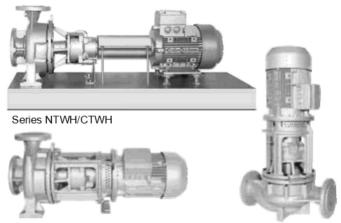




SERIES NTWH/CTWH prozess model SERIES NBWH/CBWH block model SERIES NIWH/CIWH in-line model

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



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

 <sup>\*</sup> 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 pressure① p [bar]	max. pump output Q [m³/h]	max. pump head H [m]
NTWH		1250	100
NBWH	≤ 16	270	92
NIWH		220	92
CTWH		1450	100
CBWH	≤ 25	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.

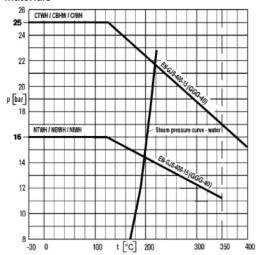
The mentioned performance data are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.

Application limits									
Series	Permissible internal pump pres- sure	Mechanical seal Bearing type	Permissible suc- tion pressure p ≤ [bar]		Hot water ①	Thermal oil			
	p ≤ [bar]		water	oil	t≤ [°C]	[°C]			
NTWH NBWH NIWH	16	U3.3A - K1 U2.11A - S1	12	8	183	t = - 30 bis + 350			
CTWH		U3.3A - K1				t = - 30			
CBWH	25	U2 11A - S1	22	15	207	bis			
CIWH		U2.13A – K2	-	15	-	+ 400			

- 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 numps



#### Pressure and temperature limits depending on housing materials



#### **Application limits**

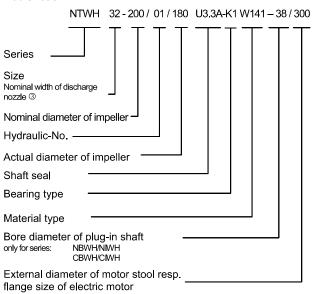
Ambient temperature: min. - 30 °C up to max. +40 °C Expansion of operating limits upon request.

#### Materials \*

Denomination	Part-	Series		
	No.	NTWH	CTWH	
		NBWH	CBWH	
		NIWH	CIWH	
		Materia	al type	
		W1	41	
	102.01	EN-GJS	-400-15	
Volute casing ②	102.01	(GGG-40)		
Impeller	230.01	EN-GJL-200 (GG-20) ①		
Casing cover	161.01	EN-GJS-400 (GGG-40)		
Shaft	210.01	1.40	021	
Plug-in shaft	220.01	1.4021/	1.7139	
Bearing bracket	330.01	EN-GJS-40	0 (GGG-40)	
Motor stool	341.01	EN-GJL-25	60 (GG-25)	
Intone dista Disa	509.01	EN-GJS	-400-15	
Intermediate Ring	309.01	(GGG-40)		
Bearing sleeve S1	529.01	SS	siC	
Bearing sleeve K2	529.01	1.7225 (specia	ally hardened)	
Bearing bush S1	545.01	SS	iC	
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

#### 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 blook and in-line installation)

LO<sub>1</sub> 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  $t \ge 207$  °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.

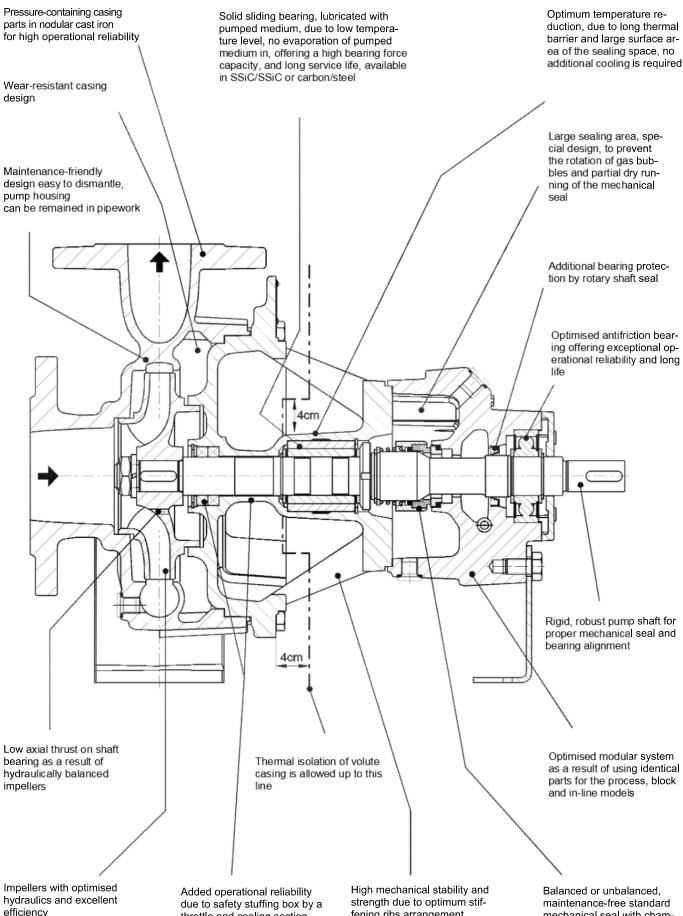
# **Explosion protection**

The pump fulfills the requirements according to EU explosion-protection directive 94/9/EC (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



efficiency

throttle and cooling section

fening ribs arrangement

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.

	Pump size		Series	interchange S	Vol.	ute-	Im- peller	Inter- mediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot	g	Plug-in shaft	Motor stool
SIZO					NTWH		_	illig								sizes dep	ed, motor nd motor
		NTWH	NBWH	NIWH	NBWH	NIWH								NTWH NB	WH		
	25-160/11	•	•	-	1	-	1							1	1		
	25-200/01	•	•	•	2	1	2								2		
	32-160/01 32-200/01	•	•	•	3	3	3 4	-							2		
	40-160/01	•	•	•	5	4	5								1	19	
	40-200/01	•	•	•	6	5	6							2	2	24 28	200 250
1	40-250/01	•	•	•	7	6	7	1	1	1	1	1	1		3	38	300
•	50-160/01 50-200/01	•	•	•	8	7 8	8	<u>-</u>							2	42	350
	50-250/01	•	•	•	10	9	10	1							3	48	400
	65-160/01	•	•	•	11	10	11	-							2	55	
	65-200/02	•	•	•	12	12	12	1							3		
	80-160/01	•	•	•	13 14	13	13 14	-							3 4		
	100-160/01 65-250/01	•	•	-	15	-	15	_						5	4		
	65-315/01	•			16	1	16	2						6			
	65-400/01	•			17	]	17	3						7			
	80-200/02	•			18		18	_						8			
	80-250/01 80-315/01	•			19 20	-	19 20	2						5 7			
2	100-200/01	•	-	-	21	-	21		2	2	2	2	2	5	-	-	-
	100-250/01	•			22	1	22	-						6			
	100-315/01	•			23		23	2						7			
	125-200/01 125-250/01	•			24 25	-	24 25	_						7			
	150-200/01	•			26	-	26	-						8			
Bearing	Pump size		Series	3	Vol	lute	lm-	Inter-	Casing	Bearing	Shaft	Bearing	Bearing	Supporting	g	Plug-in	Motor
bracket					cas	sing	peller	mediate	cover	bracket		sleeve	bush	foot		shaft	stool
size								ring							ŀ	Assign	ment to
																sizes de	
																the spee	nd motor
					CTWH											mo	
	25-160/11	CTWH	CBWH	CIWH	CBWH 27	CIWH	1							CTWH CB	WH 1		
	25-200/01	•	•	32-200/11	28	14	2								2		
	32-160/11	•	•	40-160/11	29	15	3								1	19 24	200
	32-200/11	•	•	40-200/11	30	16	4								2	28	250
1	40-160/11 40-200/11	•	•	50-160/11 50-200/11	31 32	17 18	5 6	-	1	1	1	1	1		2	38	300
	50-160/11	•	•	65-160/11	33	19	8								2	42	350
	50-200/11	•	•	65-200/11	34	20	9								2	48 55	400
	65-160/11	•	•	-	35	-	27								2	00	
	80-160/11	•	•	-	36	-	28								3		
	32-250/11 40-250/11	•			37 38	-	29 30	-						8			
	40-230/11	•			39	1	31	4						5			
	50-250/11	•			40	1	32	-						8			
2	50-315/11	•	_	_	41	] _	31	4	2	2	2	2	2	6		_	_
_	65-200/11	•			42	4	33		-		_	-		8		-	
	65-250/11	•			43 44	4	15							5 8			
	80-200/01 80-250/01	•			44	1	34 19	-						6			
			1		46	1	21					<b> </b>	l	5			
	100-200/11	•			40		21							· ·			





# Interchangability of components on bearing bracket sizes 3 up to ${\bf 5}$

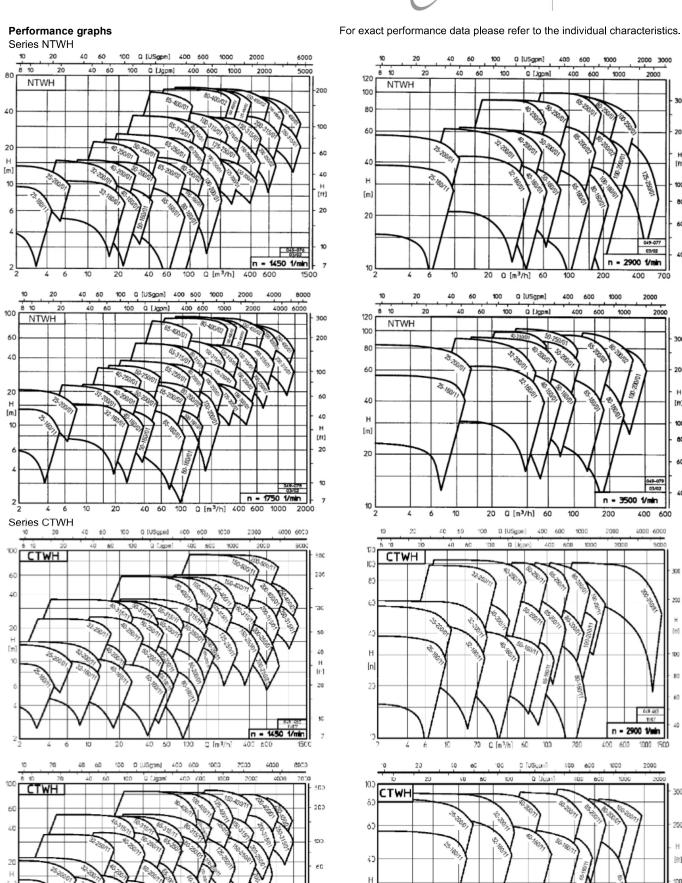
Parts with the same number are interchangeable within a vertical column.

Bearing bracket size	Pump size	Series NTWH	Volute casing	Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot
0120	80-400/02	•	1	1		1					1
	100-400/02	•	2	2	1	·					1
	125-315/01	•	3	3	-						1
	125-400/02	•	4	4	1						2
3	150-250/02	•	5	5		2	1	1	1	1	1
	150-315/01	•	6	6	-		1				1
	150-400/02	•	7	7	1	1					2
	200-250/02	•	8	8	-	2	1				3
	200-315/01	•	9	9							4
	200-400/01	•	10	10	1						4
4	250-315/01	•	11	11	i - 1	3	2	2	2	2	5
	250/400/01	•	12	12	1						5
Bearing bracket	Pump size	Series	Volute casing	Impeller	Intermediate ring	Casing cover	Bearing bracket	Shaft	Bearing sleeve	Bearing bush	Supporting foot
size		CTWH									
	65-315/11	•	13	13							6
	80-315/11	•	14	14		1					7
	80-400/11	•	15	15	2						1
	100-250/11	•	16	16	<u> </u>	2					6
	100-315/11	•	17	17		1					7
3	100-400/11	•	18	18	2		] 1	1	1	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	-	2					3
	150-315/11	•	24	24							6
	150-400/11	•	25	25	-						6
	150-500/11	•	26	26	3						7
4	200-315/01	•	27	9		3	2	2	2	2	4
4	200-400/01	•	28	10	-	ا ا	4	4	4	4	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



n = 3500 1/min

 $0 [n^3/h]$ 



n - 1750 1/mln

400 600 1000

100 Q [m³/h]

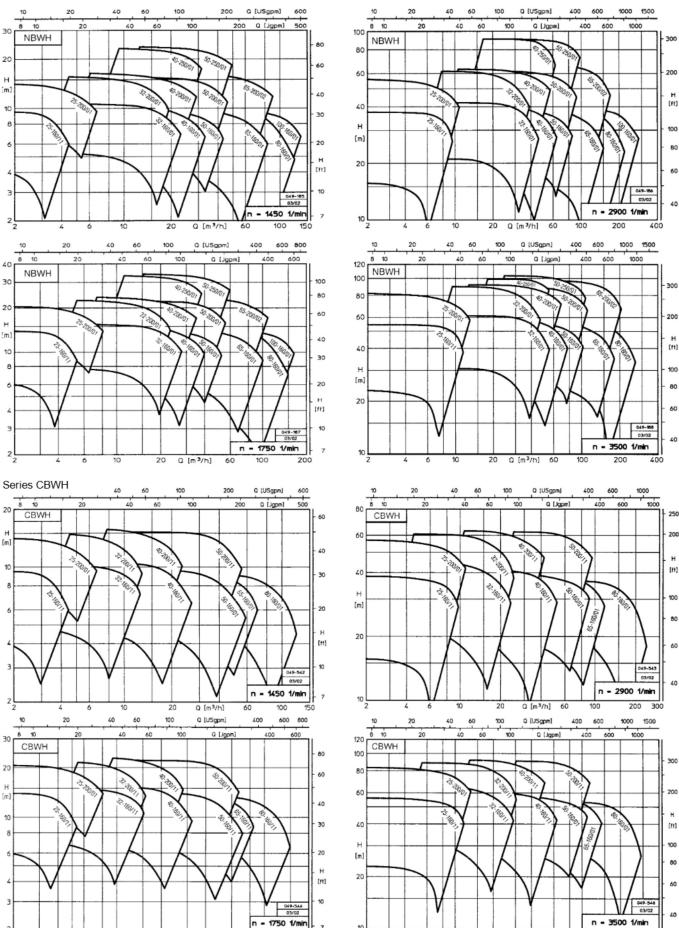
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For exact performance data please refer to the individual characteristics.

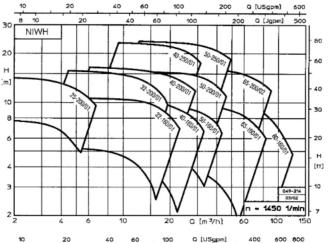
# Performance graphs

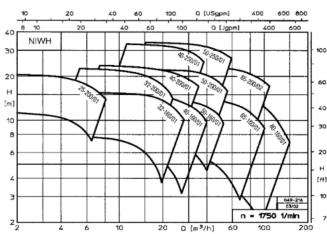
Series NBWH

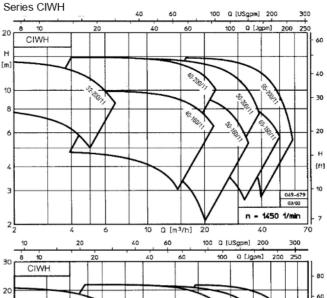


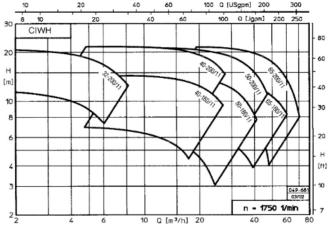




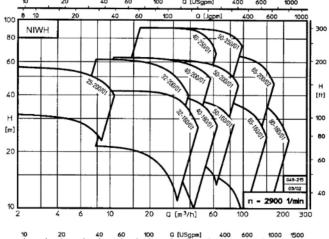


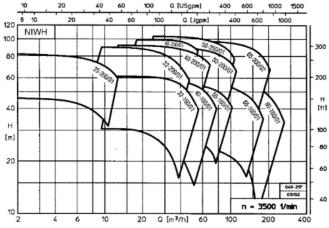


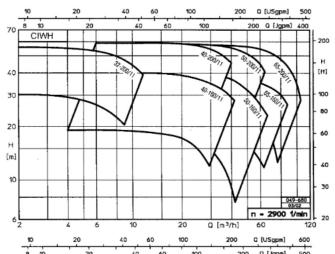


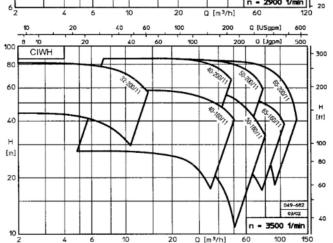


For exact performance data please refer to the individual characteristics.



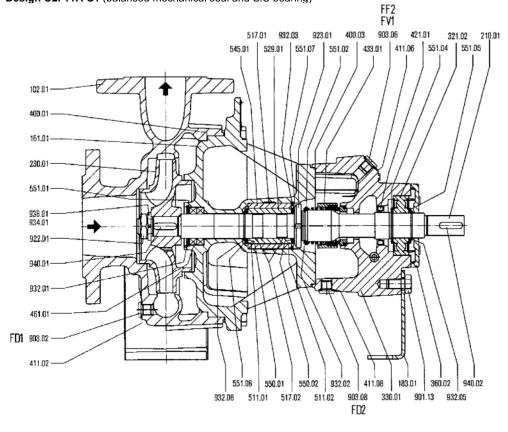


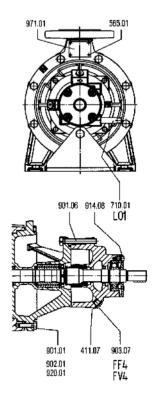




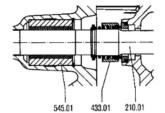


Sectional drawing - Series NTWH/CTWH on bearing bracket size 1, 2, 3 and 4 Design U2. 11A-S1 (balanced mechanical seal and SiC bearing)





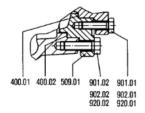
Design U3.3A-K1 (unbalanced mechanical seal and carbon bearing)



Design of bearing with bearing bracket size 3 and 4



Design with intermediate ring



Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Bearing sleeve	①529.02
Casing cover	161.01	Bearing busch	545.01
Supporting foot	183.01	Disc	<b>①550.01</b>
Shaft	210.01	Disc	①550.02
Impeller	230.01	Disc spacer	551.01
Groove ball bearing	321.02	Disc spacer	551.02
Bearing bracket	330.01	Disc spacer	551.04
Bearing cover	360.02	Disc spacer	551.05
Gasket	400.01	Disc spacer	①551.06
Gasket	400.02	Disc spacer	①551.07
Gasket	400.03	Rivet	565.01
Seal ring	411.02	Pipe	710.01
Seal ring	411.06	Hexagon screw	901.01
Seal ring	411.07	Hexagon screw	901.02
Seal ring	411.08	Hexagon screw	901.06
Radial shaft seal ring	421.01	Hexagon screw	901.13
Mechanical seal	433.01	Stud bolt	@3902.01
Stuffing box packing	461.01	Stud bolt	3902.02
Intermediate ring	509.01	Screw plug	903.02
Centering ring	①511.01	Screw plug	903.06
Centering ring	①511.02	Screw plug	903.07
Nilos ring	<b>4516.01</b>	Screw plug	903.08
Nilos ring	<b>⊕516.02</b>	Socket-head cap screw	914.08
Flexible damp ring	517.01	Nut	@3920.01
Flexible damp ring	①517.02	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	<b>@934.01</b>
Spring ring	936.01
Key	940.01
Key	940.02
Name plate	971.01

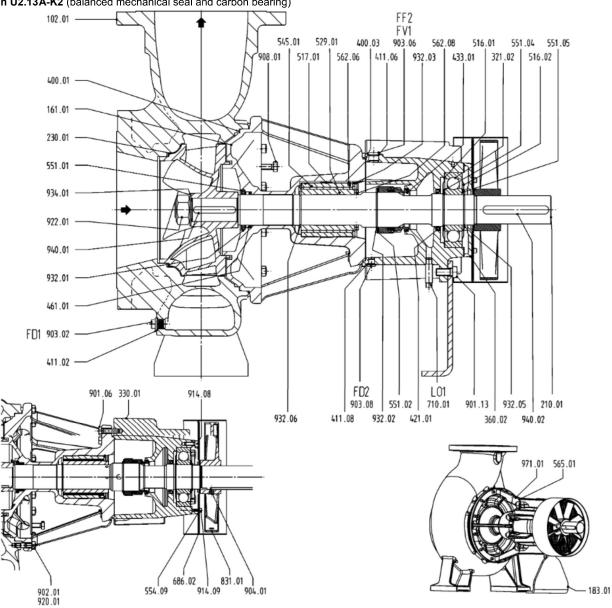
- $\ensuremath{\mathbb{O}}$  not present on version with carbon bearing
- ② only with series NTWH bearing bracket s. 4
- 3 only with series CTWH
- @ only with bearing bracket size 3 and 4

Anschli
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Anschlüss	e
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)



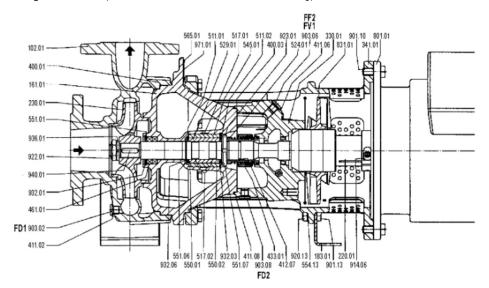
Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Disc	554.09
Casing cover	161.01	Spring dowel pin	562.06
Supporting foot	183.01	Chylindrical pin	562.08
Shaft	210.01	Rivet	565.01
Impeller	230.01	Protective grid	686.02
Groove ball bearing	321.02	Pipe	710.01
Bearing bracket	330.01	Fan	831.01
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 busch	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

Denomination	Part-No.
Key	940.01
Key	940.02
Name plate	971.01

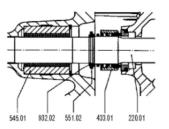
Connection	ns
FD1	Draining
FD2	Draining
FF2/FV1	Filling/Venting
FF4/FV4	Filling/Venting
	only for vertical block and in-line installations
LO1	Leakage outlet



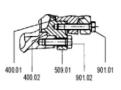
# Sectional drawing - Series NBWH/CBWH Design U2.11A-S1 (balanced mechanical seal and SiC bearing)

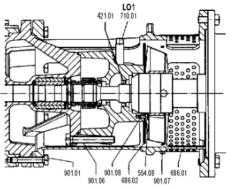


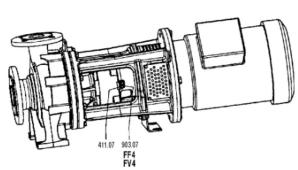
Design U3.3A-K1 (unbalanced mechanical seal and carbon bearing)











Denomination	Part-No.	Denomination	Part-No.
Volute casing	102.01	Bearing bush	545.01
Casing cover	161.01	Disc	①550.01
Supporting foot	183.01	Disc	①550.02
Plug-in shaft	220.01	Disc spacer	551.01
Impeller	230.01	Disc spacer	©551.02
Bearing bracket	330.01	Disc spacer	①551.06
Motor stool	341.01	Disc spacer	①551.07
Gasket	400.01	Washer	554.08
Gasket	400.02	Washer	554.13
Gasket	400.03	Rivet	565.01
Seal Ring	411.02	Guard plate	686.01
Seal Ring	411.06	Protective grid	686.02
Seal Ring	411.07	Pipe	710,01
Seal Ring	411.08	Flange motor	801.01
O-ring	①412.07	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	①511.01	Hexagon screw	901.08
Centering ring	①511.02	Hexagon screw	901.10
Flexible clamb ring	517.01	Hexagon screw	901.13
Flexible clamb ring	①517.02	Screw plug	903.02
Shaft sleeve	①524.01	Screw plug	914.06
Bearing sleeve	①529.01	Screw plug	903.07

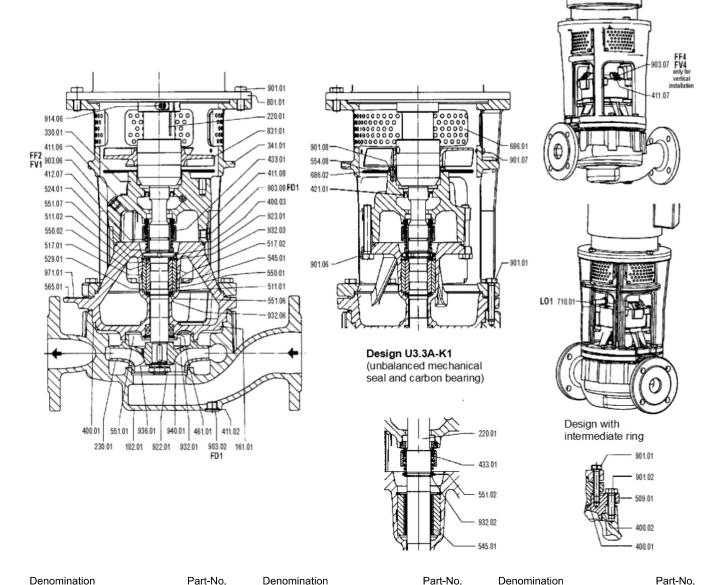
Denomination	Part-No.
Screw plug	903.08
Socket-head cap screw	914.06
Nut	920.13
Impeller nut	922.01
Bearing nut	<b>0923.01</b>
Circlip	932.01
Circlip	©932.02
Circlip	932.03
Circlip	①932.06
Spring ring	936.01
Key	940.01
Name plate	971.01

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

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



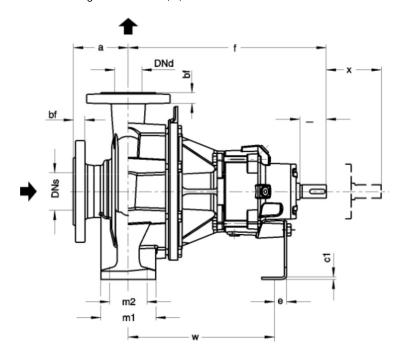
Sectional drawing - Series NIWH/CIWH
Design U2.11A-S1 (balanced mechanical seal and SiC bearing)

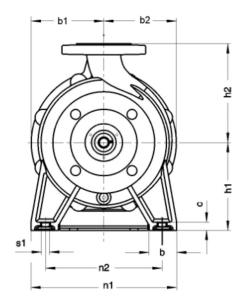


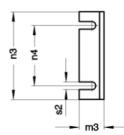
Denomination	Part-No.	Denomination	Part-No.	Denomina	lion	Part-No.
Volute casing	102.01	Disc	Disc ①550.01 Bearing		ıt	①923.01
Casing cover	161.01	Disc	<b>©550.02</b>	Circlip		932.01
Plug-in shaft	220.01	Disc spacer	551.01	Circlip		@932.02
Impeller	230.01	Disc spacer	<b>2551.02</b>	Circlip		932.03
Bearing bracket	330.01	Disc spacer	<b>①551.06</b>	Circlip		<b>1932.06</b>
Motor stool	341.01	Disc spacer	①551.07	Spring ring	1	936.01
Gasket	400.01	Washer	554.08	Key		940.01
Gasket	400.02	Rivet	565.01	Name plate	е	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	<b>0412.07</b>	Hexagon Screw	901.01	①t		ale and the sections
Radial shaft seal ring	421.01	Hexagon Screw	901.02		ent on version with ca	
Mechanical seal	433.01	Hexagon Screw	901.06	© not prese	ent on version with Si	o-bearing
Stuffing box packing	461.01	Hexagon Screw	901.07			
Intermediate ring	509.01	Hexagon Screw	901.08	Connection	ns	
Centering ring	<b>①511.01</b>	Hexagon Screw	901.10	FD1	Draining	
Centering ring	①511.02	Screw plug	903.02	FD2	Draining	
Flexible clamb ring	517.01	Screw plug	914.06	FF2/FV1	Filling/Venting	
Flexible clamb ring	①517.02	Screw plug	903.07	FF4/FV4	Filling/Venting	
Shaft sleeve	<b>①524.01</b>	Screw plug	903.08		ambufan wantiaalima	tallatian
Bearing sleeve	①5 <b>29.</b> 01	Socket-hed cap screw	914.06		only for vertical ins	taliation
Bearing bush	545.01	Impeller nut	922.01	LO1	Leakage outlet	

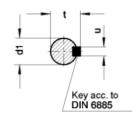


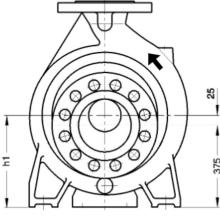
# **Pump dimensions -** Series NTWH Sizes on bearing bracket sizes 1, 2, 3 and 4











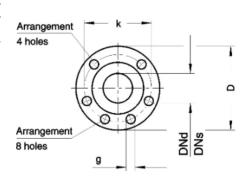
With size 250-400/01

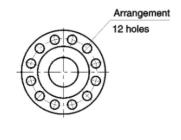
# Tolerances of joint dimensions according to DIN EN 735

Sense of Rotation: clockwise as seen from the driving side

Dimensions in mm Subject to alteration

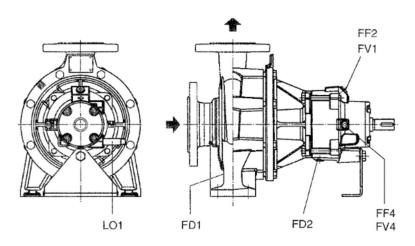
Flanges acc. to EN 1092-2 PN 16										
DNs/DNd	D	bf	k	G	No. of					
DI 10/DI 10		D1	IX.		holes					
25	115	16	85	14	4					
32	140	18	100	19	4					
40	150	18	110	19	4					
50	165	20	125	19	4					
65	185	20	145	19	4					
80	200	22	160	19	8					
100	220	24	180	19	8					
125	260	26	210	19	8					
150	285	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



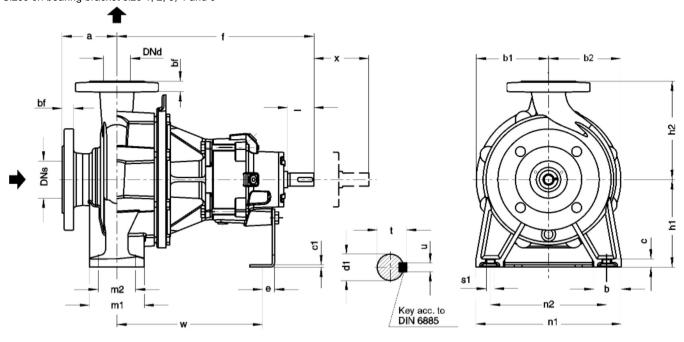
Bearing	Connections								
bracket size	Draii	ning	F Ve	Leakage outlet					
	FD1	FD2	FF2/FV1	FF4/FV4	L01				
1	G 1/4		G 1/4						
2		G1/4		G 1/4 only for vertical block	G 1/4				
3	G 3/8	0,4	G 1/2	and in-line installation					
4									

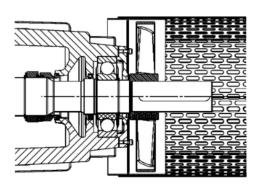
Connections FD1 in size 25-160/11 and 25-200/01 each G 1/2

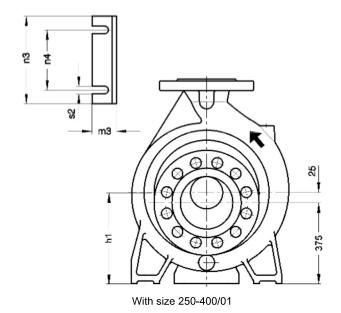
Bearing	Pump size	Suc-	Delive-		F	ump d	imensi	ons		Foot dimensions							Foot dimensions								Foot dimensions							Dis-		Shaf	end	_
bracket		tion	ry															fc	r	mant-	ac	c. to I	DIN 74	8												
size		flange	flange									l	l				l					scr	ew I	ling dim.				İ								
		DNs	DNd	а	f	b1	b2	h1	h2	b	С	c1	е	m1	m2	m3	n1	n2	n3	n4	w	s1	s2	х	d1	1	t	u								
	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								
1	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								
	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								
2	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		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		189	224	225	280	80	18	6	30	160	120	47	400	315	160	110	340	M 16	M 12		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		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								
	80-400/02	100	80	125		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								
3	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								
Ŭ	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	_	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								
	200-315/01	250	200	200		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								
4	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								
7	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







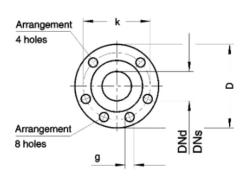
## Attention!

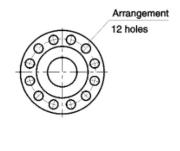
The following must be observed with size 200-250/81 (ALLHEAT 1000):

When delivered without included coupling guard, use perforated sheet metal as safety guarding to ensure adequate air flow.

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

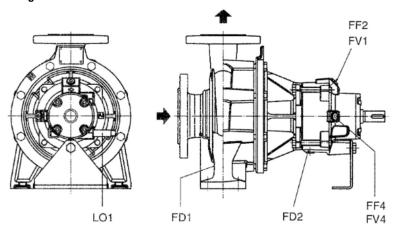
Flanges acc. to EN 1092-2 PN 25									
DNs/DNd	D	bf	k	g	No. of holes				
25	115	18	85	14	4				
32	140	20	100	19	4				
40	150	20	110	19	4				
50	165	22	125	19	4				
65	185	24	145	19	8				
80	200	26	160	19	8				
100	235	28	190	23	8				
125	270	30	220	28	8				
150	300	34	250	28	8				
200	360	34	310	28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







# Arrangement of connections - Series CTWH



Bearing	Connections								
bracket size	Draii	ning	F V	Leakage outlet *					
3120	FD1	FD2	FF2/FV1	enting FF4/FV4	L01				
	וטז	FDZ	FFZ/FVI	FF4/FV4	LUI				
1			G 1/4						
2	G 1/2	G 1/4		G 1/4 only for vertical block	G 1/4				
3	0 1/2	0 1/4	G 1/2	and in-line installation	0 1/4				
4									

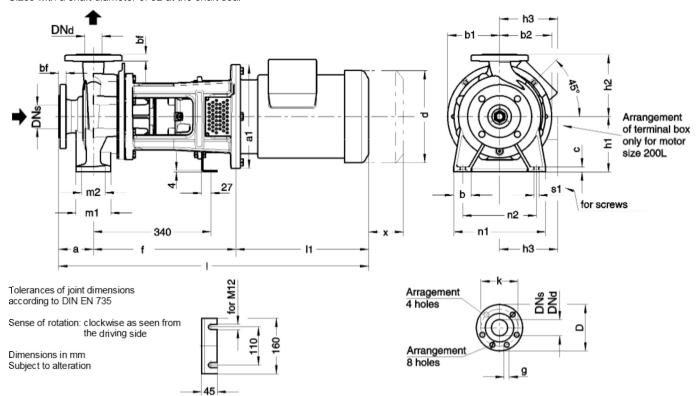
\* See page 11 for ALLHEAT 1000 positions and connections

Dimensi	ons in	mm
Subject t	to alte	ration

Bearing	Pump size	Suc-	Deliv-		F	ump d	limensi	ons							F	oot di	mensio	ons						Dis-		Shaf	end	
bracket size		tion	ery																			fo		mant-				
SIZE		flange	flange									l	ı	l								scr	ew 	ling dim.				ı
		DNs	DNd	а	f	b1	b2	h1	h2	b	С	c1	е	m1	m2	m3	n1	n2	n3	n4	W	s1	s2	Х	d1	1	t	u
	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
1	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
	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		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 50-250/11	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
		80	50	125	470	170	170	180	225	65	15	4	30	125	95	45	320	250	160	110	340	M 12	M 12	100	32	80	35 35	10
2	50-315/11 65-200/11	80 100	50 65	125 100	470 470	200 170	200 170	225 180	280 225	65 65	20 15	6	28	125 125	95 95	47 45	345 320	280 250	160 160	110 110	340 340	M 12	M 12	100 120	32	80	35	10
	65-250/11	100	65	125		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	470 470	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
	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		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
3	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
Ü	125-250/11	150	125	140		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
	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
4	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



#### Series NBWH

	Flanges	acc.to El	N 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

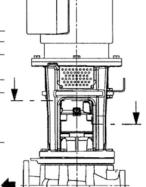
		Conne	ctions	
Draii	ning		ling/ nting	Leakage outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
G 1/4	G 1/4	G 1/4	G 1/4 only for vertical installation	G 1/4

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

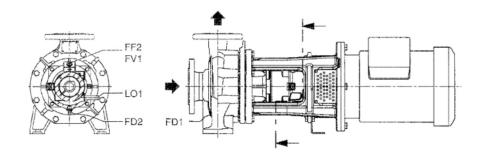
# Series CBWH

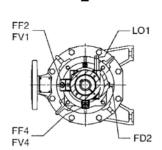
_	I	Flanges ac	c.to EN 1	092-2 PI	N 25	
_	DNs/DNd	D	bf	k	g	No. of holes
	25	115	18	85	14	4
	32	140	20	100	19	4
	40	150	20	110	19	4
	50	165	22	125	19	4
	65	185	24	145	19	8
	80	200	26	160	19	8
	100	235	28	190	23	8
_	125	270	30	220	28	8

		Connecti	ons	
Dra	ining		ling/ nting	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 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!

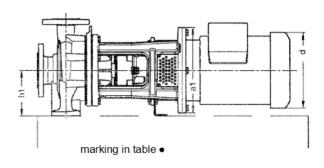
Binding motor dimension information must be submitted with each order.

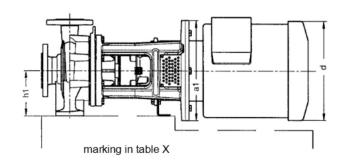
$$\begin{array}{ccc}
a_1 & d \\
h1 > & or & - \\
2 & 2
\end{array}$$

Base plate and/or foundation design

$$a_1 \qquad \qquad d$$

$$h1 \le \frac{-}{2} \quad \text{or} \quad \frac{-}{2}$$





# n = 1450 / 1750 1/min

Pump	Motor		Perfor-											Unit di	imensi	ions									
size	size	or ign	mance											Offic di	IIICIIO	0113								T	_
		and/or design ove									Pump									Motor di	mension	IS			nent haft tool
		e plate and idation des see above																			imated,			1	Assignment plug-in shaft/ motor stool
		Base plate and/or foundation design see above		Flar	nges										Foot				depe	nding or	manufa	acturer		dim.	Ass plug mo
		B 2	KW	DNs	DNd	а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	d	h3	1	1	х	
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
25 200/04	80	•	0,55 0,75	40	OF.	00	274	420	400	400	400	ΕO	45	400	70	240	400	M 40	200	162	124	234	685	400	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
	80	•	0,55 0,75																	162	124	234	685		19/200
32-160/01	90 S	•	1,1	50	32	80	371	123	123	132	160	50	15	100	70	240	100	M 12	200	181	130	282	733	102	24/200
32-100/01	90 L	•	1,5	] 30	32	00	3/1	123	123	132	100	30	13	100	10	240	130	IVI 12		181	130	282	733	102	24/200
	100 L	•	2,2 3																250	203	158	312	763		28/250
	80	•	0,55 0,75											ļ						162	124	234	685		19/200
32-200/01	90 S	•	1,1	50	32	80	371	124	130	160	180	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200
02 200/01	90 L	•	1,5	00	02	"	0, ,	12	100	100	100	00	'	100	"	-10	100	12		181	130	282	733	102	24/200
	100 L	•	2,2 3																250	203	158	312	763		28/250
	80	•	0,55 0,75											,						162	124	234	685		19/200
40-160/01	90 S	•	1,1	65	40	80	371	123	123	132	160	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200
	90 L	•	1,5																	181	130	282	733		24/200
	100 L	•	2,2 3																250	203	158	312	763		28/250
	80	•	0,55 0,75											ļ					000	162	124	234	705		19/200
40-200/01	90 S	•	1,1	65	40	100	371	125	135	160	180	50	15	100	70	265	212	M 12	200	181	130	282	753	102	24/200
	90 L	•	1,5																050	181	130	282	753		24/200
	100 L 90 S	•	2,2 3																250	203 181	158 130	312 282	783 705		28/250 24/200
		•	1,1																200					-	
40.050/04	90 L	•	1,5	CE.	40	400	371	150	150	400	225	C.E.	4.5	105	0.5	220	250	M 40		181	130	282	705	0.5	24/200
40-250/01	100 L 112 M	•	2,2   3	65	40	100		150	156	180	225	65	15	125	95	320	200	M 12	250	203 228	158 171	312	783 806	85	28/250 28/250
	132 S	•	5.5				412												300	266	196	375	887	1	38/300
	132 3	•	5,5	l	l	l	412				l					l	l		300	200	190	3/3	001	x 102 - 102 - 102 - 102 - 102	30/300



## 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.

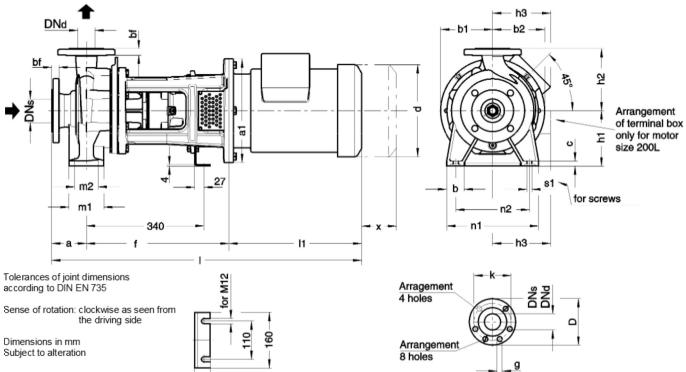
#### n = 1450 / 1750 1/min

Substitution   Subs	Pump	Motor	_	Perfor-											Unit d	imens	ions									
No.	size	size	plate and/or ation design oove page19	mance								Pump								4	appro	ximated			mant-	signment g-in shaft/ otor stool
No.			Base ounds		Flar	nges										Feet				depe	enaing o	n manut	acturer			As: plug
Section   Sect			S	KW	DNs	DNd	а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	d	h3	11	ĺ	Х	
Section   Sect		80	•	0,55 0,75	]																162	124	234	705		19/200
100	50_160/01	90 S	•	1,1	65	50	100	371	125	130	160	180	50	15	100	70	165	212	M 12	200	181	130	282		102	
Solution	30-100/01	90 L	•	_	] 03	30	100	371	125	130	100	100	30	13	100	10	103	212	IVI 12						102	
Second   S		100 L	•	,																250						
Figure   F			•		]																					
Table   Tabl			•	,																200					_	
100   100	50-200/01		•		65	50	100	371	133	145	160	200	50	15	100	70	265	212	M 12						102	
112 M	00 200,0.			- '	"											' "	-00			250						
Part					_																				_	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			_					412																		
Section   112 M				-	-				}											200						
132 S				- '				371												250						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	50-250/01				65	40	100		156	169	180	225	65	15	125	95	320	250	M 12						85	
80       0,55   0,75					-			412												300					-	
S																										
65-160/01 90 L					-															000					-	
100	05 400/04		_			C.F.	400	074	400	400	100	200	0.5	45	405	١	200	242	N 40	200					400	
112 M	00-100/01				80	00	100	3/1	133	102	100	200	00	15	125	95	280	212	W 12						102	
Part					ł															250					-	
Figure   F																										
60-200/02   100 L   •				,	-															200					{	
100-   160/01   100 L     2.2   3   128     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     3   125     32     32     3     3					-			371																	1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	60-200/02			- '	80	65	100		160	170	180	225	65	15	125	95	320	250	M 12	250					102	
132 M																									1	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					1			412												300					┨	
80-160/01   90 L   •   1,5   1,0   1	-																									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					1															200			_		1	
112 M	80-160/01				100	80	125	371	136	170	180	225	65	15	125	95	320	250	M 12						102	
100- 160/01 12 S • 5,5	00 100/01				1.00		120		100	'''	100			"	120		020			250					102	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					1			412	ł											300					1	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	-																									
100- 160/01 121 M • 4 125 100 125 165 200 200 280 65 15 125 95 320 250 M 12 250 228 171 335 831 102 28/250 38/300					1			371																	1	
160/01 132 S • 5,5 412 38/300 266 196 375 912 38/300					125	100	125		165	200	200	280	65	15	125	95	320	250	M 12	250					102	
	160/01				1						"			-					-	0.5.5					1	
					1			412												300					1	





Sizes with a shaft diameter of 32 at the shaft seal



Series CBWH

# Series NBWH

	Flanges	acc. to E	N 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

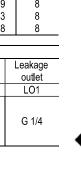
45

		Connec	ctions	
Drai	ning		ling/ nting	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

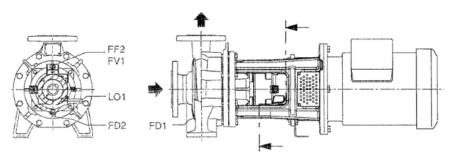
F	Flanges acc	c. to EN 1	1092-2 P	N 25	
DNs/DNd	D	bf	k	g	No. of holes
25	115	18	85	14	4
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8
80	200	26	160	19	8
100	235	28	190	23	8
125	270	30	220	28	8

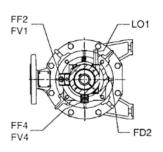
		Connecti	ons	
Dra	ining	Fill	ing/	Leakage
Dia	iiiig	Ver	nting	outlet
FD1	FD2	FF2 / FV1	FF4 / FV4	LO1
			G 1/4	
G 1/2	G 1/4	G 1/4	only for	G 1/4
G 1/2	G 1/4	G 1/4	vertical	G 1/4
			installation	



# FD1

# 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!

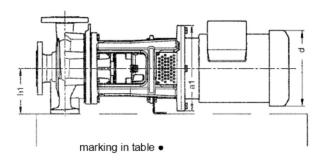
Binding motor dimension information must be submitted with each order.

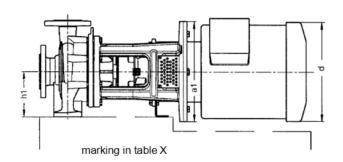
$$\begin{array}{ccc}
a_1 & d \\
h1 > \frac{}{} & \text{or} & \frac{}{} \\
2 & 2
\end{array}$$

Base plate and/or foundation design

$$a_1 \qquad \qquad d$$

$$h1 \le \frac{-}{2} \quad \text{or} \quad \frac{-}{2}$$





# n = 2900 / 3500 1/min

																							Subje	ect to alter	ation
Pump	Motor	<u> </u>	Perfor-											Un	it dim	ensior	ıs								
size	size	Base plate and/or foundation design see above	mance	Flar	nges						Pump				Feet					Motor di approx nding or	imated,			Subject to alterating dim.  I x 685 733 733 763 786 786 787 886 867 733 763 786 867 973 786 867 973 786 887 973 788 887 993 993 993 993	Assignment plug-in shaft/ motor stool
		To Ba	KW		DNd	а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	d	h3	1		x	
	80	•	0,75 1,1			-		-				_	Ť					-		162	124	234	685		19/200
0= 100///	90 S	•	1,5																200	181	130	282	733	1	24/200
25-160/11	90 L	•	2,2	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12		181	130	282	733	102	24/200
	100 L	•	3																250	203	158	312	763	1	28/250
	112 M	•	4																250	228	171	335	786	]	28/250
·	90 S	•	1,5																200	181	130	282			24/200
	90 L	•	2,2				371												200	181	130	282	_		24/200
25-200/01	100 L	•	3	40	25	80	0, 1	132	132	160	180	50	15	100	70	240	190	M 12	250	233	158	312		102	28/250
	112 M	•	4																	228	171	335		ļ	28/250
	132 S	•	5,5 7,5				412												300	266	196	375			38/300
	90 L	•	2,2				074												200	181	130	282	_	ļ	24/200
32-160/01	100 L	•	3	F0	20		371	400	400	400	400		4.5	400	70	040	400		250	203	158	312		400	28/250 28/250
32-160/01	132 S	X	5.5 7.5	50	32	80		123	123	132	160	50	15	100	70	240	190	M 12	300	228 266	171 196	335 375		102	38/300
	160 M	X	5,5 7,5 11 15				412												350	320	234	481		-	42/350
	112 M	•	4				371												250	228	171	335			28/250
	132 S	•	5,5 7,5				0/1												300	266	196	375		1	38/300
32-200/01	160 M	X	11 15	50	32	80	412	124	130	160	180	50	15	100	70	240	190	M 12		320	234	481		102	42/350
	160 L	Х	18,5																350	320	234	481		1	42/350
	90 L	•	2,2																200	181	130	282	733		24/200
	100 L	•	3				371												250	203	158	312	763	1	28/250
40-160/01	112 M	•	4	65	40	80		123	123	132	160	50	15	100	70	240	100	M 12	250	228	171	335		102	28/250
40-100/01	132 S	Х	5,5 7,5	00	40	00		123	123	132	100	50	13	100	10	240	190	IVI 12	300	266	196	375		] 102	38/300
	160 M	Х	11 15				412												350	320	234	481			42/350
	160 L	Х	18,5																	320	234	481			42/350
	112 M	•	4				371												250	228	171	335		ļ	28/250
	132 S	•	5,5 7,5																300	266	196	375			38/300
40-200/01	160 M	X	11 15	65	40	100	440	125	135	160	180	50	15	100	70	265	212	M 12	050	320	234	481		102	42/350
	160 L	X	18,5				412												350	320	234	481			42/350
	180 M 200 L	X	22 30 37													ļ			400	375 415	275 310	610 665	1122	ł	48/350 55/400
	200 L	_ ^	30 37			<u> </u>	<u> </u>	<u> </u>					<u> </u>	<u> </u>			<u> </u>	l	400	410	310	000	11//	l	33/400



# 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

Pump	Motor	or Jin 22	Perfor-											Unit di	imensi	ions									
size	Size	Base plate and/or foundation design see above page 22	mance								Pump										imensior ximated,	าร		Dismant- ling	Assignment plug-in shaft/ motor stool
		e pla ndatio abov		Flor	nges										Feet				depe		n manuf	acturer		dim.	ssig lug-ir noto
		Bas four see	KW	DNs		а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	d	h3	<u> </u>	ı	х	d I
	132 S	•	5,5 7,5	5110	Ditta	u		D.	<i>D</i> _		112		-		1112		112	01	300	266	196	375	887		38/300
	160 M	•	11 15																	320	234	481	993		42/350
40-250/01	160 L	•	18,5	65	40	100	412	150	156	180	225	65	15	125	95	320	250	M 12	350	320	234	481	993	85	42/350
	180 M	Χ	22																	375	275	610	1122		48/350
	200 L	Х	30   37																400	415	310	665	1177		55/400
	100 L	•	3				371												250	203	158	312	783		28/250
50.400/04	112 M	•	4			400		405	400	400	400		45	400	70	005			200	228	171	335	806	400	28/250
50-160/01	132 S	•	5,5 7,5	65	50	100	412	125	130	160	180	50	15	100	70	265	212	M 12	300	266	196	375	887	102	38/300
	160 M 160 L	X	11   15 18,5				412												350	320 320	234 234	481 481	993 993	-	42/350 42/350
	132 S	•	5,5 7,5																300	266	196	375	887		38/300
	160 M	X	11 15																300	320	234	481	993	-	42/350
50-200/01	160 L	X	18.5	65	50	100	412	133	145	160	200	50	15	100	70	265	212	M 12	350	320	234	481	993	102	42/350
200,01	180 M	X	22																	375	275	610	1122	1	48/350
	200 L	X	30 37																400	415	310	665	1177	1	55/400
	160 M	•	11 15																	320	234	481	993		42/350
50-250/01	160 L	•	18,5	65	50	100	412	156	169	180	225	65	4.5	125	95	320	250	M 12	350	320	234	481	993	85	42/350
30-230/01	180 M	Χ	22	00	30	100	412	100	109	100	223	00	15	125	90	320	250	IVI 12		375	275	610	1122	] 65	48/350
	200 L	Χ	30 37																400	415	310	665	1177		55/400
	112 M	•	4				371												250	228	171	335	806		28/250
	132 S	•	5,5 7,5															ļ	300	266	196	375	887		38/300
65-160/01	160 M	Х	11   15	80	65	100		133	162	160	200	65	15	125	95	280	212	M 12		320	234	481	993	102	42/350
	160 L	X	18,5				412											ļ	350	320	234	481	993	-	42/350
	180 M 200 L	X	22 30 37															ŀ	400	375 415	275	610	1122 1177	-	48/350
	132 S	λ •	30 37 5,5 7,5																300	266	310 196	665 375	887		55/400 38/300
	160 M	•	11 15																300	320	234	481	993	1	42/350
65-200/02	160 L	•	18,5	80	65	100	412	160	170	180	225	65	15	125	95	320	250	M 12	350	320	234	481	993	102	42/350
00 200/02	180 M	Х	22	00	"	100	712	100	170	100	220	00	10	120	00	020	200	IVI 12		375	275	610	1122	102	48/350
	200 L	X	30 37																400	415	310	665	1177	1	55/400
	132 S	•	5,5 7,5																300	266	196	375	912		38/300
	160 M	•	11 15																	320	234	481	1018	1	42/350
80-160/01	160 L	•	18,5	100	80	125	412	136	170	180	225	65	15	125	95	320	250	M 12	350	320	234	481	1018	102	42/350
	180 M	Х	22																	375	275	610	1147		48/350
	200 L	Х	30 37																400	415	310	665	1202		55/400
٦	132 S	•	5,5 7,5																300	266	196	375	912		38/300
100-	160 M	•	11   15																	320	234	481	1018		42/350
160/01	160 L	•	18,5	125	100	125	412	165	200	200	280	65	15	125	95	320	250	M 12	350	320	234	481	1018	102	42/350
	180 M	•	22																400	375	275	610	1147		48/350
	200 L	Χ	30 37		l	l													400	415	310	665	1202		55/400



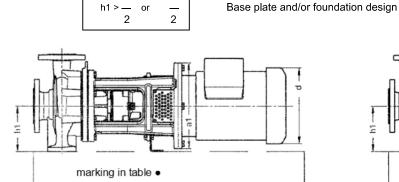
## Unit dimensions - Series CBWH

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

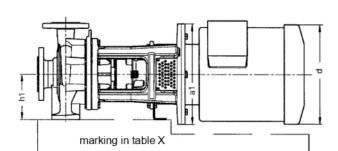
When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.

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.



or



n = 1450 / 1750 1/min

Dimensions in mm

																							Subje	ct to altera	1
Pump	Motor	or	Perfor-											Un	it dim	ensior	าร								
size	size	Base plate and/or foundation design see above	mance								Pump	1								Motor di appro ending or	kimated,			Dismant- ling dim.	Assignment plug-in shaft/
		sase ound se		_	nges										Feet				uepe					uiii.	용금
		E U	KW		DNd	а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	d	h3	1	ı	Х	
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																	162	124	234	685		19/20
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	24/20
	90 L	•	1,5																	181	130	282	733		24/20
	80	•	0,55 0,75																	162	124	234	685		19/20
32-160/01	90 S	•	1,1	50	32	80	371	130	130	132	160	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/20
	90 L	•	1,5																	181	130	282	733		24/20
	80	•	0,55 0,75																000	162	124	234	685		19/200
32-200/01	90 S	•	1,1	50	32	80	371	130	135	160	180	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/200
	90 L	•	1,5																050	181	130	282	733		24/20
	100 L	•	2,2 3																250	203	158	312	763		28/25
	80	•	0,55 0,75																000	162	124	234	685		19/20
40-160/01	90 S	•	1,1	65	40	80	371	130	130	132	160	50	15	100	70	240	190	M 12	200	181	130	282	733	102	24/20
	90 L	•	1,5																250	181	130	282	733	-	24/20
	100 L	•	2,2 3																250	203	158	312	763		28/25
	80	•	0,55 0,75																200	162	124	234	705		19/20
40-200/01	90 S 90 L	•	1,1	65	40	100	371	130	140	160	180	50	15	100	70	265	212	M 12	200	181 181	130	282	753 753	102	24/20
		•																	250		158	282	783	-	24/20
	100 L 80	•	2,2 3 0,55 0,75																250	203 162	124	312 234	705		28/25 19/20
	90 S	•						ŀ											200	181	130	282	753		24/20
50-150/11	90 S	•	1,1	80	50	100	371	130	130	160	180	50	15	100	70	265	212	M 12	200	181	130	282	753	102	24/20
	100 L	•	2.2 3																250	203	158	312	783		28/25
	80		0,55 0,75																250	162	124	234	705		19/20
	90 S	•	1,1	ł															200	181	130	282	753		24/20
	90 S	•	1,1	ł			371												200	181	130	282	753	-	24/20
50-150/11	100 L	•	2,2 3	80	50	100	3/1	135	150	160	200	50	15	100	70	265	212	M 12		203	158	312	783	102	28/25
	112 M	•	2,2   3																250	228	171	335	806	-	28/25
	132 S	•	5,5	ł			412	┨											300	266	196	375	887	-	38/300
	80	•	0,55 0,75				412												300	162	124	234	705		19/20
	90 S	•	1,1																200	181	130	282	753	1	24/200
65/160/11	90 S	•	1,1	100	65	100	371	130	155	160	200	65	15	125	95	280	212	M 12	200	181	130	282	753	102	24/200
03/100/11	100 L	•	2,2 3	100	00	100	3/1	130	100	100	200	00	10	120	30	200	212	IVI 12		203	158	312	783	102	28/25
	112 M	•	2,2   3																250	228	171	335	806	1	28/25
	90 S	•	1,1																	181	130	282	778		24/20
	90 S	•	1,1																200	181	130	282	778	1	24/20
80-160/11	100 L	•	2,2 3	125	80	125	371	145	180	180	225	65	15	125	95	320	250	M 12		203	158	312	808	102	28/25
00-100/11	112 M	•	2,2   3	123	00	123		143	100	100	223	00	13	123	90	320	250	IVI 12	250	228	171	335	831	102	28/25
	132 S	•	5,5	l	ł		412	ł		ł	l			l					300	266	196	375	912	1	38/300
	132 3	•	٥,٥		<u> </u>		412	<u> </u>											200	200	130	313	312		30/300



# 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!

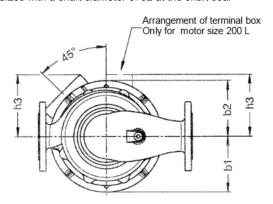
Binding motor dimension information must be submitted with each order.

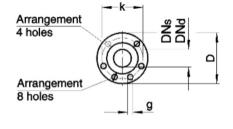
## n = 2900 / 3500 1/min

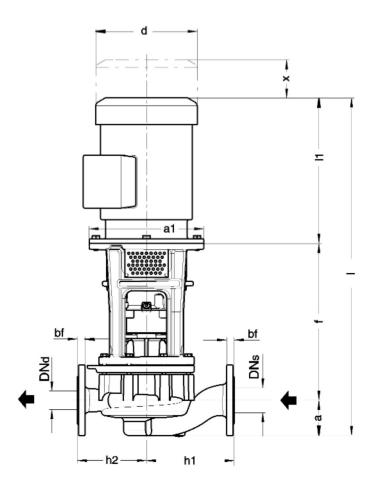
Note																								Subje	ct to alter	ation
1		Motor	or n	Perfor-											Uni	t dime	ension	S								
1	size	size	nd/c əsig e	mance																	M-4 11				D:	ヹ゙゙゙゙゙゠゙゙゙゙゙゙゠
1			te al n de lbov									Pump	)										15			isto sto
1			pla datic																	dene			octurar			ssign Jari Jari Jari
1			sase Sunc		Fla	nge														исрс	iluling of	illallul	deturer		uiii.	# <del> </del>   E
Substitution   Subs			ш ф		DNs	DNd	а	f	b1	b2	h1	h2	b	С	m1	m2	n1	n2	s1	a1	-				Х	
1		80	•	0,75 1,1																	162	124	234	685		19/200
Month   Mont	25 160/11	90 S	•	1,5																200	181	130	282	733		24/200
112M	23-100/11	90 L	•	2,2	40	25	80	371	128	128	132	160	50	15	100	70	240	190	M 12		181	130	282	733	102	24/200
172 M		100 L	•	3																250	203	158	312	763		28/250
Section   Sect		112 M	•																	230	228		335			28/250
Section   Sect		90 S	•	1,5																200	181	130	282	733		24/200
100   100			•	2,2	]			371												200	181	130			]	
112 M	25-200/01	100 L	•	3	40	25	80	371	132	132	160	180	50	15	100	70	240	190	M 12	250	203	158	312	763	102	28/250
Section   Sect		112 M	•	4																230	228	171	335	786		28/250
32-16001   100 L   •		132 S	•	5,5 7,5				412												300	266	196	375	867		38/300
112   M   W   W   W   W   W   W   W   W   W		90 L	•	2,2																200	181	130	282	733		24/200
112 M	32_160/01	100 L	•	3	50	32	ลก	371	130	130	132	160	50	15	100	70	240	100	M 12	250	203	158		763	102	28/250
122   M   -	32-100/01	112 M	•		] 30	32	00		130	130	132	100	30	13	100	10	240	190	W 12	230	228	171	335	786	102	28/250
32-20001   132 S		132 S	Χ	5,5 7,5				412												300	266	196	375	867		38/300
160 M		112 M	•	4				371																		
100	32-200/01	132 S		5,5 7,5	50	32	80	412	130	135	160	180	50	15	100	70	240	190	M 12						102	
Math		160 M	Х					712																		
40-20001   112 M		90 L	•	· ·																200						
March   Marc			•					371												250						
160 M	40-160/01	_		<u> </u>	65	40	80		130	130	132	160	50	15	100	70	240	190	M 12						102	
112 M								412																		
40-200/01   132 S			Х	11   15																						
40-200				!				371																		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	40-200/01				65	40	100		130	140	160	180	50	15	100	70	265	212	M 12	300					102	
100   100		_			ł			412												350						
112 M																										
50-160/11   132 S   •   5,5   7,5   7,5   80   50   100   412   130   13					ł			371												250				_		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	E0 400/44				00	E0.	100		120	120	100	100	E0.	15	100	70	200	242	M 40	200					100	
160 L   X   18.5   S   S   S   S   S   S   S   S   S	30-100/11	_			- 00	30	100	112	130	130	100	100	30	13	100	70	203	212	IVI 12	300					102	
132 S   •   5,5   7,5   160 M   X   11   15   150					1			412												350						
160 M	-	_																		300						
Figure   F					1															- 000					1	
180 M	50-200/11	_			80	50	100	412	135	150	160	200	50	15	100	70	265	212	M 12	350					102	
200 L   X   30   37   37   37   37   37   37   37	00 200/11				"	00	100	' ' -	100	100	100	200			'''	10	200	- ' -		000					102	
112 M					1															400				_	1	
132 S   •   5,5   7,5   7,5   7,6   7,5	-	_						371																		
65-160/11   160 M					1															_			-		1	
65-160/11   160 L X				<del>                                     </del>	1																					
200 M   X   22	65-160/11				100	65	100	412	130	155	160	200	65	15	125	95	280	212	M 12	350				_	102	<b></b>
200 L   X   30   37		_			1																		_	_	1	
132 S   •   5,5   7,5   160 M   •   11   15   15   15   15   15   15					1															400					1	
80-160/11   160 L   • 18,5   125   80   125   412   145   180   180   X   22																										
80-160/11 160 L • 18,5 125 80 125 412 145 180 180 225 65 15 125 95 320 250 M 12 350 320 234 481 1018 102 42/350 180 M X 22					1																				1	
180 M X 22 375 610 1147 48/350	80-160/11	160 L	•	18,5	125	80	125	412	145	180	180	225	65	15	125	95	320	250	M 12	350	320	234	481	_	102	42/350
200 L X 30 37   400 415 310 665 1202 55/400		180 M	Х		1																375	275	610	1147	1	48/350
		200 L	X	30 37																400	415	310	665	1202	<u> </u>	55/400



# **Unit dimensions –** Series NIWH Sizes with a shaft diameter of 32 at the shaft seal



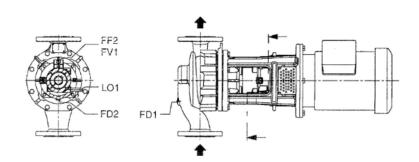


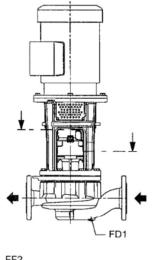


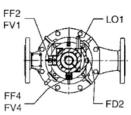
	Flanges a	acc. to EN	l 1092-2 PN	l 16	
DNs/DNd	D	bf	k	g	No. of holes
32	140	18	100	19	4
40	150	18	110	19	4
50	165	20	125	19	4
65	185	20	145	19	4
80	200	22	160	19	8
100	220	24	180	19	8

		Connections		
Drai	ning	Fill	ing/	Leakage
		Ver	nting	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











## 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

n = 1450 / 1750 1/min

Sense of rotation: Clockwise as seen from the driving side

	T												ving side			ibject to	alteration
Pump	Motor	Perfor-							Unit din	nensions							Assignment
size	size	mance				F	Pump						mensions			Disman-	plug-in shaft/ motor stool
						<u> </u>	чтр					approx	,			tling	1110101 51001
			Flar	nges							de	pending or	manufacti	urer		dim.	
		KW	DNs	DNd	а	f	b1	b2	h1	h2	a1	d	h3	l1	I	Х	
25-200/01	80	0,55 0,75	32	32	91	371	132	132	190	180	200	162	124	234	694	102	19/200
20 200/01	90 S	1,1	UZ.	52	01	371	102	102	130	100	200	181	130	282	742	102	24/200
	80	0,55 0,75										162	124	234	702	_	19/200
32-160/01	90 S	1,1	40	40	99	371	123	123	200	190	200	181	130	282	750	102	24/200
	90 L	1,5										181	130	282	750		24/200
	100 L	2,2 3									250	203	158	312	780		28/250
	80	0,55 0,75									000	162	124	234	698	-	19/200
32-160/01	90 S 90 L	1,1 1,5	40	40	95	371	124	130	200	190	200	181 181	130 130	282 282	746 746	102	24/200 24/200
	100 L	2,2 3									250	203	158	312	776	-	28/250
	80	0,55 0,75									250	162	124	234	708		19/200
	90 S	1,1									200	181	130	282	756	1	24/200
40-160/01	90 L	1,5	50	50	105	371	123	123	210	200	200	181	130	282	756	102	24/200
	100 L	2,2 3									250	203	158	312	786	1	28/250
	80	0,55 0,75										162	124	234	708		19/200
10.000/04	90 S	1,1	<b>-</b> ^	<b>5</b> 0	405	074	405	405	000	205	200	181	130	282	756	400	24/200
40-200/01	90 L	1,5	50	50	105	371	125	135	220	205		181	130	282	756	102	24/200
	100 L	2,2 3									250	203	158	312	786	1	28/250
	90 S	1,1									200	181	130	282	756		24/200
	90 L	1,5				371					200	181	130	282	756		24/200
40-250/01	100 L	2,2 3	50	50	105	3/1	148	156	240	225	250	203	158	312	786	85	28/250
	112 M	4										228	171	335	809		28/250
	132 S	5,5				412					300	266	196	375	890		38/300
	80	0,55 0,75										162	124	234	717		19/200
50-160/01	90 S	1,1	65	65	114	371	125	130	230	220	200	181	130	282	765	102	24/200
	90 L	1,5									050	181	130	282	765		24/200
	100 L	2,2 3									250	203	158 124	312 234	795		28/250 19/200
	80 90 S	0,55 0,75									200	162 181	130	282	717 765	-	24/200
	90 L	1,1 1,5				371					200	181	130	282	765	1	24/200
50-200/01	100 L	2,2 3	65	65	114	3/1	132	146	240	225		203	158	312	795	102	28/250
	112 M	4									250	228	171	335	818	1	28/250
	132 S	5,5				412					300	266	196	375	899	1	38/300
	90 L	1,5									200	181	130	282	767		24/200
	100 L	2,2 3				371					250	203	158	312	797	1	28/250
50-250/01	112 M	4	65	65	116		156	165	265	245	250	228	171	335	820	85	28/250
	132 S	5,5				412					300	266	196	375	901		38/300
	132 M	7,5				412					300	266	196	375	901		38/300
	80	0,55 0,75										162	124	234	725		19/200
	90 S	1,1									200	181	130	282	773		24/200
65-160/01	90 L	1,5	80	80	122	371	133	162	270	230		181	130	282	773	102	24/200
	100 L	2,2 3									250	203	158	312	803	4	28/250
	112 M											228	171	335	826		28/250
	90 S	1,1									200	181	130	282	755	-	24/200
	90 L	1,5				371						181 203	130 158	282 312	755 785	-	24/200 28/250
65-200/02	100 L 112 M	2,2   3	80	80	104		160	170	275	235	250	203	171	335	808	102	28/250
	132 S	5,5										266	196	375	889	1	38/300
	132 M					412					300	266	196	375	889	1	38/300
	90 S	1,1										181	130	282	783		24/200
	90 L	1,5				.=.					200	181	130	282	783	1	24/200
80-160/01	100 L	2,2 3	100	100	132	371	136	170	275	245	050	203	158	312	813	102	28/250
	112 M										250	228	171	335	836	1	28/250
	132 S					412	Ì	İ			300	266	196	375	917	1	38/300
									,	,			,				



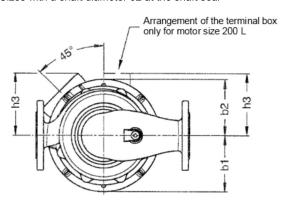
# Unit dimensions - Series NIWH

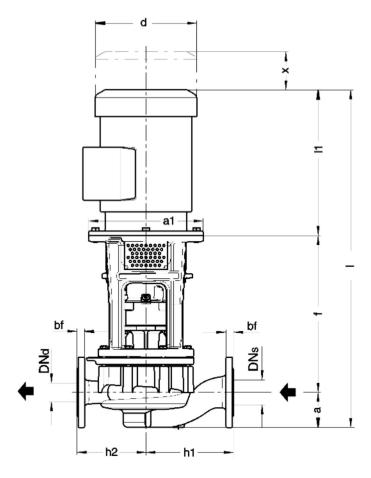
# n = 2900 / 3500 1/min

Pump	Motor	Perfor-							Unit dir	nensions							Assignment
size	size	mance				ı	oump					Motor dir	mensions imated.			Disman- tling	plug-in shaft/ motor stool
			Fla	inge							der		manufactu	ırer		dim.	
		KW	DNs	DNd	a	f	b1	b2	h1	h2	a1	d	h3	l1	1	Х	
	90 S 90 L	1,5 2,2									200	181 181	130 130	282 282	742 742		24/200 24/200
25-200/01	100 L	3	32	32	91	371	132	132	190	180		203	158	312	772	102	28/250
20 200/01	112 M	4	02	02	"		102	102	130	100	250	228	171	335	795	102	28/250
	132 S	5,5 7,5				412					300	266	196	375	876		38/300
	90 L	2,2									200	181	130	282	750		24/200
32-160/01	100 L 112 M	3 4	40	40	99	371	123	123	200	190	250	203 228	158 171	312 335	780 803	102	28/250 28/250
32-100/01	132 S	5,5 7,5	40	40	99		123	123	200	190	300	266	196	375	884	102	38/300
	160 M	11 15				412					350	320	234	481	990		42/350
	112 M	4				371					250	228	171	335	799		28/250
32-200/01	132 S	5,5 7,5	40	40	95	440	124	130	200	190	300	266	196	375	880	102	38/300
	160 M 160 L	11 15 18,5				412					350	320 320	234 234	481 481	986 986		42/350 42/350
	90 L	2,2									200	181	130	282	756		24/200
	100 L	3				371					250	203	158	312	786		28/250
40-160/01	112 M	4	50	50	105		123	123	210	200		228	171	335	809	102	28/250
10 100/01	132 S	5,5 7,5			'00	440	120	1.20	2.0	200	300	266	196 234	375	890		38/300
	160 M 160 L	11 15 18,5				412					350	320 320	234	481 481	996 996		42/350 42/350
	112 M	4				371					250	228	171	335	809		28/250
	132 S	5,5 7,5									300	266	196	375	890		38/300
40-200/01	160 M	11 15	50	50	105		125	135	200	205		320	234	481	996	102	42/350
10 200/01	160 L 180 M	18,5 22				412	120				350	320 375	234 275	481 610	996 1125		42/350 48/350
	200 L	30 37									400	415	310	665	1180		55/400
	132 S	5,5 7,5									300	266	196	375	890		38/300
	160 M	11 15										320	234	481	996		42/350
40-250/01	160 L	18,5	50	50	105	412	148	156	240	225	350	320	234	481	996	85	42/350
	180 M 200 L	22 30   37									400	375 415	375 310	610 665	1125 1180		48/350 55/400
	100 L	3				0=1						203	158	312	795		28/250
	112 M	4				371					250	228	171	335	818		28/250
50-160/01	132 S	5,5 7,5	65	65	114		125	130	230	220	300	266	196	375	899	102	38/300
	160 M 160 L	11 15				412					350	320 320	234 234	481 481	1005		42/350 42/350
	132 S	18,5 5,5 7,5									350	266	196	375	899		38/300
	160 M	11 15									000	320	234	481	1005		42/350
50-200/01	160 L	18,5	65	65	114	412	132	146	240	225	350	320	234	481	1005	102	42/350
	180 M	22									400	375	275	610	1134		48/350
-	200 L 160 M	30 37 11 15									400	415 320	310 234	665 481	1189 1007		55/400 42/350
	160 L	18,5					450				350	320	234	481	1007		42/350
50-250/01	180 M	22	65	65	116	412	156	165	265	245		375	275	610	1136	85	48/350
	200 L	30   37									400	415	310	665	1191		55/400
	112 M	4				371					250	228	171	335	826		28/250
	132 S 160 M	5,5 7,5 11 15									300	266 320	196 234	375 481	907		38/300 42/350
65-160/01	160 L	18,5	80	80	122	412	133	162	270	230	350	320	234	481	1013	102	42/350
	180 M	22										375	275	610	1142		48/350
	200 L	30 37									400	415	310	665	1197		55/400
	132 S 160 M	5,5 7,5 11 15									300	266 320	196 234	375 481	889 995		38/300 42/350
65-200/02	160 M	18,5	80	80	104	412	160	170	275	235	350	320	234	481	995	102	42/350
55 200,02	180 M	22		"	.,,			.,•		-50		375	275	610	1124		48/350
	200 L	30 37									400	415	310	665	1179		55/400
	132 S	5,5 7,5									300	266	196	375	917		38/300
80-160/01	160 M 160 L	11   15   18,5	100	100	132	412	136	170	170	245	350	320 320	234 234	481 481	1023	102	42/350 42/350
00-100/0 l	180 M	22	100	100	132	712	130	170	170	2+3	550	375	275	610	1152	102	48/350
	200 L	30 37									400	415	310	665	1207		55/400

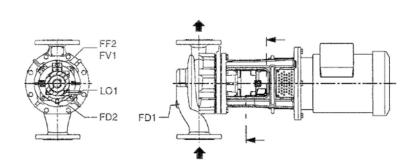


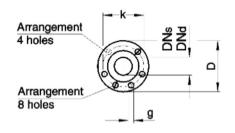
**Unit dimensions –** Series CIWH Sizes with a shaft diameter 32 at the shaft seal





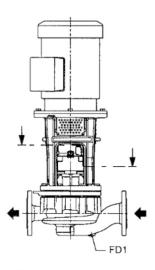
# Connections for horizontal and vertical installation

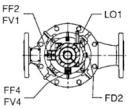




	Flange a	cc. to EN	1092-2 PN	25	
DNs/DNd	D	bf	k	g	No. of holes
32	140	20	100	19	4
40	150	20	110	19	4
50	165	22	125	19	4
65	185	24	145	19	8

		Connections		
Drai	ning	1	ing/ nting	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







#### 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

Pump	Motor	Perfor-							Unit dir	nensions							Assignment
size	size	mance	Pump Motor dimensions approximated, Flange depending on manufacture													Disman-	plug-in shaft/ motor stool
			Elo	nao			<u> </u>				do			ıror		tling dim.	1110101 31001
		KW	DNs	DNd	а	f	b1	b2	h1	h2	a1	d d	h3	11		X	
	80	0,55 0,75	פווע	DINU	а		D I	02		112	aı	162	124	234	694	, x	19/200
32-200/11	90 S	1.1	32	32	91	371	132	132	190	190	200	181	130	282	742	102	24/200
-	80	0,55 0,75										162	124	234	702		19/200
40-160/11	90 S	1,1	40	40	99	371	130	130	200	190	200	181	130	282	750	102	24/200
	90 L	1,5										181	130	282	750	1	24/200
	80	0,55 0,75										162	124	234	698		19/200
40-200/11	90 S	1,1	40	40	95	371	130	135	200	190	200	181	130	282	746	102	24/200
40-200/11	90 L	1,5	40	40	95	3/1	130	135	200	190		181	130	282	746	102	24/200
	100 L	2,2 3									250	203	158	312	776		28/250
	80	0,55 0,75										162	124	234	708	]	19/200
50-160/11	90 S	1,1	50	50	105	371	130	130	210	200	200	181	130	282	756	102	24/200
00 100/11	90 L	1,5	00	00	100	011	100	100	210	200		181	130	282	756	102	24/200
	100 L	2,2 3									250	203	158	312	795		28/250
	80	0,55 0,75										162	124	234	708	4	19/200
E0 000/44	90 S	1,1			405	074	400	405	000	005	200	181	130	282	756	400	24/200
50-200/11	90 L	1,5	50	50	105	371	130	135	220	205		181	130	282	756	102	24/200
	100 L 112 M	2,2 3									250	203 228	158 171	312 335	786 809	-	28/250 28/250
	80	0,55 0,75										162	124	234	717		19/200
	90 S	1,1									200	181	130	282	765	-	24/200
65-160/11	90 L	1,5	65	65	114	371	130	130	230	220	200	181	130	282	765	102	24/200
	100 L	2.2 3									250	203	158	312	795		28/250
	80	0,55 0,75										162	124	234	717		19/200
	90 S	1,1									200	181	130	282	765	1	24/200
05 000/44	90 L	1,5	0.5	٥.	444	371	404	440	040	005		181	130	282	765	400	24/200
65-200/11	100 L	2,2 3	65	65	114		134	148	240	225	250	203	158	312	795	102	28/250
	112 M	4									250	228	171	335	818		28/250
	132 S	5,5				412					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

Pump   Pump	Pump	Motor	Perfor-							Unit dir	nensions							Assignment
Flange   F	size	size	mance				-	⊃ump										plug-in shaft/
No.   No.						I						4						WOLDI SLOOI
Second   1.5   Seco			IZM			_		L.A	1 10	L.A	1.0						_	
32-200/11   100 L   3   32   32   91   371   132   132   190   180   200   181   130   282   742   202   203   168   312   772   102   28/250   2		00.0		DINS	DING	а	ı	DI	02	nı	nz	aı				742	X	24/200
100   3												200						
112 M   4   132 S   5.5   7.5   7.5   40   40   99   130   130   200   190   250   228   171   335   795   28/250   28/250   24/200   250   203   158   312   780   28/250	32_200/11			32	32	Q1	371	132	132	190	180						102	
132 S   5,5   7,5	32-200/11			02	02	31		102	102	130	100	250			-	_	- 102	
Math   Math							412					300	1				1	
Math   Math																		
March   Marc		100 L	,				371									_	1	
160 M   11   15	40-160/11	112 M	4	40	40	99		130	130	200	190	250		171	335	-	102	
180 M   11   15		132 S	5,5 7,5				440					300	266	196	375	884	1 1	38/300
132 S   5,5   7,5   160 M   11   15   160 L   18,5   160 L   18,		160 M	11 15				412					350	320	234	481	990	1	42/350
160 M   11   15   40   40   95   412   130   135   200   190   350   320   234   481   986   42/350		112 M	4				371					250	228	171	335	799		28/250
The color   The	40 200/11			40	40	05		130	135	200	100	300					102	
160   18,5	40-200/11		11 15	40	40	95	412	130	133	200	190	350					] 102 [	
The content of the																		
So-160/11												200						
112 M							371					250				_	]	
132 S   5,5   7,5   160 M   11   15   15   15   15   160 M   11   15   160 M   11   15   15   160 M   11   15	50-160/11			50	50	105		130	130	210	200						102	
100 M							412										'*-	
132 S   5,5   7,5   160 M   11   15   150 E   105 E																		
160 M   11   15   160 L   18.5   180 M   22   200 L   30   37   275   610   1125   280/250   280/250   200 L   30   37   275   610   200 L   30   37   275   275   280/250			7				3/1						_				-	
160 L												300					-	
180 M   22   200 L   30   37   375   275   610   1125   48/350   400   415   310   665   1180   55/400   400   415   310   665   1180   55/400   400   415   310   665   1180   55/400   400   415   310   665   1180   55/400   400   415   310   665   1180   400   415   310   665   1180   412   412   412   412   412   412   412   413   414   415   415   416	50-200/11			50	50	105	440	130	135	220	205	250					102	
200 L   30   37   371							412					350					-	
100 L   3   112 M   4     4     12   130   130   230   220   203   158   312   795   28/250   28/250   228   171   335   818   28/250   28/250   228   171   335   818   28/250   28/												400						
112 M												400						
65-160/11   132 S   5,5   7,5   65   65   114   412   130   130   230   220   300   266   196   375   899   42/350   320   234   481   1015   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   42/350   320   234   481   1005   375   3899   38/300   3							371					250						
160 M   11   15	65-160/11			65	65	114		130	130	230	220	300					1	
160 L	00 100/11						412	100	100	200							102	
132 S   5,5   7,5   160 M   11   15   65-200/11   160 L   18,5   65   65   114   412   134   148   240   225   350   320   234   481   1005   102   42/350   320   234   481   1005   102   42/350   320   375   275   610   1134   48/350   320   375   3			_									350					1 1	
160 M   11   15   65-200/11   160 L   18,5   65   65   114   412   134   148   240   225   350   320   234   481   1005   102   42/350   180 M   22   375   275   610   1134   48/350												300						
180 M   22		160 M											320	234	481	1005	1	42/350
	65-200/11	160 L		65	65	114	412	134	148	240	225	350	320	234	481	1005	102	42/350
200 L 30 37 400 415 310 665 1189 55/400		180 M											375	275	610	1134	1	48/350
		200 L	30 37									400	415	310	665	1189		55/400

Subject to technical alterations.



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E-mail: service@allweiler.de Internet: http://www.allweiler.com 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.



Only those who perform research can create sustainable, innovation-based benefits. The German Stifterverband für die Deutsche Wissenschaft has awarded Allweiler GmbH its "Innovation Through Research" certificate for its commitment to research.