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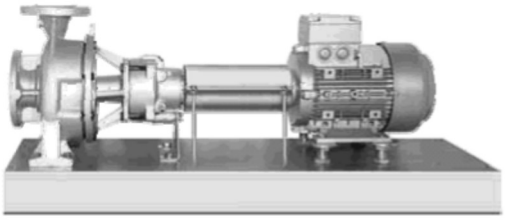
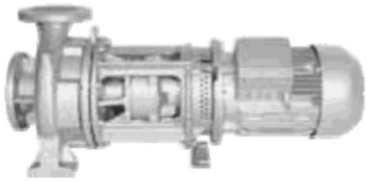
# ALLHEAT®

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 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 type | | Material code DIN EN 12756 |
|---|---|---|---|
| **U2.11A** and **U2.13A** mechanical seal **U3.3A** unbalanced mech. seal | Sliding ring | Carbon graphite, antimony impregnatet | A* |
| | Counter ring | SiC, silicone carbide | Q1* |
| | 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 pressure① p [bar] | max. pump output Q [$m^3$/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 specifed 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 ① t ≤ [°C] | Thermal oil ② [°C] |
|---|---|---|---|---|---|---|
| | | | water | oil | | |
| NTWH NBWH NIWH | 16 | U3.3A - K1 / U2.11A - S1 | 12 | 8 | 183 | t = - 30 bis + 350 |
| CTWH CBWH CIWH | 25 | U3.3A - K1 | | | | t = - 30 bis + 400 |
| | | U2.11A - S1 | 22 | 15 | 207 | |
| | | 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.

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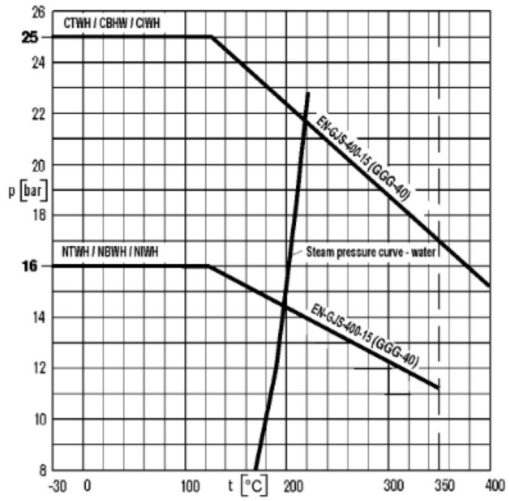
### Pressure and temperature limits depending on housing materials




### Application limits

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

### Materials *

| Denomination | Part-No. | Series NTWH NBWH NIWH | Series CTWH CBWH 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

NTWH 32 - 200 / 01 / 180 U3.3A-K1 W141 – 38 / 300

- Series
- Size — Nominal width of discharge nozzle ③
- Nominal diameter of impeller
- Hydraulic-No.
- Actual diameter of impeller
- Shaft seal
- Bearing type
- Material type
- Bore diameter of plug-in shaft — only for series: NBWH/NIWH, CBWH/CIWH
- External diameter of motor stool resp. flange size of electric motor

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 ≥ 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.

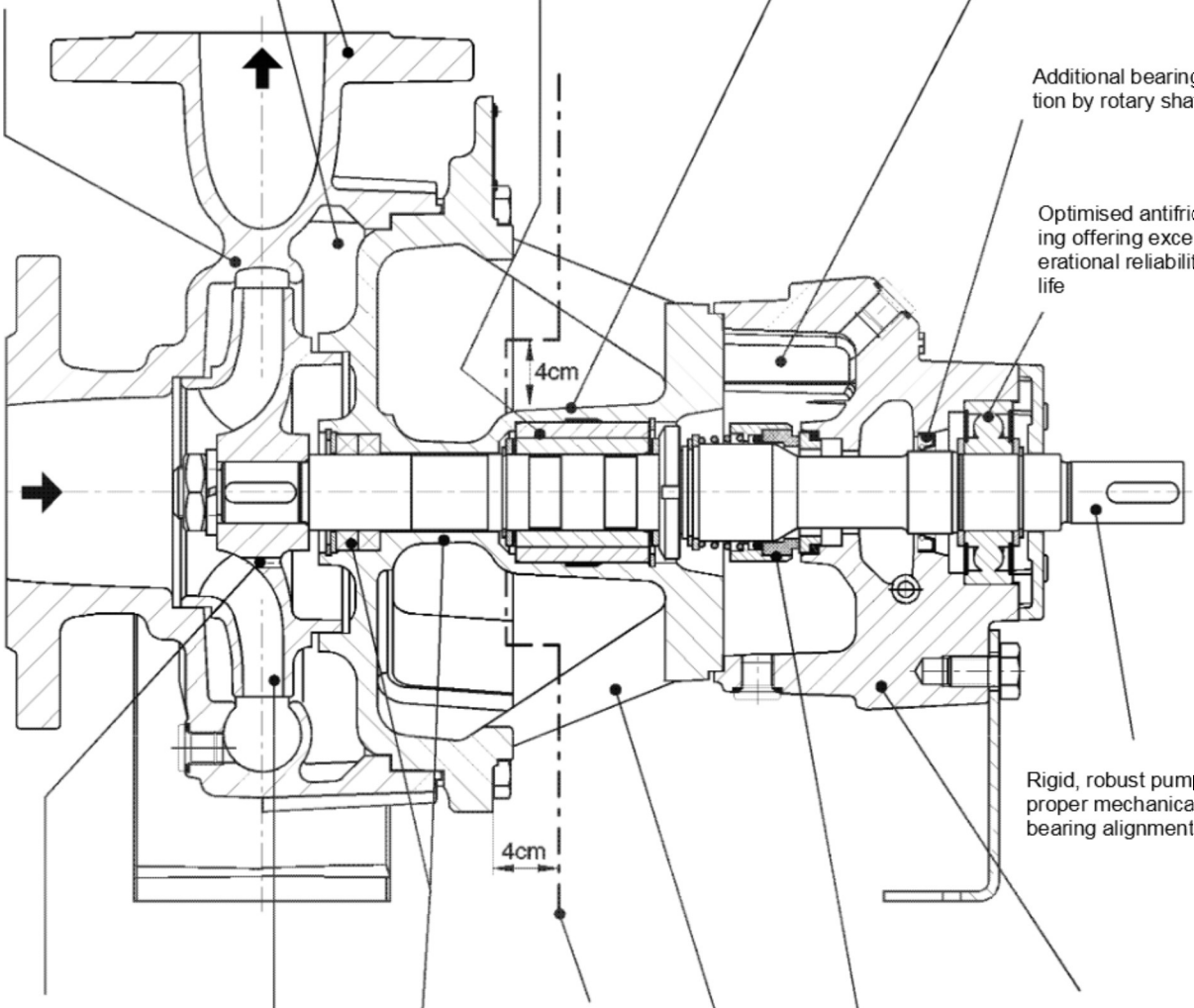
**Attention:** Motors provided by the client must contain a axial thrust bearing on the drive side for block or in-line pumps.

**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




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

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

Wear-resistant casing design

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

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

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

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

Thermal isolation of volute casing is allowed up to this line

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

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 | | Im-peller | Inter-mediate ring | Casing cover | Bearing bracket | Shaft | Bearing sleeve | Bearing bush | Supporting foot | | Plug-in shaft | Motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NTWH | | | | | | | | | | | Assignment to sizes depends on the speed, motor output and motor model | |
| | | NTWH | NBWH | NIWH | NBWH | NIWH | | | | | | | | NTWH | NBWH | | |
| 1 | 25-160/11 | ● | ● | - | 1 | - | 1 | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 19<br>24<br>28<br>38<br>42<br>48<br>55 | 200<br>250<br>300<br>350<br>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 | 1 | | | | | | 3 | 3 | | |
| | 50-160/01 | ● | ● | ● | 8 | 7 | 8 | - | | | | | | 2 | 2 | | |
| | 50-200/01 | ● | ● | ● | 9 | 8 | 9 | | | | | | | 2 | 2 | | |
| | 50-250/01 | ● | ● | ● | 10 | 9 | 10 | 1 | | | | | | 3 | 3 | | |
| | 65-160/01 | ● | ● | ● | 11 | 10 | 11 | - | | | | | | 2 | 2 | | |
| | 65-200/02 | ● | ● | ● | 12 | 12 | 12 | 1 | | | | | | 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 | | | | | | 6 | | | |
| | 65-400/01 | ● | | | 17 | | 17 | 3 | | | | | | 7 | | | |
| | 80-200/02 | ● | | | 18 | | 18 | - | | | | | | 8 | | | |
| | 80-250/01 | ● | | | 19 | | 19 | | | | | | | 5 | | | |
| | 80-315/01 | ● | | | 20 | | 20 | 2 | | | | | | 7 | | | |
| | 100-200/01 | ● | | | 21 | | 21 | - | | | | | | 5 | | | |
| | 100-250/01 | ● | | | 22 | | 22 | | | | | | | 6 | | | |
| | 100-315/01 | ● | | | 23 | | 23 | 2 | | | | | | 7 | | | |
| | 125-200/01 | ● | | | 24 | | 24 | - | | | | | | 7 | | | |
| | 125-250/01 | ● | | | 25 | | 25 | | | | | | | 7 | | | |
| | 150-200/01 | ● | | | 26 | | 26 | | | | | | | 8 | | | |

| Bearing bracket size | Pump size | Series | | | Volute casing | | Im-peller | Inter-mediate ring | Casing cover | Bearing bracket | Shaft | Bearing sleeve | Bearing bush | Supporting foot | | Plug-in shaft | Motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | CTWH | | | | | | | | | | | Assignment to sizes depends on the speed, motor output and motor model | |
| | | CTWH | CBWH | CIWH | CBWH | CIWH | | | | | | | | CTWH | CBWH | | |
| 1 | 25-160/11 | ● | ● | - | 27 | - | 1 | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 19<br>24<br>28<br>38<br>42<br>48<br>55 | 200<br>250<br>300<br>350<br>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 | | | | | | | 8 | | | |
| | 40-315/11 | ● | | | 39 | | 31 | 4 | | | | | | 5 | | | |
| | 50-250/11 | ● | | | 40 | | 32 | - | | | | | | 8 | | | |
| | 50-315/11 | ● | | | 41 | | 31 | 4 | | | | | | 6 | | | |
| | 65-200/11 | ● | | | 42 | | 33 | - | | | | | | 8 | | | |
| | 65-250/11 | ● | | | 43 | | 15 | | | | | | | 5 | | | |
| | 80-200/01 | ● | | | 44 | | 34 | | | | | | | 8 | | | |
| | 80-250/01 | ● | | | 45 | | 19 | | | | | | | 6 | | | |
| | 100-200/11 | ● | | | 46 | | 21 | | | | | | | 5 | | | |

**Interchangability of components on bearing bracket sizes 3 up to 5**

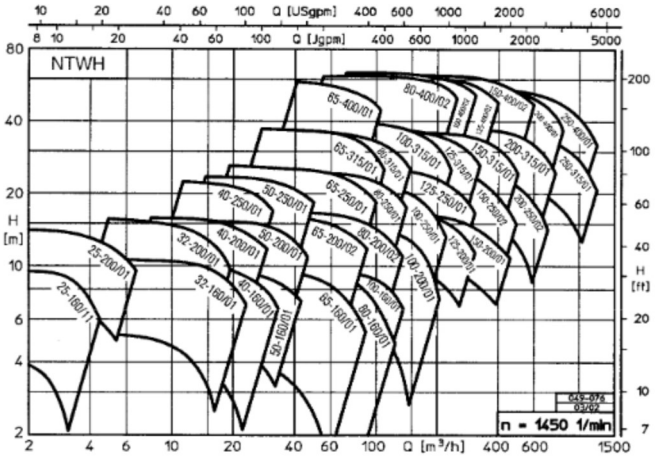
Parts with the same number are interchangeable within a vertical column.

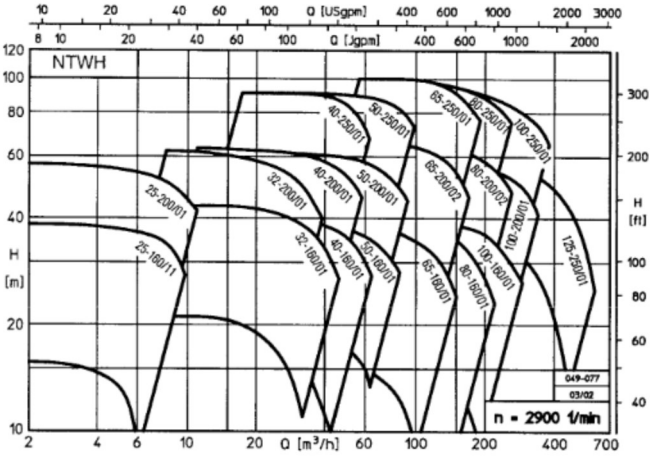
| Bearing bracket size | Pump size | Series NTWH | Volute casing | Impeller | Intermediate ring | Casing cover | Bearing bracket | Shaft | Bearing sleeve | Bearing bush | Supporting foot |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 80-400/02 | • | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 100-400/02 | • | 2 | 2 | | | | | | | 1 |
| | 125-315/01 | • | 3 | 3 | - | | | | | | 1 |
| | 125-400/02 | • | 4 | 4 | 1 | | | | | | 2 |
| | 150-250/02 | • | 5 | 5 | - | 2 | | | | | 1 |
| | 150-315/01 | • | 6 | 6 | | 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 |
| | 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 |

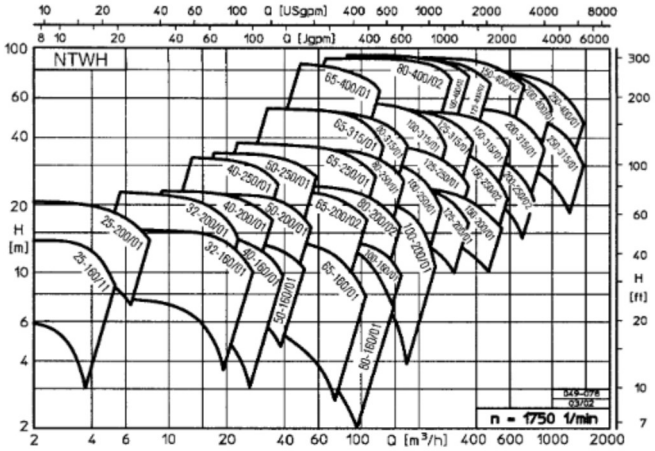
**Performance graphs**

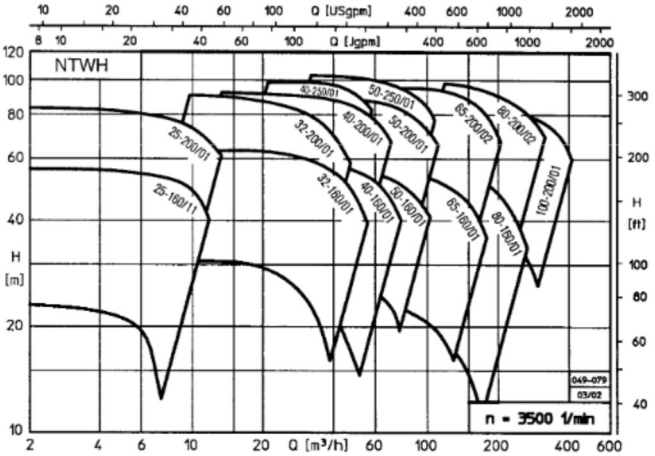
For exact performance data please refer to the individual characteristics.

Series NTWH

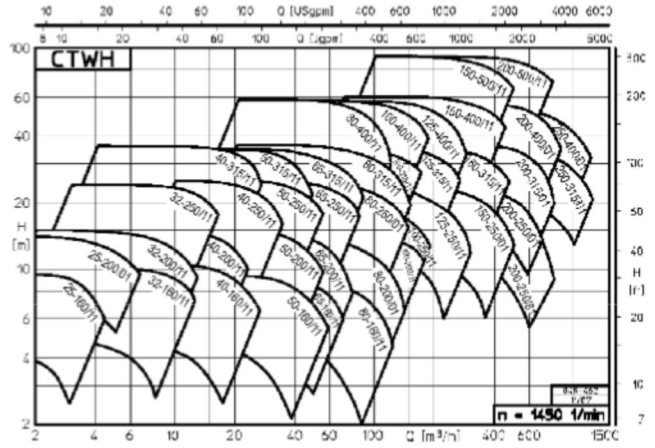


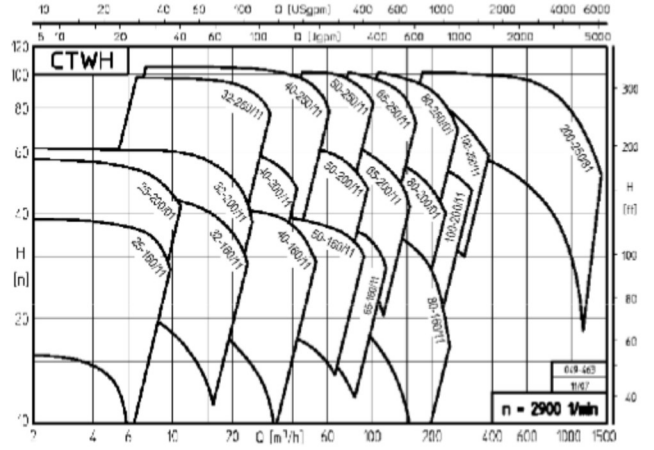



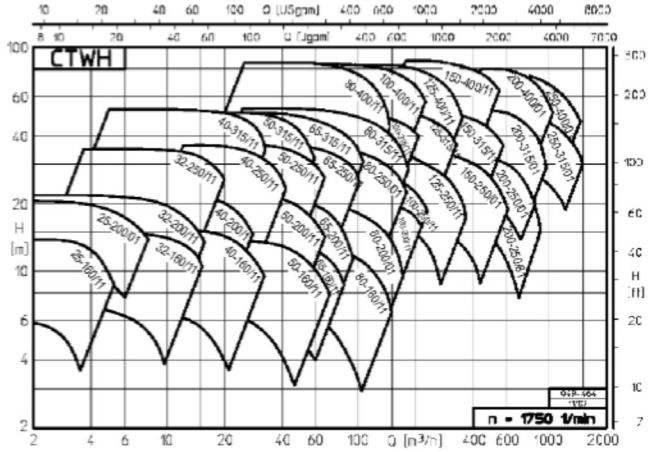



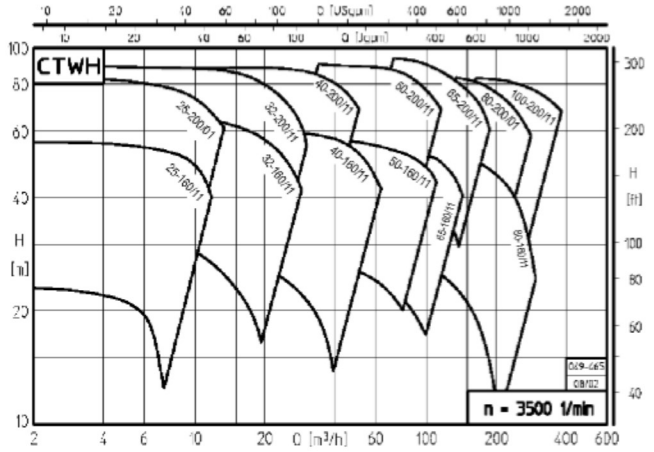




Series CTWH



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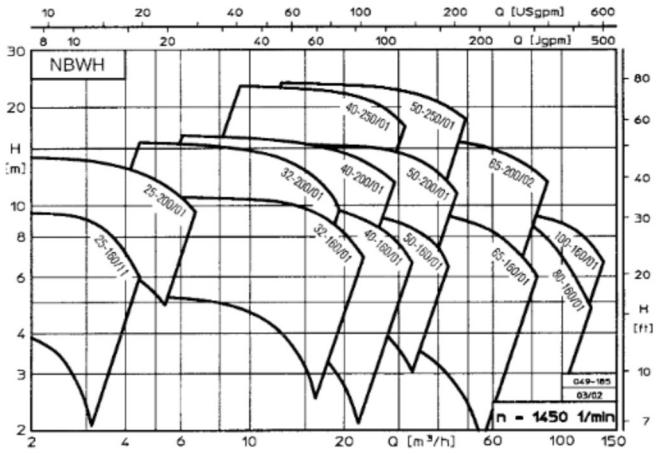
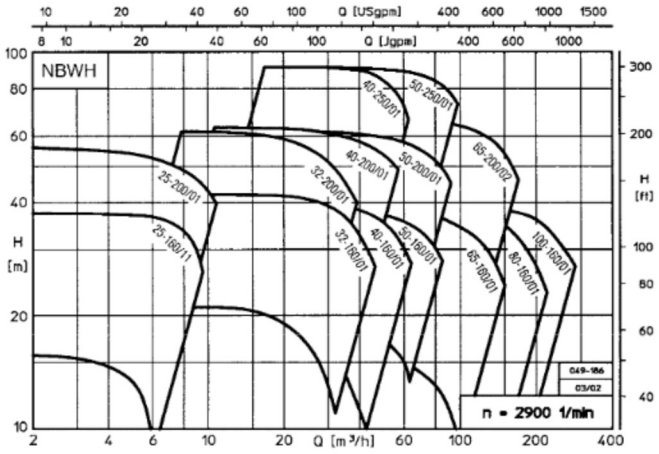
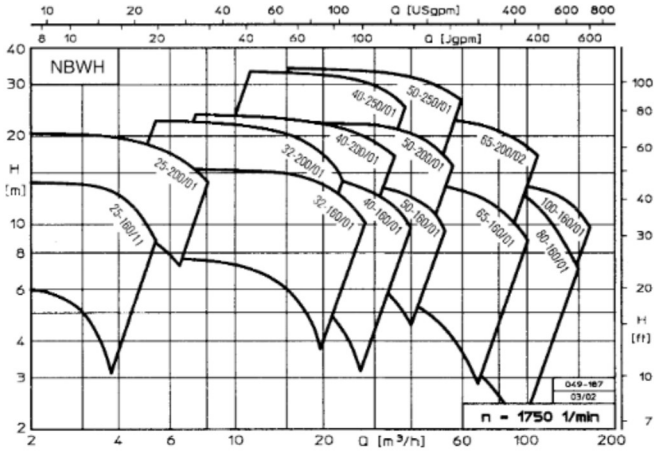
**Performance graphs**

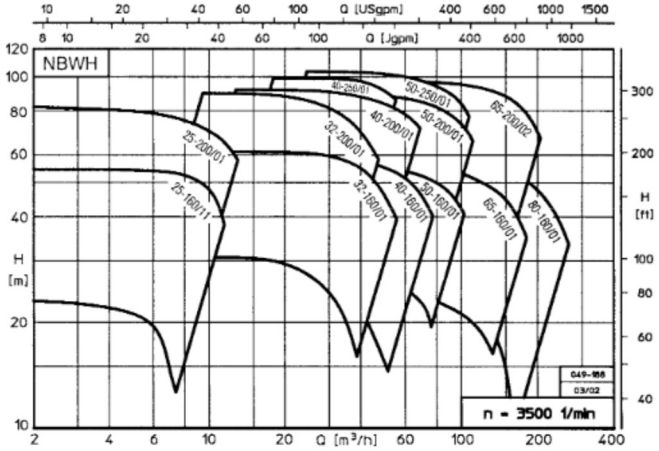
For exact performance data please refer to the individual characteristics.

Series NBWH

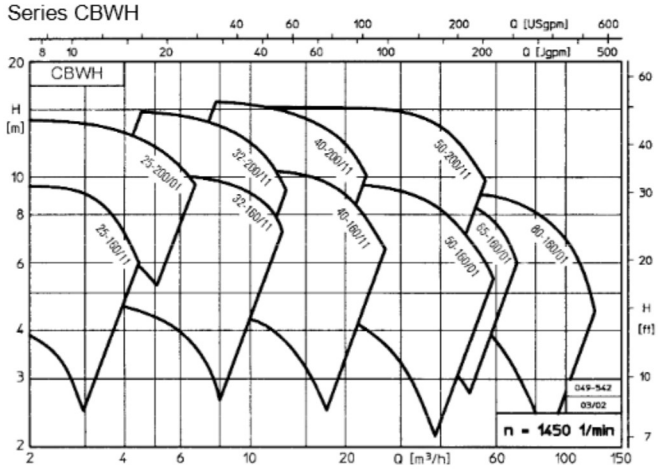


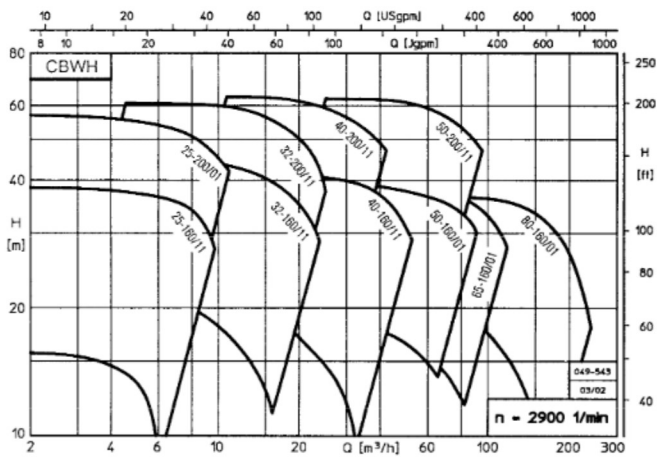



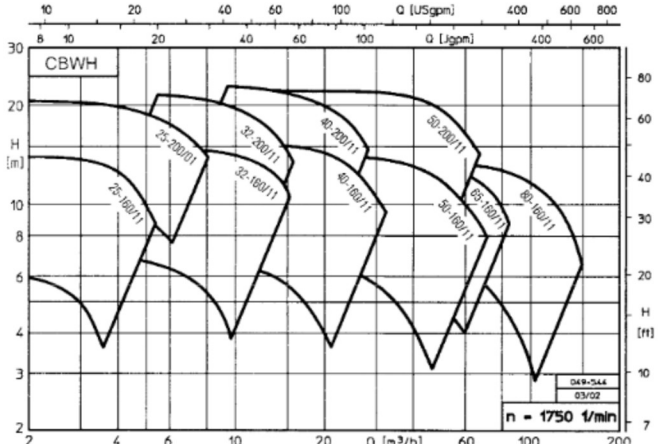



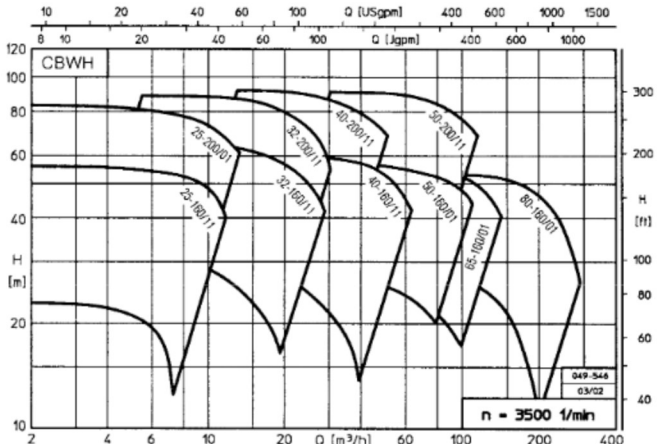




Series CBWH



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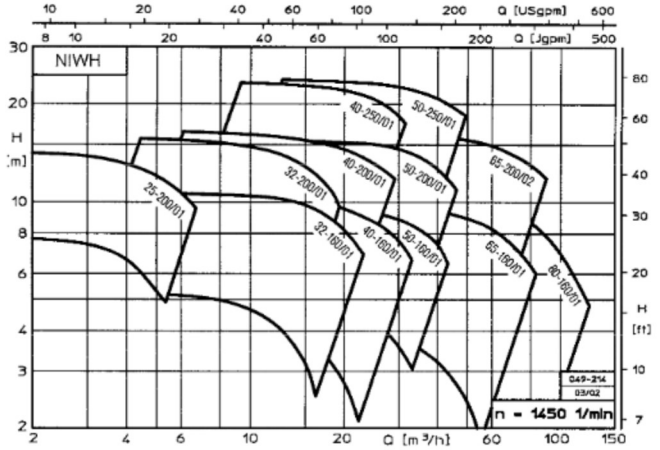
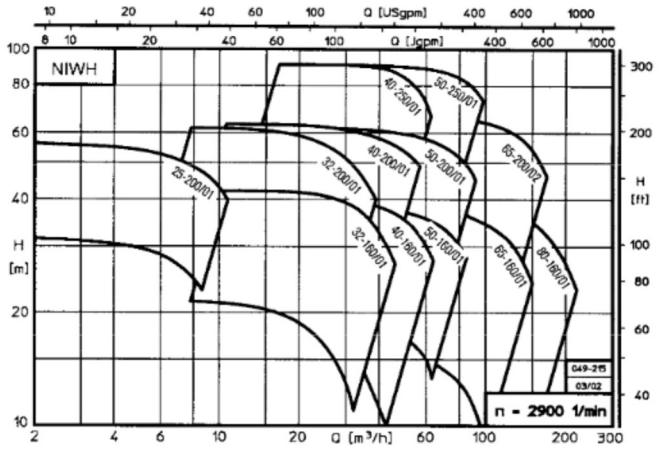
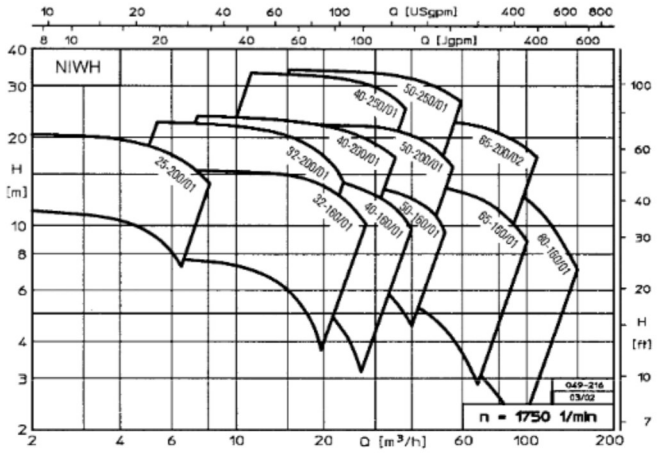
**Performance graphs**

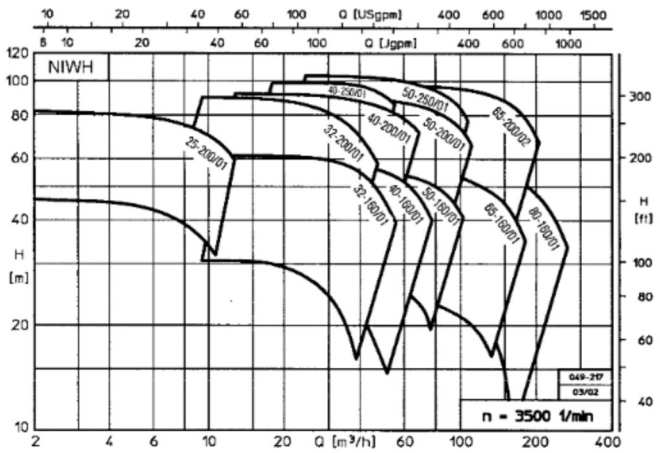
For exact performance data please refer to the individual characteristics.

Series NIWH

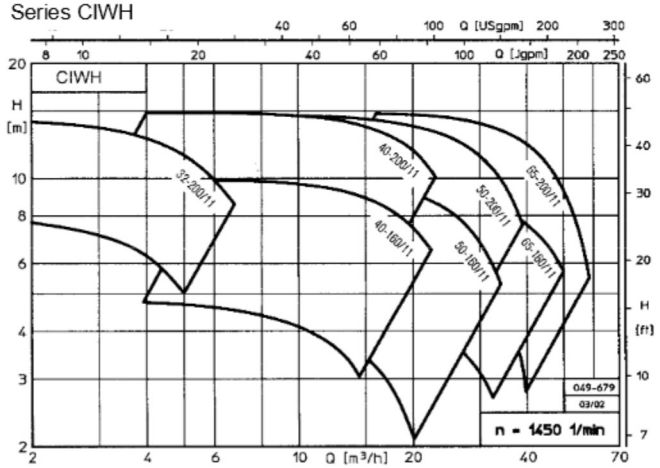


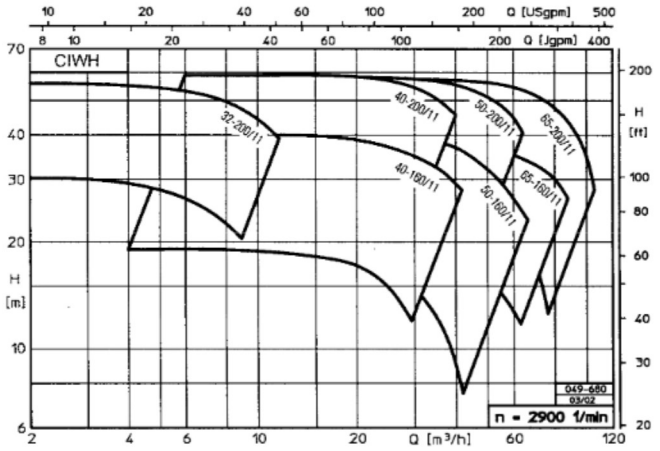



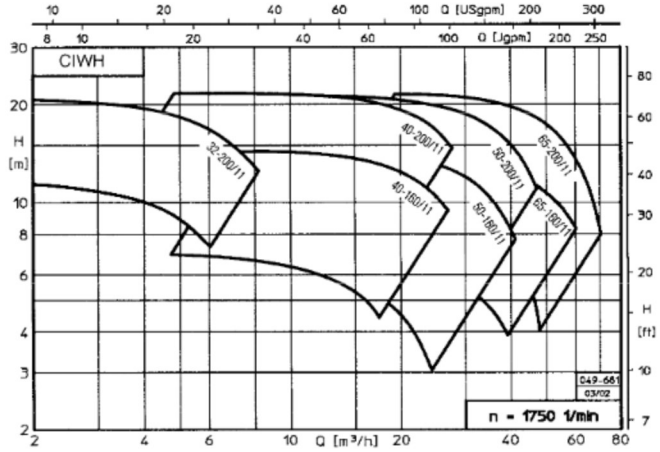



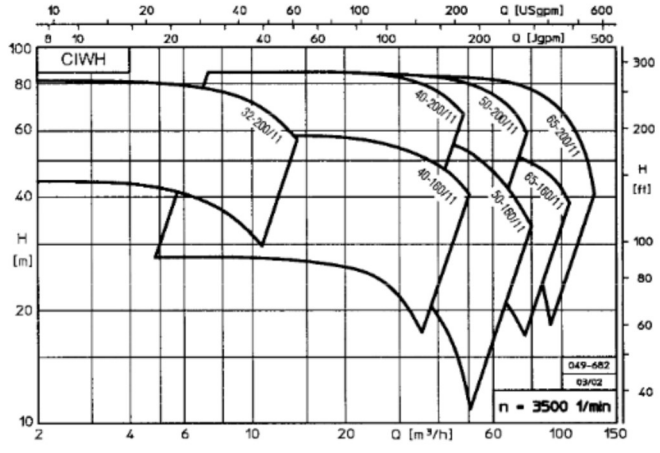




Series CIWH

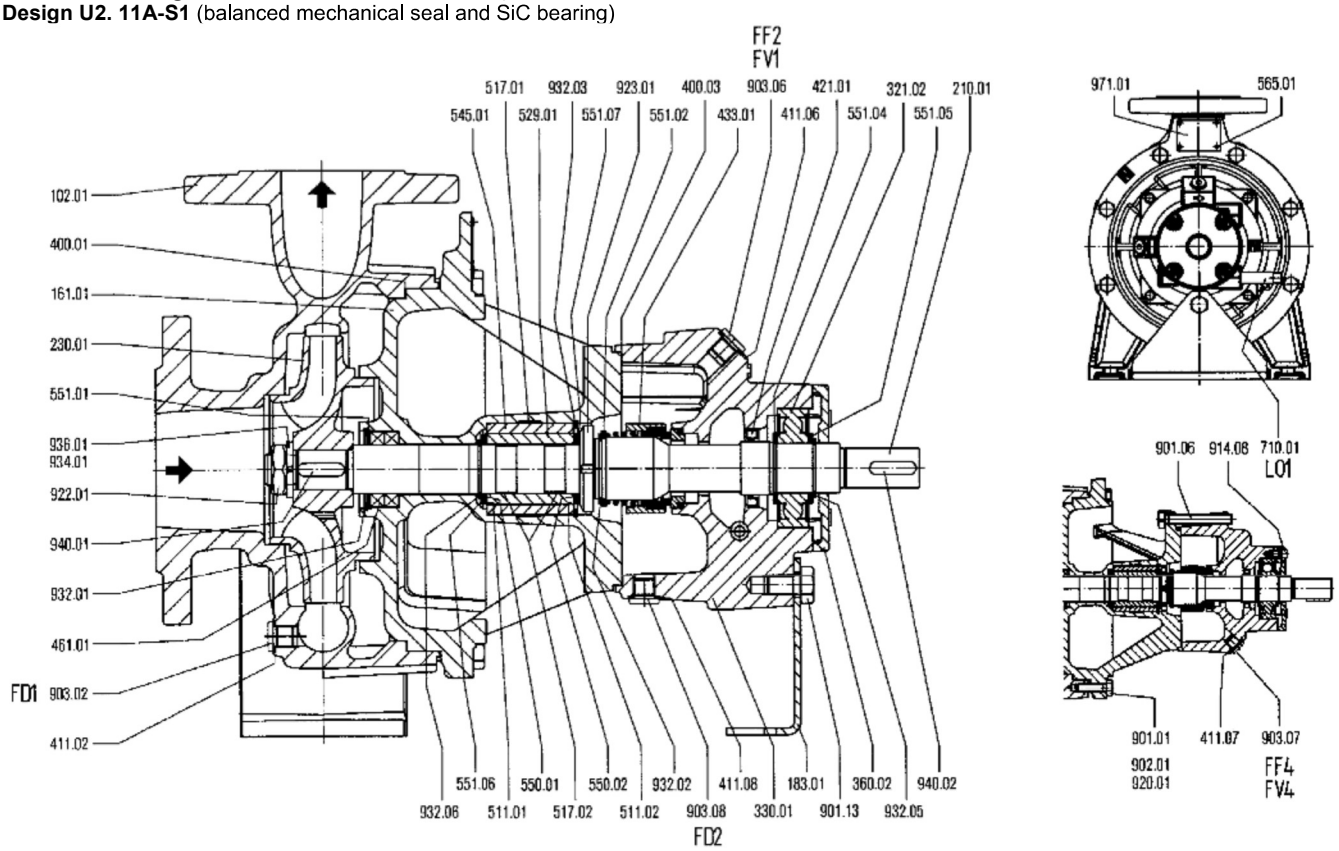


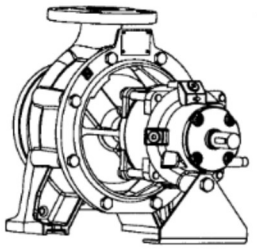



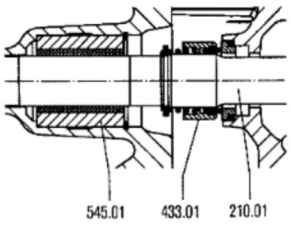



**Sectional drawing -** Series NTWH/CTWH on bearing bracket size 1, 2, 3 and 4
**Design U2. 11A-S1** (balanced mechanical seal and SiC bearing)

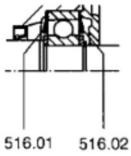



**Design U3.3A-K1**
(unbalanced mechanical seal and carbon bearing)

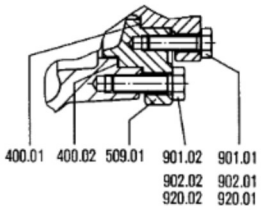





Design of bearing with bearing bracket size 3 and 4




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 busch | 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 |

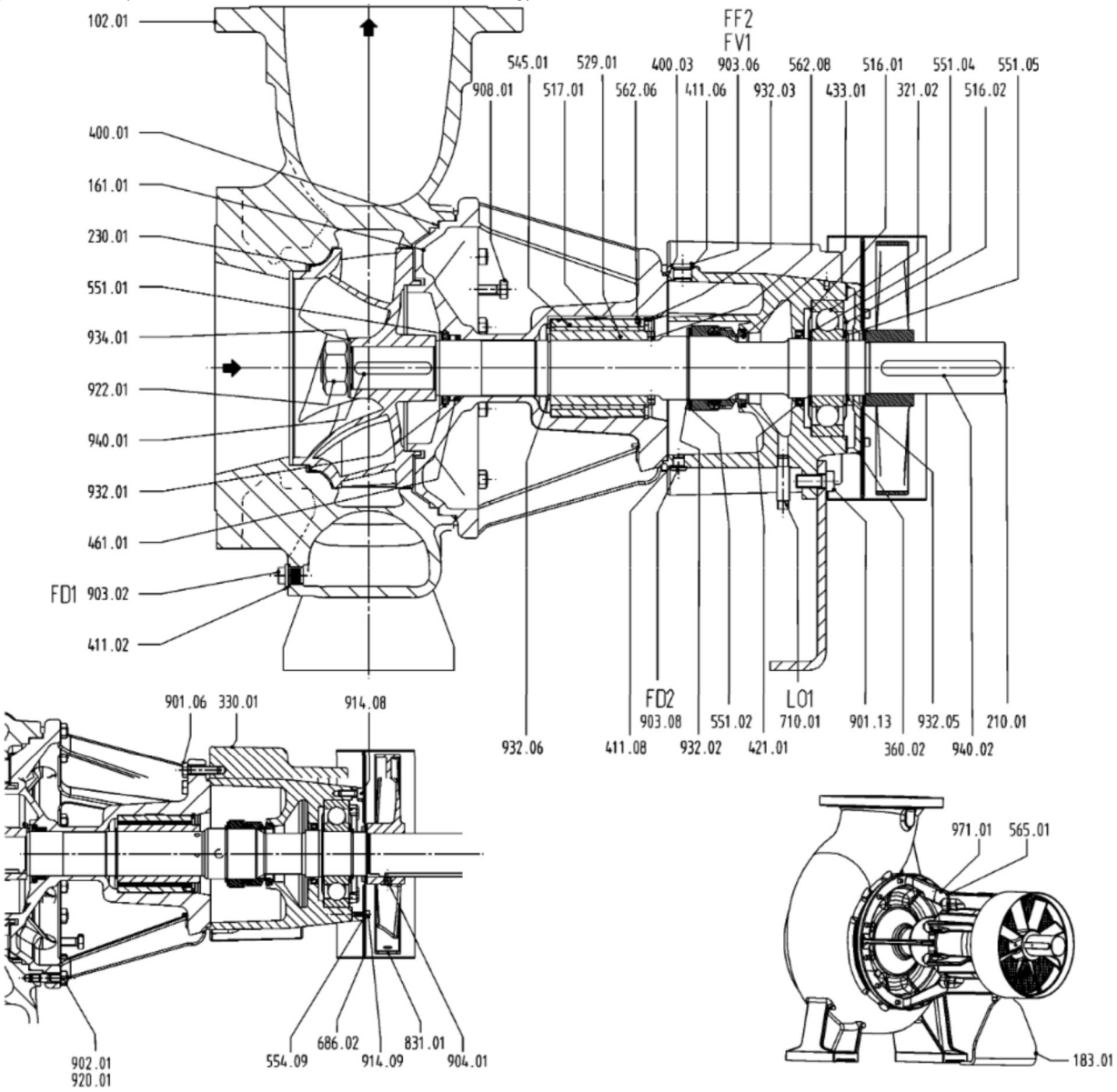
| Denomination | Part-No. |
|---|---|
| Impeller nut | 922.01 |
| Bearing nut | ①923.01 |
| Circlip | 932.01 |
| Circlip | 932.02 |
| Circlip | 932.03 |
| Circlip | 932.05 |
| Circlip | ①932.06 |
| Spring disc | ④934.01 |
| Spring ring | 936.01 |
| Key | 940.01 |
| Key | 940.02 |
| Name plate | 971.01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

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. |
|---|---|
| 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 | 400.03 |
| Seal ring | 411.02 |
| Seal ring | 411.06 |
| Seal ring | 411.08 |
| Radial shaft seal ring | 421.01 |
| Mechanical seal | 433.01 |
| Packing ring | 461.01 |
| Nilos-ring | 516.01 |
| Nilos-ring | 516.02 |
| Flexible damp ring | 517.01 |
| Bearing sleeve | 529.01 |
| Bearing busch | 545.01 |
| Disc spacer | 551.01 |
| Supporting disc | 551.02 |
| Supporting disc | 551.04 |
| Supporting disc | 551.05 |

| Denomination | Part-No. |
|---|---|
| Disc | 554.09 |
| Spring dowel pin | 562.06 |
| Chylindrical pin | 562.08 |
| Rivet | 565.01 |
| Protective grid | 686.02 |
| Pipe | 710.01 |
| Fan | 831.01 |
| Hexagon Screw | 901.06 |
| Hexagon Screw | 901.13 |
| Stud bolt | 902.01 |
| Screw plug | 903.02 |
| Screw plug | 903.06 |
| Screw plug | 903.08 |
| Setscrew | 904.01 |
| Hexagon Screw | 908.01 |
| Socket-head cap screw | 914.08 |
| Socket-head cap screw | 914.09 |
| Nut | 920.01 |
| Nut | 922.01 |
| Circlip | 932.01 |
| Circlip | 932.02 |
| Circlip | 932.03 |
| Circlip | 932.05 |
| Circlip | 932.06 |
| Spring disc | 934.01 |

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

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

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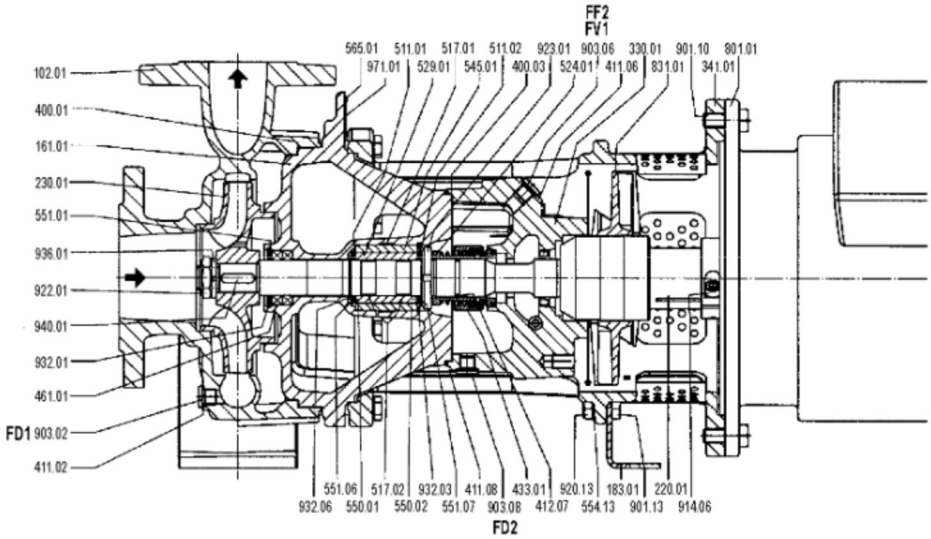
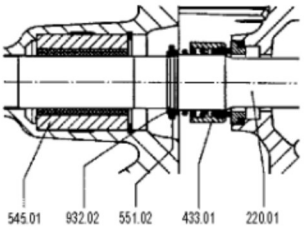
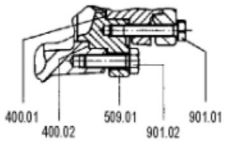
**Sectional drawing -** Series NBWH/CBWH
**Design U2.11A-S1** (balanced mechanical seal and SiC bearing)

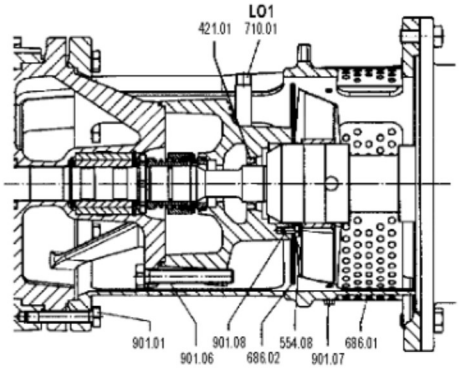


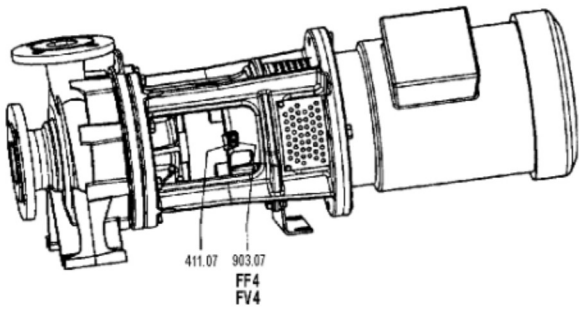

**Design U3.3A-K1**
(unbalanced mechanical seal and carbon bearing)




Design with
Intermediate ring




| Denomination | Part-No. |
|---|---|
| Volute casing | 102.01 |
| Casing cover | 161.01 |
| Supporting foot | 183.01 |
| Plug-in shaft | 220.01 |
| Impeller | 230.01 |
| Bearing bracket | 330.01 |
| Motor stool | 341.01 |
| 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 |
| O-ring | ①412.07 |
| 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 |
| Flexible clamb ring | 517.01 |
| Flexible clamb ring | ①517.02 |
| Shaft sleeve | ①524.01 |
| Bearing sleeve | ①529.01 |

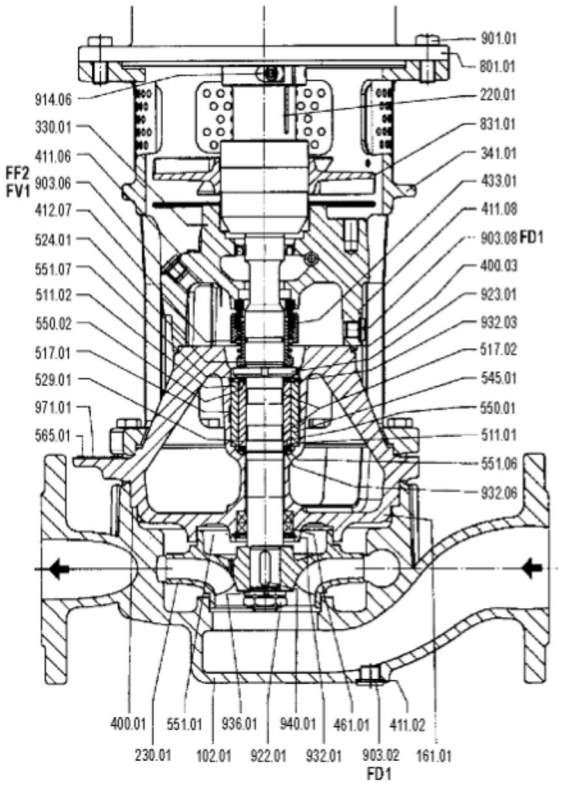
| Denomination | Part-No. |
|---|---|
| Bearing bush | 545.01 |
| Disc | ①550.01 |
| Disc | ①550.02 |
| Disc spacer | 551.01 |
| Disc spacer | ②551.02 |
| Disc spacer | ①551.06 |
| Disc spacer | ①551.07 |
| Washer | 554.08 |
| Washer | 554.13 |
| Rivet | 565.01 |
| Guard plate | 686.01 |
| Protective grid | 686.02 |
| Pipe | 710.01 |
| Flange motor | 801.01 |
| Fan | 831.01 |
| Hexagon screw | 901.01 |
| Hexagon screw | 901.02 |
| Hexagon screw | 901.06 |
| Hexagon screw | 901.07 |
| Hexagon screw | 901.08 |
| Hexagon screw | 901.10 |
| Hexagon screw | 901.13 |
| Screw plug | 903.02 |
| Screw plug | 914.06 |
| Screw plug | 903.07 |

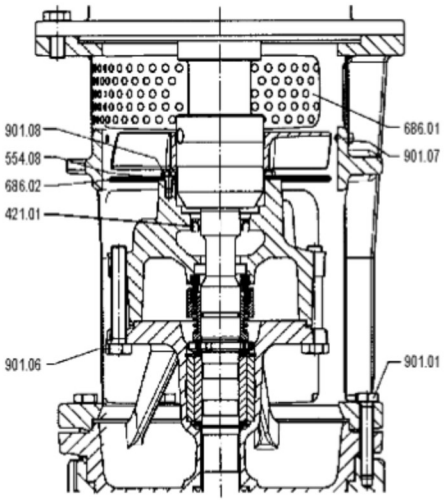
| Denomination | Part-No. |
|---|---|
| Screw plug | 903.08 |
| Socket-head cap screw | 914.06 |
| Nut | 920.13 |
| Impeller nut | 922.01 |
| Bearing nut | ①923.01 |
| Circlip | 932.01 |
| Circlip | ②932.02 |
| Circlip | 932.03 |
| Circlip | ①932.06 |
| Spring ring | 936.01 |
| Key | 940.01 |
| Name plate | 971.01 |

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

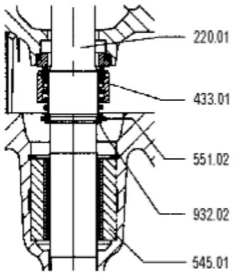
| Connections | |
|---|---|
| FD1 | Draining |
| FD2 | Draining |
| FF2/FV1 | Filling/Venting |
| FF4/FV4 | Filling/Venting<br>only for vertical block and in-line installations |
| LO1 | Leakage outlet |

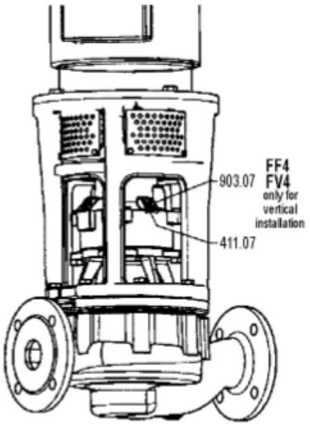
**Sectional drawing -** Series NIWH/CIWH
**Design U2.11A-S1** (balanced mechanical seal and SiC bearing)

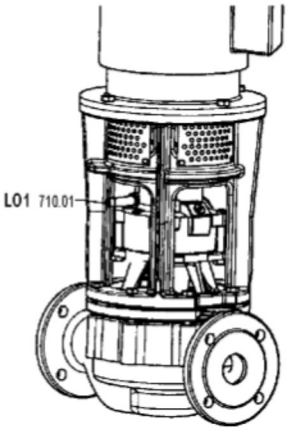


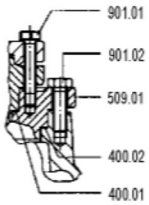

**Design U3.3A-K1**
(unbalanced mechanical seal and carbon bearing)




Design with intermediate ring




| Denomination | Part-No. |
|---|---|
| Volute casing | 102.01 |
| Casing cover | 161.01 |
| Plug-in shaft | 220.01 |
| Impeller | 230.01 |
| Bearing bracket | 330.01 |
| Motor stool | 341.01 |
| 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 |
| O-ring | ①412.07 |
| 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 |
| Flexible clamb ring | 517.01 |
| Flexible clamb ring | ①517.02 |
| Shaft sleeve | ①524.01 |
| Bearing sleeve | ①529.01 |
| Bearing bush | 545.01 |

| Denomination | Part-No. |
|---|---|
| Disc | ①550.01 |
| Disc | ①550.02 |
| Disc spacer | 551.01 |
| Disc spacer | ②551.02 |
| Disc spacer | ①551.06 |
| Disc spacer | ①551.07 |
| Washer | 554.08 |
| Rivet | 565.01 |
| Guard plate | 686.01 |
| Protective grid | 686.02 |
| Pipe | 710.01 |
| Flange motor | 801.01 |
| Fan | 831.01 |
| Hexagon Screw | 901.01 |
| Hexagon Screw | 901.02 |
| Hexagon Screw | 901.06 |
| Hexagon Screw | 901.07 |
| Hexagon Screw | 901.08 |
| Hexagon Screw | 901.10 |
| Screw plug | 903.02 |
| Screw plug | 914.06 |
| Screw plug | 903.07 |
| Screw plug | 903.08 |
| Socket-hed cap screw | 914.06 |
| Impeller nut | 922.01 |

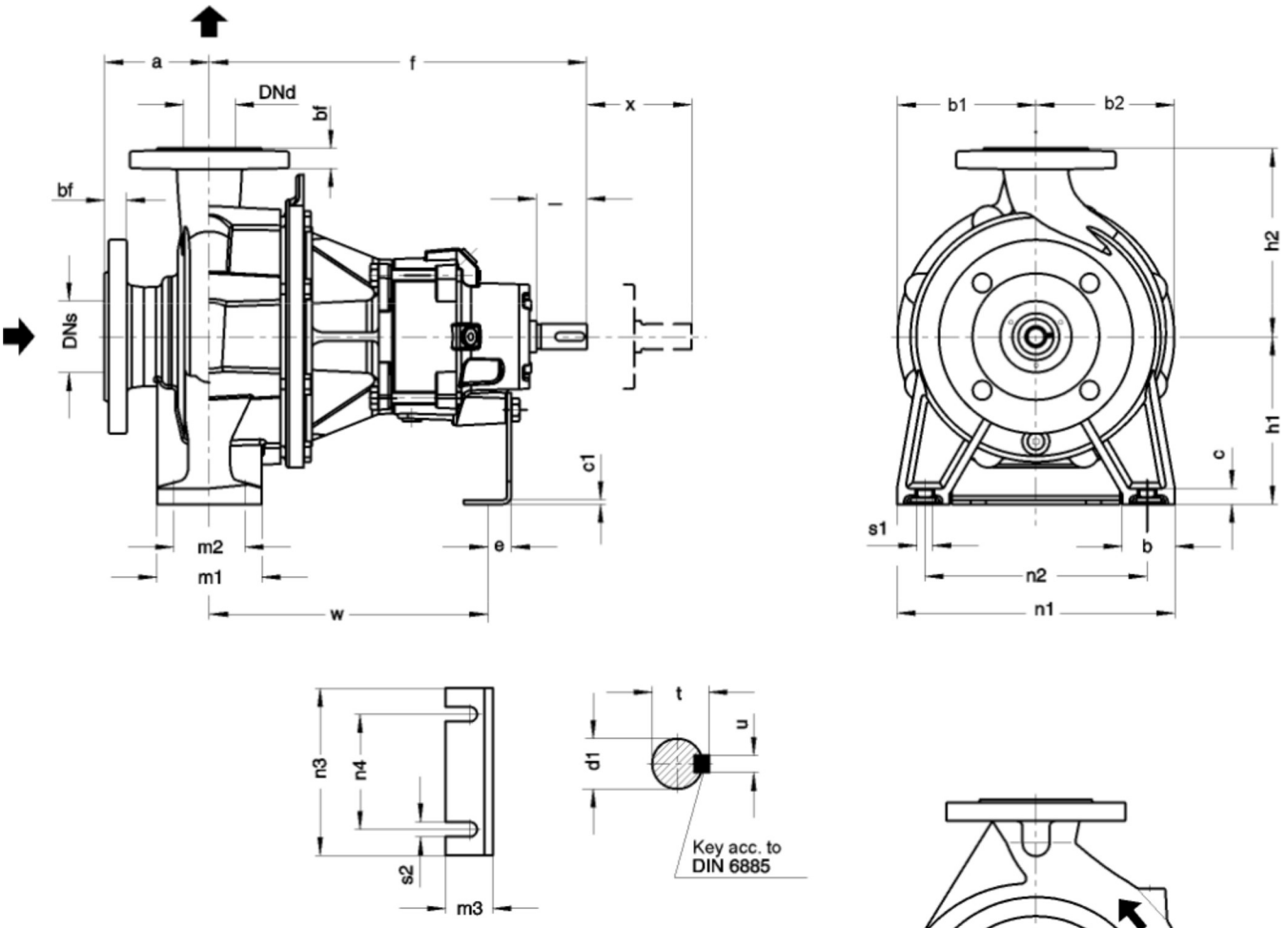
| Denomination | Part-No. |
|---|---|
| Bearing nut | ①923.01 |
| Circlip | 932.01 |
| Circlip | ②932.02 |
| Circlip | 932.03 |
| Circlip | ①932.06 |
| Spring ring | 936.01 |
| Key | 940.01 |
| Name plate | 971.01 |

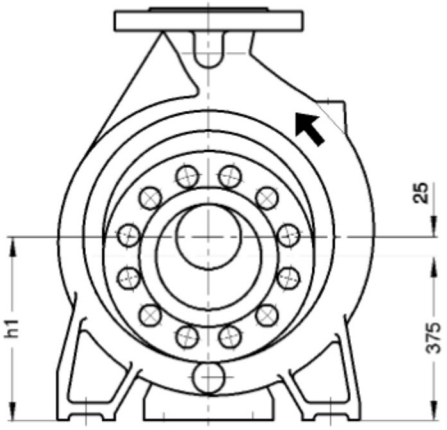
① not present on version with carbon bearing
② not present on version with SiC-bearing

Connections

| | |
|---|---|
| FD1 | Draining |
| FD2 | Draining |
| FF2/FV1 | Filling/Venting |
| FF4/FV4 | Filling/Venting |
| | only for vertical installation |
| LO1 | Leakage outlet |

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



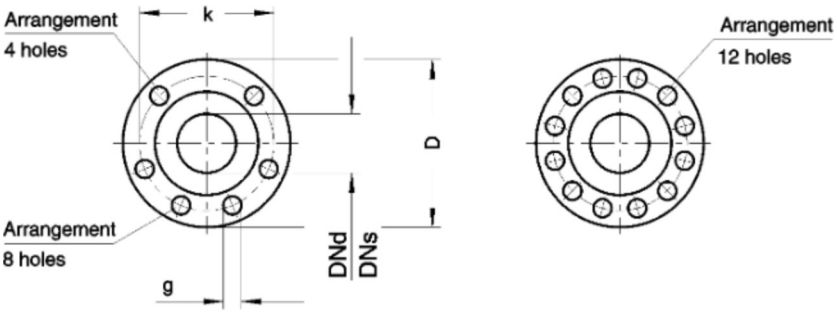

With size 250-400/01

Tolerances of joint dimensions
according to DIN EN 735

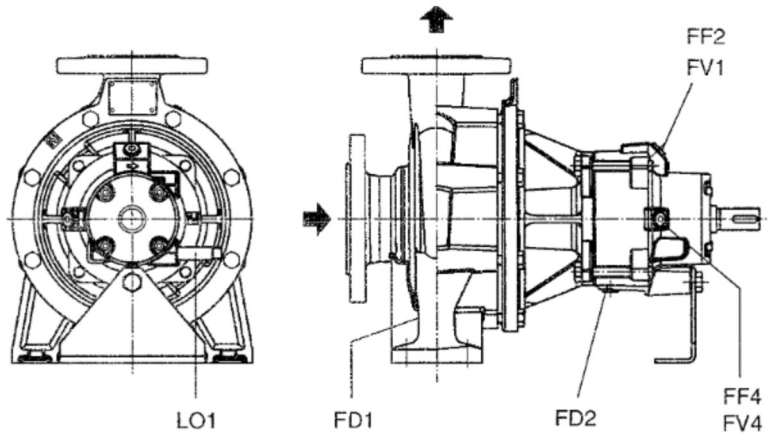
Sense of Rotation: clockwise as seen from
the driving side

Dimensions in mm
Subject to alteration

| Flanges acc. to EN 1092-2 PN 16 | | | | | |
|---|---|---|---|---|---|
| DNs/DNd | D | bf | k | G | No. of 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



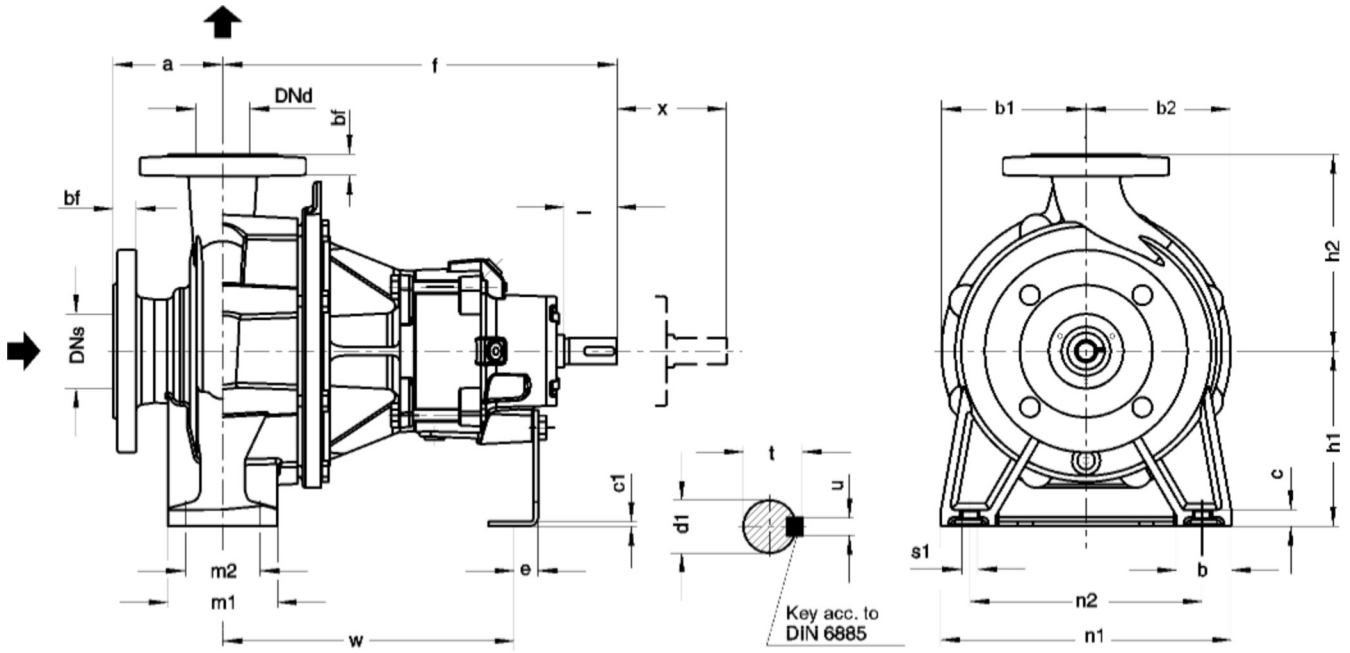

| Bearing bracket size | Connections | | | | |
|---|---|---|---|---|---|
| | Draining | | Filling/ Venting | | Leakage outlet |
| | FD1 | FD2 | FF2/FV1 | FF4/FV4 | L01 |
| 1 | G 1/4 | G¼ | G 1/4 | G 1/4 only for vertical block and in-line installation | G 1/4 |
| 2 | G 3/8 | | G 1/2 | | |
| 3 | | | | | |
| 4 | | | | | |

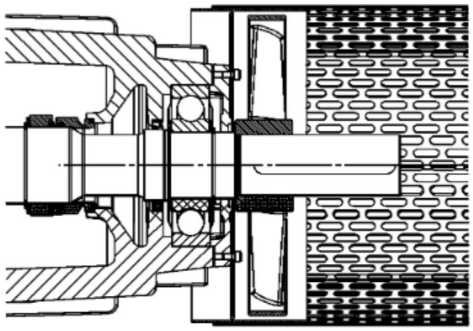
Connections FD1 in size 25-160/11 and 25-200/01 each G 1/2

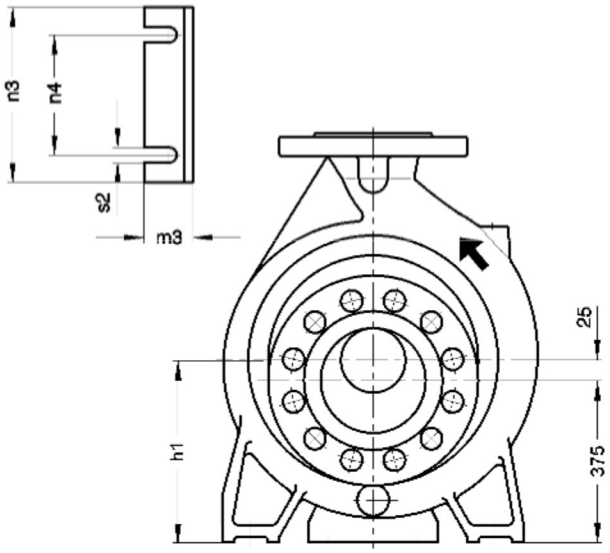
Dimensions in mm
Subject to alteration

| Bearing bracket size | Pump size | Suction flange | Delivery flange | Pump dimensions | | | | | | Foot dimensions | | | | | | | | | | | | for screw | | Dismantling dim. | Shaft end acc. to DIN 748 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DNs | DNd | a | f | b1 | b2 | h1 | h2 | b | c | c1 | e | m1 | m2 | m3 | n1 | n2 | n3 | n4 | w | s1 | s2 | x | 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 |
| | 32-160/01 | 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





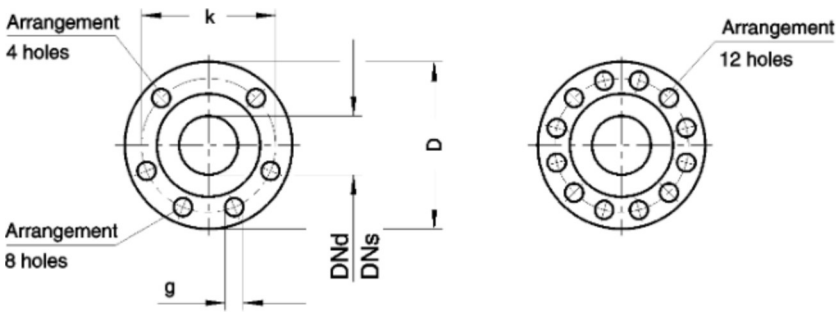

With size 250-400/01

**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.

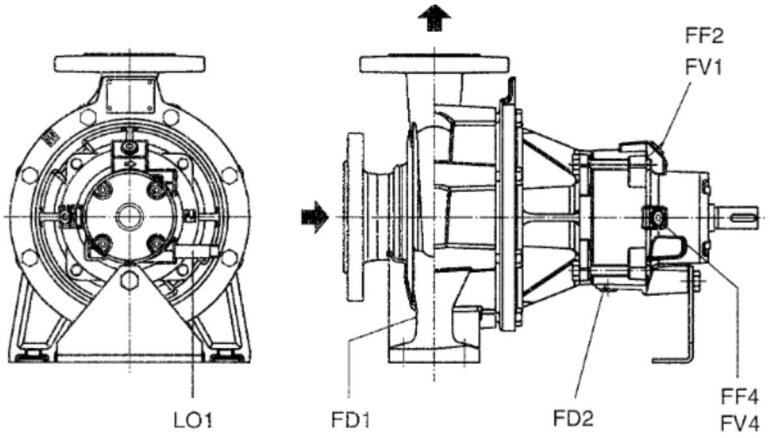
Tolerances of joint dimensions according to DIN EN 735
Sense of Rotation: clockwise as seen from the driving side

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



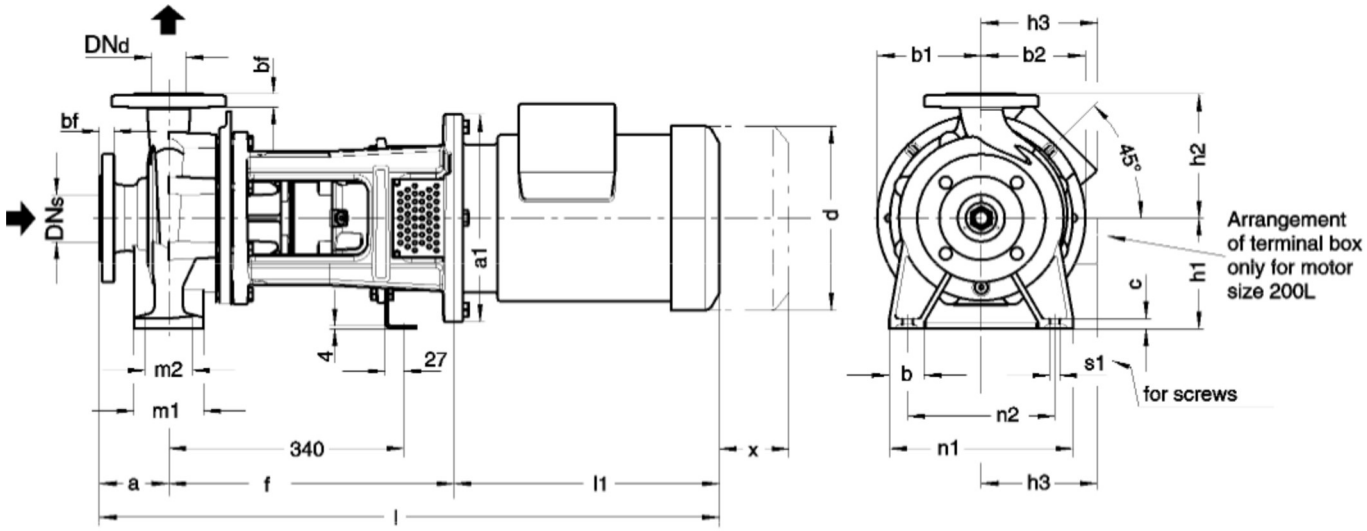

| Bearing bracket size | Connections | | | | |
|---|---|---|---|---|---|
| | Draining | | Filling/ Venting | | Leakage outlet * |
| | FD1 | FD2 | FF2/FV1 | FF4/FV4 | L01 |
| 1 | G 1/2 | G 1/4 | G 1/4 | G 1/4 only for vertical block and in-line installation | G 1/4 |
| 2 | | | G 1/2 | | |
| 3 | | | |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

* See page 11 for ALLHEAT 1000 positions and connections

Dimensions in mm
Subject to alteration

| Bearing bracket size | Pump size | Suction flange | Delivery flange | Pump dimensions | | | | | | Foot dimensions | | | | | | | | | | | | for screw | | Dismantling dim. | Shaft end | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DNs | DNd | a | f | b1 | b2 | h1 | h2 | b | c | c1 | e | m1 | m2 | m3 | n1 | n2 | n3 | n4 | w | s1 | s2 | x | 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 |
| | 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 |
| 4 | 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 |

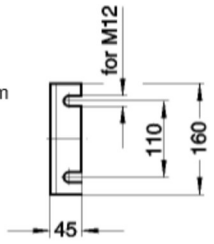
**Unit dimensions -** Series NBWH/CBWH
Sizes with a shaft diameter of 32 at the shaft seal

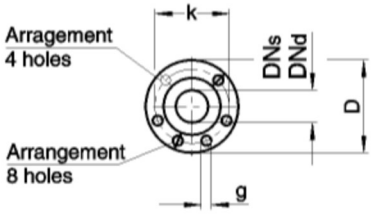



Tolerances of joint dimensions
according to DIN EN 735

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 |

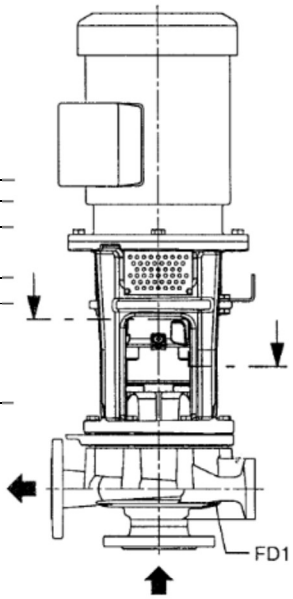
| Connections | | | | |
|---|---|---|---|---|
| Draining | | Filling/ Venting | | Leakage outlet |
| FD1 | FD2 | FF2 / FV1 | FF4 / FV4 | LO1 |
| G 1/4 | G 1/4 | G 1/4 | G 1/4 only for vertical installation | G 1/4 |

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

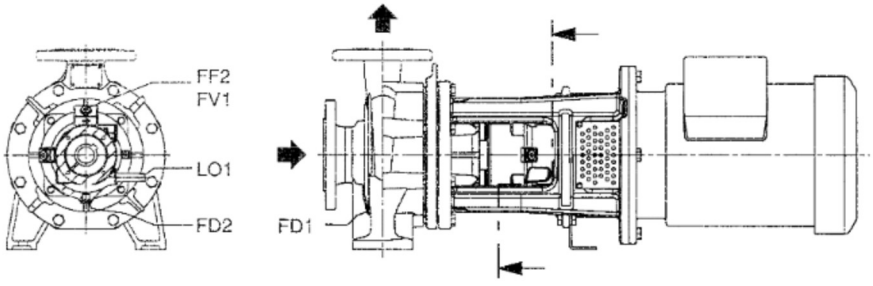
**Series CBWH**

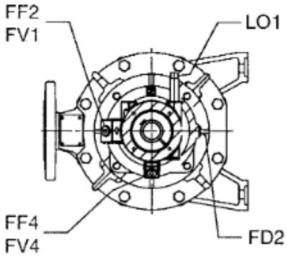
| Flanges acc.to EN 1092-2 PN 25 | | | | | |
|---|---|---|---|---|---|
| DNs/DNd | D | bf | k | g | No. of holes |
| 25 | 115 | 18 | 85 | 14 | 4 |
| 32 | 140 | 20 | 100 | 19 | 4 |
| 40 | 150 | 20 | 110 | 19 | 4 |
| 50 | 165 | 22 | 125 | 19 | 4 |
| 65 | 185 | 24 | 145 | 19 | 8 |
| 80 | 200 | 26 | 160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

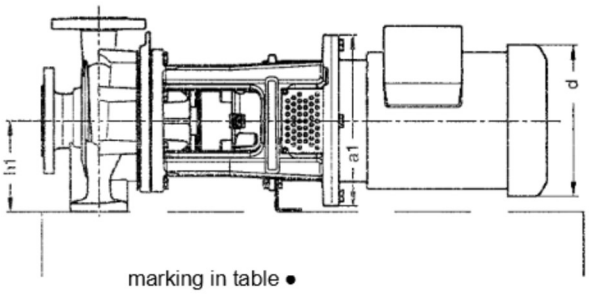
The motor dimensions as indicated are approximate values. Exact data depend on the motor make.

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.

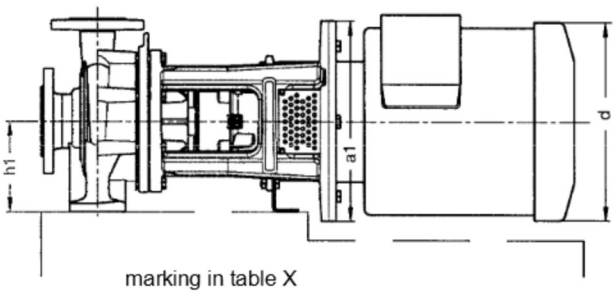
$h1 > \frac{a_1}{2}$ or $\frac{d}{2}$

Base plate and/or foundation design

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




marking in table ●




marking in table X

**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 | | | Foot | | | | | | | | | | | | | | | | | | | | | |
| | | | KW | 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |

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**Unit dimensions -** Series NBWH

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

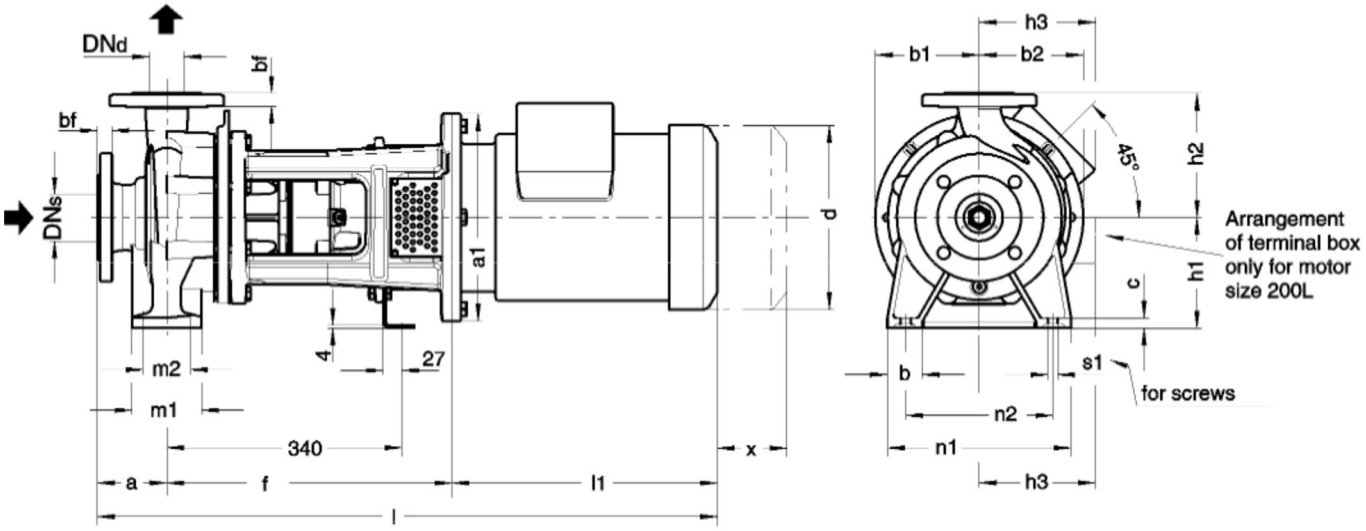
When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
**Attention:** Motors provided by the client must also contain a axial thrust bearing on the drive side!
Binding motor 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 page19 | Performance | Unit dimensions | | | | | | | | | | | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pump | | | | | | | | | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismantling dim. | |
| | | | | Flanges | | Feet | | | | | | | | | | | | | | | | | | | | | | |
| | | | KW | 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 | | | | | | | | | | | | | | | | | 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 |
| 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 | | | | | | | | | | | | | | | | | 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 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 806 | | 28/250 |
| | 132 S | ● | 5,5 | | | | 412 | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 806 | | 28/250 |
| | 132 S | ● | 5,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 687 | | 38/300 |
| | 132 M | ● | 7,5 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 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 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 753 | | 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 132 M | ● | 7,5 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 778 | | 24/200 |
| | 100 L | ● | 2,2 \| 3 | | | | | | | | | | | | | | | | 250 | 203 | 158 | 312 | 808 | | 28/250 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 831 | | 28/250 |
| | 132 S | ● | 5,5 | | | | 412 | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 831 | | 28/250 |
| | 132 S | ● | 5,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 912 | | 38/300 |
| | 132 M | ● | 7,5 | | | | | | | | | | | | | | | | | 266 | 196 | 375 | 912 | | 38/300 |

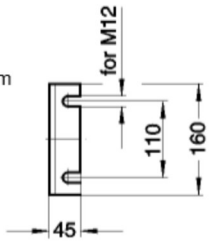
**Unit dimensions –** Series NBWH/CBWH
Sizes with a shaft diameter of 32 at the shaft seal

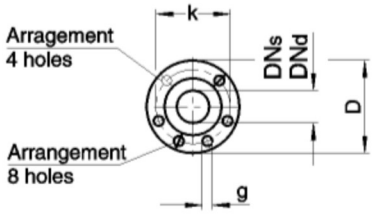



Tolerances of joint dimensions
according to DIN EN 735

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 |

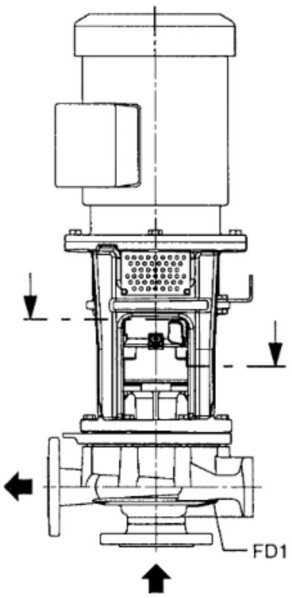
| Connections | | | | |
|---|---|---|---|---|
| Draining | | Filling/ Venting | | Leakage outlet |
| FD1 | FD2 | FF2 / FV1 | FF4 / FV4 | LO1 |
| G 1/4 | G 1/4 | G 1/4 | G 1/4 only for vertical installation | G 1/4 |

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

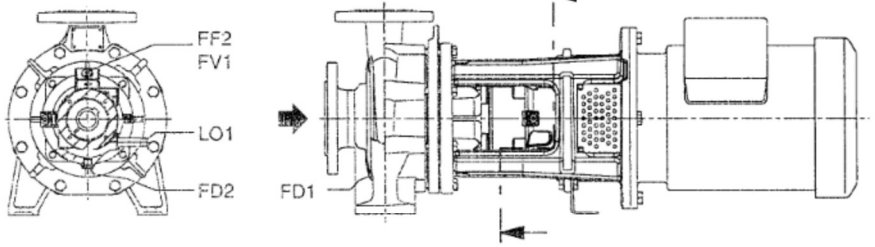
**Series CBWH**

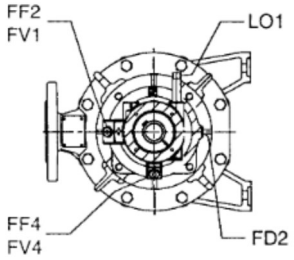
| Flanges acc. to EN 1092-2 PN 25 | | | | | |
|---|---|---|---|---|---|
| DNs/DNd | D | bf | k | g | No. of holes |
| 25 | 115 | 18 | 85 | 14 | 4 |
| 32 | 140 | 20 | 100 | 19 | 4 |
| 40 | 150 | 20 | 110 | 19 | 4 |
| 50 | 165 | 22 | 125 | 19 | 4 |
| 65 | 185 | 24 | 145 | 19 | 8 |
| 80 | 200 | 26 | 160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

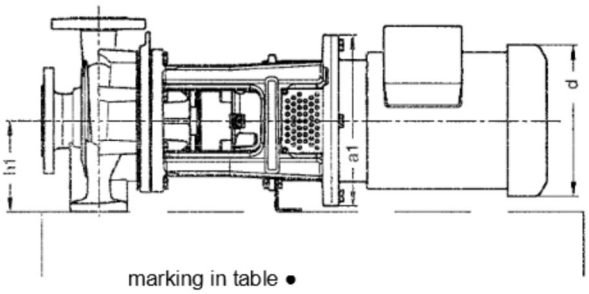
The motor dimensions as indicated are approximate values. Exact data depend on the motor make.

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.

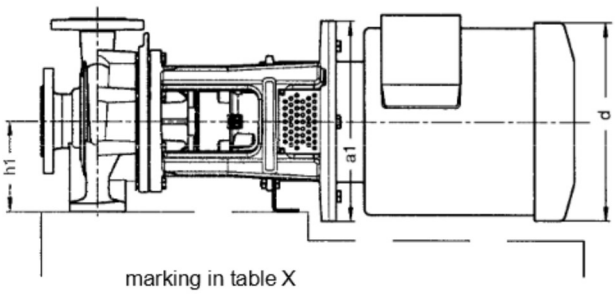
$h1 > \frac{a_1}{2}$ or $\frac{d}{2}$

Base plate and/or foundation design

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




marking in table •




marking in table X

**n = 2900 / 3500 1/min**

Dimensions in mm
Subject to alteration

| Pump size | Motor size | Base plate and/or foundation design see above | Perfor-mance | Unit dimensions | | | | | | | | | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pump | | | | | | | | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismant-ling dim. | |
| | | | | Flanges | | Feet | | | | | | | | | | | | | | | | | | | | |
| | | | KW | 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 | • | 0,75 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 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 733 | | 24/200 |
| | 90 L | • | 2,2 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 733 | | 24/200 |
| | 100 L | • | 3 | | | | | | | | | | | | | | | | 250 | 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 | | | | | | | | | | | | | | | | 250 | 233 | 158 | 312 | 763 | | 28/250 |
| | 112 M | • | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | • | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | X | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 867 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 973 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 320 | 234 | 481 | 973 | | 42/350 |
| 40-160/01 | 90 L | • | 2,2 | 65 | 40 | 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 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | X | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 867 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 973 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 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 |

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**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 | Perfor-mance | Unit dimensions | | | | | | | | | | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pump | | | | | | | | | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismant-ling dim. | |
| | | | | Flanges | | Feet | | | | | | | | | | | | | | | | | | | | | |
| | | | KW | DNs | DNd | a | f | b1 | b2 | h1 | h2 | b | c | m1 | m2 | n1 | n2 | s1 | a1 | d | h3 | l1 | l | x | |
| 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 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 | | 320 | 234 | 481 | 993 | 85 | 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 |
| 65-160/01 | 112 M | ● | 4 | 80 | 65 | 100 | 371 | 133 | 162 | 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 | | | | 412 | | | | | | | | | | | | | 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

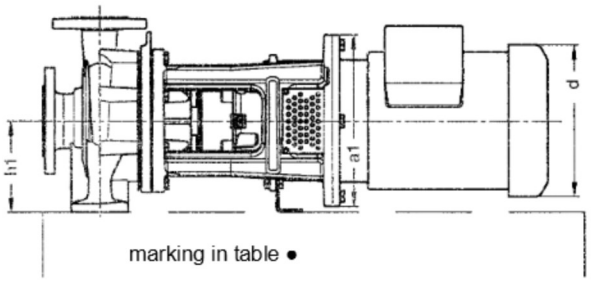
The motor dimensions as indicated are approximate values. Exact data depend on the motor make.

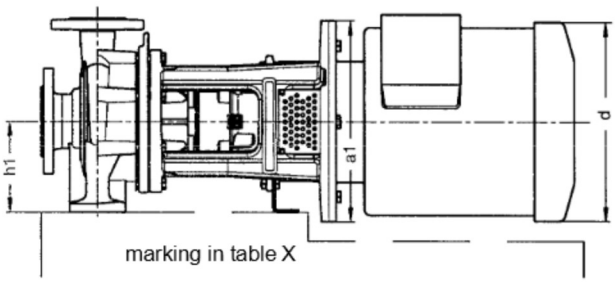
When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
**Attention:** Motors provided by the client must also contain a axial thrust bearing on the drive side!
Binding motor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

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

Base plate and/or foundation design

$h1 \leq \frac{a_1}{2}$ 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 | Perfor-mance | Unit dimensions | | | | | | | | | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pump | | | | | | | | | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismant-ling dim. | |
| | | | | Flanges | | Feet | | | | | | | | | | | | | | | | | | | | | |
| | | | KW | 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 |
| | 90 L | • | 1,5 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 733 | | 24/200 |
| | 90 L | • | 1,5 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | | 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 | 130 | 130 | 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 | 130 | 140 | 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 |
| 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 | | | | | | | | | | | | | | | | | 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 |
| 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 | | | | | | | | | | | | | | | | | 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 |
| | 112 M | • | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 806 | | 28/250 |
| | 132 S | • | 5,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| 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 | | | | | | | | | | | | | | | | | 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 |
| | 112 M | • | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 806 | | 28/250 |
| 80-160/11 | 90 S | • | 1,1 | 125 | 80 | 125 | 371 | 145 | 180 | 180 | 225 | 65 | 15 | 125 | 95 | 320 | 250 | M 12 | 200 | 181 | 130 | 282 | 778 | 102 | 24/200 |
| | 90 L | • | 1,5 | | | | | | | | | | | | | | | | | 181 | 130 | 282 | 778 | | 24/200 |
| | 100 L | • | 2,2 \| 3 | | | | | | | | | | | | | | | | 250 | 203 | 158 | 312 | 808 | | 28/250 |
| | 112 M | • | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 831 | | 28/250 |
| | 132 S | • | 5,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 912 | | 38/300 |

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**Unit dimensions -** Series CBWH

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

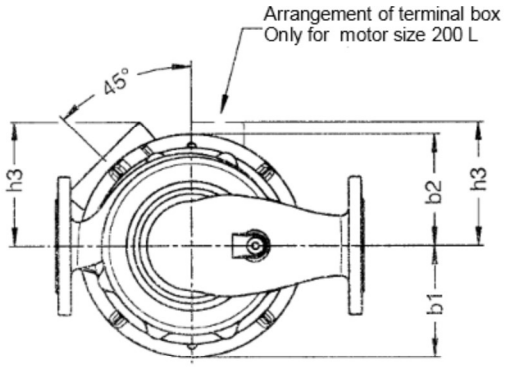
When using special motors, it must be noted that depending upon the enclosure, different performances are allocated to the individual sizes. The main dimensions are changed accordingly.
**Attention:** Motors provided by the client must also contain a axial thrust bearing on the drive side!
Binding motor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

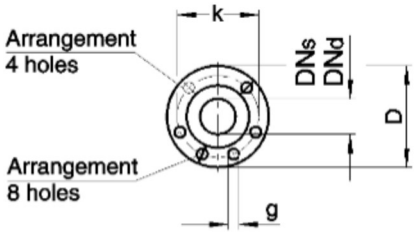
**n = 2900 / 3500 1/min**

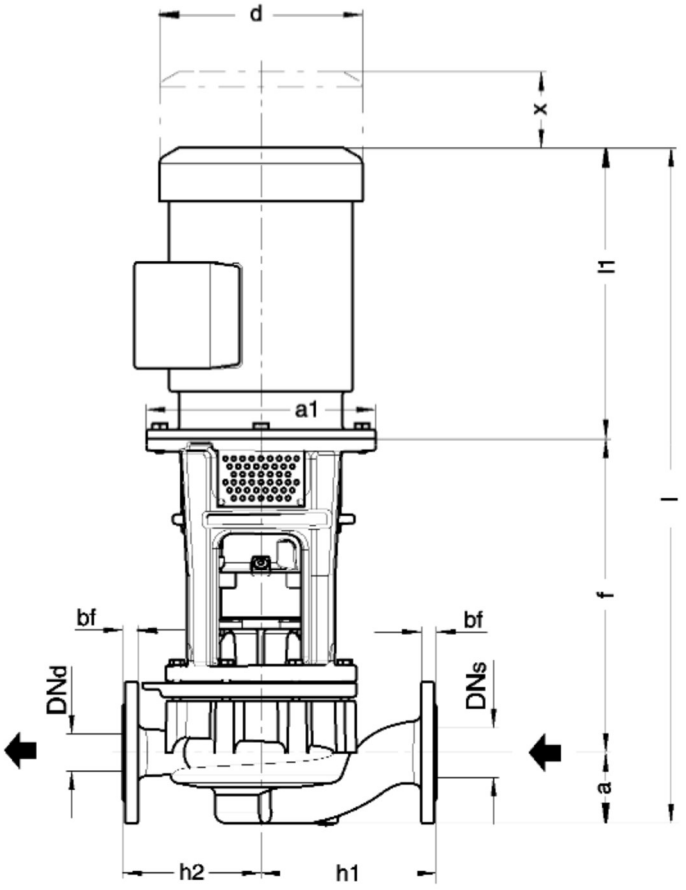
Dimensions in mm
Subject to alteration

| Pump size | Motor size | Base plate and/or foundation design see above | Perfor-mance | Unit dimensions | | | | | | | | | | | | | | | | | | | | | Assignment plug-in shaft motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Pump | | | | | | | | | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismantling dim. | |
| | | | | Flange | | Feet | | | | | | | | | | | | | | | | | | | | |
| | | | KW | 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 | ● | 0,75 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 | | | | | | | | | | | | | | | | 250 | 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 | | | | | | | | | | | | | | | | 250 | 203 | 158 | 312 | 763 | | 28/250 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | ● | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | 250 | 203 | 158 | 312 | 763 | | 28/250 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | X | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 867 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 973 | | 42/350 |
| 40-160/01 | 90 L | ● | 2,2 | 65 | 40 | 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 | | | | | | | | | | | | | | | | 250 | 203 | 158 | 312 | 763 | | 28/250 |
| | 112 M | ● | 4 | | | | | | | | | | | | | | | | | 228 | 171 | 335 | 786 | | 28/250 |
| | 132 S | X | 5,5 7,5 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 867 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 973 | | 42/350 |
| 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 320 | 234 | 481 | 993 | | 42/350 |
| 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 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 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 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 |
| 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 | | | | 412 | | | | | | | | | | | | 300 | 266 | 196 | 375 | 887 | | 38/300 |
| | 160 M | X | 11 15 | | | | | | | | | | | | | | | | 350 | 320 | 234 | 481 | 993 | | 42/350 |
| | 160 L | X | 18,5 | | | | | | | | | | | | | | | | | 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 | 300 | 266 | 196 | 375 | 912 | 102 | 38/300 |
| | 160 M | ● | 11 15 | | | | | | | | | | | | | | | | 350 | 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



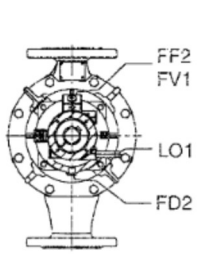



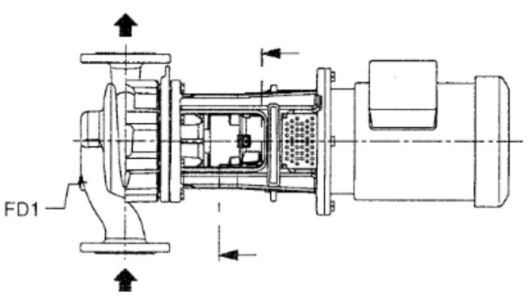



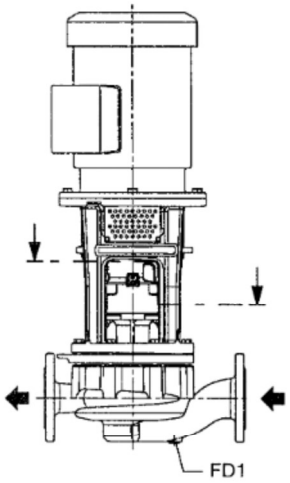

| Flanges acc. to EN 1092-2 PN 16 | | | | | |
|---|---|---|---|---|---|
| DNs/DNd | D | bf | k | g | No. of holes |
| 32 | 140 | 18 | 100 | 19 | 4 |
| 40 | 150 | 18 | 110 | 19 | 4 |
| 50 | 165 | 20 | 125 | 19 | 4 |
| 65 | 185 | 20 | 145 | 19 | 4 |
| 80 | 200 | 22 | 160 | 19 | 8 |
| 100 | 220 | 24 | 180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

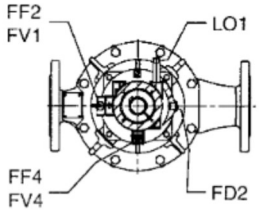
| Connections | | | | |
|---|---|---|---|---|
| Draining | | Filling/ Venting | | Leakage outlet |
| FD1 | FD2 | FF2 / FV1 | FF4 / FV4 | L01 |
| G 3/8 | G 1/4 | G 1/4 | G 1/4 only for vertical installation | G 1/4 |

**Connections for horizontal and vertical installation**



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**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

Dimensions in mm
Subject to alteration

| Pump size | Motor size | Perfor-mance | Unit dimensions | | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pump | | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismantling dim. | |
| | | | Flanges | | | | | | | | | | | | | | | |
| | | KW | DNs | DNd | a | f | b1 | b2 | h1 | h2 | a1 | d | h3 | l1 | l | x | |
| 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 | | | | 412 | | | | | 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 | | | | 412 | | | | | 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 | | | | 412 | | | | | 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 | | | | 412 | | | | | 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 | | | | 412 | | | | | 300 | 266 | 196 | 375 | 917 | | 38/300 |

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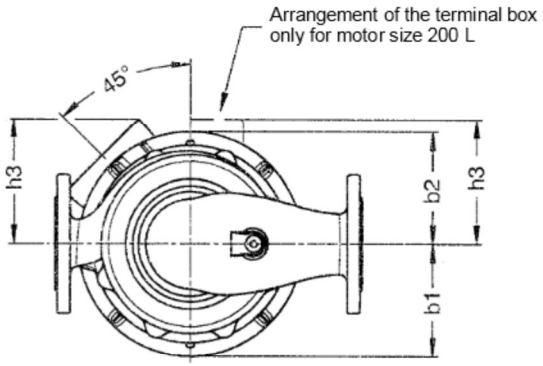
**Unit dimensions –** Series NIWH

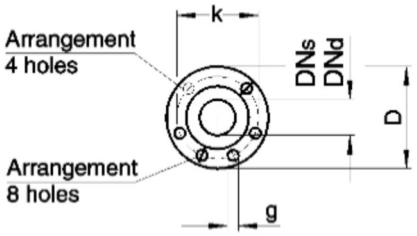
**n = 2900 / 3500 1/min**

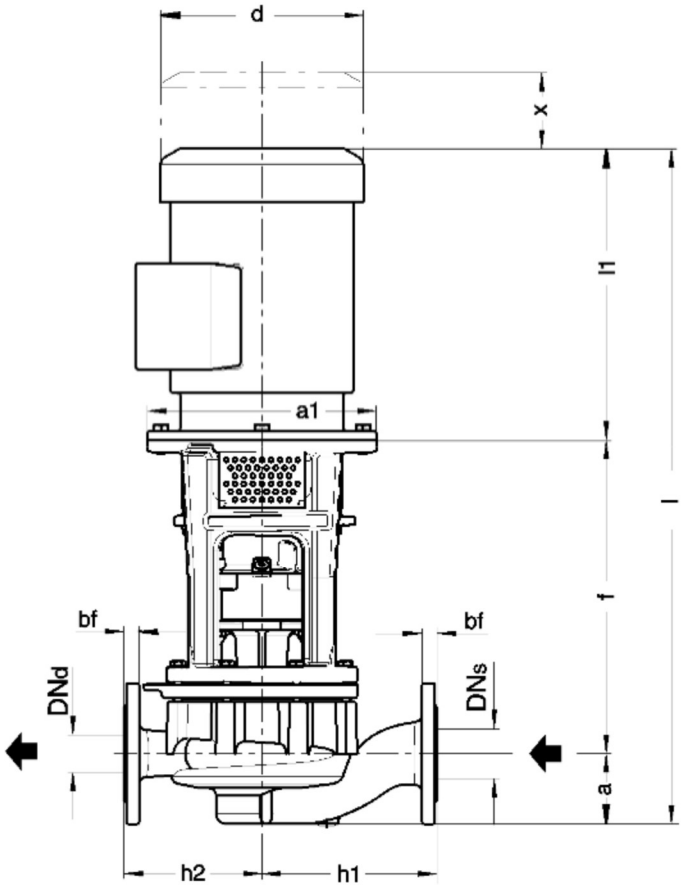
Dimensions in mm
Subject to alteration

| Pump size | Motor size | Performance | Unit dimensions | | | | | | | | | | | | | | Assignment plug-in shaft/ motor stool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pump | | | | | | | | Motor dimensions approximated, depending on manufacturer | | | | | Dismantling dim. | |
| | | | Flange | | | | | | | | | | | | | | |
| | | KW | DNs | DNd | a | f | b1 | b2 | h1 | h2 | a1 | d | h3 | l1 | l | x | |
| 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 | | | | | | | | | 350 | 320 | 234 | 481 | 986 | | 42/350 |
| | 160 L | 18,5 | | | | | | | | | | 320 | 234 | 481 | 986 | | 42/350 |
| 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 | | | | | | | | | 350 | 320 | 234 | 481 | 996 | | 42/350 |
| | 160 L | 18,5 | | | | | | | | | | 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 | | | | | | | | | 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 |
| 40-250/01 | 132 S | 5,5 \| 7,5 | 50 | 50 | 105 | 412 | 148 | 156 | 240 | 225 | 300 | 266 | 196 | 375 | 890 | 85 | 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 | 375 | 610 | 1125 | | 48/350 |
| | 200 L | 30 \| 37 | | | | | | | | | 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 | | | | | | | | | 350 | 320 | 234 | 481 | 1005 | | 42/350 |
| | 160 L | 18,5 | | | | | | | | | | 320 | 234 | 481 | 1005 | | 42/350 |
| 50-200/01 | 132 S | 5,5 \| 7,5 | 65 | 65 | 114 | 412 | 132 | 146 | 240 | 225 | 350 | 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 |
| 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 |
| 65-160/01 | 112 M | 4 | 80 | 80 | 122 | 371 | 133 | 162 | 270 | 230 | 250 | 228 | 171 | 335 | 826 | 102 | 28/250 |
| | 132 S | 5,5 \| 7,5 | | | | 412 | | | | | 300 | 266 | 196 | 375 | 907 | | 38/300 |
| | 160 M | 11 \| 15 | | | | | | | | | 350 | 320 | 234 | 481 | 1013 | | 42/350 |
| | 160 L | 18,5 | | | | | | | | | | 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 | | | | | | | | | | 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 | | 38/300 |
| | 160 M | 11 \| 15 | | | | | | | | | 350 | 320 | 234 | 481 | 1023 | 102 | 42/350 |
| | 160 L | 18,5 | | | | | | | | | | 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



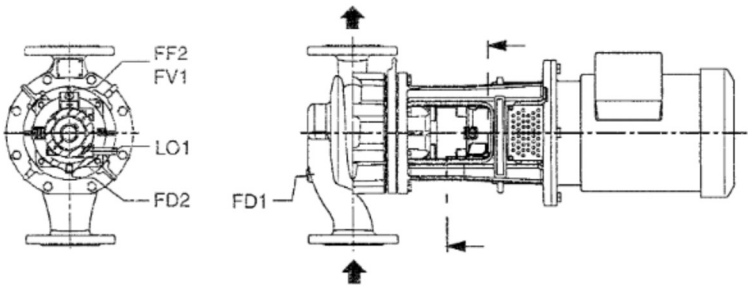



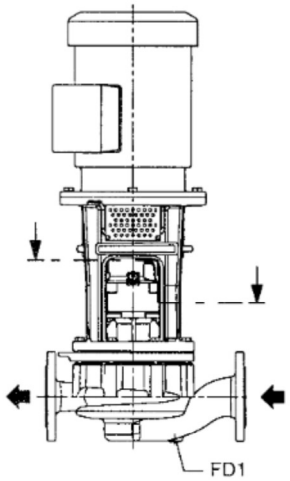



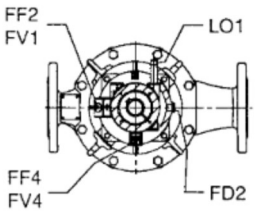

| Flange acc. to EN 1092-2 PN 25 | | | | | |
|---|---|---|---|---|---|
| DNs/DNd | D | bf | k | g | No. of holes |
| 32 | 140 | 20 | 100 | 19 | 4 |
| 40 | 150 | 20 | 110 | 19 | 4 |
| 50 | 165 | 22 | 125 | 19 | 4 |
| 65 | 185 | 24 | 145 | 19 | 8 |

| 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**



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**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. | |
| | | | Flange | | | | | | | | | | | | | | |
| | | KW | DNs | DNd | a | f | b1 | b2 | h1 | h2 | a1 | d | h3 | l1 | l | x | |
| 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 | | | | 412 | | | | | 300 | 266 | 196 | 375 | 899 | | 38/300 |

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**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 | | | | | | | | | | | | | | |
| | | KW | DNs | DNd | a | f | b1 | b2 | h1 | h2 | a1 | d | h3 | l1 | l | x | |
| 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 | | | | | | | | | 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 |
| 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 | | | | | | | | | 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 |
| 40-200/11 | 112 M | 4 | 40 | 40 | 95 | 371 | 130 | 135 | 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 | | | | | | | | | | 320 | 234 | 481 | 986 | | 42/350 |
| | 160 L | 18,5 | | | | | | | | | 350 | 320 | 234 | 481 | 986 | | 42/350 |
| 50-160/11 | 90 L | 2,2 | 50 | 50 | 105 | 371 | 130 | 130 | 210 | 200 | 200 | 181 | 130 | 282 | 756 | | 24/200 |
| | 100 L | 3 | | | | | | | | | 250 | 203 | 158 | 312 | 786 | 102 | 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 | | | | | | | | | 350 | 320 | 234 | 481 | 996 | | 42/350 |
| 50-200/11 | 112 M | 4 | 50 | 50 | 105 | 371 | 130 | 135 | 220 | 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 | | | | | | | | | 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 | 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 | | | | | | | | | 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 | 300 | 266 | 196 | 375 | 899 | 102 | 38/300 |
| | 160 M | 11 15 | | | | | | | | | 350 | 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.

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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.