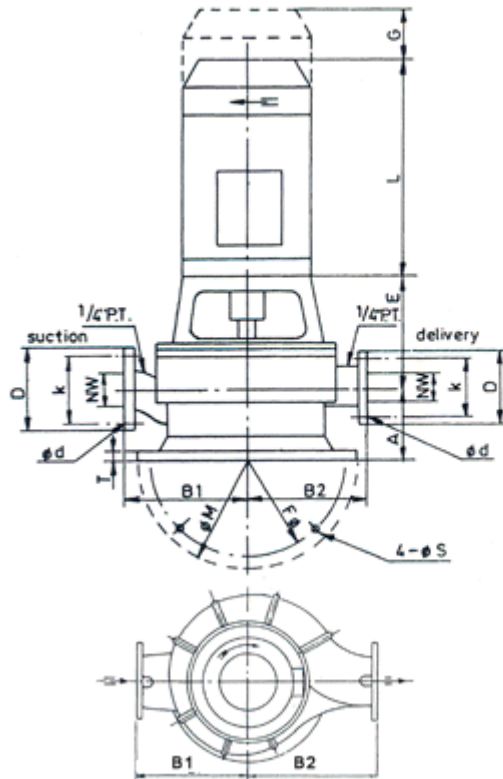
Part list CNM

Pos. no.	Description	Pcs.	Material
102	Pump casing	1	c.i./brz.
161	Cover	1	c.i./brz.
210	Pump shaft	1	stainl.steel
230	Impeller	1	brz.
341	Motor stool	1	c.i.
412	O-ring	1	viton
433	Mechanical seal	1	
502.1	Casing wear ring	1	brz.
502.2	Casing wear ring	1	brz.
554	Washer	1	stainl.steel
562	Screw	2	steel
914	Screw	1	stainl.steel



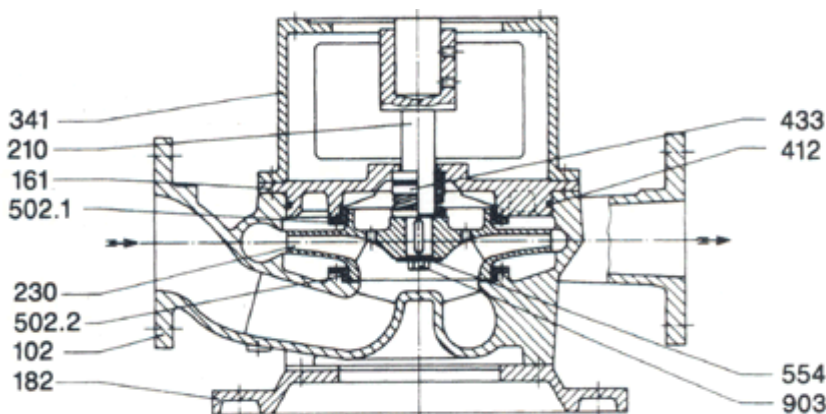
# Type CNL

## Dimensional drawing



PUMP SIZE	FLANGES				A	B1/B2	E	F	G	L	M	eS	T	PUMP WEIGHT KG
	NW	k	D	e.d.										
65- 65/160	65	145	185	4-18	125	180	150		90					45
80- 80/160	80	160	200	8-18	140	200	160							50
25- 25/200	25	85	115	4-14		180								55
40- 40/200	40	110	150	4-18	125		280				330	20	16	55
50- 50/200	50	125	165	4-18		200	155							60
65- 65/200	65	145	185	4-18										60
80- 80/200	80	160	200	8-18	140	225			120					65
100-100/200	100	180	220	8-18	175	250	165							90
125-125/200	125	210	250	8-18	205	280	215							100
50- 50/250	50	125	165	4-18	145	225					440			110
65- 65/250	65	145	185	4-18			380							100
80- 80/250	80	160	200	8-18	160	250	220							110
100-100/250	100	180	220	8-18	180									120
125-125/250	125	210	250	8-18	210	280								125
150-150/250	150	240	285	8-22	235	355						24	25	150
200-200/250	200	295	340	8-22	280	450	240							180
80- 80/315	80	160	200	8-18	175	280								145
100-100/315	100	180	220	8-18	180		255	460	160		520			150
125-125/315	125	210	250	8-18	200		315	275						165
150-150/315	150	240	285	8-22	220	355								175
200-200/315	200	295	340	8-22	315	450								230
250-250/315	250	350	395	12-22	335	500	310							275
300-300/400	300	400	445	12-22	400	630/560	400	560	230		630	26		500

Dimensions are given in milimetres.

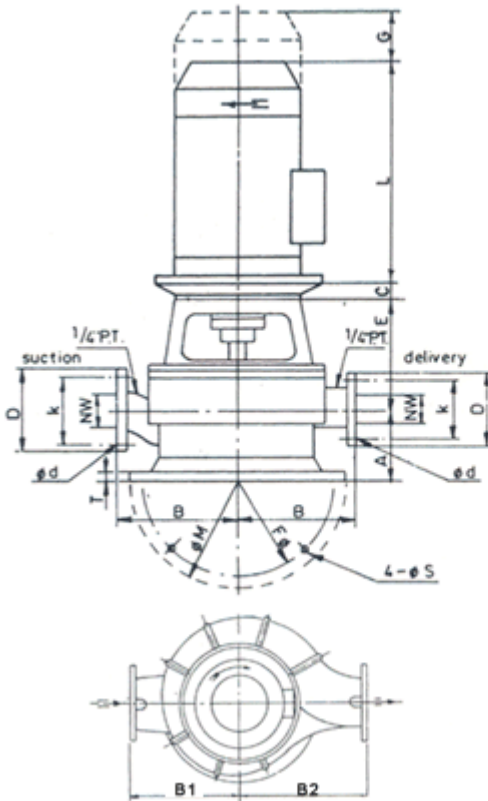


Pos. no.	Description	Pcs	Material
102	Pump casing	1	c.i./brz.
161	Cover	1	c.i./brz.
182	Pump base	1	c.i.
210	Pump shaft	1	stainl.steel
230	Impeller	1	brz.
341	Motor stool	1	c.i.
412	O-ring	1	rubber
433	Mechanical seal	1	
502.1	Casing wear ring	1	brz.
502.1	Casing wear ring	1	brz.
554	Washer	1	stainl.steel
903	Screw	1	stain.steel

Close coupled in-line top pull out pump. Only standard cover and seal are available. As a standard on vertical pumps discharge and suction flanges are drilled alike. Upon request the discharge flange can be drilled one size smaller than the suction flange.

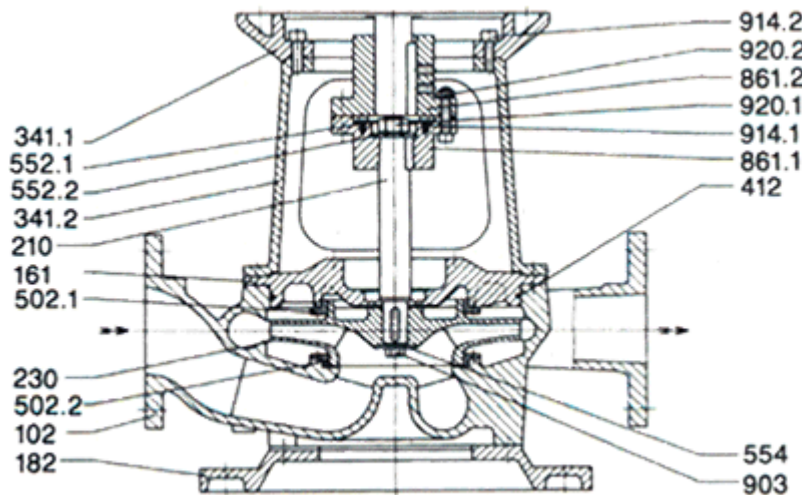
# Type CNLX

## Dimensional drawing



PUMP SIZE	FLANGES				A	B	C	E	F	G	L	M	eS	T	PUMP WEIGHT KG	
	NW	k	D	ed												
65- 65/160	65	145	185	4-18	125	180		272		90					60	
80- 80/160	80	160	200	8-18	140	200									65	
25- 25/200	25	85	115	4-14											80	
40- 40/200	40	110	150	4-18		180						330	20	16	85	
50- 50/200	50	125	165	4-18	125				280						70	
65- 65/200	65	145	185	4-18		200		297							75	
80- 80/200	80	160	200	8-18	140	225				120					80	
100-100/200	100	180	220	8-18	175	250									105	
125-125/200	125	210	250	8-18	205	280									115	
50- 50/250	50	125	165	4-18											125	
65- 65/250	65	145	185	4-18	145	225			380			440			120	
80- 80/250	80	160	200	8-18	160	250									130	
100-100/250	100	180	220	8-18	180										140	
125-125/250	125	210	250	8-18	210	280								24	25	155
150-150/250	150	240	285	8-22	235	355									180	
200-200/250	200	295	340	8-22	280	450									210	
80- 80/315	80	160	200	8-18	175	280									175	
100-100/315	100	180	220	8-18	180				365	460	160		520		180	
125-125/315	125	210	250	8-18	200										195	
150-150/315	150	240	285	8-22	220	355									205	
200-200/315	200	295	340	8-22	315	450									260	
250-250/315	250	350	395	12-22	335	500									305	

Dimensions are given in millimetres.

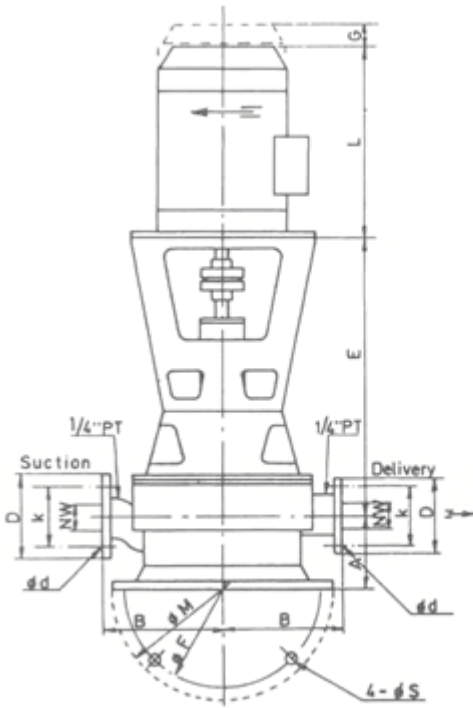


Pos. no.	Description	Pcs	Material
102	Pump casing	1	c.i./brz.
161	Cover	1	c.i./brz.
182	Pump base	1	c.i.
210	Pump shaft	1	stainl.steel
230	Impeller	1	brz.
341.1	Motor stool	1	c.i.
341.2	Motor stool	1	c.i.
412	O-ring	1	rubber
502.1	Casing wear ring	1	brz.
502.2	Casing wear ring	1	brz.
552.1	Coupling washer	1	st
552.2	Washer	1	st
554	Washer	1	stainl.steel
861.1	Pumpside coupling	1	c.i.
861.2	Pumpside coupling	1	c.i.
903	Screw	1	stain.steel
914.1	Cylinder bolt coupling	2	st.
914.2	Cylinder bolt coupling	8	st.
920.1	Pump shaft nut	1	st.
920.2	Coupling locking nut	6	st.

Close coupled in-line pumps as above, but equipped with flanged coupling and combi-cover enabling the use of the various seal arrangements shown on page 16.

## Type CNLB(X)

Dimensional drawing

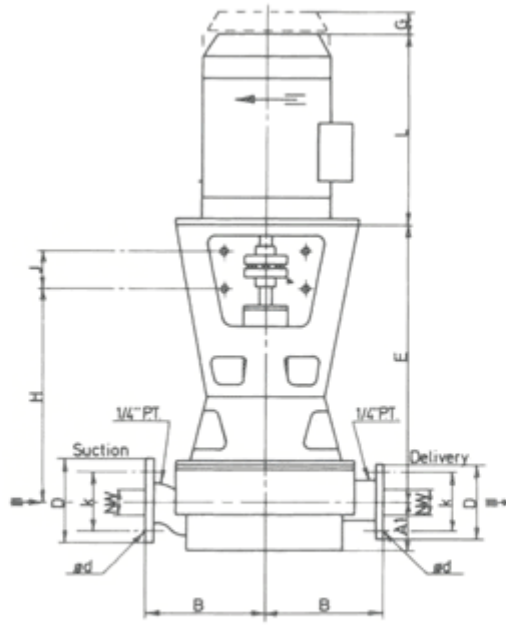


### In-line

Base mounted

## Type CNLB(X)

Dimensional drawing

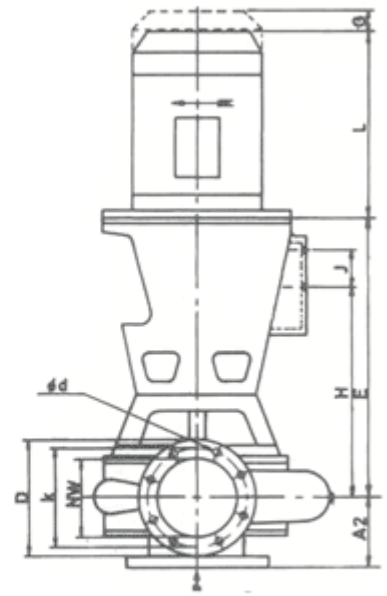


### In-line

Bulk head mounted

## Type CNV(X)

Dimensional drawing



### End suction

Bulk head mounted

Vertical pump with outside sealed ball bearing and flexible coupling:

- CNLB(X) in-line model
- CNV(X) vertical end suction model
- 

Table of dimensions shows models with suction and discharge flanges alike. Models with discharge flange drilled one size smaller than suction flange are available. Both standard pump cover and combi-cover for special applications are available. For sectional view - see page 15.

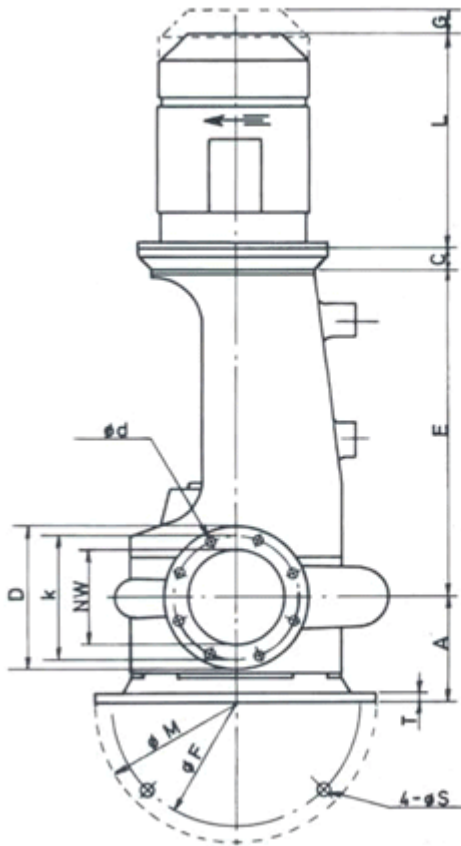
## Type CNLB(X) / CNV(X)

Dimensions are given in millimetres

PUMP SIZE	FLANGES				A	A1	A2	B1	B2	E	F	G	H	J	K	L	M	N	O	P	ød	øS	PUMP WEIGHT KG	
	NW	k	D	ød																				
65- 65/160	65	145	185	4-18	125	95	100	180	180	445		90	315	80	175			110	210	140	18		60	
80- 80/160	80	160	200	8-18	140	110		200	200											160			65	
25- 25/200	25	85	115	4-14	125	95	80	180	180	565	280						330			140	20		75	
40- 40/200	40	110	150	4-18				200	200											75				
50- 50/200	50	125	165	4-18			160	80																
65- 65/200	65	145	185	4-18			100	200	200											80				
80- 80/200	80	160	200	8-18			140	110	225											225			180	90
100-100/200	100	180	220	8-18			175	125	250											250			190	100
125-125/200	125	210	250	8-18	205	155	280	280	210	115														
50- 50/250	50	125	165	4-18	145	95	100	225	225	575	380		364				440			200	20		110	
65- 65/250	65	145	185	4-18				250	250											110				
80- 80/250	80	160	200	8-18			160	110	250											250			200	110
100-100/250	100	180	220	8-18			180	130	280											280			210	115
125-125/250	125	210	250	8-18			210	155	355											355			230	125
150-150/250	150	240	285	8-22			235	180	450											450			240	125
200-200/250	200	295	340	8-22	280	225	675	460	160	440	125	225							300	24		240		
80- 80/315	80	160	200	8-18	175	120	280	280	240	195														
100-100/315	100	180	220	8-18	180	125	315	315	250	210														
125-125/315	125	210	250	8-18	200	145	355	355	260	225														
150-150/315	150	240	285	8-22	220	165	450	450	280	235														
200-200/315	200	295	340	8-22	315	260	710	560	230	300	400	320							310			290		
250-250/315	250	350	395	12-22	335	280	180	500	500	710	560	230	300	400	320					330	335			
300-300/400	300	400	445	12-22	400	345	250	630	560	975	560	230	300	400	320					450	33	26	575	

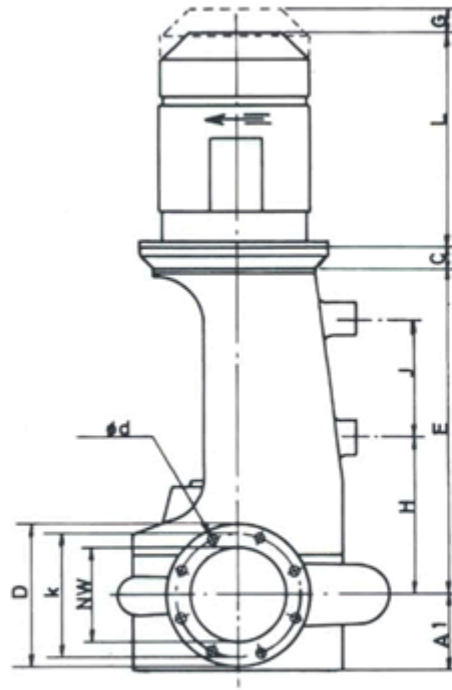
# Type CNHB(X)

Dimensional drawing



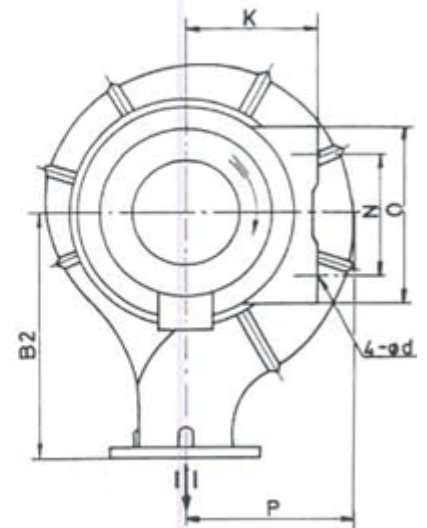
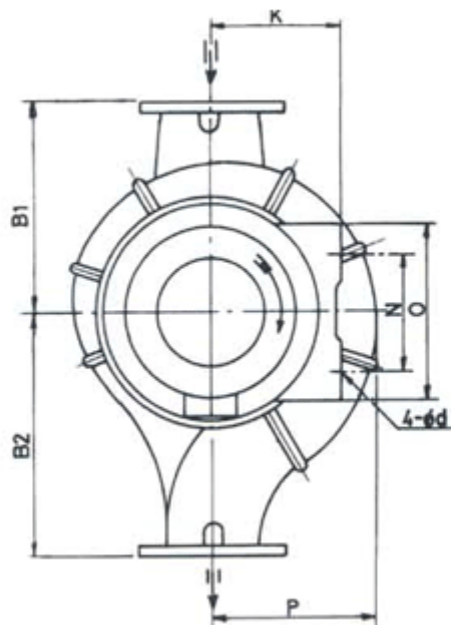
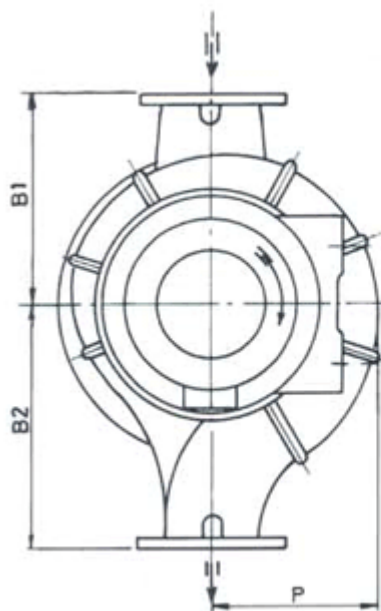
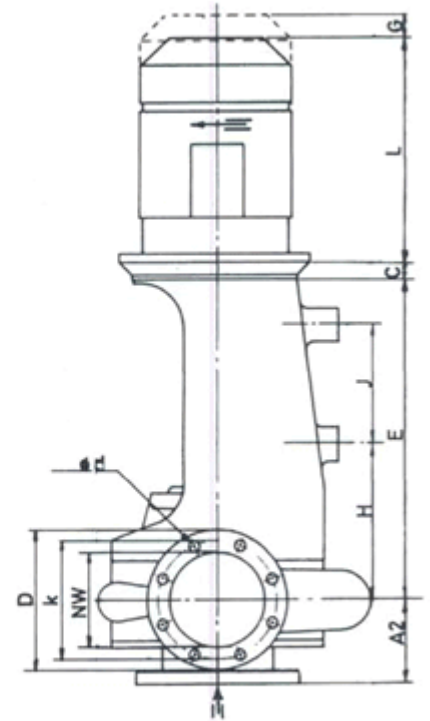
# Type CNHB(X)

Dimensional drawing



# Type CNBV(X)

Dimensional drawing



## In-line

Base mounted

## In-line

Bulk head mounted

## End suction

Bulk head mounted

Vertical pump with outside sealed ball bearings and flexible spacer coupling enabling service inside the pump without removing the motor, wiring and pipe connections:

- CNHB(X) in-line model
- CNBV(X) vertical end suction model

Table of dimensions shows models with suction and discharge flanges alike. Models with discharge flange drilled one size smaller than suction flanges are available. Both standard pump cover and combi-cover for special applications are available.

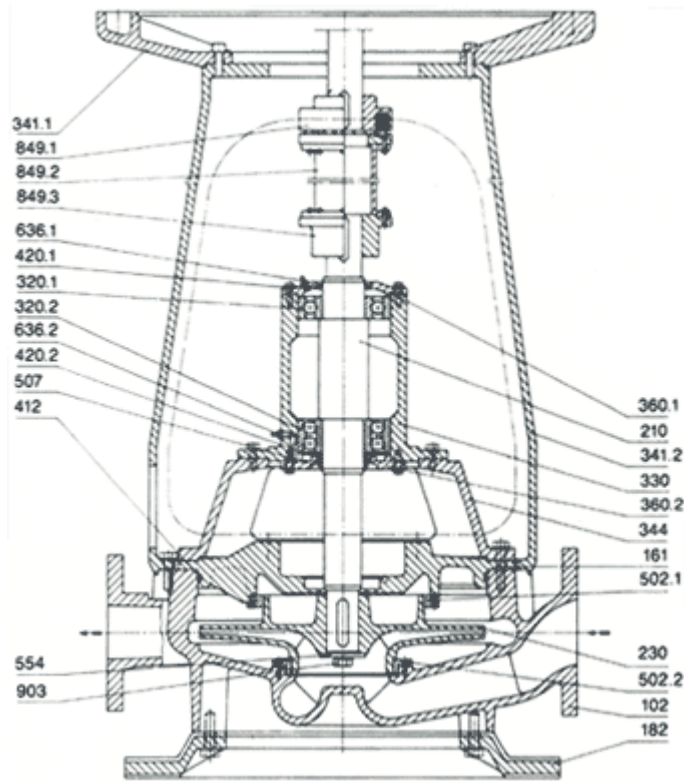
## Type CNHB(X) / CNBV(X)

Dimensions are given in millimetres

PUMP SIZE	FLANGES				A	A1	A2	B1/B2	C	E	F	G	H	J	K	L	M	N	O	P	ød	øS	T	PUMP WEIGHT KG	
	NW	k	D	ød																					
80- 80/250	80	160	200	8-18	160	110	125	250		674	380		310			440			200						140
100-100/250	100	180	220	8-18	180	130		280				130		205				180	260	210					150
125-125/250	125	210	250	8-18	210	155													230						215
150-150/250	150	240	285	8-22	235	180		355		770									240						235
200-200/250	200	295	340	8-22	280	225	160	450											300						265
80- 80/315	80	160	200	8-18	175	120	125	280		460		330	220			520			240	20	24	25			225
100-100/315	100	180	220	8-18	180	125													250						240
125-125/315	125	210	250	8-18	200	145		315		810		160		235				220	300	260					255
150-150/315	150	240	285	8-22	220	165													280						265
200-200/315	200	295	340	8-22	315	260	160	450											310						320
250-250/315	250	350	395	12-22	335	280	180	500		840									330						365
300-300/400	300	400	445	12-22	400	345	250	$\frac{630}{560}$		1225	560	230	300	400	320		630	300	400	420	30	26			600

# Type CNHBX

## SECTIONAL VIEW



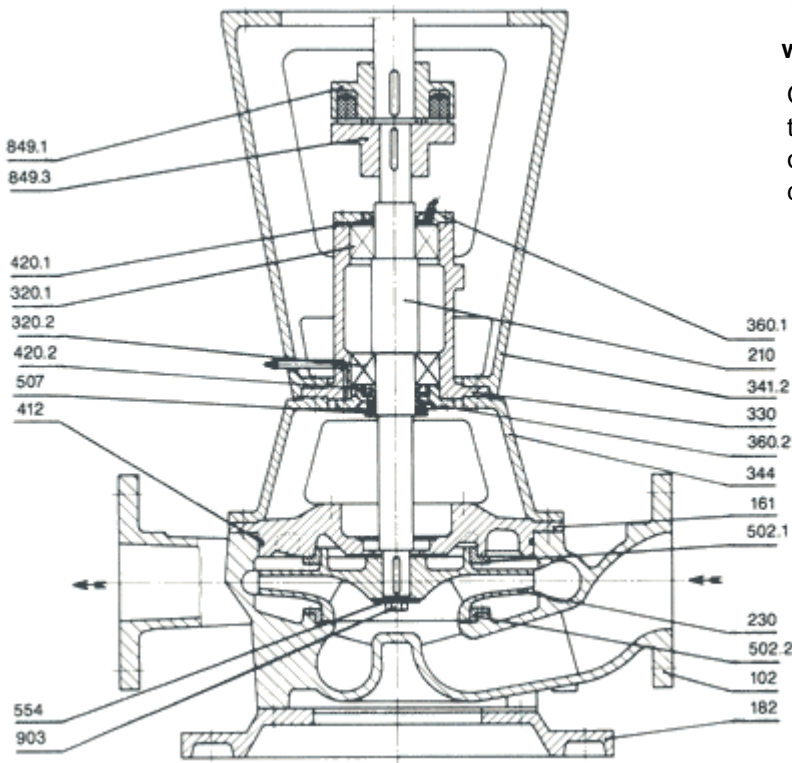
# Type CNHBX & Type CNLBX

## Part list CNHBX and CNLBX

Pos. no.	Description	Pcs.	Material
102	Volute casing	1	c.i./brz.
161	Casing cover	1	c.i./brz.
182	Pump base	1	ci.
210	Pump shaft	1	stainl.steel
230	Impeller	1	brz.
320.1	Radial ball bearing	1	
320.2	Radial ball bearing	1	
330	Bearing housing	1	ci
341.1	Motor flange	1	ci.
341.2	Motor stool	1	ci.
344	Bearing bracket lantern	1	ci.
360.1	Bearing cover	1	ci
360.2	Bearing cover	1	ci.
412	O-ring	1	viton
420.1	Shaft seal ring	1	nitril
420.2	Shaft seal ring	1	nitril
502.1	Casing wear ring	1	brz.
502.2	Casing wear ring	1	brz.
507	Thrower	1	nitril
554	Washer	1	stainl.steel
636.1	Grease nippel	1	
636.2	Grease nippel	1	
849.1	Coupling - half	1	ci.
849.2	Spacer bush	1	ci.
849.3	Coupling - half	1	ci.
903	Impeller screw	1	stainl.steel

# Type CNLBX

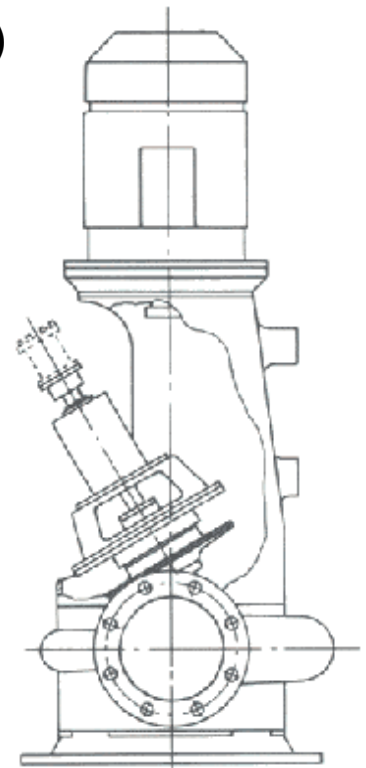
## SECTIONAL VIEW



# Type CNHB(X)

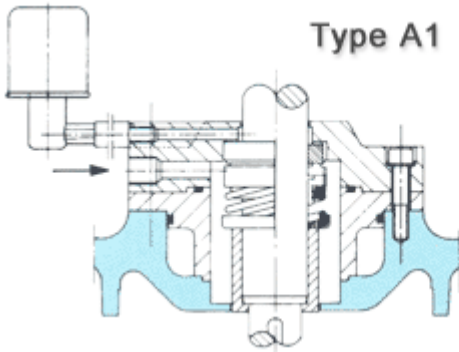
## with spacer coupling

Quick and easy dismantling for inspection, without disturbing piping and driver.



# Seal arrangements

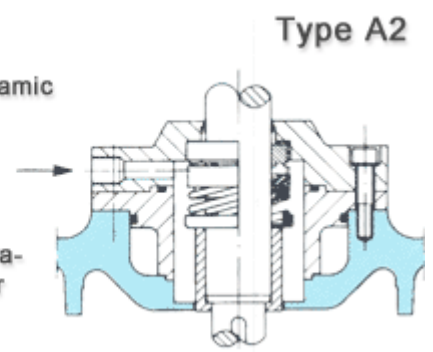
Type CNX - CNLX - CNLBX - CNVX - CNHBX - CNBVX



**Type A1**

**Type A1 - max. 80°C**

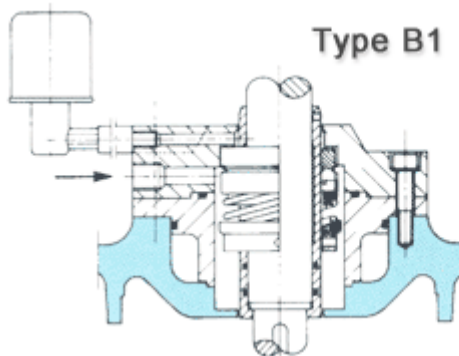
Mechanical shaft seal - carbon/ceramic type - with oil lubricator to prevent overheating during evacuation.



**Type A2**

**Type A2 - max. 120°C**

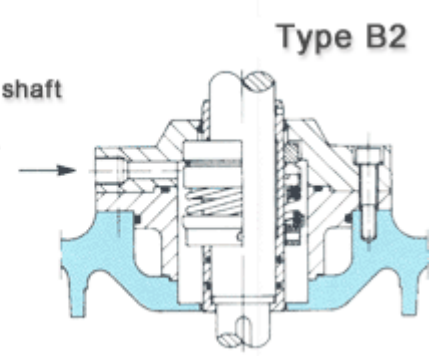
Mechanical shaft seal - carbon/ceramic type - with VITON/EPDM rubber bellow and extra lip seal.



**Type B1**

**Type B1 - max. 80°C**

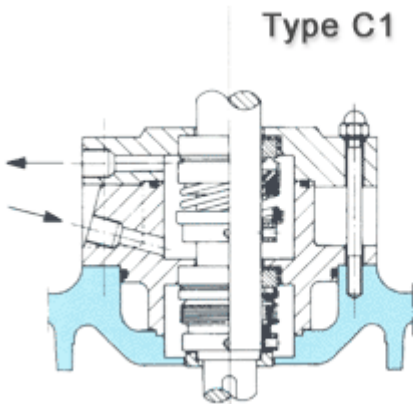
As type A1, but with exchangeable shaft sleeve.



**Type B2**

**Type B2 - max. 120°C**

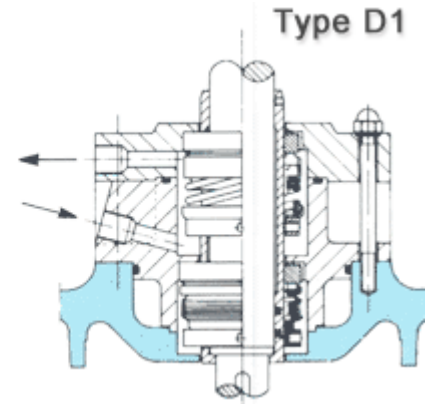
As type A2, but with exchangeable shaft sleeve.



**Type C1**

**Type C1 - max. 200°C**

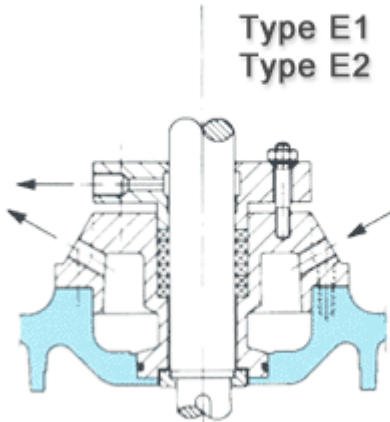
Double mechanical shaft seal - carbon/tungsten carbide type - with VITON/EPDM rubber bellow, designed for external cooling water max. 60°C.



**Type D1**

**Type D1 - max. 200°C**

As type C1, but with exchangeable shaft sleeve.



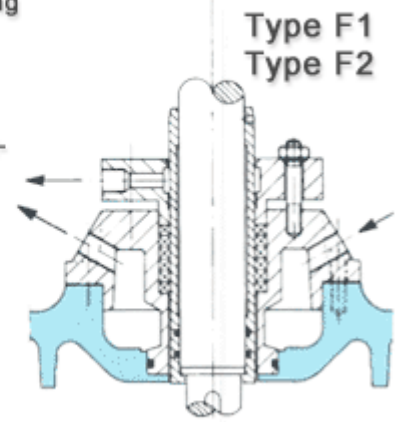
**Type E1  
Type E2**

**Type E1 - max. 100°C**

Stuffing box with CHESTERTON packing style 1774 (without external cooling water).

**Type E2 - max. 200°C**

Stuffing box with CHESTERTON packing style 326, designed for external cooling water max. 60°C.



**Type F1  
Type F2**

**Type F1 - max. 100°C**

As type E1, but with exchangeable shaft sleeve.

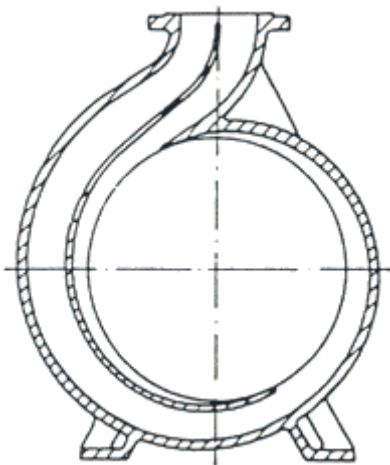
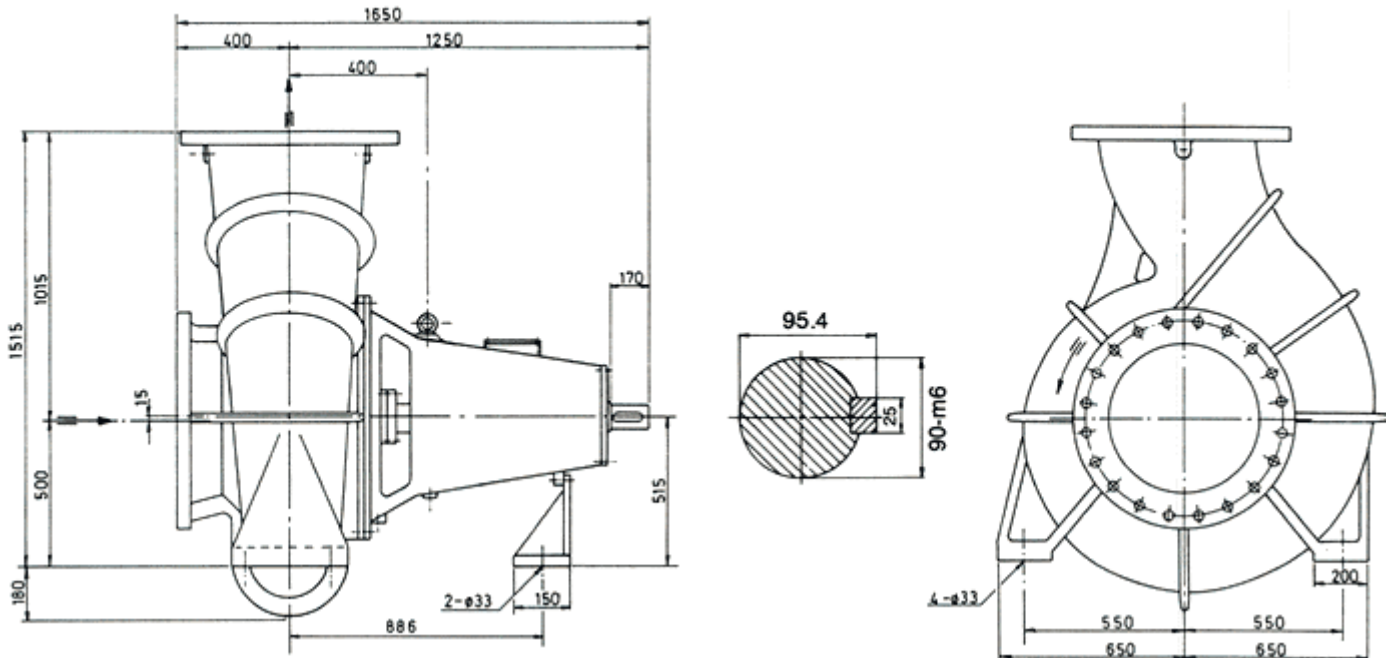
**Type F2 - max. 200°C**

As type E2, but with exchangeable shaft sleeve.



# Type CNDV - 500 - 500/630

Horizontal end suction type with dual volute casing  
Dimensional drawing  
(Bare shaft model)



## Dual volute design

Dual volute casing design is ideal when pump must operate at higher head to equalize radial forces and lessen radial reaction on shaft and bearings. Balancing of radial forces is accomplished by dividing the liquid discharged by the impeller into two half-capacity volutes with volute lips set 180° apart.

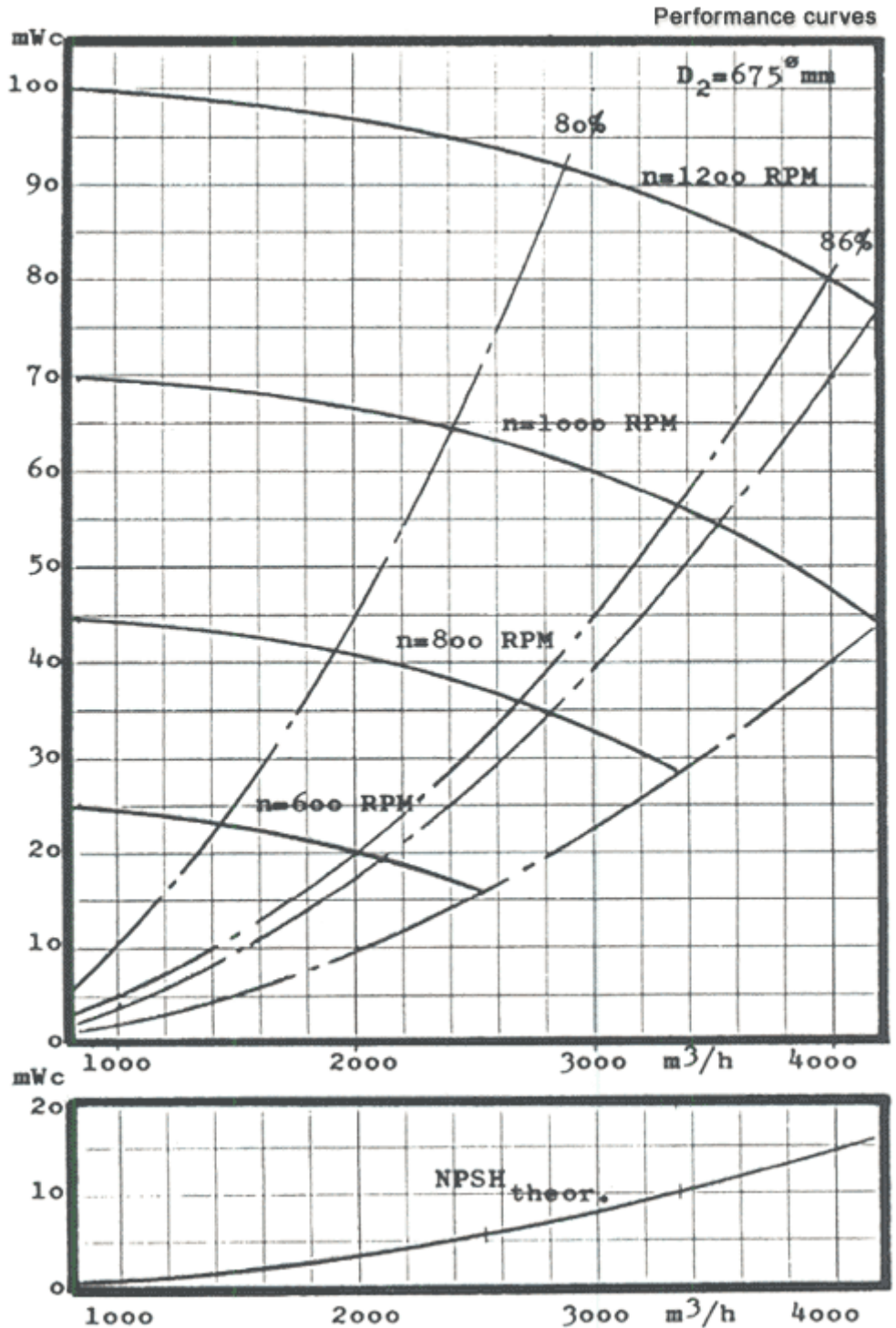
# Design features

- Back pull out of complete rotating element.
- Heavy duty oil lubricated anti friction bearings.
- High efficiency double curved closed impeller.
- Combination of design materials and shaft seal according to application.
- Common base plate for pump and driver including guarded flexible spacer coupling is supplied upon request.
- Suction and discharge flanges are alike DN 500 mm (20" dia.).
- Max. design pressure is for
  - cast steel and nodular cast iron PN25
  - gray cast iron and bronze PN10

# Applications

- General Water Supply
- District Heating
- Industrial Service

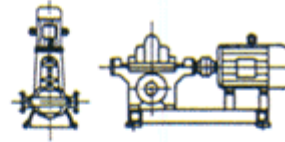
Weight app. 1700 Kg.



**We also manufacture:**

**Split Casing Pumps  
Centrifugal type**

QH..  
QV..  
QVP..  
QVK..



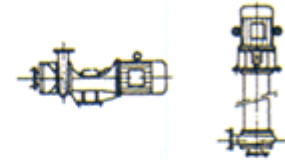
**Selfpriming End-suction Pumps  
Centrifugal type**

RS..  
RSM..



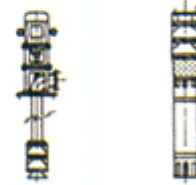
**End-suction Pumps  
(front pull out/multi stage)  
Centrifugal type**

CH..  
CHV..  
CHVM..  
CHVS..



**Submersible Pumps  
Centrifugal and Mixed Flow type**

CS..  
CVLS..



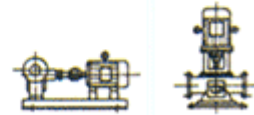
**Water Ring Pumps**

AA  
AB  
AC



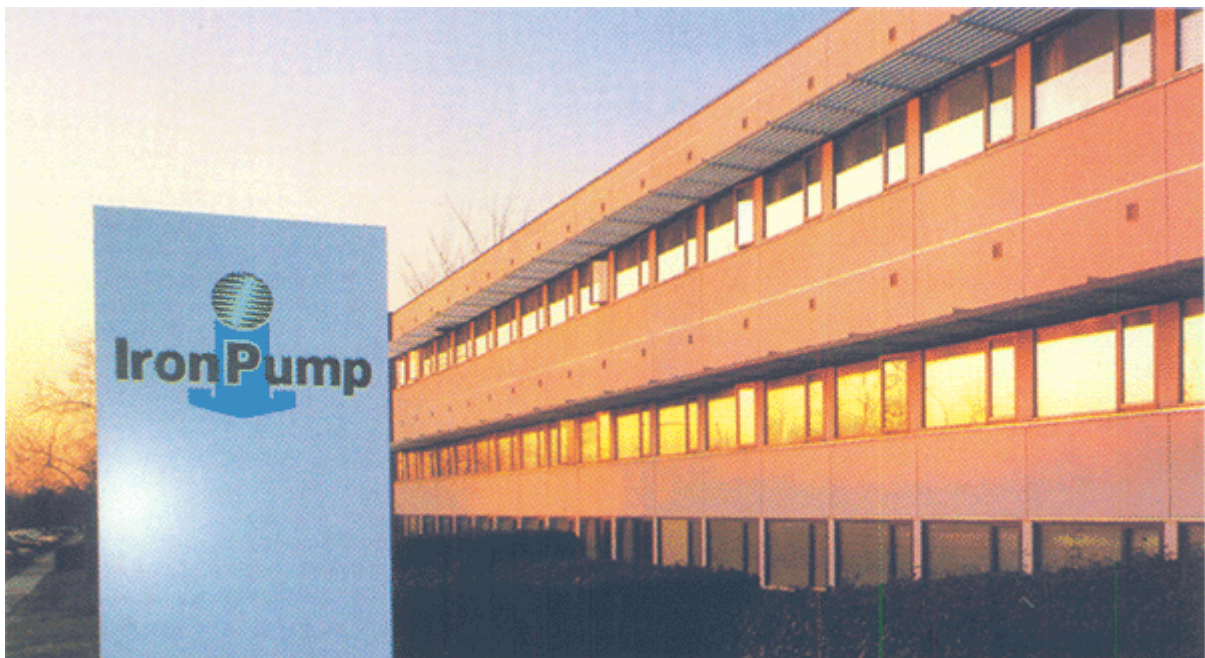
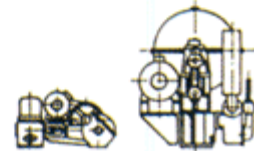
**Gear Pumps**

ON..  
ONV..  
ONM..  
ONT..



**Piston Pumps**

BC..  
BDV..  
BDHV..



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