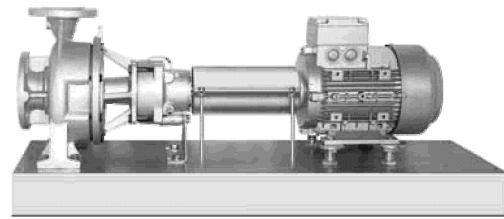


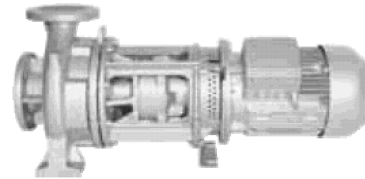
ALLHEAT®

SERIES NTWH/CTWH
prozess model
 SERIES NBWH/CBWH
block model
 SERIES NIWH/CIWH
in-line model

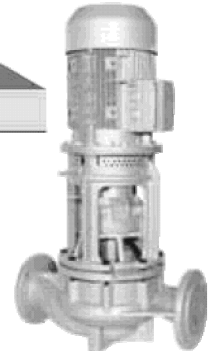
PN 16/PN 25 Volute Centrifugal-Pumps for Heat Transfer Media Thermal Oil up to 400 °C Hot Water up to 207 °C



Series NTWH/CTWH



Series NBWH/CBWH



Series NIWH/CIWH

Application

For circulating heat transfer media such as thermal oil or hot water in heat transfer systems (DIN 4754 and 4752). The media to be pumped may not contain any abrasive constituents or chemically attack the pump material.

Series

The NTWH, NBWH, and NIWH series of pumps are designed for organic and synthetic heat transfer oils up to 350 °C. Series CTWH, CBWH, CIWH can be used up to 400 °C.

The series NTWH, NBWH and NIWH (PN16) can be used with hot water at temperatures of up to 183 °C and series CTWH, CBWH and CIWH (PN25) at temperatures of up to 207 °C. Size CTWH 200-250/81 (ALLHEAT 1000) is approved for pumping heat transfer oils only.

The application limits with regard to temperature, pump series and housing material are specified in the table "Application limits" and in the diagram "Pressure/temperature limits depending on the housing materials".

Design

Series NTWH/CTWH:

Process models of a horizontal volute centrifugal pump. Single-flow, single-stage with optimised bearing support (consisting of housing cover incl. throttle/cooling section and bearing support). Shaft bearing consisting of a silicon carbide or carbon sliding bearing lubricated by the pumped medium on the pump side and a grease-lubricated deep groove ball bearing on the drive side. Volute casing with cast-on pump feet.

Series NBWH/CBWH:

Block model of a volute centrifugal pump. Single-flow, single-stage with optimised bearing support (consisting of housing cover incl. throttle/cooling section and bearing support). Plug-in shaft and motor shaft are rigidly connected to each other. Shaft bearing consisting of a silicon carbide or carbon sliding bearing lubricated by the pumped medium on the pump side and the grease-lubricated deep groove ball bearing of the drive motor. Motors with axial thrust bearings. Spiral casing with cast-on pump feet.

Horizontal or vertical installation, however, not with motor arrangement facing downwards.

Series NIWH/CIWH:

In-line model of volute centrifugal pump, other details as for series NBWH/CBWH.

Shaft sealing

Uncooled, balanced or unbalanced, maintenance-free mechanical seals acc. to DIN EN 12756. The shaft seal is dependent on the direction of rotation.

A safety gland and a subsequent throttle/cooling section are provided upstream of the shaft seal.

Shaft seal			
Product code	Material type		Material code DIN EN 12756
U2.11A and U2.13A mechanical seal	Sliding ring	Carbon graphite, antimony impregnated	A*
	Counter ring	SiC, silicon carbide	Q1*
U3.3A unbalanced mech. seal	O-Ring	Rubber fluoride (FPM)	V
	Spring	CrNiMo steel	G
	other design components	CrNiMo steel	G

* U2.13A (ALLHEAT 1000) Sliding ring material, counter ring: SiC-C-Si, material code Q3

Flange

Flange connection dimensions correspond to EN 1092-2, PN 16 or PN 25.

Performance data at 50 Hz

Series	Permissible internal pump pressure ^① p [bar]	max. pump output Q [m³/h]	max. pump head H [m]
NTWH	≤ 16	1250	100
NBWH		270	92
NIWH		220	92
CTWH	≤ 25	1450	100
CBWH		240	63
CIWH		105	58

① The entry pressure and pressure during zero flow rate must not exceed the specified values. For permissible values per series, see diagram on page 2.

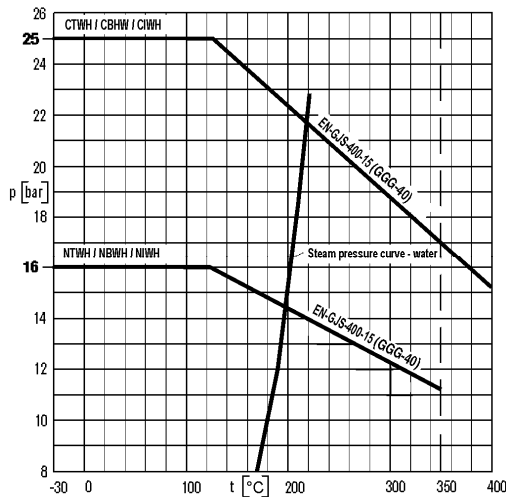
The mentioned performance data are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.

Application limits						
Series	Permissible internal pump pressure p ≤ [bar]	Mechanical seal Bearing type	Permissible suction pressure p ≤ [bar]		Hot water t ≤ [°C]	Thermal oil t [°C]
			water	oil		
NTWH	16	U3.3A - K1	12	8	183	t = - 30 bis + 350
NBWH						
NIWH						
CTWH	25	U3.3A - K1	22	15	207	t = - 30 bis + 400
CBWH		U2.11A - S1				
CIWH		U2.13A - K2	-	-		

① Requirement to hot water quality: Water with low salt content or deionised water acc. to VdTÜV directive 02.89 TCH 1466 solids content ≤ 5mg/l, without settling additives.

② Toxic thermal oils are not hermetically sealed from the environment. In this case we recommend the use of our magnetically coupled pumps.

Pressure and temperature limits depending on housing materials



Application limits

Ambient temperature: min. – 30 °C up to max. +40 °C
Expansion of operating limits upon request.

Materials *

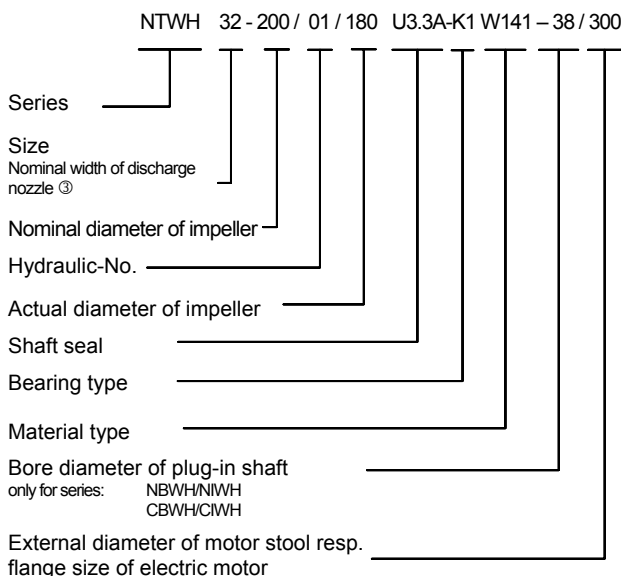
Denomination	Part-No.	Series	
		NTWH	CTWH
		NBWH	CBWH
		NIWH	CIWH
		Material type	
		W141	
Volute casing ②	102.01	EN-GJS-400-15 (GGG-40)	
Impeller	230.01	EN-GJL-200 (GG-20) ①	
Casing cover	161.01	EN-GJS-400 (GGG-40)	
Shaft	210.01	1.4021	
Plug-in shaft	220.01	1.4021/1.7139	
Bearing bracket	330.01	EN-GJS-400 (GGG-40)	
Motor stool	341.01	EN-GJL-250 (GG-25)	
Intermediate Ring	509.01	EN-GJS-400-15 (GGG-40)	
Bearing sleeve S1	529.01	SSiC	
Bearing sleeve K2	529.01	1.7225 (specially hardened)	
Bearing bush S1	545.01	SSiC	
Bearing bush K1 resp. K2	545.01	carbon/1.4021	

① Material type W143 (ALLHEAT 1000): impeller in EN-GJS-400-15 (GGG-40).

② Volute casing of CTWH 250-315 and 250-400 series in material GS-C25 (W142).

* Other materials available upon request.

Abbreviation



③ For series CIWH ACTUAL width of discharge nozzle

The abbreviation is displayed on the nameplate

Bearing and lubrication

NTWH/CTWH

Pump side: Sliding bearing, lubricated by pumped medium
Drive side: Deep groove ball bearing, grease-lubricated

NBWH/CBWH/NIWH/CIWH

Pump side: Sliding bearing, lubricated by pumped fluid
Drive side: Deep groove ball bearing of drive motor, grease-lubricated

Connections

The following connections are always provided:

- FD1 Draining
- FD2 Draining
- FF2/FV1 Filling/Venting
- FF4/FV4 Filling/Venting
(only for vertical block and in-line installation)
- LO1 Leakage outlet*

* According to DIN 4754 for non-hazardous draining of heat transfer medium leaking from the shaft seal.

Component combinations

The tables on page 5 and 6 show the possible combinations of components for the ALLHEAT sizes.

Due to the modular design, spare parts management is simplified.

Dismantling of insert unit NTWH/CTWH

Where a shaft coupling with a spacer element is used, the insert unit can be removed towards the motor side, whilst the volute casing and the motor may remain on the base plate and the pipes connected to the volute casing.

Dismantling of drive unit NBWH/CBWH/NIWH/CIWH

During dismantling of the drive unit, the volute casing can remain in the pipeline.

Shaft coupling and contact protection

Elastic shaft coupling acc. to DIN 740 with or without spacer element. A coupling protection is supplied as a contact protection acc. to DIN EN 294 (DIN 31001), where the scope of delivery includes a pump, base plate and shaft coupling.

Couplings with spacer element in rotationally flexible, double cardanic design (proper base plate size required).

We recommend the use of double cardanic couplings under the following operating conditions:

- In case of changing temperatures of the pumped medium
- In case of changing ambient temperatures or ventilation
- In case of plants that are sensitive to vibration

When series NTWH and CTWH have impeller diameters 315, 400, and 500 and $t \geq 207$ °C, the double-cardanic coupling is standard. Size CTWH 200-250/81 (ALLHEAT 1000) is available with a double cardanic spacer coupling only.

Base plate series NTWH/CTWH

Two base plate types are available: channel steel, U-profile; and base plates with drip channel made from cast iron or steel, welded (material type depends on size).

The coupling types and base plate versions can be combined with each other.

Use our ALL2CAD interactive system to obtain the installation dimensions.

Accessories

The pump can be equipped with an optional pressureless quench fluid buffer in order to protect the mechanical seal from oxidation with sensitive heat transfer liquids.

Leaks and the bearing can be monitored with ALLWEILER Smart Equipment.

Drive

Surface-cooled IEC three-phase cage motors; model IM B3, protection type IP 55, insulation class F, performances and main dimensions acc. to DIN 42 673.

Attention: Motors provided by the client must generate a cooling airflow in axial direction to the pump side that unimpededly contacts the pump surface. It must also be ensured that any heat can be freely dissipated into the atmosphere.

Block and in-line pumps of series NBWH, CBWH, NIWH, CIWH

Driven by surface-cooled IEC three-phase cage motors with axial thrust bearing, model IM V1, protection type IP55, insulation class F, performances and main dimensions acc. to DIN 42 677.

Attention: Motors provided by the client must contain a axial thrust bearing on the drive side for block or in-line pumps.

Explosion protection

The pump fulfills the requirements according to EU explosion-protection directive 2014/34/EU (ATEX 100a) for devices in device class II, category 2 G. Classification into temperature classes according to EN 13463-1 depends on temperature of the pumped liquid. Refer to proposal or order documentation for the maximum permissible temperature of pumped liquid for the respective temperature classes.

Note: When operating the pump in category 2, suitable measures must be provided to prevent impermissible warming of the pump surfaces during disturbance.

Sectional drawing – Series NTWH/CTWH

Pressure-containing casing parts in nodular cast iron for high operational reliability

Wear-resistant casing design

Maintenance-friendly design easy to dismantle, pump housing can be remained in pipework

Solid sliding bearing, lubricated with pumped medium, due to low temperature level, no evaporation of pumped medium in, offering a high bearing force capacity, and long service life, available in SSiC/SSiC or carbon/steel

Optimum temperature reduction, due to long thermal barrier and large surface area of the sealing space, no additional cooling is required

Large sealing area, special design, to prevent the rotation of gas bubbles and partial dry running of the mechanical seal

Additional bearing protection by rotary shaft seal

Optimised antifriction bearing offering exceptional operational reliability and long life

Rigid, robust pump shaft for proper mechanical seal and bearing alignment

Optimised modular system as a result of using identical parts for the process, block and in-line models

Low axial thrust on shaft bearing as a result of hydraulically balanced impellers

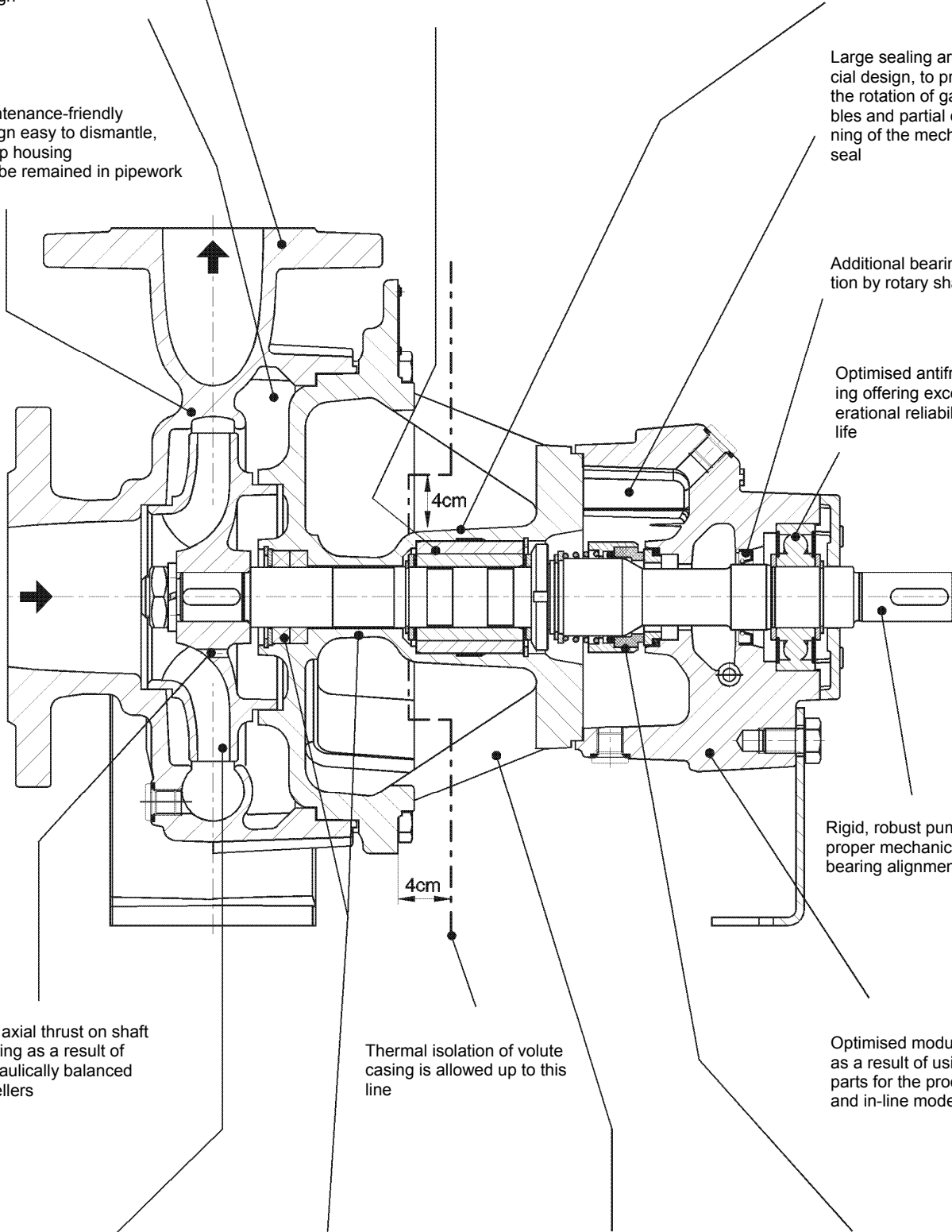
Thermal isolation of volute casing is allowed up to this line

Impellers with optimised hydraulics and excellent efficiency

Added operational reliability due to safety stuffing box by a throttle and cooling section

High mechanical stability and strength due to optimum stiffening ribs arrangement

Balanced or unbalanced, maintenance-free standard mechanical seal with chambered O-ring, no additional cooling



Interchangability of components on bearing bracket sizes 1 and 2

Parts with the same number are interchangeable within a vertical column.

Bearing bracket size	Pump size	Series			Volute casing		Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot		Plug-in shaft	Motor stool	
		NTWH	NBWH	NIWH	NTWH									NTWH	NBWH			
					NBWH	NIWH												
1	25-160/11	•	•	-	1	-	1	-	1	1	1	1	1	1	19 24 28 38 42 48 55	200 250 300 350 400		
	25-200/01	•	•	•	2	1	2						2	2				
	32-160/01	•	•	•	3	2	3						1	1				
	32-200/01	•	•	•	4	3	4						2	2				
	40-160/01	•	•	•	5	4	5						1	1				
	40-200/01	•	•	•	6	5	6						2	2				
	40-250/01	•	•	•	7	6	7						3	3				
	50-160/01	•	•	•	8	7	8						2	2				
	50-200/01	•	•	•	9	8	9						2	2				
	50-250/01	•	•	•	10	9	10						3	3				
	65-160/01	•	•	•	11	10	11						2	2				
	65-200/02	•	•	•	12	12	12						3	3				
	80-160/01	•	•	•	13	13	13						3	3				
	100-160/01	•	•	-	14	-	14						4	4				
2	65-250/01	•	-	-	15	-	15	-	2	2	2	2	2	5	-	-	-	
	65-315/01	•	-	-	16	-	16	2	2	2	2	2	2	6	-	-	-	
	65-400/01	•	-	-	17	-	17	3	2	2	2	2	2	7	-	-	-	
	80-200/02	•	-	-	18	-	18	-	2	2	2	2	2	8	-	-	-	
	80-250/01	•	-	-	19	-	19	-	2	2	2	2	2	5	-	-	-	
	80-315/01	•	-	-	20	-	20	2	2	2	2	2	2	7	-	-	-	
	100-200/01	•	-	-	21	-	21	-	2	2	2	2	2	5	-	-	-	
	100-250/01	•	-	-	22	-	22	-	2	2	2	2	2	6	-	-	-	
	100-315/01	•	-	-	23	-	23	2	2	2	2	2	2	7	-	-	-	
	125-200/01	•	-	-	24	-	24	-	2	2	2	2	2	7	-	-	-	
	125-250/01	•	-	-	25	-	25	-	2	2	2	2	2	7	-	-	-	
	150-200/01	•	-	-	26	-	26	-	2	2	2	2	2	8	-	-	-	
	Bearing bracket size	Pump size	Series			Volute casing		Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot		Plug-in shaft	Motor stool
			CTWH	CBWH	CIWH	CTWH									CTWH	CBWH		
CBWH						CIWH												
1	25-160/11	•	•	-	27	-	1	-	1	1	1	1	1	1	19 24 28 38 42 48 55	200 250 300 350 400		
	25-200/01	•	•	32-200/11	28	14	2						2	2				
	32-160/11	•	•	40-160/11	29	15	3						1	1				
	32-200/11	•	•	40-200/11	30	16	4						2	2				
	40-160/11	•	•	50-160/11	31	17	5						1	1				
	40-200/11	•	•	50-200/11	32	18	6						2	2				
	50-160/11	•	•	65-160/11	33	19	8						2	2				
	50-200/11	•	•	65-200/11	34	20	9						2	2				
	65-160/11	•	•	-	35	-	27						2	2				
	80-160/11	•	•	-	36	-	28						3	3				
2	32-250/11	•	-	-	37	-	29	-	2	2	2	2	2	8	-	-	-	
	40-250/11	•	-	-	38	-	30	-	2	2	2	2	2	8	-	-	-	
	40-315/11	•	-	-	39	-	31	4	2	2	2	2	2	5	-	-	-	
	50-250/11	•	-	-	40	-	32	-	2	2	2	2	2	8	-	-	-	
	50-315/11	•	-	-	41	-	31	4	2	2	2	2	2	6	-	-	-	
	65-200/11	•	-	-	42	-	33	-	2	2	2	2	2	8	-	-	-	
	65-250/11	•	-	-	43	-	15	-	2	2	2	2	2	5	-	-	-	
	80-200/01	•	-	-	44	-	34	-	2	2	2	2	2	8	-	-	-	
	80-250/01	•	-	-	45	-	19	-	2	2	2	2	2	6	-	-	-	
	100-200/11	•	-	-	46	-	21	-	2	2	2	2	2	5	-	-	-	

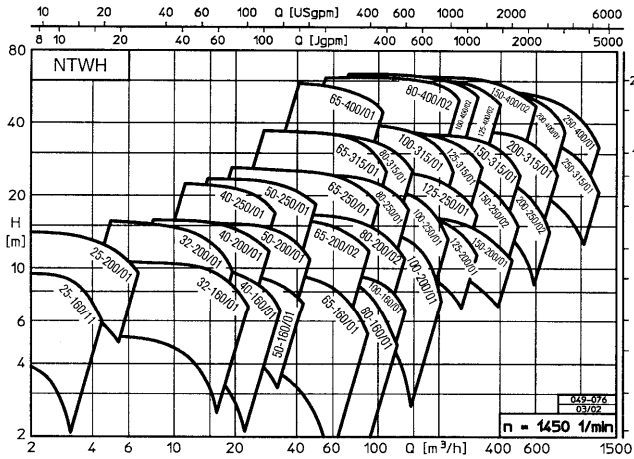
Interchangability of components on bearing bracket sizes 3 up to 5

Parts with the same number are interchangeable within a vertical column.

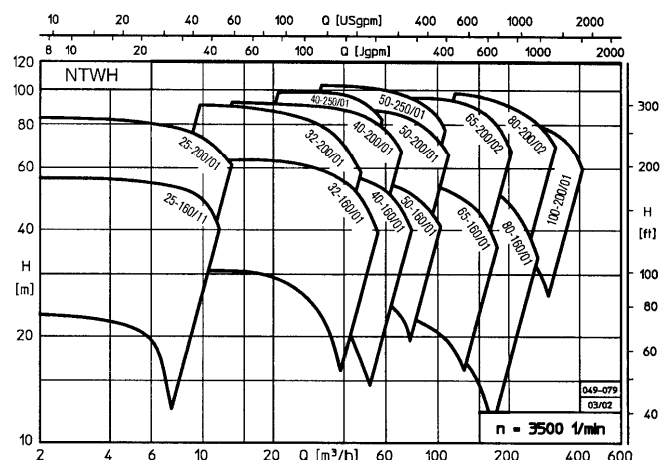
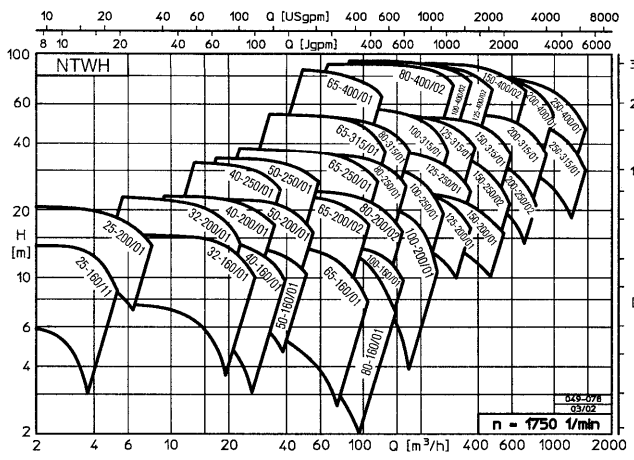
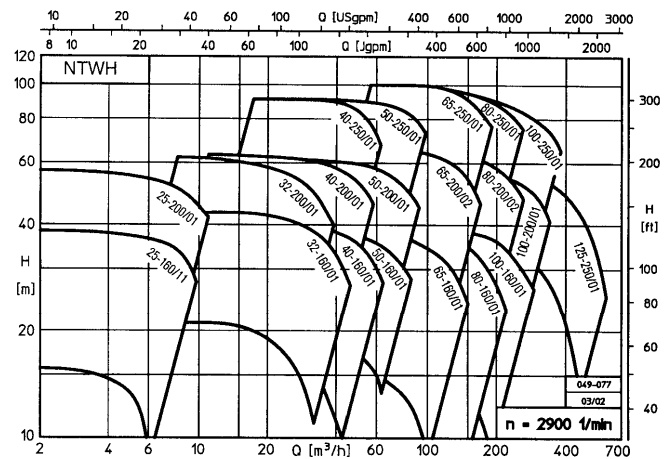
Bearing bracket size	Pump size	Series NTWH	Volute casing	Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot	
3	80-400/02	●	1	1	1	1	1	1	1	1	1	
	100-400/02	●	2	2							1	1
	125-315/01	●	3	3							-	1
	125-400/02	●	4	4	1	2					2	
	150-250/02	●	5	5	-						1	
	150-315/01	●	6	6	1	1					1	
	150-400/02	●	7	7		1					2	
	200-250/02	●	8	8	-	2					3	
4	200-315/01	●	9	9	-	3	2	2	2	2	4	
	200-400/01	●	10	10							4	
	250-315/01	●	11	11							5	
	250/400/01	●	12	12							5	
Bearing bracket size	Pump size	Series CTWH	Volute casing	Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot	
3	65-315/11	●	13	13	-	1	1	1	1	1	6	
	80-315/11	●	14	14							7	
	80-400/11	●	15	15	2	1						
	100-250/11	●	16	16	-	2					6	
	100-315/11	●	17	17		1					7	
	100-400/11	●	18	18	2	1					1	
	125-250/11	●	19	19	-	2					7	
	125-315/11	●	20	20		1					1	
	125-400/11	●	21	21	2	2						
	150/250/01	●	22	22	-	2					1	
200-250/01	●	23	23	3								
4	150-315/11	●	24	24	-	3	2	2	2	2	6	
	150-400/11	●	25	25							6	
	150-500/11	●	26	26	3						7	
	200-315/01	●	27	9	-						4	
	200-400/01	●	28	10							4	
	200-500/11	●	29	27	3						8	
	250-315/01	●	30	11	-						5	
250-400/01	●	31	12	5								
5	200-250/81	●	32	28	-	4	3	3	3	3	4	

Performance graphs

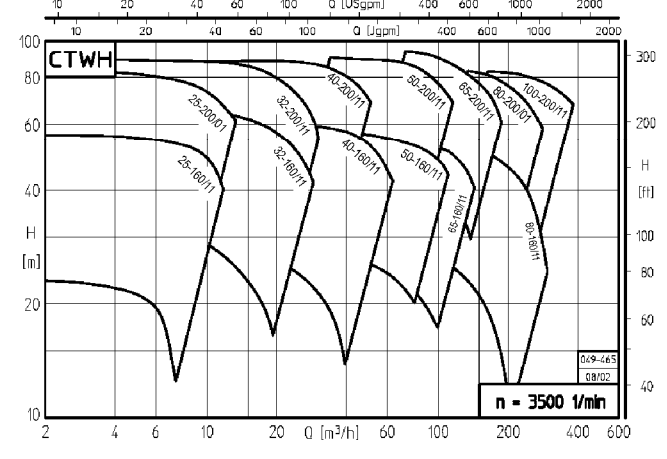
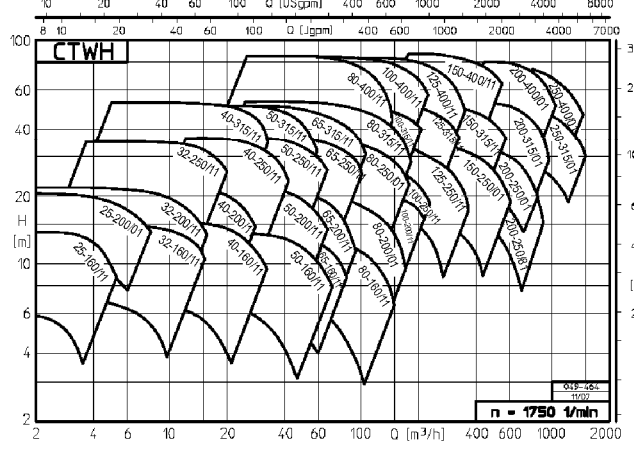
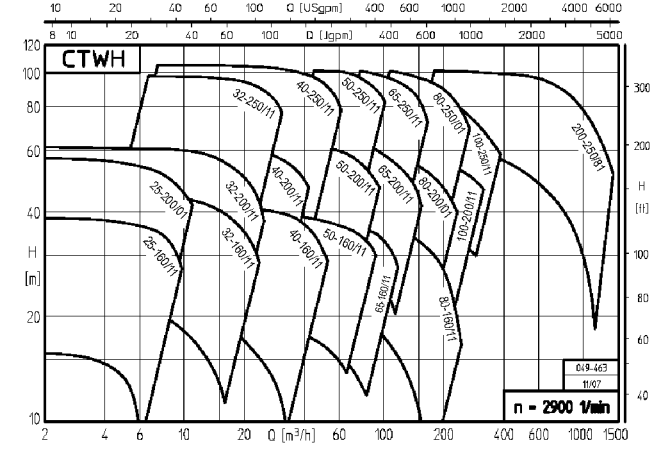
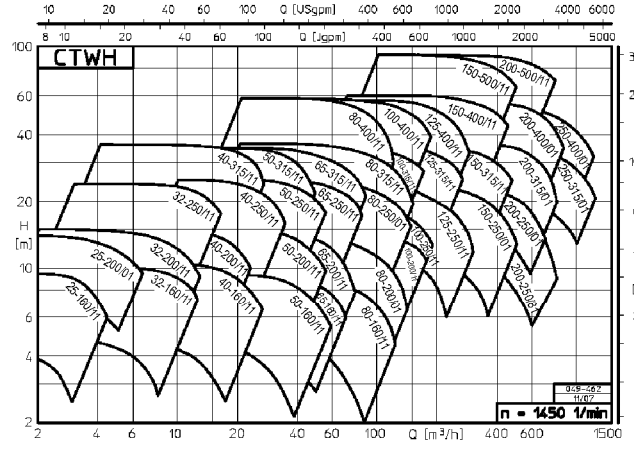
Series NTWH



For exact performance data please refer to the individual characteristics.

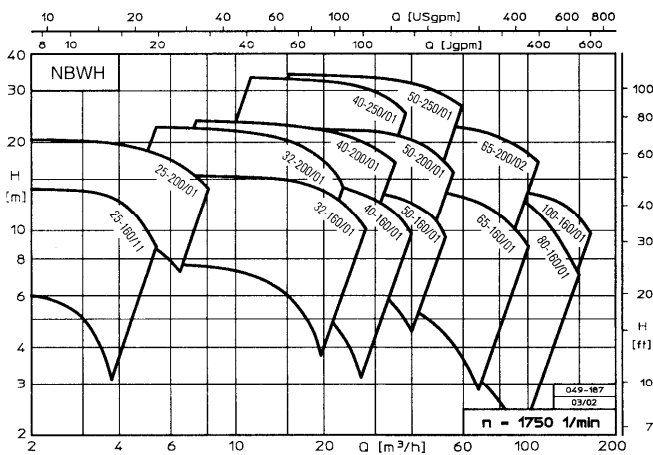
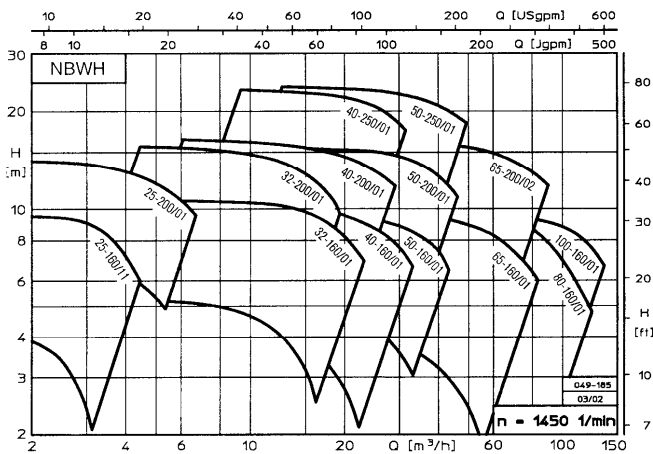


Series CTWH

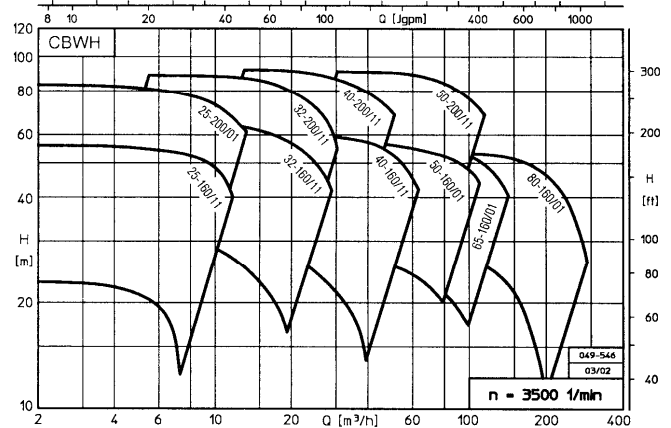
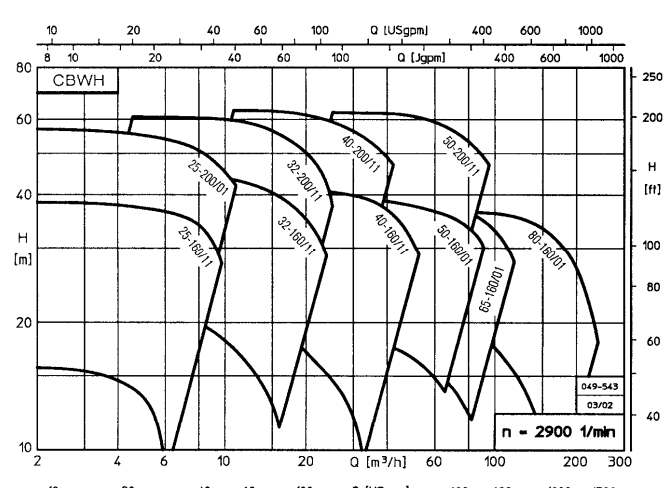
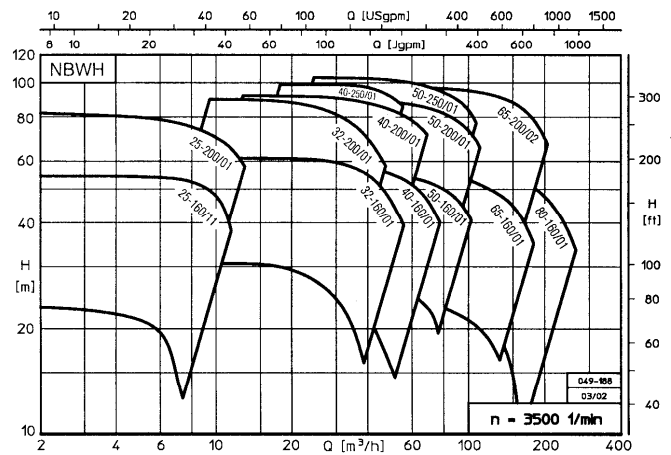
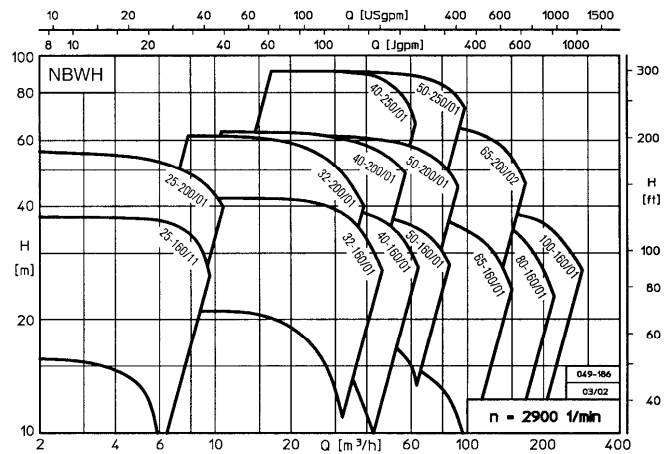
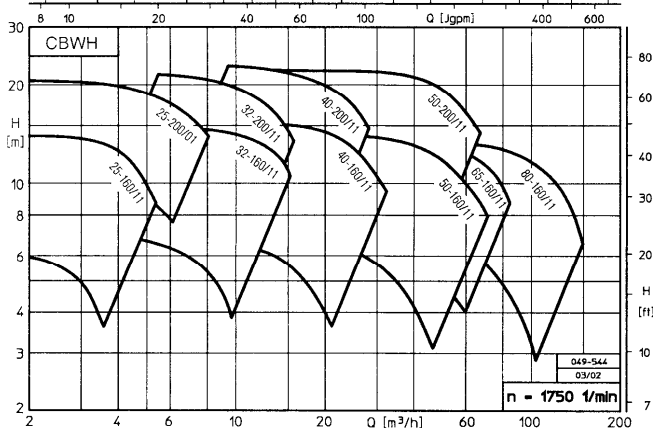
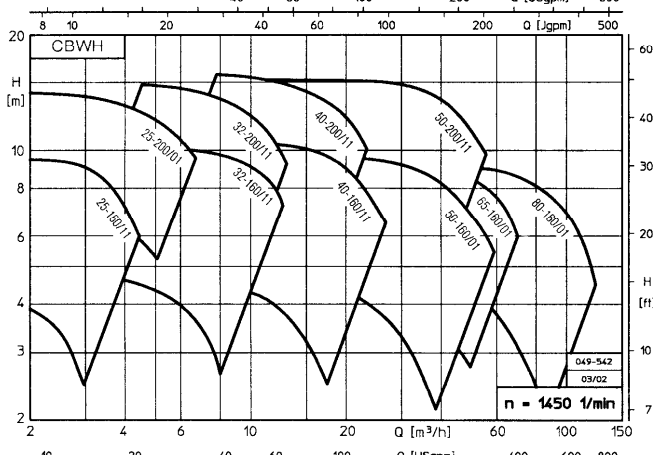


Performance graphs
Series NBWH

For exact performance data please refer to the individual characteristics.



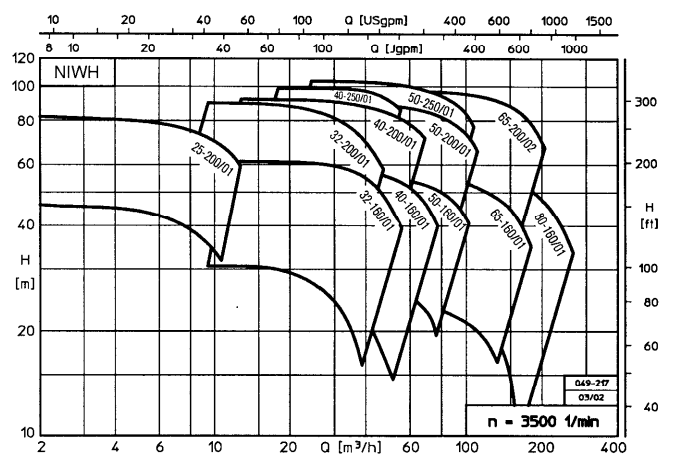
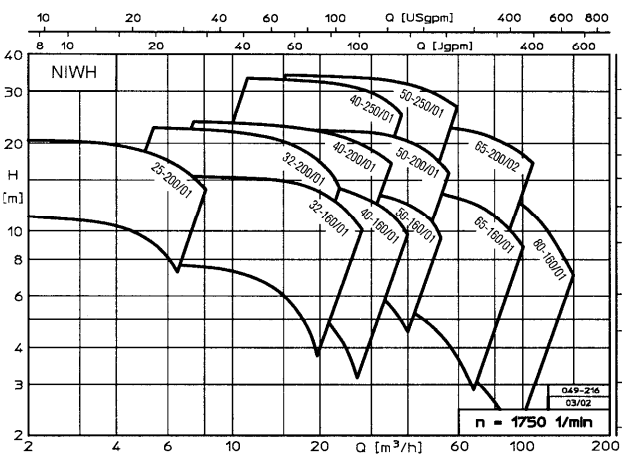
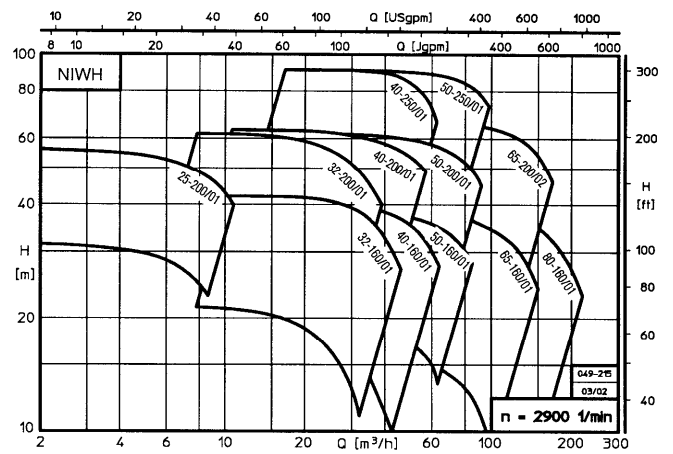
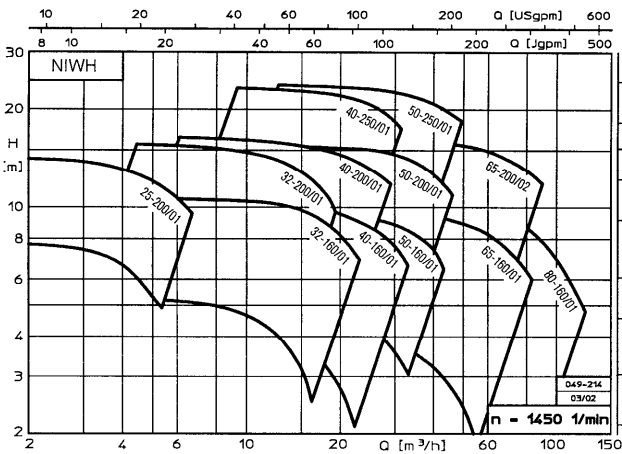
Series CBWH



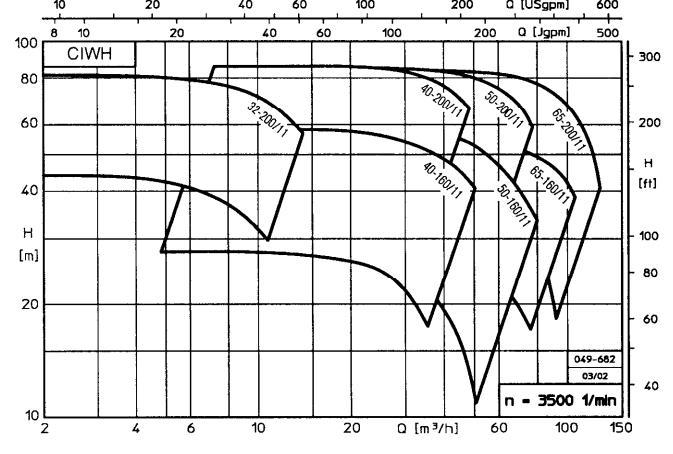
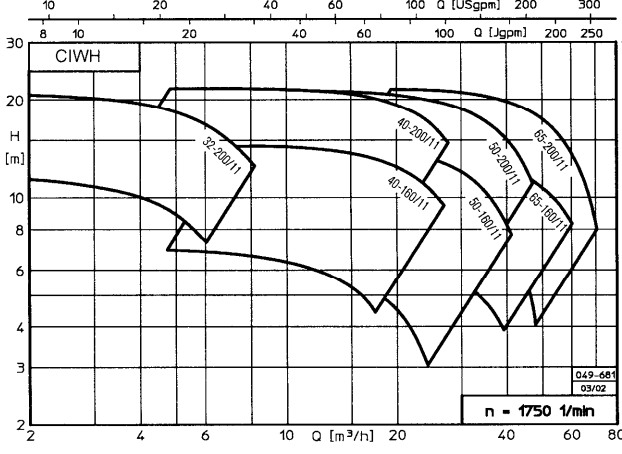
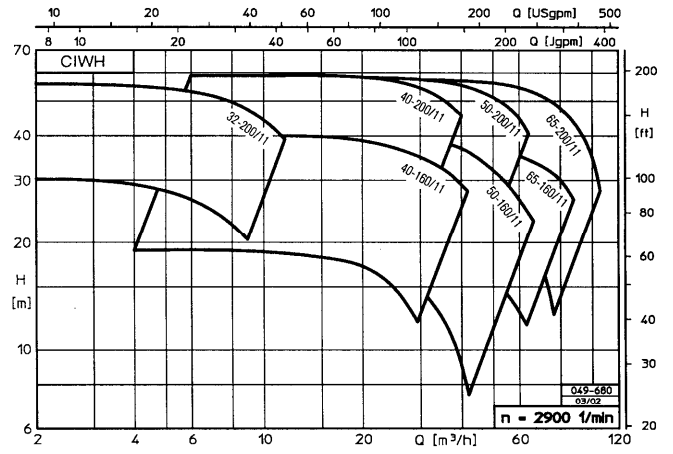
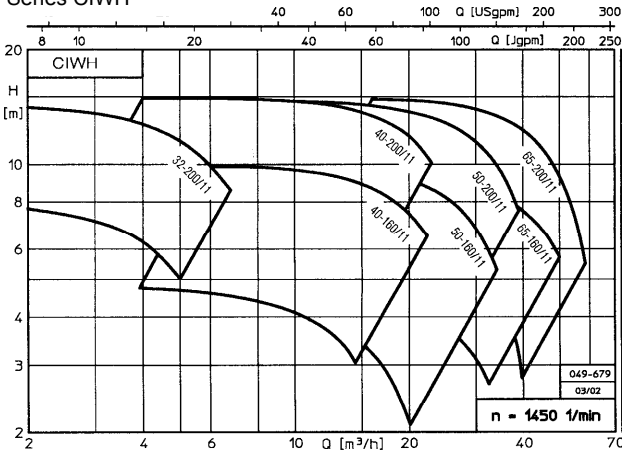
Performance graphs

Series NIWH

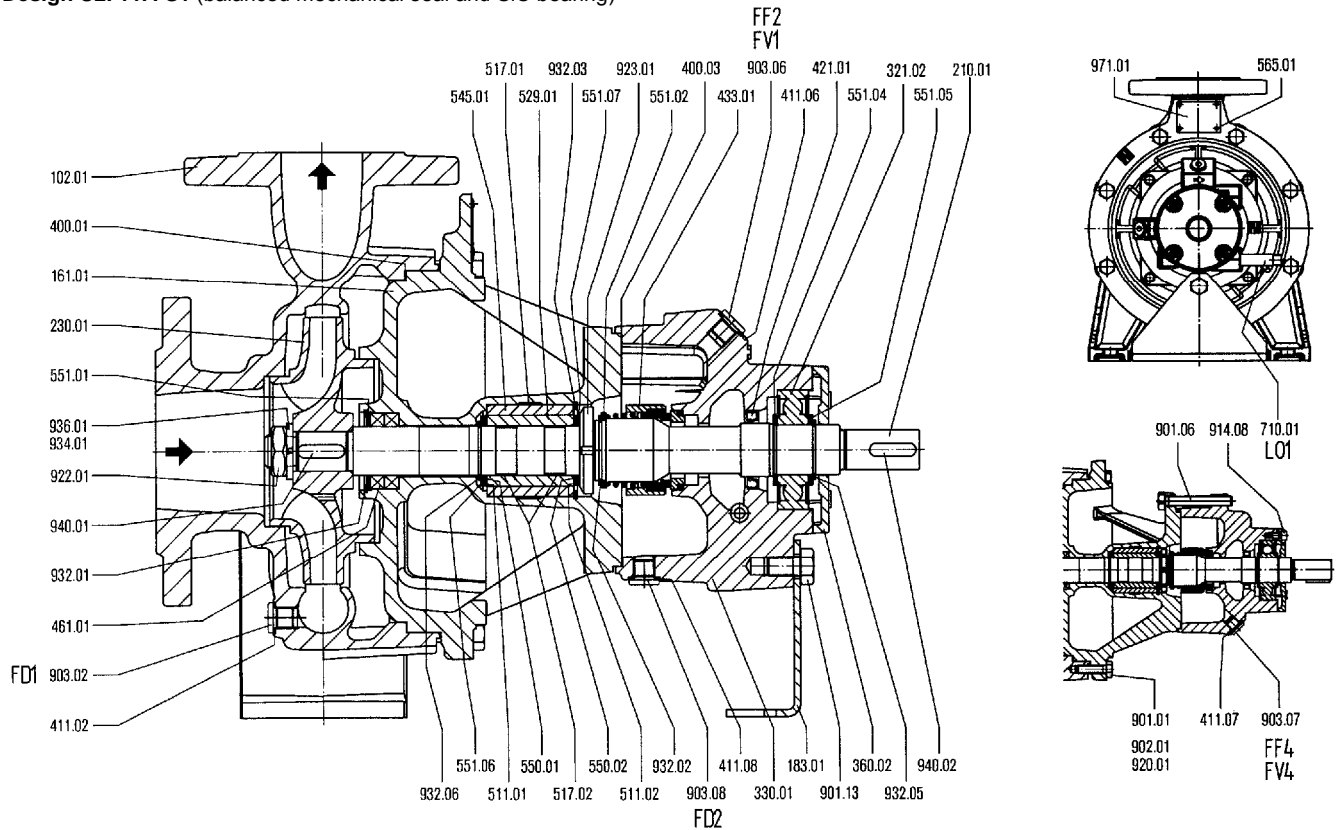
For exact performance data please refer to the individual characteristics.



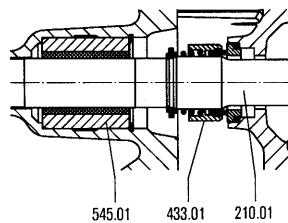
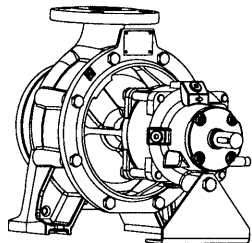
Series CIWH



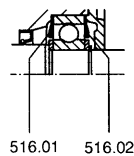
Sectional drawing - Series NTWH/CTWH on bearing bracket size 1, 2, 3 and 4
Design U2. 11A-S1 (balanced mechanical seal and SiC bearing)



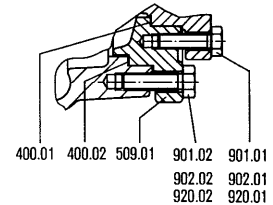
Design U3.3A-K1
 (unbalanced mechanical seal and carbon bearing)



Design of bearing with bearing bracket size 3 and 4



Design with intermediate ring



Denomination	Part-No.
Volute casing	102.01
Casing cover	161.01
Supporting foot	183.01
Shaft	210.01
Impeller	230.01
Groove ball bearing	321.02
Bearing bracket	330.01
Bearing cover	360.02
Gasket	400.01
Gasket	400.02
Gasket	400.03
Seal ring	411.02
Seal ring	411.06
Seal ring	411.07
Seal ring	411.08
Radial shaft seal ring	421.01
Mechanical seal	433.01
Stuffing box packing	461.01
Intermediate ring	509.01
Centering ring	①511.01
Centering ring	①511.02
Nilos ring	④516.01
Nilos ring	④516.02
Flexible damp ring	517.01
Flexible damp ring	①517.02

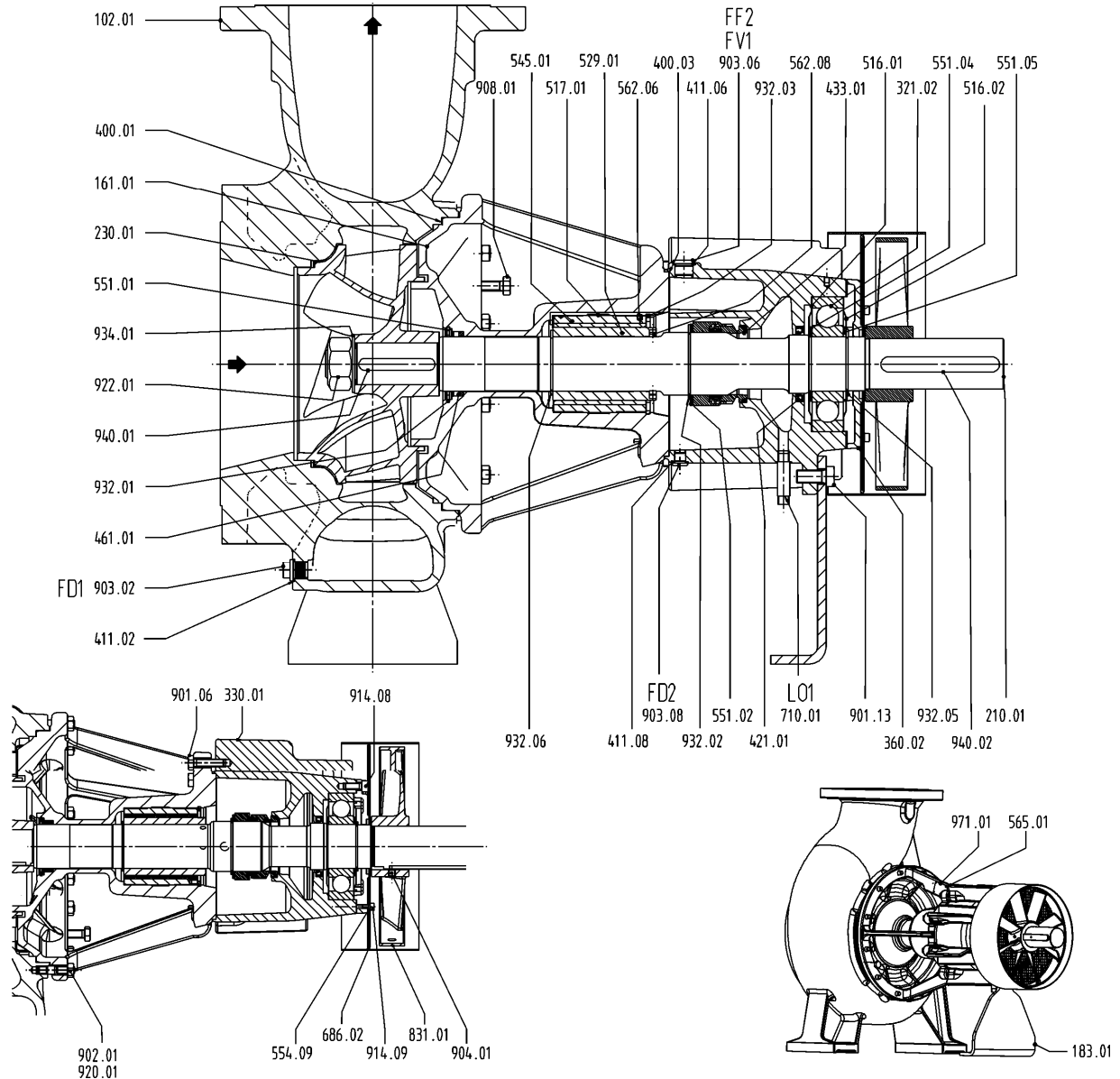
Denomination	Part-No.
Bearing sleeve	①529.02
Bearing bush	545.01
Disc	①550.01
Disc	①550.02
Disc spacer	551.01
Disc spacer	551.02
Disc spacer	551.04
Disc spacer	551.05
Disc spacer	①551.06
Disc spacer	①551.07
Rivet	565.01
Pipe	710.01
Hexagon screw	901.01
Hexagon screw	901.02
Hexagon screw	901.06
Hexagon screw	901.13
Stud bolt	②③902.01
Stud bolt	③902.02
Screw plug	903.02
Screw plug	903.06
Screw plug	903.07
Screw plug	903.08
Socket-head cap screw	914.08
Nut	②③920.01
Nut	③920.02

Denomination	Part-No.
Impeller nut	922.01
Bearing nut	①923.01
Circlip	932.01
Circlip	932.02
Circlip	932.03
Circlip	932.05
Circlip	①932.06
Spring disc	④934.01
Spring ring	936.01
Key	940.01
Key	940.02
Name plate	971.01

① not present on version with carbon bearing
 ② only with series NTWH bearing bracket s. 4
 ③ only with series CTWH
 ④ only with bearing bracket size 3 and 4

Anschlüsse	
FD1	Draining
FD2	Draining
FF2/FV1	Filling/Venting
FF4/FV4	Filling/Venting
only for vertical block and in-line installations	
LO1	Leakage outlet

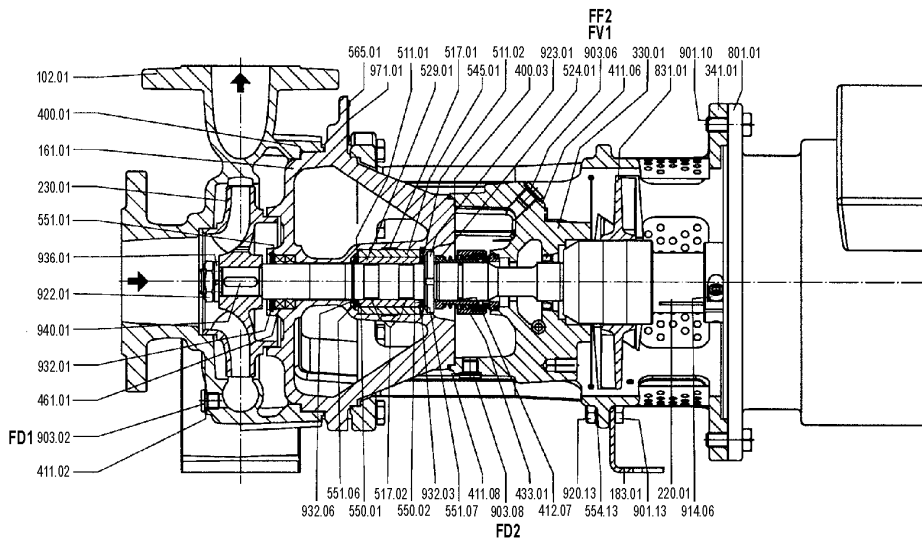
Sectional drawing - Series CTWH 200-250/81 on bearing bracket size 5
Design U2.13A-K2 (balanced mechanical seal and carbon bearing)



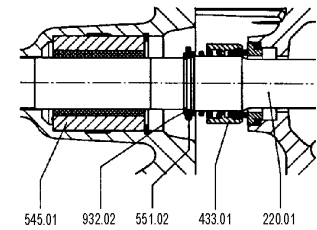
Denomination	Part-No.	Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Disc	554.09	Key	940.01
Casing cover	161.01	Spring dowel pin	562.06	Key	940.02
Supporting foot	183.01	Cylindrical pin	562.08	Name plate	971.01
Shaft	210.01	Rivet	565.01		
Impeller	230.01	Protective grid	686.02		
Groove ball bearing	321.02	Pipe	710.01		
Bearing bracket	330.01	Fan	831.01		
Bearing cover	360.02	Hexagon Screw	901.06		
Gasket	400.01	Hexagon Screw	901.13		
Gasket	400.03	Stud bolt	902.01		
Seal ring	411.02	Screw plug	903.02		
Seal ring	411.06	Screw plug	903.06		
Seal ring	411.08	Screw plug	903.08		
Radial shaft seal ring	421.01	Setscrew	904.01		
Mechanical seal	433.01	Hexagon Screw	908.01		
Packing ring	461.01	Socket-head cap screw	914.08		
Nilos-ring	516.01	Socket-head cap screw	914.09		
Nilos-ring	516.02	Nut	920.01		
Flexible damp ring	517.01	Nut	922.01		
Bearing sleeve	529.01	Circlip	932.01		
Bearing bush	545.01	Circlip	932.02		
Disc spacer	551.01	Circlip	932.03		
Supporting disc	551.02	Circlip	932.05		
Supporting disc	551.04	Circlip	932.06		
Supporting disc	551.05	Spring disc	934.01		

Connections	
FD1	Draining
FD2	Draining
FF2/FV1	Filling/Venting
FF4/FV4	Filling/Venting only for vertical block and in-line installations
LO1	Leakage outlet

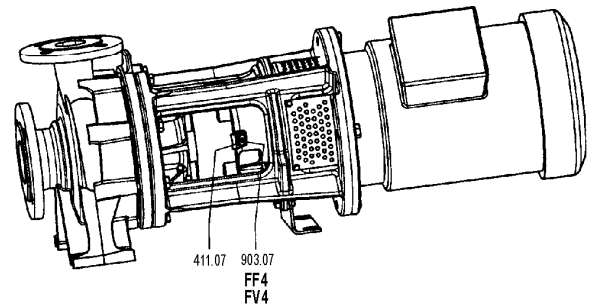
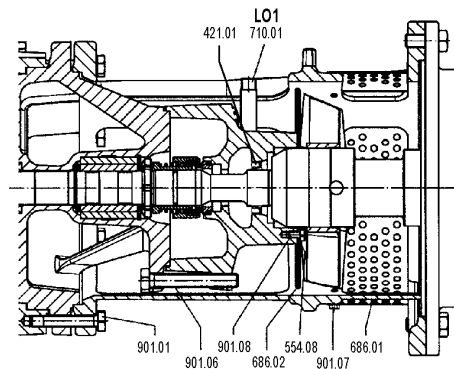
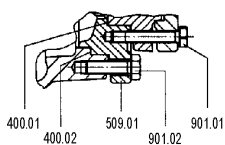
Sectional drawing - Series NBWH/CBWH
Design U2.11A-S1 (balanced mechanical seal and SiC bearing)



Design U3.3A-K1
 (unbalanced mechanical seal and carbon bearing)



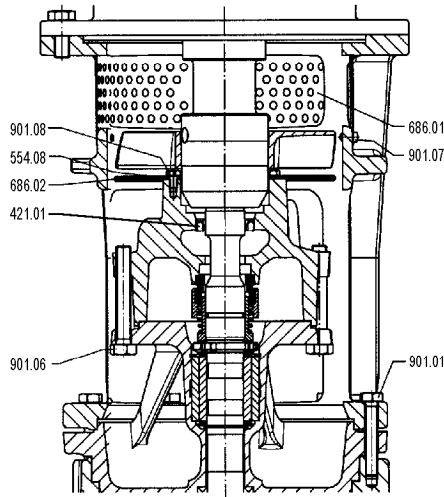
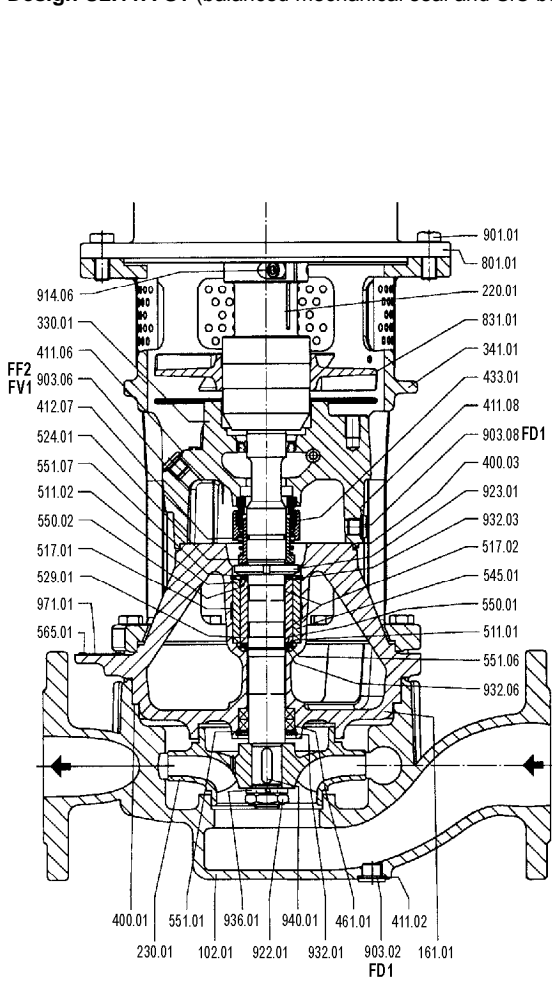
Design with Intermediate ring



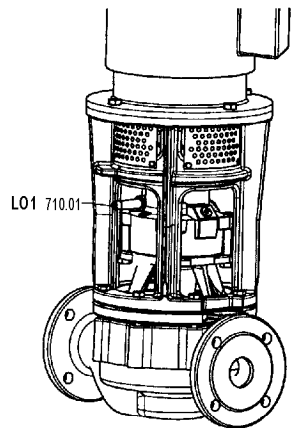
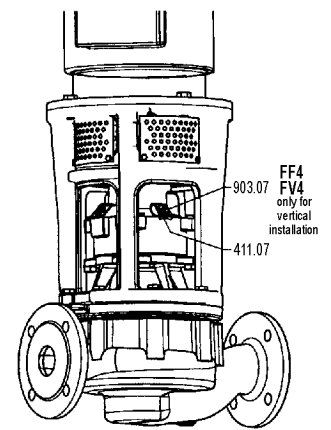
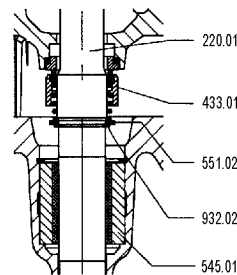
Denomination	Part-No.	Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Bearing bush	545.01	Screw plug	903.08
Casing cover	161.01	Disc	⓪550.01	Socket-head cap screw	914.06
Supporting foot	183.01	Disc	⓪550.02	Nut	920.13
Plug-in shaft	220.01	Disc spacer	551.01	Impeller nut	922.01
Impeller	230.01	Disc spacer	⓪551.02	Bearing nut	⓪923.01
Bearing bracket	330.01	Disc spacer	⓪551.06	Circlip	932.01
Motor stool	341.01	Disc spacer	⓪551.07	Circlip	⓪932.02
Gasket	400.01	Washer	554.08	Circlip	932.03
Gasket	400.02	Washer	554.13	Circlip	⓪932.06
Gasket	400.03	Rivet	565.01	Spring ring	936.01
Seal Ring	411.02	Guard plate	686.01	Key	940.01
Seal Ring	411.06	Protective grid	686.02	Name plate	971.01
Seal Ring	411.07	Pipe	710.01		
Seal Ring	411.08	Flange motor	801.01		
O-ring	⓪412.07	Fan	831.01		
Radial shaft seal ring	421.01	Hexagon screw	901.01		
Mechanical seal	433.01	Hexagon screw	901.02		
Stuffing box packing	461.01	Hexagon screw	901.06		
Intermediate ring	509.01	Hexagon screw	901.07		
Centering ring	⓪511.01	Hexagon screw	901.08		
Centering ring	⓪511.02	Hexagon screw	901.10		
Flexible clamb ring	517.01	Hexagon screw	901.13		
Flexible clamb ring	⓪517.02	Screw plug	903.02		
Shaft sleeve	⓪524.01	Screw plug	914.06		
Bearing sleeve	⓪529.01	Screw plug	903.07		

Connections	
FD1	Draining
FD2	Draining
FF2/FV1	Filling/Venting
FF4/FV4	Filling/Venting only for vertical block and in-line installations
LO1	Leakage outlet

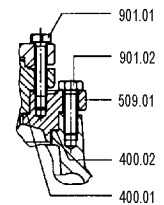
Sectional drawing - Series NIWH/CIWH
Design U2.11A-S1 (balanced mechanical seal and SiC bearing)



Design U3.3A-K1
 (unbalanced mechanical seal and carbon bearing)



Design with intermediate ring

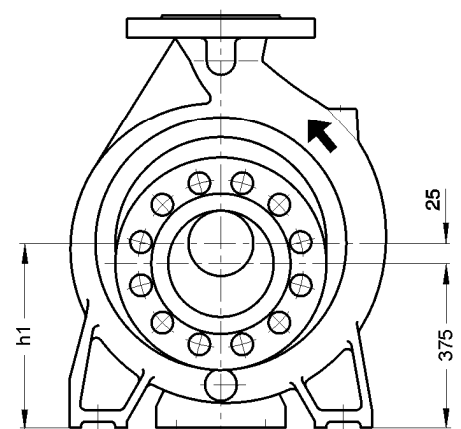
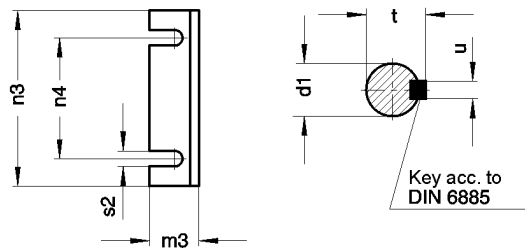
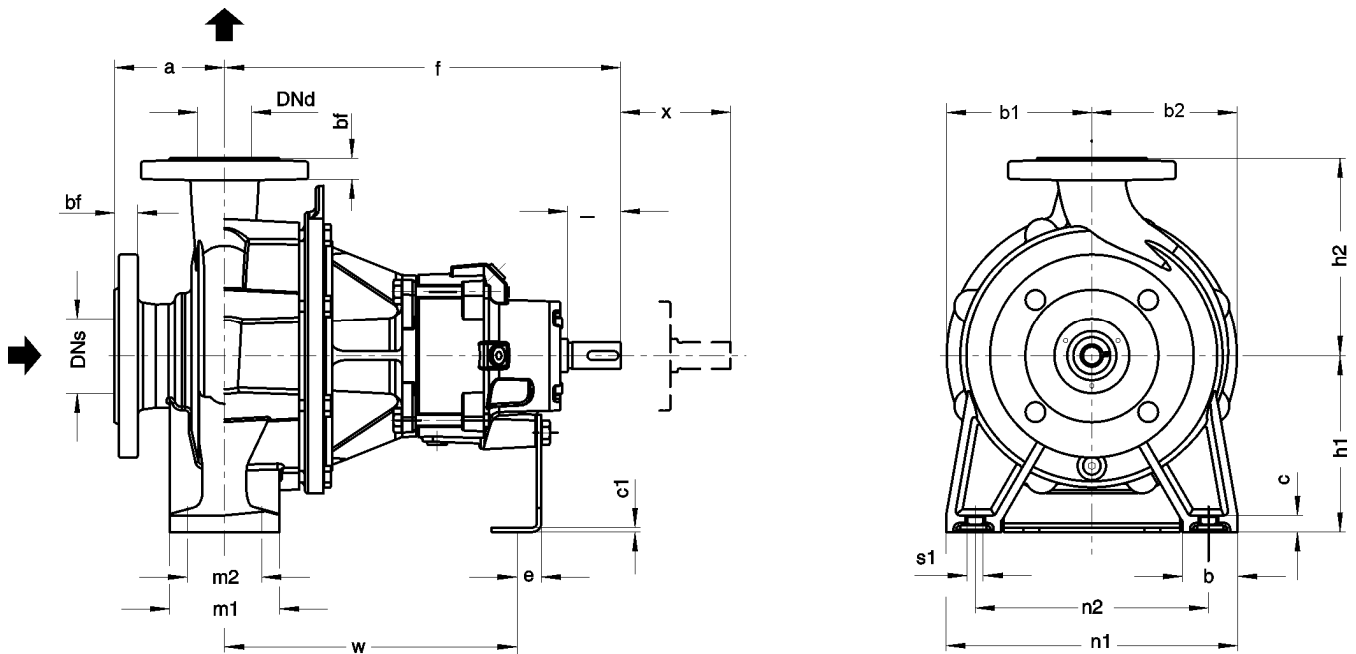


Denomination	Part-No.	Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Disc	①550.01	Bearing nut	①923.01
Casing cover	161.01	Disc	①550.02	Circlip	932.01
Plug-in shaft	220.01	Disc spacer	551.01	Circlip	②932.02
Impeller	230.01	Disc spacer	②551.02	Circlip	932.03
Bearing bracket	330.01	Disc spacer	①551.06	Circlip	①932.06
Motor stool	341.01	Disc spacer	①551.07	Spring ring	936.01
Gasket	400.01	Washer	554.08	Key	940.01
Gasket	400.02	Rivet	565.01	Name plate	971.01
Gasket	400.03	Guard plate	686.01		
Seal Ring	411.02	Protective grid	686.02		
Seal Ring	411.06	Pipe	710.01		
Seal Ring	411.07	Flange motor	801.01		
Seal Ring	411.08	Fan	831.01		
O-ring	①412.07	Hexagon Screw	901.01		
Radial shaft seal ring	421.01	Hexagon Screw	901.02		
Mechanical seal	433.01	Hexagon Screw	901.06		
Stuffing box packing	461.01	Hexagon Screw	901.07		
Intermediate ring	509.01	Hexagon Screw	901.08		
Centering ring	①511.01	Hexagon Screw	901.10		
Centering ring	①511.02	Screw plug	903.02		
Flexible clamb ring	517.01	Screw plug	914.06		
Flexible clamb ring	①517.02	Screw plug	903.07		
Shaft sleeve	①524.01	Screw plug	903.08		
Bearing sleeve	①529.01	Socket-hed cap screw	914.06		
Bearing bush	545.01	Impeller nut	922.01		

Connections	
FD1	Draining
FD2	Draining
FF2/FV1	Filling/Venting
FF4/FV4	Filling/Venting
	only for vertical installation
L01	Leakage outlet

① not present on version with carbon bearing
 ② not present on version with SiC-bearing

Pump dimensions - Series NTWH
 Sizes on bearing bracket sizes 1, 2, 3 and 4



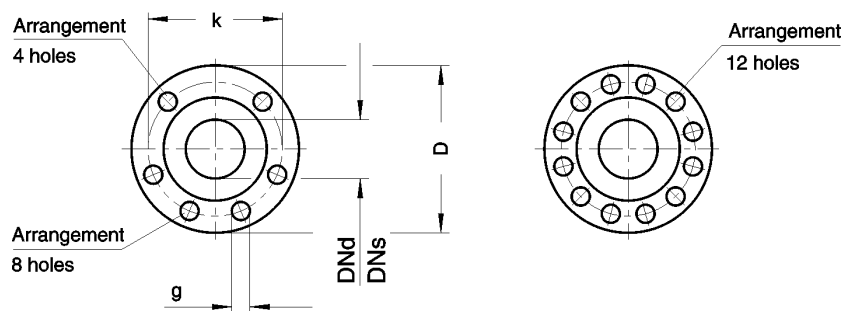
With size 250-400/01

Tolerances of joint dimensions according to DIN EN 735

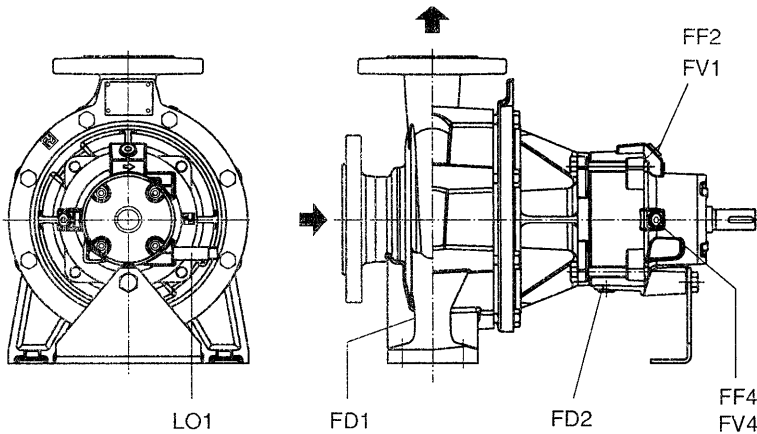
Sense of Rotation: clockwise as seen from the driving side

Dimensions in mm
 Subject to alteration

Flanges acc. to EN 1092-2 PN 16					
DNs/DNd	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	260	26	210	19	8
150	285	26	240	23	8
200	340	30	295	23	12
250	405	32	355	28	12
300	460	32	410	28	12



Arrangement of connections – Series NTWH



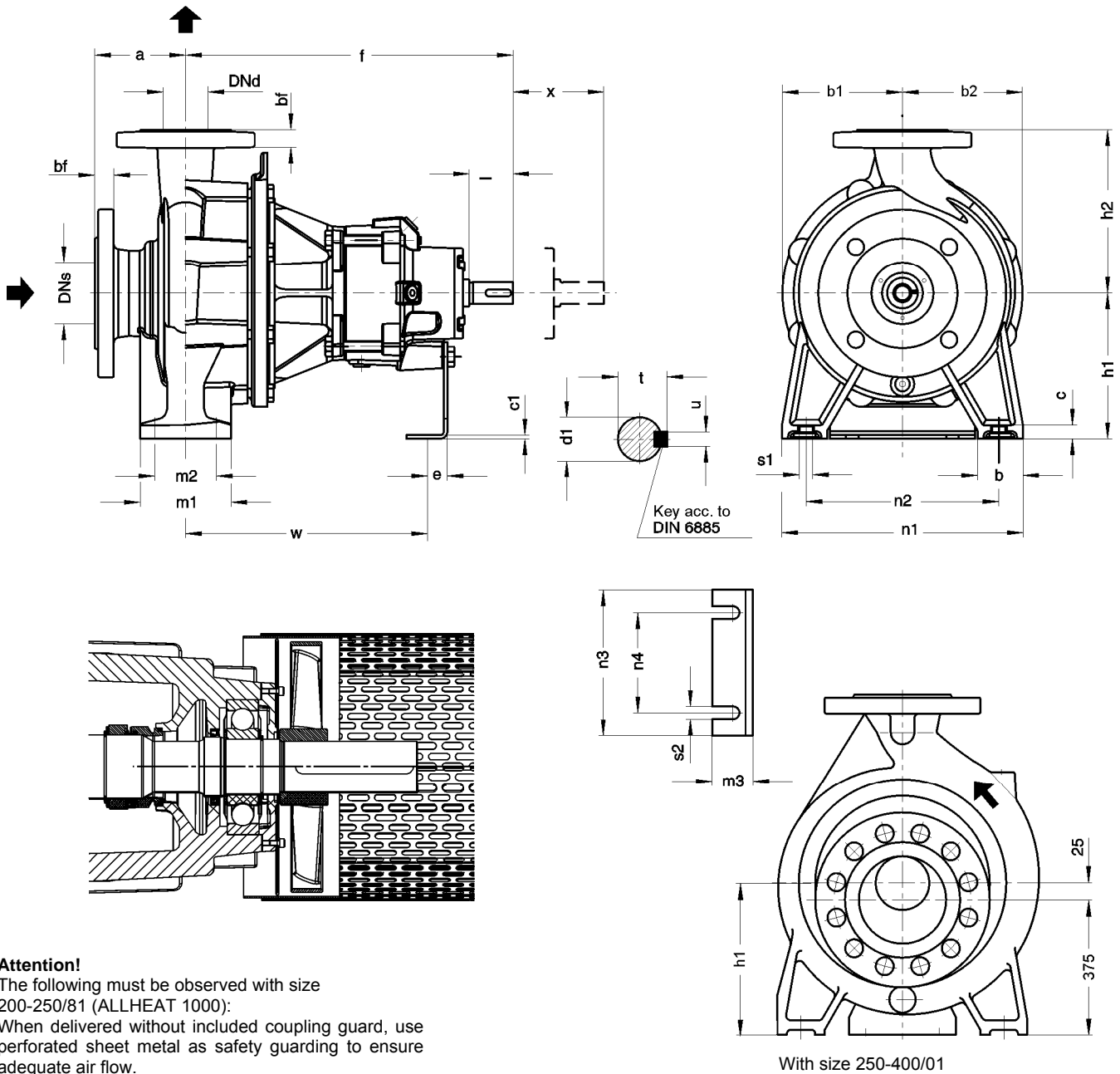
Bearing bracket size	Connections				
	Draining		Filling/Venting		Leakage outlet L01
	FD1	FD2	FF2/FV1	FF4/FV4	
1	G 1/4	G 1/4	G 1/4	G 1/4 only for vertical block and in-line installation	G 1/4
2	G 3/8		G 1/2		
3					
4					

Connections FD1 in size 25-160/11 and 25-200/01 each G 1/2

Dimensions in mm
Subject to alteration

Bearing bracket size	Pump size	Suction flange DN _s	Delivery flange DN _d	Pump dimensions								Foot dimensions											Dis-mantling dim. x	Shaft end acc. to DIN 748				
				a	f	b1	b2	h1	h2	b	c	c1	e	m1	m2	m3	n1	n2	n3	n4	w	s1		s2	d1	l	t	u
				for screw																								
1	25-160/11	40	25	80	360	128	128	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	25-200/01	40	25	80	360	132	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	32-160/01	50	32	80	360	130	130	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	32-200/01	50	32	80	360	124	130	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	40-160/01	65	40	80	360	130	130	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	40-200/01	65	40	100	360	125	135	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	40-250/01	65	40	100	360	150	156	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	80	24	50	27	8
	50-160/01	65	50	100	360	125	130	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	50-200/01	65	50	100	360	133	145	160	200	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	50-250/01	65	50	100	360	156	169	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	80	24	50	27	8
	65-160/01	80	65	100	360	133	162	160	200	65	15	4	28	125	95	45	280	212	160	110	260	M 12	M 12	100	24	50	27	8
	65-200/02	80	65	100	360	160	170	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	100	24	50	27	8
	80-160/01	100	80	125	360	136	170	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	100	24	50	27	8
100-160/01	125	100	125	360	165	200	200	280	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	100	24	50	27	8	
2	65-250/01	80	65	100	470	164	184	200	250	80	18	4	28	160	120	45	360	280	160	110	340	M 16	M 12	100	32	80	35	10
	65-315/01	80	65	125	470	202	219	225	280	80	25	6	30	160	120	47	400	315	160	110	340	M 16	M 12	100	32	80	35	10
	65-400/01	80	65	125	470	239	255	250	355	80	25	6	30	160	120	47	420	335	160	110	340	M 16	M 12	100	32	80	35	10
	80-200/02	100	80	125	470	172	190	180	250	65	18	4	28	125	95	45	345	280	160	110	340	M 16	M 12	100	32	80	35	10
	80-250/01	100	80	125	470	185	210	200	280	80	18	4	28	160	120	45	400	315	160	110	340	M 16	M 12	100	32	80	35	10
	80-315/01	100	80	125	470	210	231	250	315	80	25	6	30	160	120	47	400	315	160	110	340	M 16	M 12	100	32	80	35	10
	100-200/01	125	100	125	470	165	203	200	280	80	18	4	28	160	120	45	360	280	160	110	340	M 16	M 12	120	32	80	35	10
	100-250/01	125	100	140	470	189	224	225	280	80	18	6	30	160	120	47	400	315	160	110	340	M 16	M 12	120	32	80	35	10
	100-315/01	125	100	140	470	220	250	250	315	80	25	6	30	160	120	47	400	315	160	110	340	M 16	M 12	120	32	80	35	10
	125-200/01	150	125	140	470	196	236	250	315	80	18	6	30	160	120	47	400	315	160	110	340	M 16	M 12	120	32	80	35	10
	125-250/01	150	125	140	470	212	255	250	355	80	18	6	30	160	120	47	400	315	160	110	340	M 16	M 12	100	32	80	35	10
150-200/01	200	150	160	470	214	268	280	370	100	27	6	30	200	150	47	550	450	160	110	340	M 16	M 12	120	32	80	35	10	
3	80-400/02	100	80	125	530	261	282	280	355	80	25	6	31	160	120	47	435	355	160	110	370	M 16	M 12	140	42	85	45	12
	100-400/02	125	100	140	530	268	292	280	355	100	27	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	125-315/01	150	125	140	530	226	252	280	355	100	27	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	125-400/02	150	125	140	530	285	315	315	400	100	27	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	150-250/02	200	150	160	530	230	285	280	375	100	27	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	150-315/01	200	150	160	530	239	271	280	400	100	27	6	31	200	150	47	550	450	160	110	370	M 20	M 12	140	42	85	45	12
	150-400/02	200	150	160	530	277	305	315	450	100	27	6	31	200	150	47	550	450	160	110	370	M 20	M 12	140	42	85	45	12
200-250/02	200	200	180	530	265	330	355	425	100	27	6	31	200	150	47	550	450	160	110	370	M 20	M 12	140	42	85	45	12	
4	200-315/01	250	200	200	650	275	335	355	450	110	27	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	200-400/01	250	200	180	650	315	374	355	500	100	30	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	250-315/01	300	250	250	650	325	408	400	560	130	30	10	42	260	190	65	690	560	250	200	455	M 24	M 12	180	60	105	64	18
	250-400/01	300	250	225	650	350	440	400	600	120	30	10	42	280	200	65	630	500	250	200	455	M 27	M 12	180	60	105	64	18

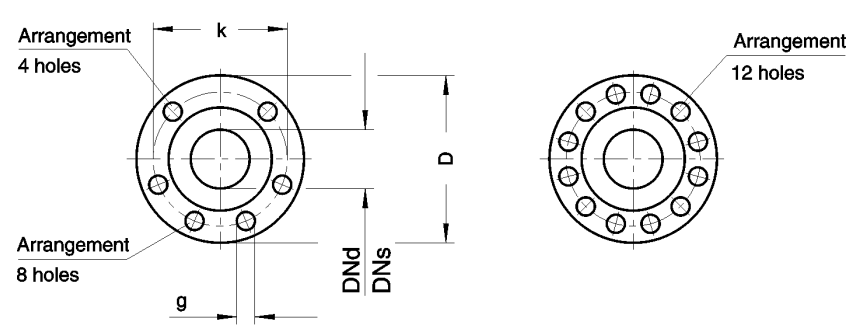
Pump dimensions – Series CTWH
 Sizes on bearing bracket size 1, 2, 3, 4 and 5



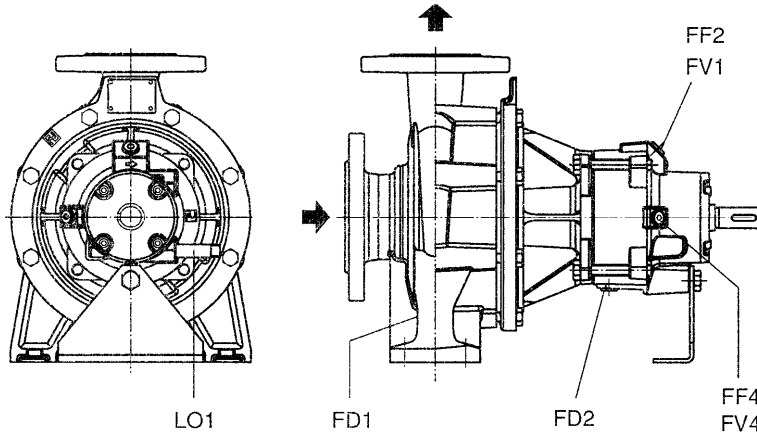
Tolerances of joint dimensions according to DIN EN 735
 Sense of Rotation: clockwise as seen from the driving side

Dimensions in mm
 Subject to alteration

Flanges acc. to EN 1092-2 PN 25					
DNs/DNd	D	bf	k	g	No. of holes
25	115	18	85	14	4
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8
80	200	26	160	19	8
100	235	28	190	23	8
125	270	30	220	28	8
150	300	34	250	28	8
200	360	34	310	28	12
250	425	36	370	31	12
300	485	40	430	31	16



Arrangement of connections – Series CTWH



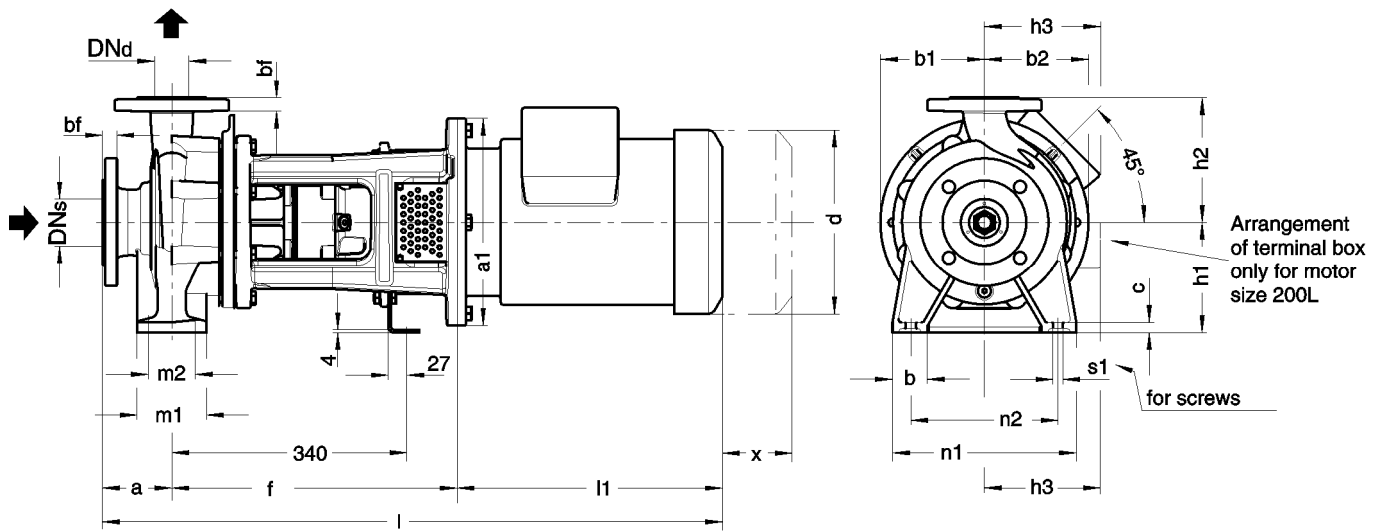
Bearing bracket size	Connections				
	Draining		Filling/Venting		Leakage outlet *
	FD1	FD2	FF2/FF1	FF4/FFV4	
1	G 1/2	G 1/4	G 1/4	G 1/4 only for vertical block and in-line installation	G 1/4
2					
3					
4					

* See page 11 for ALLHEAT 1000 positions and connections

Dimensions in mm
Subject to alteration

Bearing bracket size	Pump size	Suction flange DN _s	Delivery flange DN _d	Pump dimensions								Foot dimensions											Dis- mant- ling dim. x	Shaft end				
				a	f	b1	b2	h1	h2	b	c	c1	e	m1	m2	m3	n1	n2	n3	n4	w	for screw		d1	l	t	u	
				s1	s2	d1	l	t	u																			
1	25-160/11	40	25	80	360	128	128	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	25-200/01	40	25	80	360	132	132	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	32-160/11	50	32	80	360	130	130	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	32-200/11	50	32	80	360	130	135	160	180	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	40-160/11	65	40	80	360	130	130	132	160	50	15	4	28	100	70	45	240	190	160	110	260	M 12	M 12	80	24	50	27	8
	40-200/11	65	40	100	360	130	140	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	50-160/11	80	50	100	360	130	130	160	180	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	50-200/11	80	50	100	360	135	150	160	200	50	15	4	28	100	70	45	265	212	160	110	260	M 12	M 12	80	24	50	27	8
	65-160/11	100	65	100	360	130	150	160	200	65	15	4	28	125	95	45	280	212	160	110	260	M 12	M 12	100	24	50	27	8
80-160/11	125	80	125	360	145	180	180	225	65	15	4	28	125	95	45	320	250	160	110	260	M 12	M 12	100	24	50	27	8	
2	32-250/11	50	32	100	470	170	170	180	225	65	15	4	28	125	95	45	320	250	160	110	340	M 12	M 12	100	32	80	35	10
	40-250/11	65	40	100	470	170	170	180	225	65	15	4	28	125	95	45	320	250	160	110	340	M 12	M 12	100	32	80	35	10
	40-315/11	65	40	125	470	200	200	200	250	65	20	4	28	125	95	45	345	280	160	110	340	M 12	M 12	100	32	80	35	10
	50-250/11	80	50	125	470	170	170	180	225	65	15	4	28	125	95	45	320	250	160	110	340	M 12	M 12	100	32	80	35	10
	50-315/11	80	50	125	470	200	200	225	280	65	20	6	30	125	95	47	345	280	160	110	340	M 12	M 12	100	32	80	35	10
	65-200/11	100	65	100	470	170	170	180	225	65	15	4	28	125	95	45	320	250	160	110	340	M 12	M 12	120	32	80	35	10
	65-250/11	100	65	125	470	170	190	200	250	80	18	4	28	160	120	45	360	280	160	110	340	M 16	M 12	100	32	80	35	10
	80-200/01	125	80	125	470	170	190	180	250	65	18	4	28	125	95	45	345	280	160	110	340	M 12	M 12	100	32	80	35	10
	80-250/01	125	80	125	470	185	210	225	280	80	18	6	30	160	120	47	400	315	160	110	340	M 16	M 12	100	32	80	35	10
100-200/11	125	100	125	470	170	205	200	280	80	18	4	28	160	120	45	360	280	160	110	340	M 16	M 12	120	32	80	35	10	
3	65-315/11	100	65	125	530	200	230	225	280	80	20	6	31	160	120	47	400	315	160	110	370	M 16	M 12	140	42	85	45	10
	80-315/11	125	80	125	530	210	255	250	315	80	20	6	31	160	120	47	400	315	160	110	370	M 16	M 12	140	42	85	45	12
	80-400/11	125	80	125	530	245	260	280	355	80	20	6	31	160	120	47	435	355	160	110	370	M 16	M 12	140	42	85	45	12
	100-250/11	125	100	140	530	200	230	225	280	80	20	6	31	160	120	47	400	315	160	110	370	M 16	M 12	140	42	85	45	12
	100-315/11	125	100	140	530	210	260	250	315	80	20	6	31	160	120	47	400	315	160	110	370	M 16	M 12	140	42	85	45	12
	100-400/11	125	100	140	530	250	295	280	355	100	20	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	125-250/11	150	125	140	530	210	260	250	355	80	20	6	31	160	120	47	400	315	160	110	370	M 16	M 12	140	42	85	45	12
	125-315/11	150	125	140	530	215	255	280	355	100	20	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	125-400/11	150	125	140	530	265	320	315	400	100	20	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
4	150-250/01	200	150	160	530	230	285	280	375	100	27	6	31	200	150	47	500	400	160	110	370	M 20	M 12	140	42	85	45	12
	200-250/01	200	200	180	530	265	330	355	425	100	27	6	31	200	150	47	550	450	160	110	370	M 20	M 12	140	42	85	45	12
	150-315/11	200	150	160	650	265	280	315	400	100	22	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	150-400/11	200	150	160	650	300	330	315	450	100	22	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	150-500/11	200	150	180	650	320	380	375	500	100	25	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	200-315/01	250	200	200	650	275	335	355	450	110	27	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	200-400/01	250	200	180	650	315	374	355	500	100	30	10	42	200	150	65	550	450	250	200	455	M 20	M 12	180	60	105	64	18
	200-500/11	250	200	200	650	360	440	425	560	100	25	10	42	200	150	65	660	560	250	200	455	M 20	M 12	180	60	105	64	18
	250-315/01	300	250	250	650	325	408	400	560	130	30	10	42	260	190	65	690	560	250	200	455	M 24	M 12	180	60	105	64	18
250-400/01	300	250	225	650	350	440	400	600	120	30	10	42	280	200	65	630	500	250	200	455	M 27	M 12	180	60	105	64	18	
5	200-250/81	250	200	180	743	222	319	355	425	100	27	10	40	200	150	65	550	450	250	200	495	M 24	M 14	180	60	105	64	18

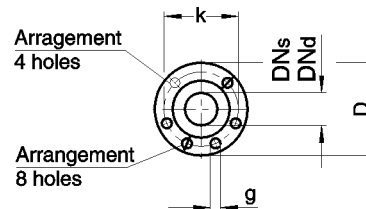
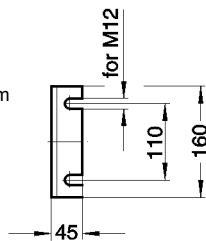
Unit dimensions - Series NBWH/CBWH
 Sizes with a shaft diameter of 32 at the shaft seal



Tolerances of joint dimensions according to DIN EN 735

Sense of rotation: clockwise as seen from the driving side

Dimensions in mm
 Subject to alteration



Series NBWH

Flanges acc.to EN 1092-2 PN 16					
DNs/DNd	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

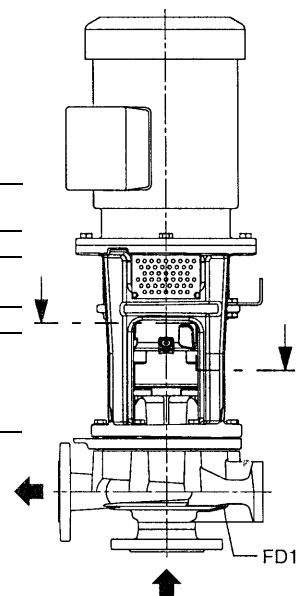
Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
G 1/4	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4

Connection FD1 in size 25-160/11 and 25-200/01 each G 1/2

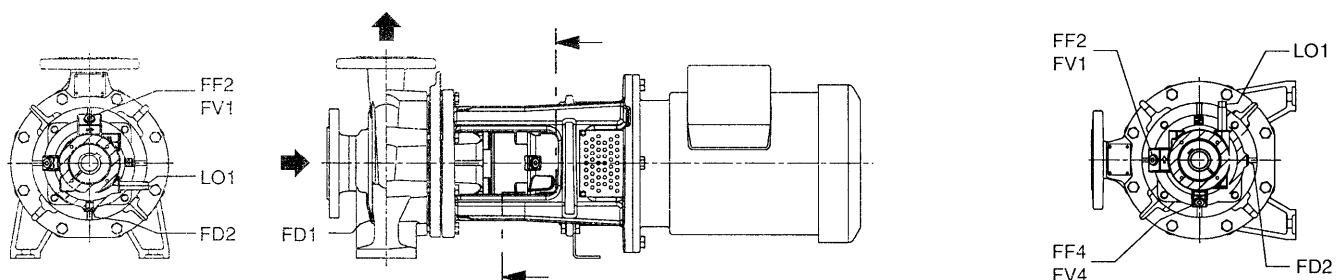
Series CBWH

Flanges acc.to EN 1092-2 PN 25					
DNs/DNd	D	bf	k	g	No. of holes
25	115	18	85	14	4
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8
80	200	26	160	19	8
100	235	28	190	23	8
125	270	30	220	28	8

Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
G 1/2	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4



Connections for horizontal and vertical installation



Unit dimensions - Series NBWH

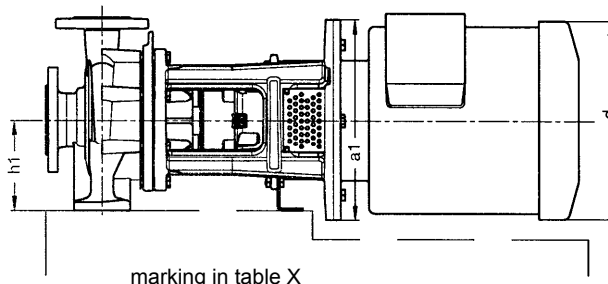
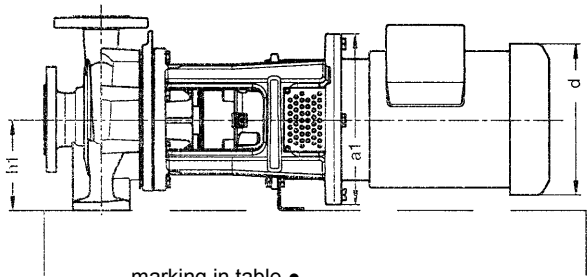
The motor dimensions as indicated are approximate values. Exact data depend on the motor make.

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!
 Binding motor dimension information must be submitted with each order.

$$h1 > \frac{a_1}{2} \text{ or } \frac{d}{2}$$

Base plate and/or foundation design

$$h1 \leq \frac{a_1}{2} \text{ or } \frac{d}{2}$$



n = 1450 / 1750 1/min

Dimensions in mm
Subject to alteration

Pump size	Motor size	Base plate and/or foundation design see above	Performance	Unit dimensions																							Assignment plug-in shaft/ motor stool
				Pump																Motor dimensions approximated, depending on manufacturer						Dis-mantling dim.	
				Flanges		Foot														a1	d	h3	l1	l	x		
DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1	a1	d	h3	l1	l							x	
25-160/11	80	•	0,55 0,75	40	25	80	371	128	128	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
25-200/01	80	•	0,55 0,75	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																	181	130	282	733		24/200		
32-160/01	80	•	0,55 0,75	50	32	80	371	123	123	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																	181	130	282	733		24/200		
	90 L	•	1,5																	181	130	282	733		24/200		
	100 L	•	2,2 3																	250	203	158	312		763	28/250	
32-200/01	80	•	0,55 0,75	50	32	80	371	124	130	160	180	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																	181	130	282	733		24/200		
	90 L	•	1,5																	181	130	282	733		24/200		
	100 L	•	2,2 3																	250	203	158	312		763	28/250	
40-160/01	80	•	0,55 0,75	65	40	80	371	123	123	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																	181	130	282	733		24/200		
	90 L	•	1,5																	181	130	282	733		24/200		
	100 L	•	2,2 3																	250	203	158	312		763	28/250	
40-200/01	80	•	0,55 0,75	65	40	100	371	125	135	160	180	50	15	100	70	265	212	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																	181	130	282	753		24/200		
	90 L	•	1,5																	181	130	282	753		24/200		
	100 L	•	2,2 3																	250	203	158	312		783	28/250	
40-250/01	90 S	•	1,1	65	40	100	371	150	156	180	225	65	15	125	95	320	250	M 12	200	181	130	282	705	85	24/200		
	90 L	•	1,5																	181	130	282	705		24/200		
	100 L	•	2,2 3																	250	203	158	312		783	28/250	
	112 M	•	4																	228	171	335	806		28/250		
	132 S	•	5,5																	300	266	196	375		887	38/300	

Unit dimensions - Series NBWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!

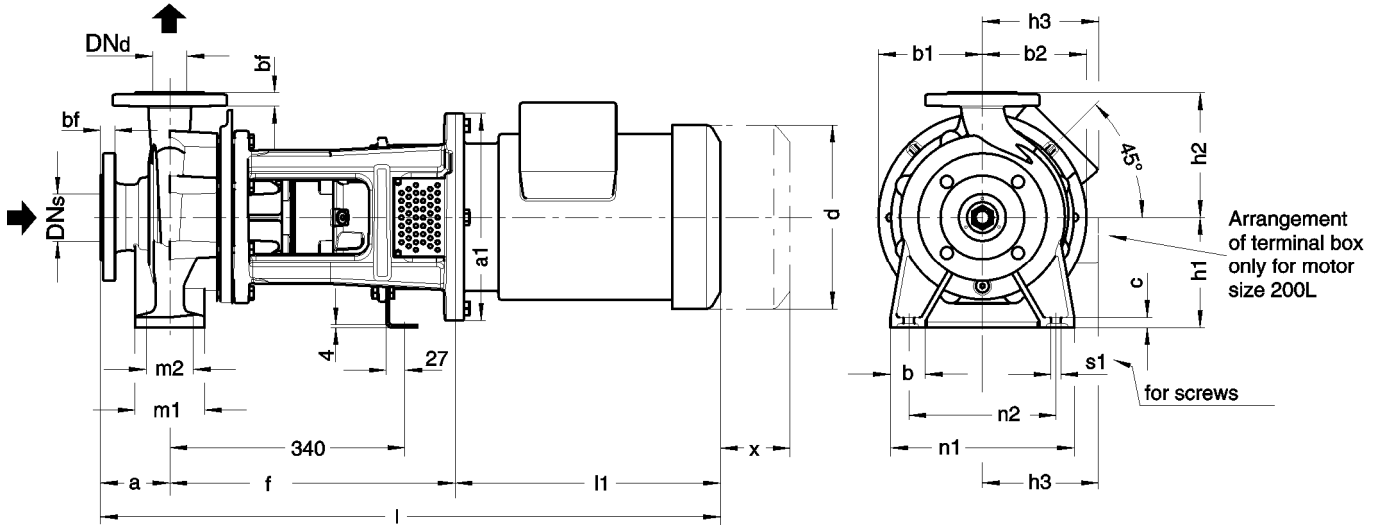
Binding motor dimension information must be submitted with each order.

n = 1450 / 1750 1/min

Dimension in mm
Subject to alteration

Pump size	Motor size	Base plate and/or foundation design see above page 19	Performance		Unit dimensions																				Dismantling dim.	Assignment plug-in shaft/motor stool
					Pump										Motor dimensions approximated, depending on manufacturer					l	x					
					Flanges		Feet																			
DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1	a1	d	h3	l1	l	x						
50-160/01	80	•	0,55	0,75	65	50	100	371	125	130	160	180	50	15	100	70	165	212	M 12	200	162	124	234	705	102	19/200
	90 S	•	1,1	200																181	130	282	753	24/200		
	90 L	•	1,5	200																181	130	282	753	24/200		
	100 L	•	2,2	3																250	203	158	312	783		28/250
50-200/01	80	•	0,55	0,75	65	50	100	371	133	145	160	200	50	15	100	70	265	212	M 12	200	162	124	234	705	102	19/200
	90 S	•	1,1	200																181	130	282	753	24/200		
	90 L	•	1,5	200																181	130	282	753	24/200		
	100 L	•	2,2	3				250												203	158	312	783	28/250		
	112 M	•	4	412				300												228	171	335	806	28/250		
	132 S	•	5,5					300												266	196	375	887	38/300		
50-250/01	90 L	•	1,5	65	40	100	371	156	169	180	225	65	15	125	95	320	250	M 12	200	181	130	282	753	85	24/200	
	100 L	•	2,2																3	250	203	158	312		783	28/250
	112 M	•	4																412	300	228	171	335		806	28/250
	132 S	•	5,5				300													266	196	375	887		38/300	
	132 M	•	7,5				300												266	196	375	887	38/300			
65-160/01	80	•	0,55	0,75	80	65	100	371	133	162	160	200	65	15	125	95	280	212	M 12	200	162	124	234	705	102	19/200
	90 S	•	1,1	200																181	130	282	753	24/200		
	90 L	•	1,5	200																181	130	282	753	24/200		
	100 L	•	2,2	3																250	203	158	312	783		28/250
	112 M	•	4	250																228	171	335	806	28/250		
60-200/02	90 S	•	1,1	80	65	100	371	160	170	180	225	65	15	125	95	320	250	M 12	200	181	130	282	753	102	24/200	
	90 L	•	1,5																200	181	130	282	753		24/200	
	100 L	•	2,2																3	250	203	158	312		783	28/250
	112 M	•	4				412												300	228	171	335	806		28/250	
	132 S	•	5,5																300	266	196	375	887		38/300	
	132 M	•	7,5				300												266	196	375	887	38/300			
80-160/01	90 S	•	1,1	100	80	125	371	136	170	180	225	65	15	125	95	320	250	M 12	200	181	130	282	778	102	24/200	
	90 L	•	1,5																200	181	130	282	778		24/200	
	100 L	•	2,2																3	250	203	158	312		808	28/250
	112 M	•	4				412												300	228	171	335	831		28/250	
	132 S	•	5,5																300	266	196	375	912		38/300	
100-160/01	90 L	•	1,5	125	100	125	371	165	200	200	280	65	15	125	95	320	250	M 12	200	181	130	282	778	102	24/200	
	100 L	•	2,2																3	250	203	158	312		808	28/250
	112 M	•	4																412	300	228	171	335		831	28/250
	132 S	•	5,5				300													266	196	375	912		38/300	
	132 M	•	7,5				300												266	196	375	912	38/300			

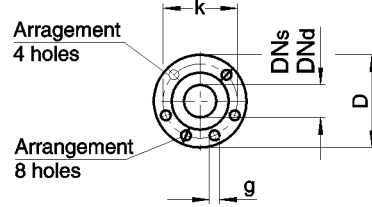
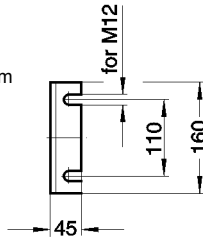
Unit dimensions – Series NBWH/CBWH
 Sizes with a shaft diameter of 32 at the shaft seal



Tolerances of joint dimensions according to DIN EN 735

Sense of rotation: clockwise as seen from the driving side

Dimensions in mm
 Subject to alteration



Series NBWH

Flanges acc. to EN 1092-2 PN 16					
DNs/DNd	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

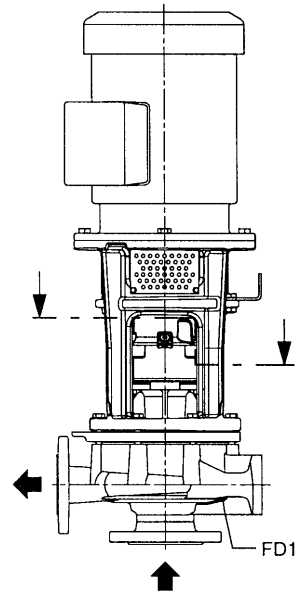
Series CBWH

Flanges acc. to EN 1092-2 PN 25					
DNs/DNd	D	bf	k	g	No. of holes
25	115	18	85	14	4
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8
80	200	26	160	19	8
100	235	28	190	23	8
125	270	30	220	28	8

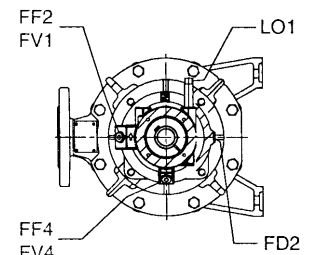
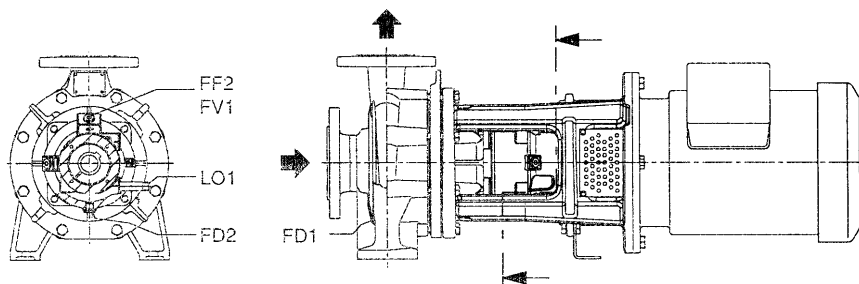
Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
G 1/4	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4

Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
G 1/2	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4

Connection FD1 in size 25-160/11 and 25-200/01 each G 1/2



Connections for horizontal and vertical installation



Unit dimensions - Series NBWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

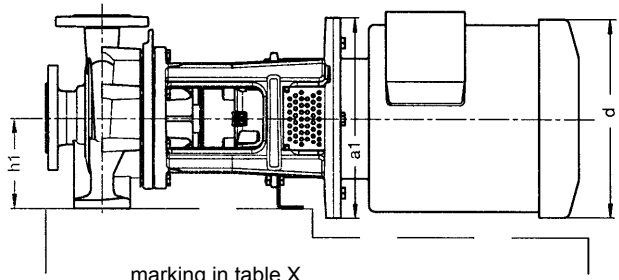
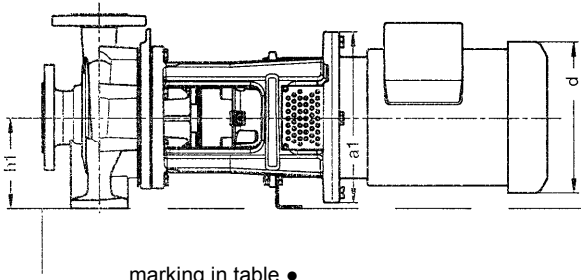
Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!

Binding motor dimension information must be submitted with each order.

$$h1 > \frac{a_1}{2} \text{ or } \frac{d}{2}$$

Base plate and/or foundation design

$$h1 \leq \frac{a_1}{2} \text{ or } \frac{d}{2}$$



n = 2900 / 3500 1/min

Dimensions in mm
Subject to alteration

Pump size	Motor size	Base plate and/or foundation design see above	Performance KW	Unit dimensions																	Dismantling dim. x	Assignment plug-in shaft/ motor stool			
				Pump													Motor dimensions approximated, depending on manufacturer								
				Flanges		Feet											a1	d	h3	l1			l		
DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1											
25-160/11	80	●	0,75 1,1	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200
	90 S	●	1,5																200	181	130	282	733		24/200
	90 L	●	2,2																200	181	130	282	733		24/200
	100 L	●	3																250	203	158	312	763		28/250
	112 M	●	4																250	228	171	335	786		28/250
25-200/01	90 S	●	1,5	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200
	90 L	●	2,2																200	181	130	282	733		24/200
	100 L	●	3																250	233	158	312	763		28/250
	112 M	●	4																250	228	171	335	786		28/250
	132 S	●	5,5 7,5																300	266	196	375	867		38/300
32-160/01	90 L	●	2,2	50	32	80	371	123	123	132	160	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200
	100 L	●	3																250	203	158	312	763		28/250
	112 M	●	4																250	228	171	335	786		28/250
	132 S	X	5,5 7,5																300	266	196	375	867		38/300
	160 M	X	11 15																350	320	234	481	973		42/350
32-200/01	112 M	●	4	50	32	80	371	124	130	160	180	50	15	100	70	240	190	M 12	250	228	171	335	786	102	28/250
	132 S	●	5,5 7,5																300	266	196	375	867		38/300
	160 M	X	11 15																350	320	234	481	973		42/350
	160 L	X	18,5																350	320	234	481	973		42/350
	90 L	●	2,2																200	181	130	282	733		24/200
40-160/01	100 L	●	3	65	40	80	371	123	123	132	160	50	15	100	70	240	190	M 12	200	203	158	312	763	102	28/250
	112 M	●	4																250	228	171	335	786		28/250
	132 S	X	5,5 7,5																300	266	196	375	867		38/300
	160 M	X	11 15																350	320	234	481	973		42/350
	160 L	X	18,5																350	320	234	481	973		42/350
40-200/01	112 M	●	4	65	40	100	371	125	135	160	180	50	15	100	70	265	212	M 12	250	228	171	335	806	102	28/250
	132 S	●	5,5 7,5																300	266	196	375	887		38/300
	160 M	X	11 15																350	320	234	481	993		42/350
	160 L	X	18,5																350	320	234	481	993		42/350
	180 M	X	22																375	275	610	1122	48/350		
200 L	X	30 37	400	415	310	665	1177	55/400																	

Unit dimensions - Series NBWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!
 Binding motor dimension information must be submitted with each order.

n = 2900 / 3500 1/min

Dimension in mm
Subject to alteration

Pump size	Motor Size	Base plate and/or foundation design see above page 22	Performance		Unit dimensions																				Assignment plug-in shaft/motor stand	
					Pump															Motor dimensions approximated, depending on manufacturer						Dismantling dim. x
					Flanges		Feet													a1	d	h3	l1	l		
					DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1							
40-250/01	132 S	●	5,5	7,5	65	40	100	412	150	156	180	225	65	15	125	95	320	250	M 12	300	266	196	375	887	85	38/300
	160 M	●	11	15																320	234	481	993	42/350		
	160 L	●	18,5	350																320	234	481	993	42/350		
	180 M	X	22	375																275	610	1122	48/350			
	200 L	X	30	37																400	415	310	665	1177		55/400
50-160/01	100 L	●	3	65	50	100	371	125	130	160	180	50	15	100	70	265	212	M 12	250	203	158	312	783	102	28/250	
	112 M	●	4																228	171	335	806	28/250			
	132 S	●	5,5																7,5	300	266	196	375		887	38/300
	160 M	X	11																15	320	234	481	993		42/350	
	160 L	X	18,5																350	320	234	481	993		42/350	
50-200/01	132 S	●	5,5	7,5	65	50	100	412	133	145	160	200	50	15	100	70	265	212	M 12	300	266	196	375	887	102	38/300
	160 M	X	11	15																320	234	481	993	42/350		
	160 L	X	18,5	350																320	234	481	993	42/350		
	180 M	X	22	375																275	610	1122	48/350			
	200 L	X	30	37																400	415	310	665	1177		55/400
50-250/01	160 M	●	11	15	65	50	100	412	156	169	180	225	65	15	125	95	320	250	M 12	350	320	234	481	993	85	42/350
	160 L	●	18,5	320																234	481	993	42/350			
	180 M	X	22	375																275	610	1122	48/350			
	200 L	X	30	37																400	415	310	665	1177		55/400
	112 M	●	4	250																228	171	335	806	28/250		
65-160/01	132 S	●	5,5	7,5	80	65	100	412	133	162	160	200	65	15	125	95	280	212	M 12	300	266	196	375	887	102	38/300
	160 M	X	11	15																320	234	481	993	42/350		
	160 L	X	18,5	350																320	234	481	993	42/350		
	180 M	X	22	375																275	610	1122	48/350			
	200 L	X	30	37																400	415	310	665	1177		55/400
65-200/02	132 S	●	5,5	7,5	80	65	100	412	160	170	180	225	65	15	125	95	320	250	M 12	300	266	196	375	887	102	38/300
	160 M	●	11	15																320	234	481	993	42/350		
	160 L	●	18,5	350																320	234	481	993	42/350		
	180 M	X	22	375																275	610	1122	48/350			
	200 L	X	30	37																400	415	310	665	1177		55/400
80-160/01	132 S	●	5,5	7,5	100	80	125	412	136	170	180	225	65	15	125	95	320	250	M 12	300	266	196	375	912	102	38/300
	160 M	●	11	15																320	234	481	1018	42/350		
	160 L	●	18,5	350																320	234	481	1018	42/350		
	180 M	X	22	375																275	610	1147	48/350			
	200 L	X	30	37																400	415	310	665	1202		55/400
100-160/01	132 S	●	5,5	7,5	125	100	125	412	165	200	200	280	65	15	125	95	320	250	M 12	300	266	196	375	912	102	38/300
	160 M	●	11	15																320	234	481	1018	42/350		
	160 L	●	18,5	350																320	234	481	1018	42/350		
	180 M	●	22	375																275	610	1147	48/350			
	200 L	X	30	37																400	415	310	665	1202		55/400

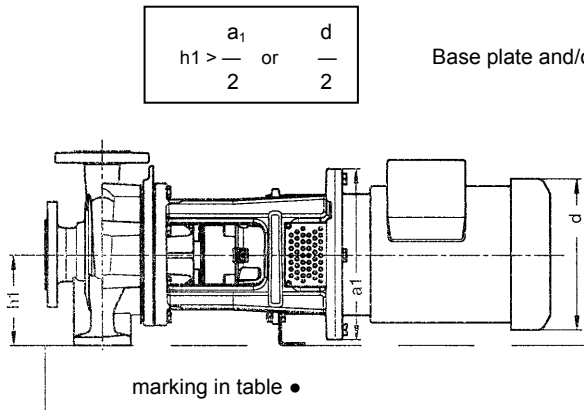
Unit dimensions - Series CBWH

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

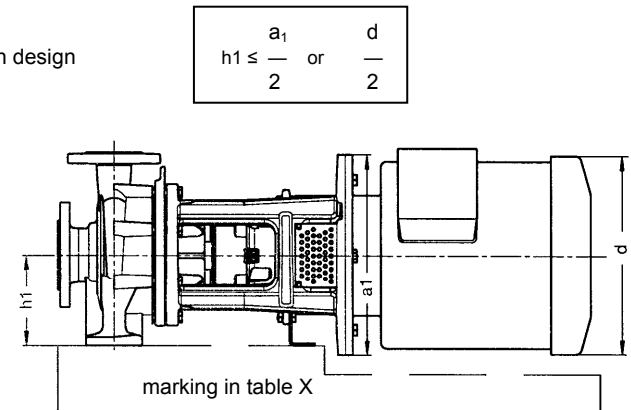
When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!

Binding motor dimension information must be submitted with each order.



Base plate and/or foundation design



n = 1450 / 1750 1/min

Dimensions in mm
Subject to alteration

Pump size	Motor size	Base plate and/or foundation design see above	Performance	Unit dimensions																							Assignment plug-in shaft/ motor stool
				Pump														Motor dimensions approximated, depending on manufacturer					Dismantling dim.				
				Flanges		Feet												a1	d	h3	l1	l		x			
DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1													
25-160/11	80	•	0,55 0,75	40	25	80	371	128	128	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	80	•	0,55 0,75																200	162	124	234	685		19/200		
25-200/01	90 S	•	1,1	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200		
	90 L	•	1,5																200	181	130	282	733		24/200		
32-160/01	80	•	0,55 0,75	50	32	80	371	130	130	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																200	181	130	282	733		24/200		
	90 L	•	1,5																200	181	130	282	733		24/200		
32-200/01	80	•	0,55 0,75	50	32	80	371	130	135	160	180	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																200	181	130	282	733		24/200		
	90 L	•	1,5																200	181	130	282	733		24/200		
	100 L	•	2,2 3																250	203	158	312	763		28/250		
40-160/01	80	•	0,55 0,75	65	40	80	371	130	130	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	•	1,1																200	181	130	282	733		24/200		
	90 L	•	1,5																200	181	130	282	733		24/200		
	100 L	•	2,2 3																250	203	158	312	763		28/250		
40-200/01	80	•	0,55 0,75	65	40	100	371	130	140	160	180	50	15	100	70	265	212	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																200	181	130	282	753		24/200		
	90 L	•	1,5																200	181	130	282	753		24/200		
	100 L	•	2,2 3																250	203	158	312	783		28/250		
50-150/11	80	•	0,55 0,75	80	50	100	371	130	130	160	180	50	15	100	70	265	212	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																200	181	130	282	753		24/200		
	90 L	•	1,5																200	181	130	282	753		24/200		
	100 L	•	2,2 3																250	203	158	312	783		28/250		
50-150/11	80	•	0,55 0,75	80	50	100	371	135	150	160	200	50	15	100	70	265	212	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																200	181	130	282	753		24/200		
	90 L	•	1,5																200	181	130	282	753		24/200		
	100 L	•	2,2 3																250	203	158	312	783		28/250		
	112 M	•	4																300	228	171	335	806		28/250		
65-160/11	80	•	0,55 0,75	100	65	100	371	130	155	160	200	65	15	125	95	280	212	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																200	181	130	282	753		24/200		
	90 L	•	1,5																200	181	130	282	753		24/200		
	100 L	•	2,2 3																250	203	158	312	783		28/250		
	112 M	•	4																250	228	171	335	806		28/250		
80-160/11	80	•	0,55 0,75	125	80	125	371	145	180	180	225	65	15	125	95	320	250	M 12	200	162	124	234	705	102	19/200		
	90 S	•	1,1																200	181	130	282	778		24/200		
	90 L	•	1,5																200	181	130	282	778		24/200		
	100 L	•	2,2 3																250	203	158	312	808		28/250		
	112 M	•	4																250	228	171	335	831		28/250		
	132 S	•	5,5				412												300	266	196	375	912		38/300		

Unit dimensions - Series CBWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!
 Binding motor dimension information must be submitted with each order.

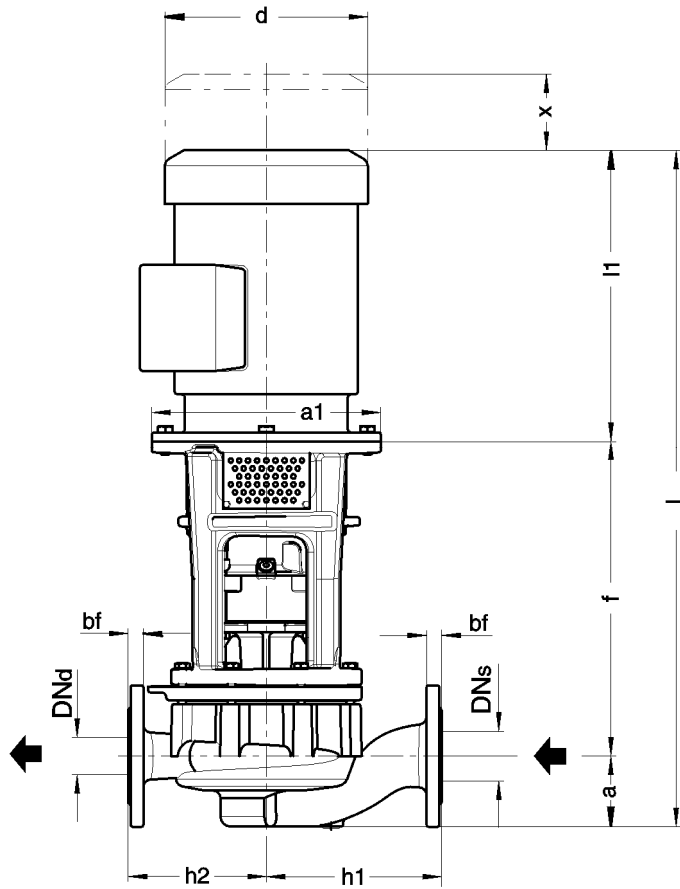
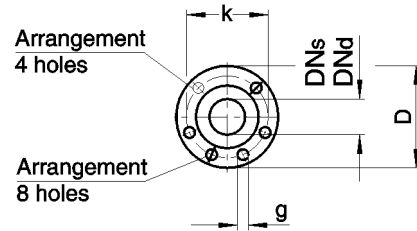
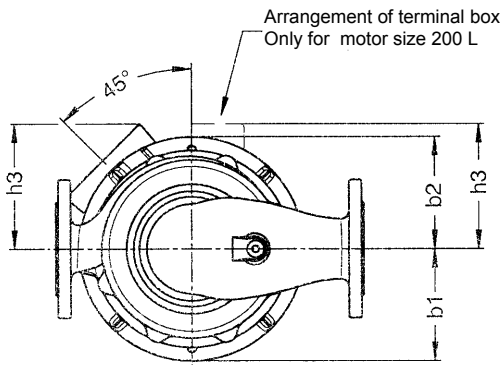
n = 2900 / 3500 1/min

Dimensions in mm
 Subject to alteration

Pump size	Motor size	Base plate and/or foundation design see above	Performance	Unit dimensions																							Assignment plug-in shaft motor stool
				Pump																Motor dimensions approximated, depending on manufacturer					Dismantling dim.		
				Flange		Feet														a1	d	h3	l1	l		x	
				DNs	DNd	a	f	b1	b2	h1	h2	b	c	m1	m2	n1	n2	s1									
25-160/11	80	●	0,75 1,1	40	25	80	371	128	128	132	160	50	15	100	70	240	190	M 12	200	162	124	234	685	102	19/200		
	90 S	●	1,5																	181	130	282	733		24/200		
	90 L	●	2,2																	181	130	282	733		24/200		
	100 L	●	3																	203	158	312	763		28/250		
	112 M	●	4																	228	171	335	786		28/250		
25-200/01	90 S	●	1,5	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200		
	90 L	●	2,2																	181	130	282	733		24/200		
	100 L	●	3																	203	158	312	763		28/250		
	112 M	●	4																	228	171	335	786		28/250		
	132 S	●	5,5 7,5																	300	266	196	375		867	38/300	
32-160/01	90 L	●	2,2	50	32	80	371	130	130	132	160	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200		
	100 L	●	3																	203	158	312	763		28/250		
	112 M	●	4																	228	171	335	786		28/250		
	132 S	X	5,5 7,5																	300	266	196	375		867	38/300	
32-200/01	112 M	●	4	50	32	80	371	130	135	160	180	50	15	100	70	240	190	M 12	250	228	171	335	786	102	28/250		
	132 S	●	5,5 7,5																	250	266	196	375		867	38/300	
	160 M	X	11 15																	350	320	234	481		973	42/350	
	90 L	●	2,2																	200	181	130	282		733	24/200	
40-160/01	100 L	●	3	65	40	80	371	130	130	132	160	50	15	100	70	240	190	M 12	250	203	158	312	763	102	28/250		
	112 M	●	4																	228	171	335	786		28/250		
	132 S	X	5,5 7,5																	300	266	196	375		867	38/300	
	160 M	X	11 15																	350	320	234	481		973	42/350	
	90 L	●	2,2																	200	181	130	282		733	24/200	
40-200/01	112 M	●	4	65	40	100	371	130	140	160	180	50	15	100	70	265	212	M 12	250	228	171	335	806	102	28/250		
	132 S	●	5,5 7,5																	300	266	196	375		887	38/300	
	160 M	X	11 15																	350	320	234	481		993	42/350	
	160 L	X	18,5																	350	320	234	481		993	42/350	
	90 L	●	2,2																	200	181	130	282		733	24/200	
50-160/11	100 L	●	3	80	50	100	371	130	130	160	180	50	15	100	70	265	212	M 12	250	203	158	312	783	102	28/250		
	112 M	●	4																	228	171	335	806		28/250		
	132 S	●	5,5 7,5																	300	266	196	375		887	38/300	
	160 M	X	11 15																	350	320	234	481		993	42/350	
	160 L	X	18,5																	350	320	234	481		993	42/350	
50-200/11	132 S	●	5,5 7,5	80	50	100	412	135	150	160	200	50	15	100	70	265	212	M 12	300	266	196	375	887	102	38/300		
	160 M	X	11 15																	320	234	481	993		42/350		
	160 L	X	18,5																	350	320	234	481		993	42/350	
	180 M	X	22																	375	275	610	1122		48/350		
	200 L	X	30 37																	400	415	310	665		1177	55/400	
65-160/11	112 M	●	4	100	65	100	371	130	155	160	200	65	15	125	95	280	212	M 12	250	228	171	335	806	102	28/250		
	132 S	●	5,5 7,5																	300	266	196	375		887	38/300	
	160 M	X	11 15																	350	320	234	481		993	42/350	
	160 L	X	18,5																	350	320	234	481		993	42/350	
	200 M	X	22																	375	275	610	1122		48/350		
	200 L	X	30 37																	400	415	310	665		1177	55/400	
80-160/11	132 S	●	5,5 7,5	125	80	125	412	145	180	180	225	65	15	125	95	320	250	M 12	350	266	196	375	912	102	38/300		
	160 M	●	11 15																	320	234	481	1018		42/350		
	160 L	●	18,5																	320	234	481	1018		42/350		
	180 M	X	22																	375	275	610	1147		48/350		
	200 L	X	30 37																	400	415	310	665		1202	55/400	

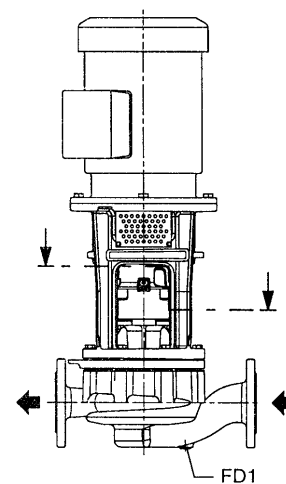
Unit dimensions – Series NIWH

Sizes with a shaft diameter of 32 at the shaft seal

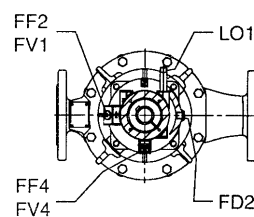
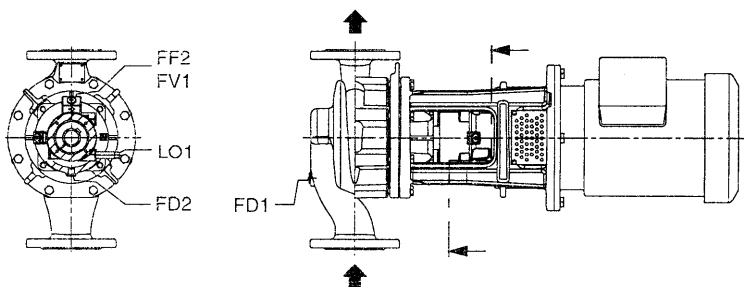


Flanges acc. to EN 1092-2 PN 16					
DNs/DNd	D	bf	k	g	No. of holes
32	140	18	100	19	4
40	150	18	110	19	4
50	165	20	125	19	4
65	185	20	145	19	4
80	200	22	160	19	8
100	220	24	180	19	8

Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	L01
G 3/8	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4



Connections for horizontal and vertical installation



Unit dimensions - Series NIWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!

Binding motor dimension information must be submitted with each order.

Tolerances of joint dimensions similar to DIN EN 735

Sense of rotation: Clockwise as seen from the driving side

Dimensions in mm Subject to alteration

n = 1450 / 1750 1/min

Pump size	Motor size	Performance	Unit dimensions														Assignment plug-in shaft/ motor stool	
			Pump								Motor dimensions approximated, depending on manufacturer					Dismantling dim.		
			Flanges		a	f	b1	b2	h1	h2	a1	d	h3	l1	l			x
DNs	DNd																	
25-200/01	80	0,55 0,75	32	32	91	371	132	132	190	180	200	162	124	234	694	102	19/200	
	90 S	1,1										181	130	282	742		24/200	
32-160/01	80	0,55 0,75	40	40	99	371	123	123	200	190	200	162	124	234	702	102	19/200	
	90 S	1,1										181	130	282	750		24/200	
	90 L	1,5										181	130	282	750		24/200	
	100 L	2,2 3										250	203	158	312		780	28/250
32-160/01	80	0,55 0,75	40	40	95	371	124	130	200	190	200	162	124	234	698	102	19/200	
	90 S	1,1										181	130	282	746		24/200	
	90 L	1,5										181	130	282	746		24/200	
	100 L	2,2 3										250	203	158	312		776	28/250
40-160/01	80	0,55 0,75	50	50	105	371	123	123	210	200	200	162	124	234	708	102	19/200	
	90 S	1,1										181	130	282	756		24/200	
	90 L	1,5										181	130	282	756		24/200	
	100 L	2,2 3										250	203	158	312		786	28/250
40-200/01	80	0,55 0,75	50	50	105	371	125	135	220	205	200	162	124	234	708	102	19/200	
	90 S	1,1										181	130	282	756		24/200	
	90 L	1,5										181	130	282	756		24/200	
	100 L	2,2 3										250	203	158	312		786	28/250
40-250/01	90 S	1,1	50	50	105	371	148	156	240	225	200	181	130	282	756	85	24/200	
	90 L	1,5										181	130	282	756		24/200	
	100 L	2,2 3										250	203	158	312		786	28/250
	112 M	4				228					171	335	809	28/250				
	132 S	5,5				300					266	196	375	890	38/300			
50-160/01	80	0,55 0,75	65	65	114	371	125	130	230	220	200	162	124	234	717	102	19/200	
	90 S	1,1										181	130	282	765		24/200	
	90 L	1,5										181	130	282	765		24/200	
	100 L	2,2 3										250	203	158	312		795	28/250
50-200/01	80	0,55 0,75	65	65	114	371	132	146	240	225	200	162	124	234	717	102	19/200	
	90 S	1,1										181	130	282	765		24/200	
	90 L	1,5										181	130	282	765		24/200	
	100 L	2,2 3				250					203	158	312	795	28/250			
	112 M	4				228					171	335	818	28/250				
	132 S	5,5				300					266	196	375	899	38/300			
50-250/01	90 L	1,5	65	65	116	371	156	165	265	245	200	181	130	282	767	85	24/200	
	100 L	2,2 3										250	203	158	312		797	28/250
	112 M	4										228	171	335	820		28/250	
	132 S	5,5				300					266	196	375	901	38/300			
	132 M	7,5				266					196	375	901	38/300				
65-160/01	80	0,55 0,75	80	80	122	371	133	162	270	230	200	162	124	234	725	102	19/200	
	90 S	1,1										181	130	282	773		24/200	
	90 L	1,5										181	130	282	773		24/200	
	100 L	2,2 3									250	203	158	312	803		28/250	
	112 M	4									228	171	335	826	28/250			
65-200/02	90 S	1,1	80	80	104	371	160	170	275	235	200	181	130	282	755	102	24/200	
	90 L	1,5										181	130	282	755		24/200	
	100 L	2,2 3										250	203	158	312		785	28/250
	112 M	4				228					171	335	808	28/250				
	132 S	5,5				300					266	196	375	889	38/300			
	132 M	7,5				266					196	375	889	38/300				
80-160/01	90 S	1,1	100	100	132	371	136	170	275	245	200	181	130	282	783	102	24/200	
	90 L	1,5										181	130	282	783		24/200	
	100 L	2,2 3										250	203	158	312		813	28/250
	112 M	4				228					171	335	836	28/250				
	132 S	5,5				300					266	196	375	917	38/300			

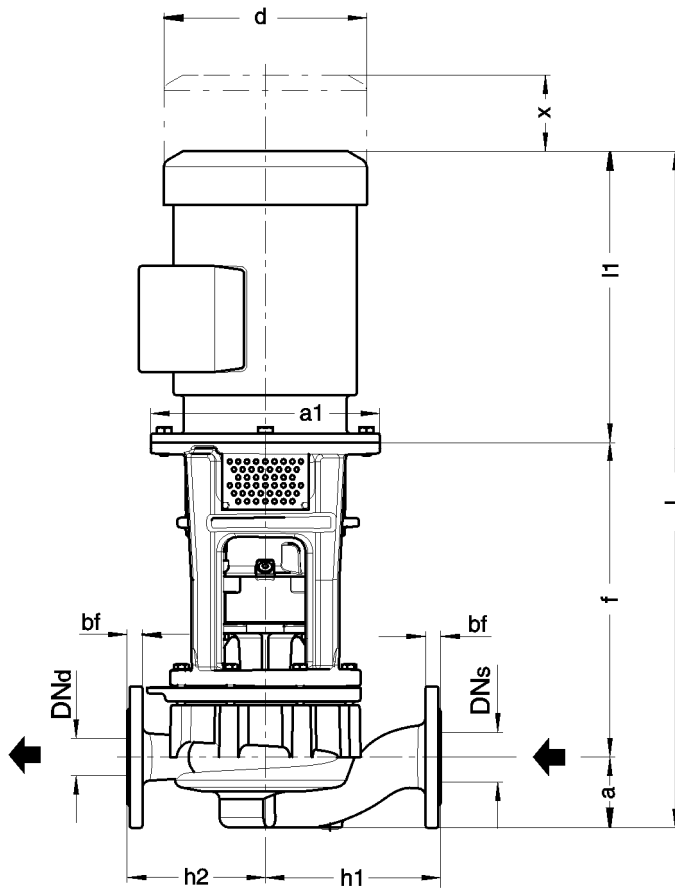
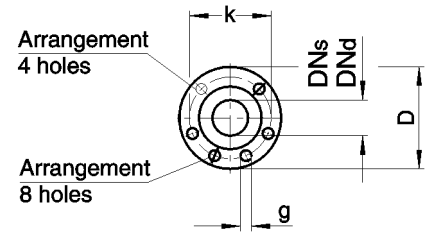
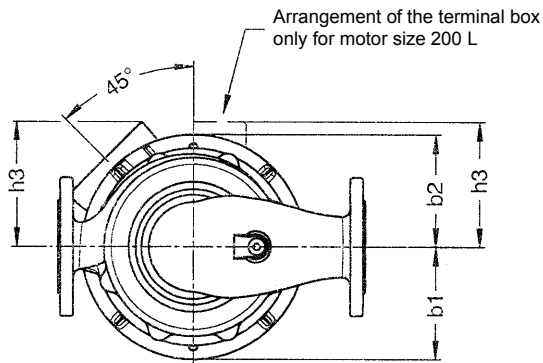
Unit dimensions – Series NIWH

n = 2900 / 3500 1/min

Dimensions in mm
Subject to alteration

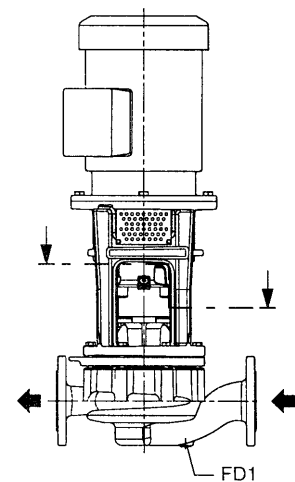
Pump size	Motor size	Performance	Unit dimensions														Assignment plug-in shaft/ motor stool		
			Pump								Motor dimensions approximated, depending on manufacturer				Dismantling dim.				
			Flange		a	f	b1	b2	h1	h2	a1	d	h3	l1		l		x	
			DNs	DNd															KW
25-200/01	90 S	1,5	32	32	91	371	132	132	190	180	200	181	130	282	742	102	24/200		
	90 L	2,2										181	130	282	742		24/200		
	100 L	3										250	203	158	312		772	28/250	
	112 M	4										228	171	335	795		28/250		
	132 S	5,5 7,5										412	300	266	196		375	876	38/300
32-160/01	90 L	2,2	40	40	99	371	123	123	200	190	200	181	130	282	750	102	24/200		
	100 L	3										250	203	158	312		780	28/250	
	112 M	4										228	171	335	803		28/250		
	132 S	5,5 7,5										412	300	266	196		375	884	38/300
	160 M	11 15										350	320	234	481		990	42/350	
32-200/01	112 M	4	40	40	95	371	124	130	200	190	250	228	171	335	799	102	28/250		
	132 S	5,5 7,5				412						300	266	196	375		880	38/300	
	160 M	11 15				412						350	320	234	481		986	42/350	
	160 L	18,5				320						234	481	986	42/350				
	112 M	4				371						250	228	171	335		799	28/250	
40-160/01	90 L	2,2	50	50	105	371	123	123	210	200	200	181	130	282	756	102	24/200		
	100 L	3										250	203	158	312		786	28/250	
	112 M	4										228	171	335	809		28/250		
	132 S	5,5 7,5										412	300	266	196		375	890	38/300
	160 M	11 15										412	350	320	234		481	996	42/350
40-200/01	112 M	4	50	50	105	371	125	135	200	205	250	228	171	335	809	102	28/250		
	132 S	5,5 7,5				412						300	266	196	375		890	38/300	
	160 M	11 15				412						350	320	234	481		996	42/350	
	160 L	18,5				320						234	481	996	42/350				
	180 M	22				375						275	610	1125	48/350				
40-250/01	200 L	30 37	50	50	105	412	148	156	240	225	300	266	196	375	890	85	38/300		
	132 S	5,5 7,5										350	320	234	481		996	42/350	
	160 M	11 15										350	320	234	481		996	42/350	
	160 L	18,5										375	375	610	1125		48/350		
	180 M	22										400	415	310	665		1180	55/400	
50-160/01	100 L	3	65	65	114	371	125	130	230	220	250	203	158	312	795	102	28/250		
	112 M	4										228	171	335	818		28/250		
	132 S	5,5 7,5										412	300	266	196		375	899	38/300
	160 M	11 15										412	350	320	234		481	1005	42/350
	160 L	18,5										320	234	481	1005		42/350		
50-200/01	160 L	18,5	65	65	114	412	132	146	240	225	350	266	196	375	899	102	38/300		
	160 M	11 15										350	320	234	481		1005	42/350	
	160 L	18,5										350	320	234	481		1005	42/350	
	180 M	22										375	275	610	1134		48/350		
	200 L	30 37										400	415	310	665		1189	55/400	
50-250/01	160 M	11 15	65	65	116	412	156	165	265	245	350	320	234	481	1007	85	42/350		
	160 L	18,5										320	234	481	1007		42/350		
	180 M	22										375	275	610	1136		48/350		
	200 L	30 37										400	415	310	665		1191	55/400	
	112 M	4										371	250	228	171		335	826	28/250
65-160/01	132 S	5,5 7,5	80	80	122	412	133	162	270	230	300	266	196	375	907	102	38/300		
	160 M	11 15										350	320	234	481		1013	42/350	
	160 L	18,5										350	320	234	481		1013	42/350	
	180 M	22										375	275	610	1142		48/350		
	200 L	30 37										400	415	310	665		1197	55/400	
65-200/02	132 S	5,5 7,5	80	80	104	412	160	170	275	235	300	266	196	375	889	102	38/300		
	160 M	11 15										350	320	234	481		995	42/350	
	160 L	18,5										350	320	234	481		995	42/350	
	180 M	22										375	275	610	1124		48/350		
	200 L	30 37										400	415	310	665		1179	55/400	
80-160/01	132 S	5,5 7,5	100	100	132	412	136	170	170	245	300	266	196	375	917	102	38/300		
	160 M	11 15										350	320	234	481		1023	42/350	
	160 L	18,5										350	320	234	481		1023	42/350	
	180 M	22										375	275	610	1152		48/350		
	200 L	30 37										400	415	310	665		1207	55/400	

Unit dimensions – Series CIWH
 Sizes with a shaft diameter 32 at the shaft seal

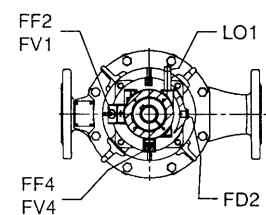
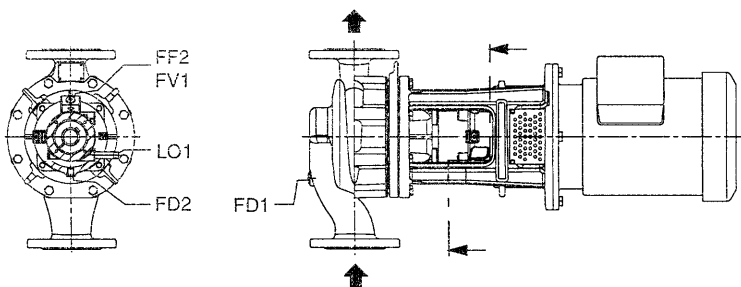


Flange acc. to EN 1092-2 PN 25					
DNs/DNd	D	bf	k	g	No. of holes
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8

Connections				
Draining		Filling/Venting		Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	L01
G 1/2	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4



Connections for horizontal and vertical installation



Unit dimensions - Series CIWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!

Binding motor dimension information must be submitted with each order.

Tolerances of joint dimensions similar to DIN EN 735

n = 1450 / 1750 1/min

Sense of rotation: clockwise as seen from the driving side

Dimensions in mm Subject to alteration

Pump size	Motor size	Performance		Unit dimensions													Assignment plug-in shaft/ motor stool	
				Pump							Motor dimensions approximated, depending on manufacturer				Dismantling dim. x			
				Flange		a	f	b1	b2	h1	h2	a1	d	h3		l1		l
DNs	DNd																	
32-200/11	80	0,55	0,75	32	32	91	371	132	132	190	190	200	162	124	234	694	102	19/200
	90 S	1,1	181										130	282	742	24/200		
40-160/11	80	0,55	0,75	40	40	99	371	130	130	200	190	200	162	124	234	702	102	19/200
	90 S	1,1	181										130	282	750	24/200		
	90 L	1,5	181										130	282	750	24/200		
40-200/11	80	0,55	0,75	40	40	95	371	130	135	200	190	200	162	124	234	698	102	19/200
	90 S	1,1	181										130	282	746	24/200		
	90 L	1,5	181										130	282	746	24/200		
	100 L	2,2 3	250										203	158	312	776		28/250
50-160/11	80	0,55	0,75	50	50	105	371	130	130	210	200	200	162	124	234	708	102	19/200
	90 S	1,1	181										130	282	756	24/200		
	90 L	1,5	181										130	282	756	24/200		
	100 L	2,2 3	250										203	158	312	795		28/250
50-200/11	80	0,55	0,75	50	50	105	371	130	135	220	205	200	162	124	234	708	102	19/200
	90 S	1,1	181										130	282	756	24/200		
	90 L	1,5	181										130	282	756	24/200		
	100 L	2,2 3	250										203	158	312	786		28/250
	112 M	4	228										171	335	809	28/250		
65-160/11	80	0,55	0,75	65	65	114	371	130	130	230	220	200	162	124	234	717	102	19/200
	90 S	1,1	181										130	282	765	24/200		
	90 L	1,5	181										130	282	765	24/200		
	100 L	2,2 3	250										203	158	312	795		28/250
65-200/11	80	0,55	0,75	65	65	114	371	134	148	240	225	200	162	124	234	717	102	19/200
	90 S	1,1	181										130	282	765	24/200		
	90 L	1,5	181										130	282	765	24/200		
	100 L	2,2 3	250				203						158	312	795	28/250		
	112 M	4	228				171						335	818	28/250			
	132 S	5,5	300				266						196	375	899	38/300		

Unit dimensions - Series CIWH

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

When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
Attention: Motors provided by the client must also contain a axial thrust bearing on the drive side!
 Binding motor dimension information must be submitted with each order.

n = 2900 / 3500 1/min

Dimensions in mm
Subject to alteration

Pump size	Motor size	Performance	Unit dimensions													Assignment plug-in shaft/ Motor stool		
			Pump								Motor dimensions approximated, depending on manufacturer						Dismantling dim.	
			Flange		a	f	b1	b2	h1	h2	a1	d	h3	l1	l			x
KW	DNs	DNd																
32-200/11	90 S	1,5	32	32	91	371	132	132	190	180	200	181	130	282	742	102	24/200	
	90 L	2,2										181	130	282	742		24/200	
	100 L	3										203	158	312	772		28/250	
	112 M	4										228	171	335	795		28/250	
	132 S	5,5 7,5										266	196	375	876		38/300	
40-160/11	90 L	2,2	40	40	99	371	130	130	200	190	200	181	130	282	750	102	24/200	
	100 L	3										203	158	312	780		28/250	
	112 M	4										228	171	335	803		28/250	
	132 S	5,5 7,5										266	196	375	884		38/300	
	160 M	11 15										350	320	234	481		990	42/350
40-200/11	112 M	4	40	40	95	371	130	135	200	190	200	250	228	171	335	799	102	28/250
	132 S	5,5 7,5				300						266	196	375	880	38/300		
	160 M	11 15				350						320	234	481	986	42/350		
	160 L	18,5				320						234	481	986	42/350			
50-160/11	90 L	2,2	50	50	105	371	130	130	210	200	200	200	181	130	282	756	102	24/200
	100 L	3										203	158	312	786	28/250		
	112 M	4										228	171	335	809	28/250		
	132 S	5,5 7,5										266	196	375	890	38/300		
	160 M	11 15										350	320	234	481	996		42/350
50-200/11	112 M	4	50	50	105	371	130	135	220	205	205	250	228	171	335	809	102	28/250
	132 S	5,5 7,5										300	266	196	375	890		38/300
	160 M	11 15										350	320	234	481	996		42/350
	160 L	18,5										320	234	481	996	42/350		
	180 M	22										375	275	610	1125	48/350		
	200 L	30 37										400	415	310	665	1180		55/400
65-160/11	100 L	3	65	65	114	371	130	130	230	220	220	250	203	158	312	795	102	28/250
	112 M	4										228	171	335	818	28/250		
	132 S	5,5 7,5										300	266	196	375	899		38/300
	160 M	11 15										350	320	234	481	1015		42/350
	160 L	18,5										320	234	481	1005	42/350		
65-200/11	132 S	5,5 7,5	65	65	114	412	134	148	240	225	225	300	266	196	375	899	102	38/300
	160 M	11 15										320	234	481	1005	42/350		
	160 L	18,5										320	234	481	1005	42/350		
	180 M	22										375	275	610	1134	48/350		
	200 L	30 37										400	415	310	665	1189		55/400

Subject to technical alterations.



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The mentioned performance data and additionally all standard references are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.