

ZEND 031125 ... 125250

TECHNICAL DATA

| | |
|------------------------|--|
| Output: | max. 600 m ³ /h |
| Delivery head: | max. 90 m |
| Speed: | max. 3600 rpm |
| Temperature: | max. 230 °C ⁽¹⁾ |
| Casing pressure: | PN 40 |
| Shaft sealing: | balanced standard mechanical seal uncooled |
| Flange connections: | material design 1B DIN EN 1092-2 PN 40 2B DIN EN 1092-1 PN 40 |
| Direction of rotation: | clockwise, when looking at the pump from the drive end |



APPLICATION

The volute pumps of the series ZEND are part of the overall programme heat transfer and circulation pumps. They are primarily used for circulation of **hot water** in closed pipe and vessel systems.

Therefore their fields of applications are

- the energy production
- heat transport and
- the industry

and here mainly in systems where hot water as heat carrier is given preference, despite its high systems pressure, over oil as heat carrier.

DESIGN

Horizontal, single-stage⁽²⁾ volute pumps with dimensions and nominal ratings to **DIN EN 22858** in back pull out design, with uncooled balanced mechanical seal.

The series **ZEND** has especially been designed for the trouble free handling of hot water up to 230 °C and is distinguished by:

- A double heat barrier that causes an optimal energy consumption by the pump and reduces the temperature level in the mechanical seal chamber to less than 100 °C without external cooling circuit (see temperature curve on page 3). The service life of the mechanical seal increases considerably.
- A special design that automatically leads accumulation of gas to exhaust. Consequently the dry operation of the mechanical seal can be excluded.
- A programme that comprehends 29 construction sizes and thus guarantees an optimal solution for every operating point.
- The back pull out design, which permits the removal of the complete bearing unit towards the drive end without removing the pump casing from the pipe work. If a spacer coupling is installed it is also unnecessary to disconnect the motor.

⁽¹⁾ Temperature range 170 °C to 200 °C

⁽²⁾ Except for sizes 031125 to 031250

CONSTRUCTION

Casing pressure

max. 35 bar from 170 °C to 200 °C
max. 32 bar from 200 °C to 230 °C
Intermediate values can be obtained by interpolation.

Please note:

Technical rules and safety regulations.
Max. casing pressure = inlet pressure + zero head
Max. test pressure = 52 bar

Flanges location:

Axial suction flange, discharge flange radially upwards.

Flanges:

The flanges comply with DIN EN 1092 part 1 and part 2 resp. PN 40.
Flange design to ANSI 300 is possible.

Hydraulic:

Designation of this construction type: A.

Bearing:

One grease-lubricated, reinforced antifriction bearing to DIN 625 and one internal liquid flushed sleeve bearing.
Designation of this construction type: S

Direction of rotation:

Clockwise, when looking at the pump from the drive end.

Shaft sealing:

Code BG3: balanced standard mechanical seal
seal face materials SIC/carbon
elastomer EPDM

Material design:

| Item | Components | Material | | | | | | Execution | | |
|----------------------------------|---|--------------------|--------------------------|---------------------|---------------------------|-----------------|--------|-----------|----|---|
| | | EN material-number | EN material-denomination | DIN material-number | DIN material-denomination | US denomination | | 1B | 2B | |
| | | | | | | ASTM Standard | AISI | | | |
| 10.20 15.20 16.10 33.00 | volute casing * intermediate flange casing cover bearing bracket | EN-JS 1025 | EN-GJS-400-18-LT | 0.7043 | GGG-40.3 | A 395 | | X | | |
| 10.91 17.11 23.00 | intermediate piece ** impeller** | 1.4571 | X6 Cr Ni Mo Ti 17 12 2 | 1.4571 | X6 Cr Ni Mo Ti 17 12 2 | A 276 Gr316Ti | 316 Ti | X | | |
| 52.30 | shaft sleeve | 1.4571 | X6 Cr Ni Mo Ti 17 12 2 | 1.4571 | X6 Cr Ni Mo Ti 17 12 2 | A 276 Gr316Ti | 316 Ti | X | X | |
| 21.00 | shaft | 1.4021 | X 20 Cr 13 | 1.4021 | X 20 Cr 13 | A 276 Type 420 | 420 | X | X | |
| 23.00 44.10 | impeller casing for mechanical seal | EN-JL 1040 | EN-GJL 250 | 0.6025 | GG-25 | A 278 Class 30 | | X | X | |
| 43.30 | mechanical seal | SIC / carbon | | | | | | | X | X |
| 52.90 54.00 | sleeve bearing | SIC / SIC | | | | | | | X | X |

* for sizes 065315, 080315, 100315 material volute casing GP 240 GH.

** only for sizes 031125... 031250

Casing gasket:

The casing is sealed by a flat gasket of graphite. Designation of this construction type: 2

Motor power:

Using commercial electric motors, type of construction IM B3.

To determine the drive power we recommend the following safety margin:

Up to 4 kW: 25%

4 up to 7,5 kW: 20%

above 7,5 kW: 15%

The following speeds are to be observed:

| max. speed rpm | size | | | max. speed rpm | size | | max. speed rpm | size |
|-------------------|--------|--------|--------|-------------------|--------|--------|-------------------|--------|
| 3600 | 031125 | 040200 | 080200 | 3000 | 031250 | 100250 | 1800 | 125250 |
| | 031160 | 050160 | 100160 | | 032250 | 125200 | | 040315 |
| | 031200 | 050200 | 100200 | | 040250 | 050315 | | |
| | 032160 | 065160 | 050250 | | 065315 | | | |
| | 032200 | 065200 | 065250 | | 080315 | | | |
| | 040160 | 080160 | 080250 | | 100315 | | | |

The max. speeds result from the permissible peripheral speed of the impeller or from the shaft load admissible at higher temperatures, respectively.

Bearing bracket / pump size:

| | |
|------------|--|
| Bracket 25 | 031125 031160 031200 031250 032160 032200 040160 040200 050160 050200 |
| Bracket 35 | 032250 040250 050250 065160 065200 065250 080160 080200 080250 100160 100200 040315 050315 |
| Bracket 45 | 100250 125200 125250 065315 080315 100315 |

General remarks:

For equipping hot media systems a complete programme is available for a flow range between 1-1000 m³/h consisting of the range:

ZDN volute pumps to DIN EN 22858, t_{max} 207 °C PN 25. Hot water design

ZHN volute pumps to EN 733, t_{max} 180 °C PN 16. Hot water design.

ZLI volute pumps to EN 733 as INLINE construction, t_{max} 150 °C PN 25. Hot water design.

ZTN volute pumps to EN 733, t_{max} 350 °C PN 16. Heat transfer oil design.

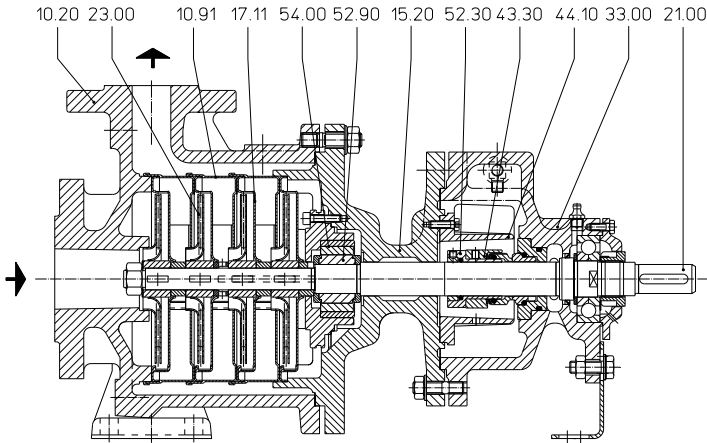
ZTK volute pumps to EN 733 close coupled design, t_{max} 350 °C PN 16. Heat transfer oil.

ZTI volute pumps to EN 733 as INLINE construction, t_{max} 350 °C PN 16. Heat transfer oil.

Technical documentation on these programmes will readily be supplied on request.

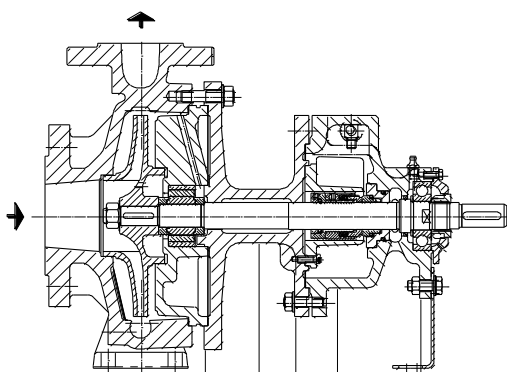
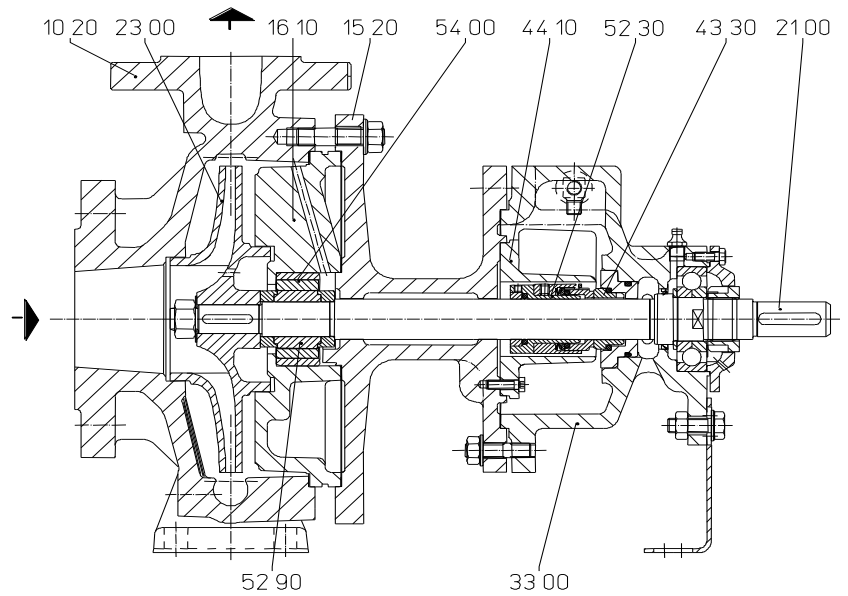
Sectional drawing and nomenclature

ZEND 031125 ... 031250 AS BG3...



- 10.20 volute casing
- 10.91, 17.11 intermediate piece
- 15.20 intermediate flange
- 16.10 casing cover
- 21.00 shaft
- 23.00 impeller
- 33.00 bearing bracket
- 43.30 mechanical seal
- 44.10 casing for mechanical seal
- 52.30 shaft sleeve
- 52.90, 54.00 sleeve bearing

ZEND 032160 ... 125250 AS BG3...

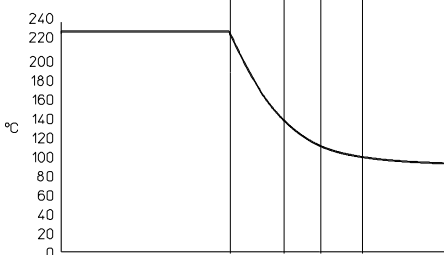


Heat barrier / shaft seal / bearing / feet arrangement

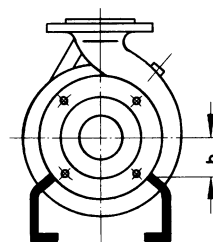
Heat transfer installations have achieved a high level of technical development. Consequently the requirements on the pumps handling heat carriers have increased regarding operating safety, environmental protection, maintenance and operating costs. On the basis of many years' experience and latest technical know-how the ZEND fully complies with these requirements. Special attention was paid to the above technical details.

A favourable reduction in temperature is obtained towards the drive side by fitting a double acting heat barrier between the casing cover and the shaft seal housing. See illustration.

Product-side heat losses are effectively prevented (energy saving). The temperature reduction makes it possible to use safely an **uncooled** mechanical seal up to a pumping medium temperature of **230 °C**.



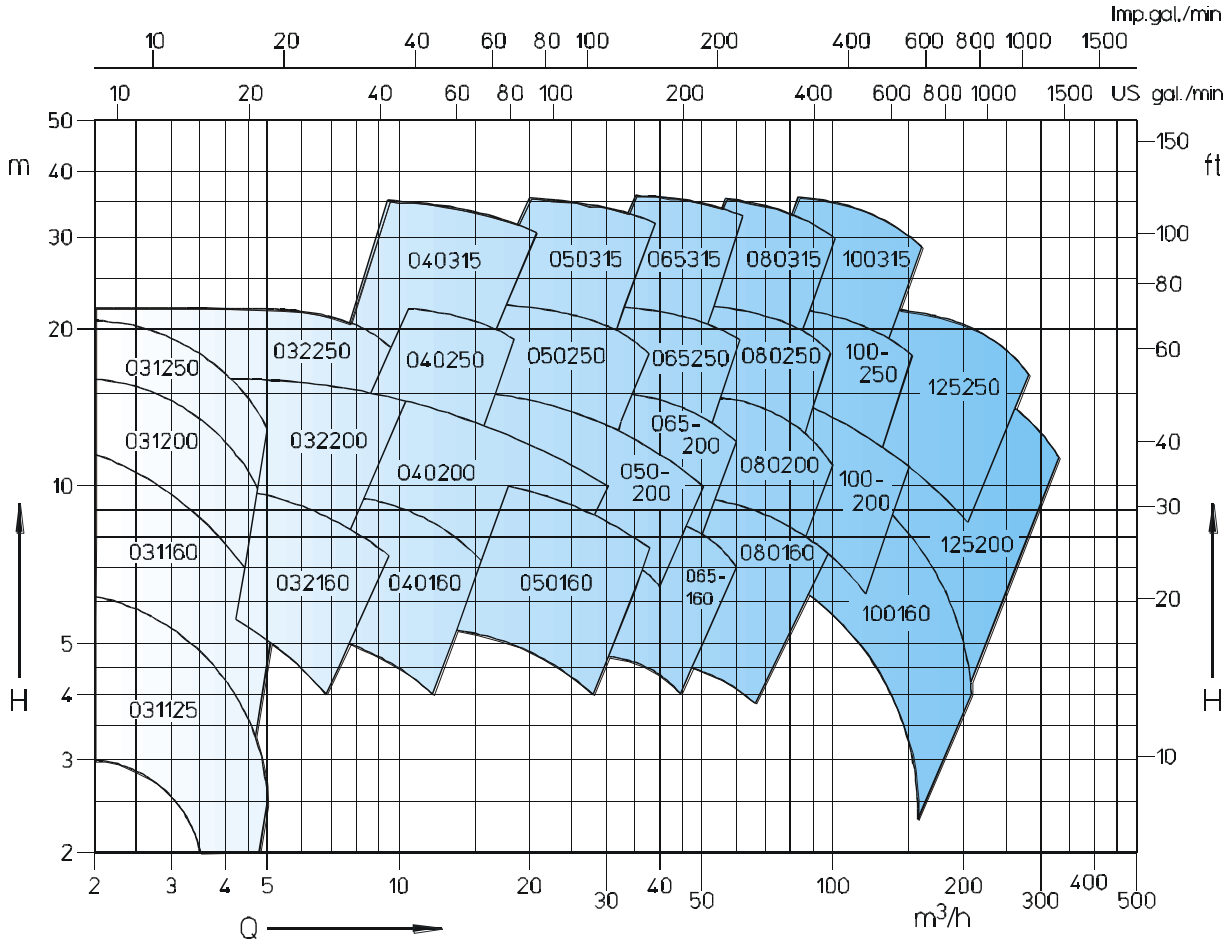
Curve of temperature decrease



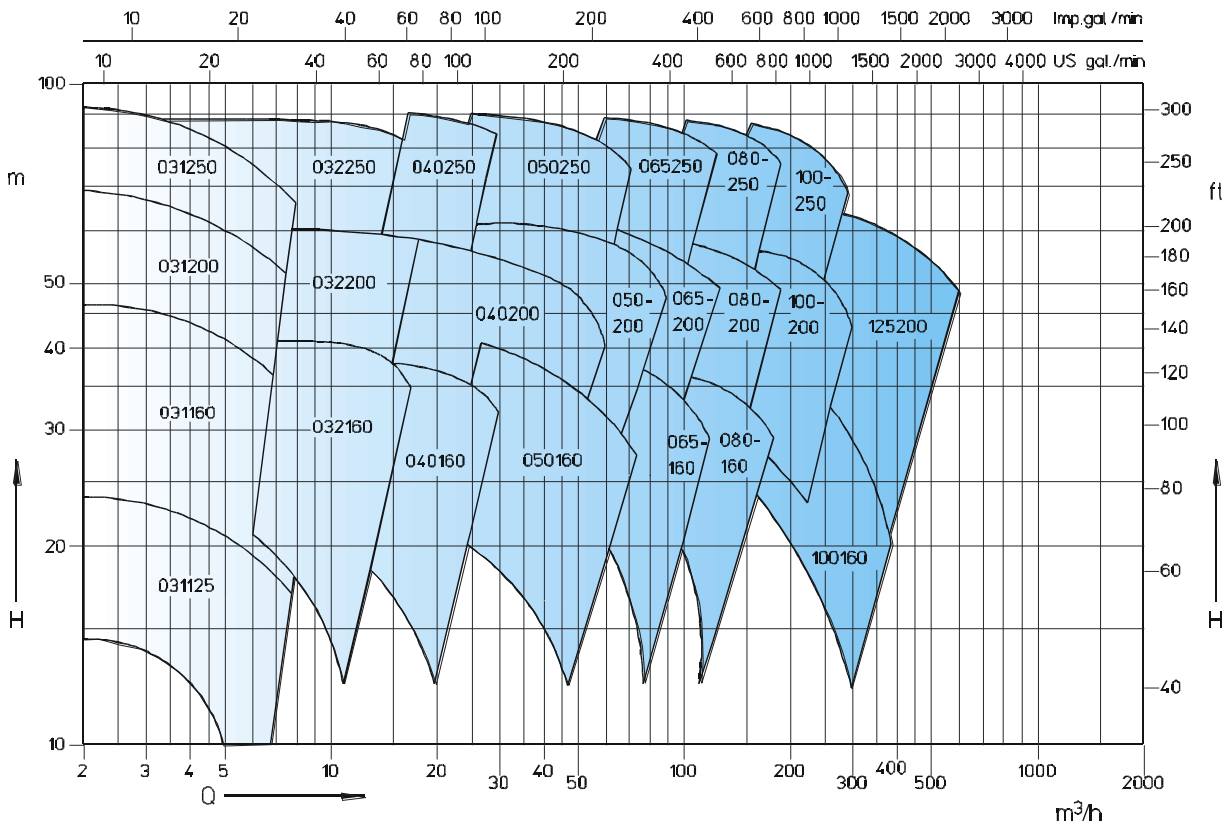
By special constructional shaping of the pump feed, displacements caused by thermal expansion are prevented to a great extent. For the vertical displacement only the measure h is decisive, since the rest of the foot remains cold. The horizontal expansion is taken up by the elastic foot bracings.

Performance graph

50 Hz
n= 1450 rpm

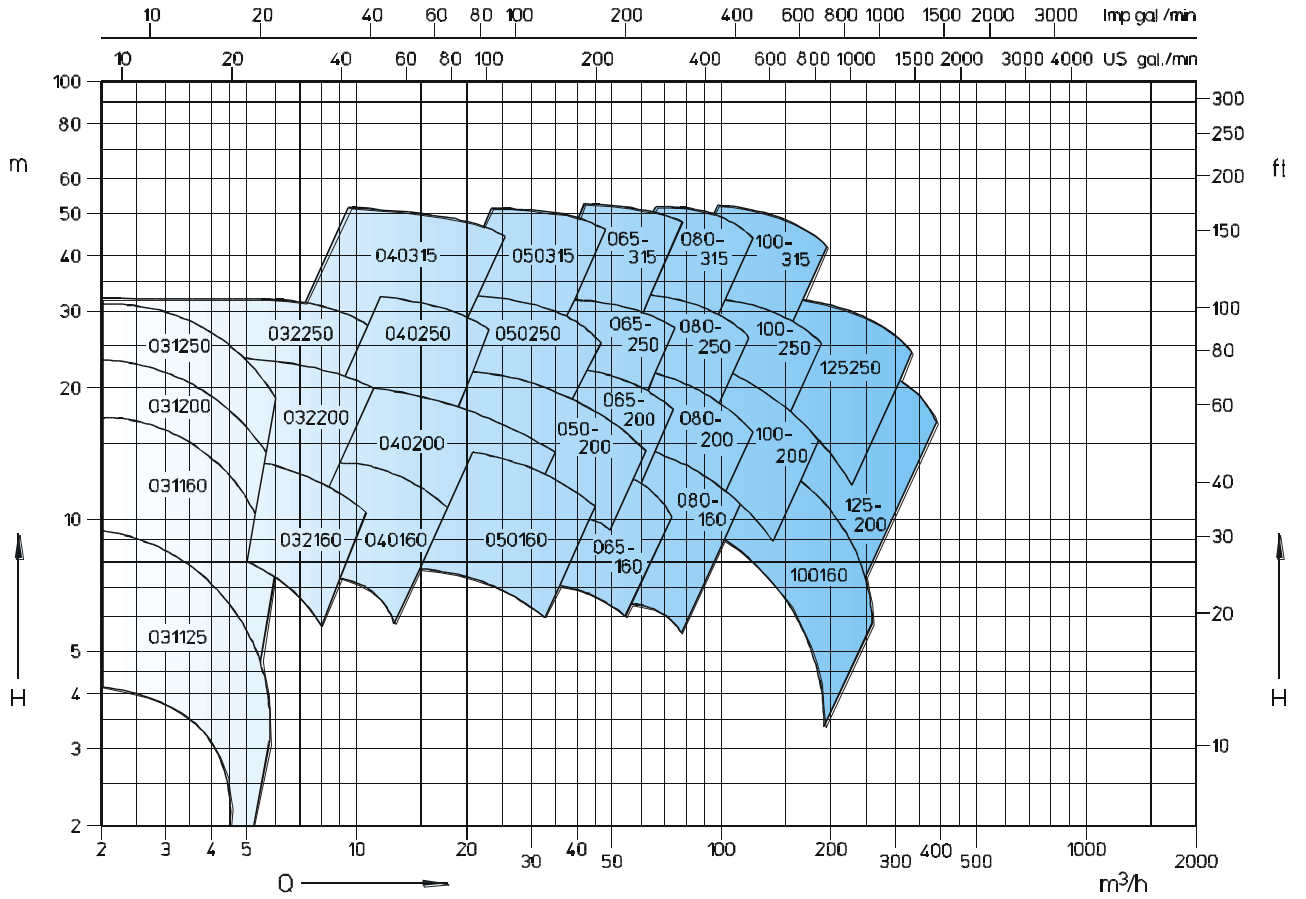


n= 2900 rpm

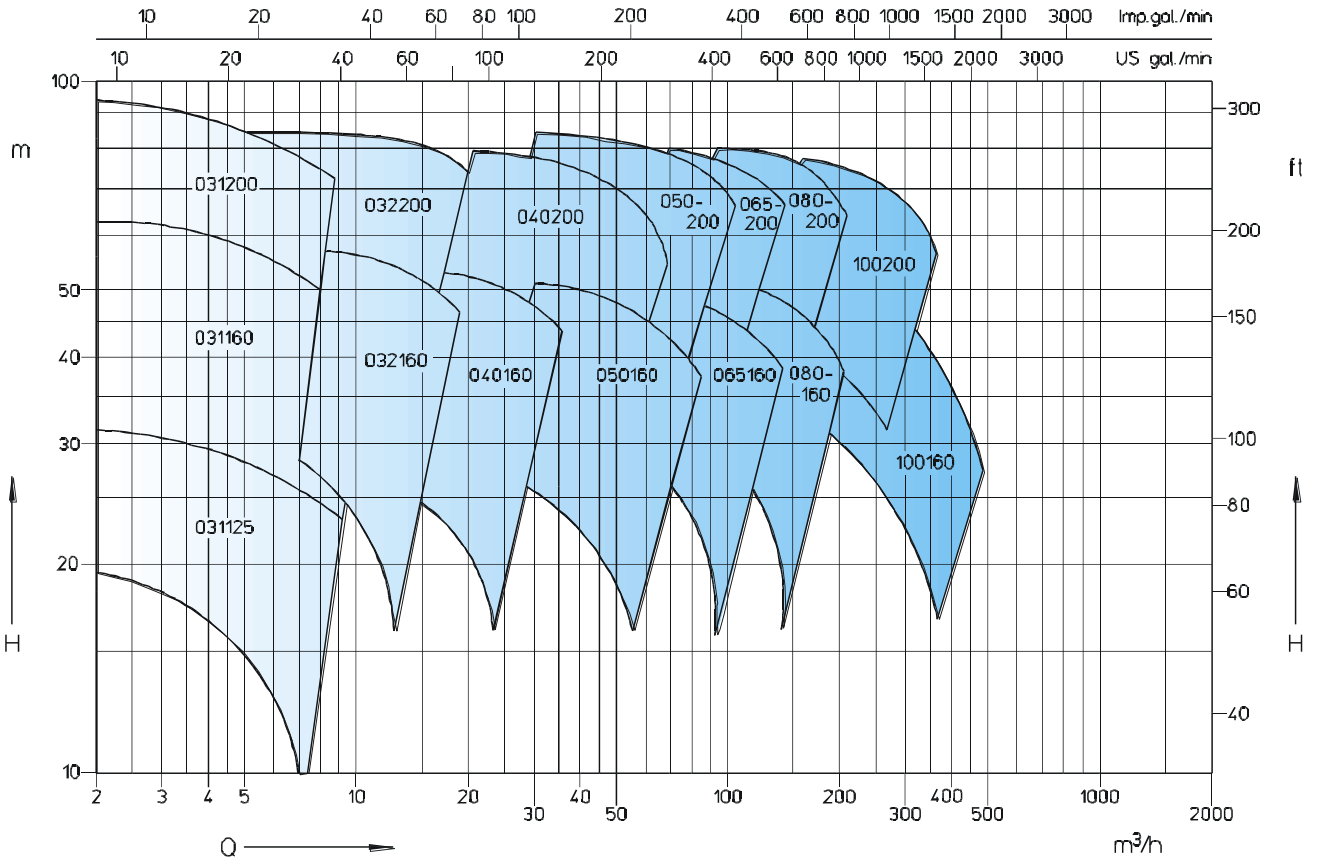


Performance graph

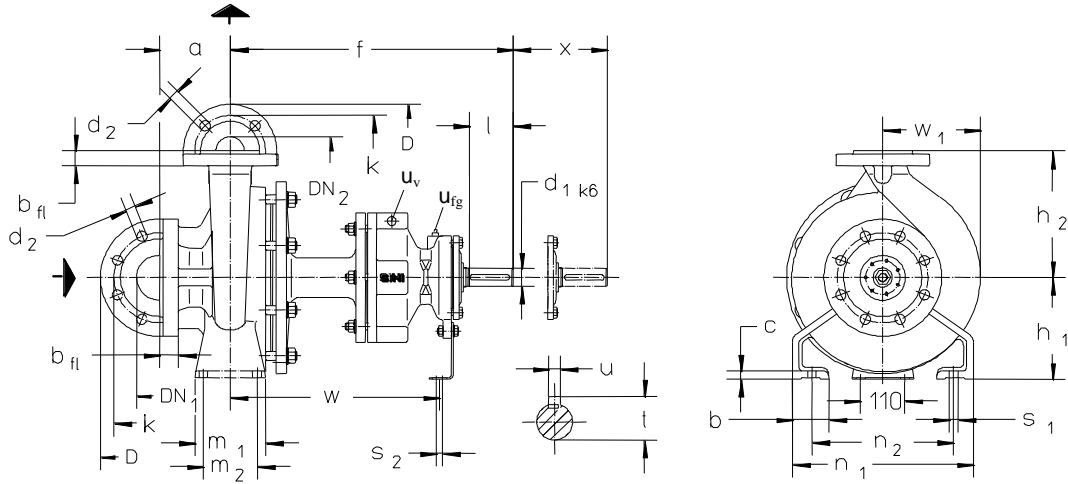
**60 Hz
n = 1750 rpm**



n = 3500 rpm



Dimension table



uv = vent connection (G1/8)

ufg = grease filling connection (G1/8)

Dimensions in mm

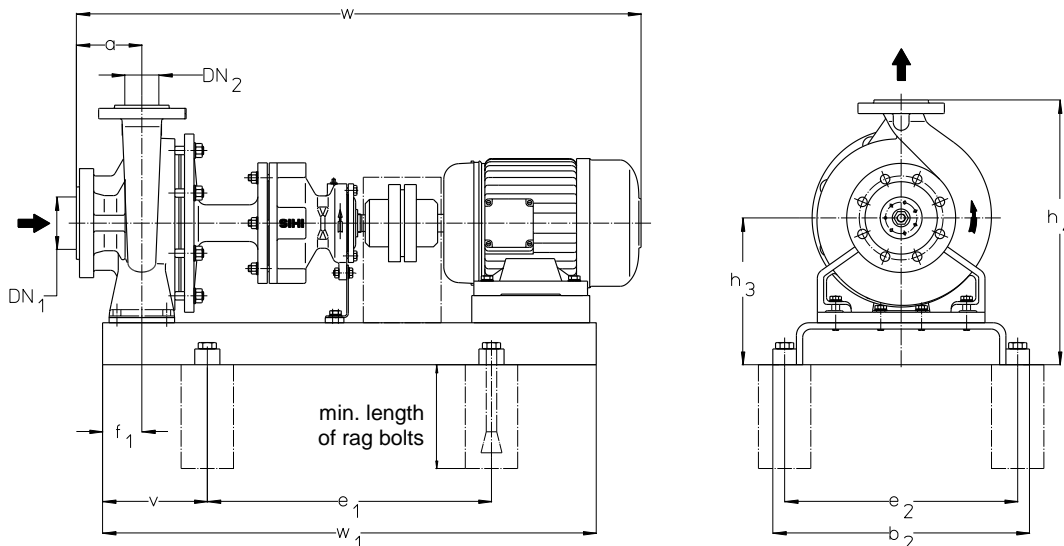
| size | DN ₂ | DN ₁ | a | b | c | f | h ₁ | h ₂ | m ₁ | m ₂ | n ₁ | n ₂ | s ₁ * | s ₂ * | w | w ₁ | x | d ₁ | l | t | u |
|----------------------|-----------------|-----------------|-----|-----|-----|-----|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|-----|----------------|-----|----------------|-----|----|----|
| 031125 ¹⁾ | 32 | 50 | 80 | 50 | 17 | 450 | 132 | 160 | 100 | 70 | 240 | 190 | M12 | | 350 | 128 | 140 | 24 | 50 | 27 | 8 |
| 031160 ¹⁾ | | | | | | | | | | | | | | | | | | | | | |
| 031200 ¹⁾ | | | | | | | | | | | | | | | | | | | | | |
| 031250 ¹⁾ | | | | | | | | | | | | | | | | | | | | | |
| 032160 | | | | | | | | | | | | | | | | | | | | | |
| 032200 | | | | | | | | | | | | | | | | | | | | | |
| 032250 | 100 | 65 | 500 | 180 | 225 | 125 | 95 | 320 | 250 | 370 | 170 | 32 | 80 | 35 | 10 | | | | | | |
| 040160 | 40 | 65 | 80 | 50 | 17 | 385 | 132 | 160 | 100 | 70 | 240 | 190 | M12 | | 285 | 125 | 100 | 24 | 50 | 27 | 8 |
| 040200 | | | | | | | | | | | | | | | | | | | | | |
| 040250 | | | | | | | | | | | | | | | | | | | | | |
| 040315 | | | | | | | | | | | | | | | | | | | | | |
| 050160 | 50 | 80 | 100 | 50 | 17 | 385 | 160 | 180 | 100 | 70 | 265 | 212 | M12 | | 285 | 135 | 100 | 24 | 50 | 27 | 8 |
| 050200 | | | | | | | | | | | | | | | | | | | | | |
| 050250 | | | | | | | | | | | | | | | | | | | | | |
| 050315 | | | | | | | | | | | | | | | | | | | | | |
| 065160 | 65 | 100 | 100 | 65 | 17 | 500 | 160 | 200 | 125 | 95 | 280 | 212 | M12 | | 285 | 155 | 100 | 32 | 80 | 35 | 10 |
| 065200 | | | | | | | | | | | | | | | | | | | | | |
| 065250 | | | | | | | | | | | | | | | | | | | | | |
| 065315 | | | | | | | | | | | | | | | | | | | | | |
| 080160 | 80 | 125 | 100 | 80 | 20 | 530 | 225 | 280 | 160 | 120 | 360 | 280 | M16 | | 230 | 230 | 140 | 42 | 110 | 45 | 12 |
| 080200 | | | | | | | | | | | | | | | | | | | | | |
| 080250 | | | | | | | | | | | | | | | | | | | | | |
| 080315 | | | | | | | | | | | | | | | | | | | | | |
| 100160 ¹⁾ | 100 | 125 | 140 | 80 | 20 | 500 | 200 | 280 | 160 | 120 | 360 | 280 | M16 | | 210 | 210 | 140 | 32 | 80 | 35 | 10 |
| 100200 | | | | | | | | | | | | | | | | | | | | | |
| 100250 | | | | | | | | | | | | | | | | | | | | | |
| 100315 | | | | | | | | | | | | | | | | | | | | | |
| 125200 ¹⁾ | 125 | 150 | 140 | 80 | 20 | 530 | 250 | 315 | 400 | 315 | 400 | 315 | M16 | | 245 | 245 | 140 | 42 | 110 | 45 | 12 |
| 125250 | | | | | | | | | | | | | | | | | | | | | |

¹⁾ Transnorm pump sizes, not included in DIN EN 22858.

* Slots suitable for bolts with dimensions indicated. Bolts are not included in the bare shaft pump standard scope of supply.

| Flange connection according to DIN EN 1092-2 PN 40 execution material 1B | | | | | | | | | Flange connection acc. to DIN EN 1092-1 PN 40 execution material 2B | | | | | | | | |
|--|------|------|------|------|------|------|------|------|---|------|------|------|------|------|------|------|--|
| DN ₂ /DN ₁ | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | |
| D | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 | |
| k | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 | |
| b _{fl} | 18 | 19 | 19 | 19 | 19 | 19 | 23,5 | 26 | 18 | 18 | 20 | 22 | 24 | 24 | 26 | 28 | |
| Tolerances | | | | | | | | | | | | | | | | | |
| d ₂ x number | 19x4 | 19x4 | 19x4 | 19x8 | 19x8 | 23x8 | 28x8 | 28x8 | 18x4 | 18x4 | 18x4 | 18x8 | 18x8 | 22x8 | 26x8 | 26x8 | |

Foundation plan

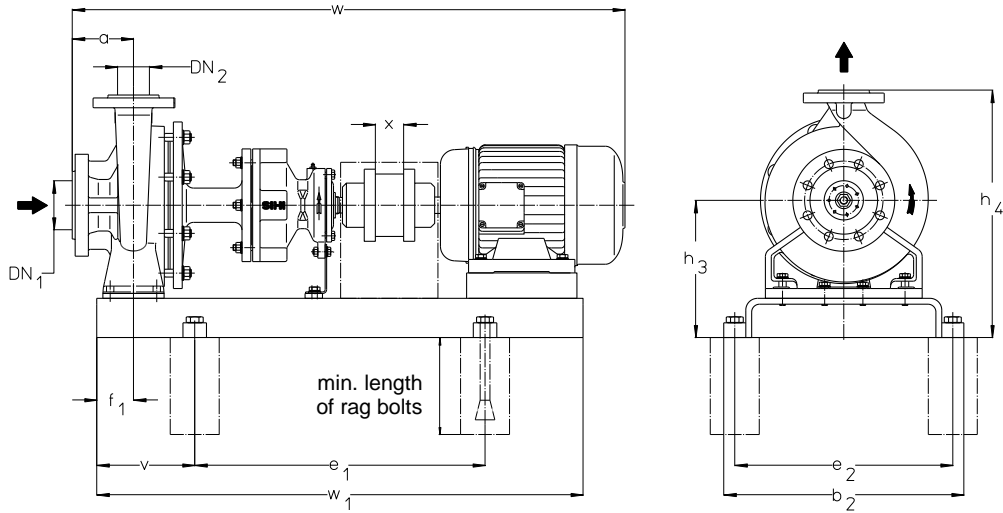


Dimensions in mm

| ZEND Size | Motor | | Size | Base plate No. | Cplg. | Weight (kg) | | DN ₂ | DN ₁ | a | b ₂ | e ₁ | e ₂ | v | f ₁ | h ₃ | h ₄ | w* | w ₁ | Rag bolt size |
|-----------|-------|-------|------|----------------|-------|-------------|------|-----------------|-----------------|----|----------------|----------------|----------------|-----|----------------|----------------|----------------|------|----------------|---------------|
| | rpm | kW | | | | Pump | Unit | | | | | | | | | | | | | |
| 031125 | 0,25 | - | 71a | S272 | B68 | 57 | 93 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 766 | 820 | |
| | - | 2,20 | 90L | | | | 101 | | | | | | | | | | | 854 | | |
| 031160 | 0,37 | - | 71b | S272 | B80 | 57 | 94 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 766 | 820 | |
| | - | 3,00 | 100L | | | | 107 | | | | | | | | | | | 898 | | |
| 031200 | 0,55 | - | 80a | S272 | B68 | 57 | 95 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 802 | 820 | |
| | - | 4,00 | 112M | | | | 112 | | | | | | | | | | | 915 | | |
| 031250 | 0,75 | - | 80b | S303 | B68 | 57 | 97 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 802 | 820 | |
| | - | 5,50 | 132S | | | | 143 | | | | | | | | | | | 977 | | |
| 032160 | 0,37 | - | 71b | S272 | B68 | 55 | 87 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 701 | 820 | M16X200 |
| | 0,55 | - | 80a | | | | 93 | | | | | | | | | | | 737 | | |
| 032160 | - | 1,10 | 80b | S272 | B68 | 55 | 94 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 737 | 820 | M16X200 |
| | - | 1,50 | 90S | | | | 97 | | | | | | | | | | | 764 | | |
| 032160 | - | 2,20 | 90L | S272 | B68 | 55 | 100 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 764 | 820 | M16X200 |
| | - | 3,00 | 100L | | | | 106 | | | | | | | | | | | 833 | | |
| 032160 | - | 4,00 | 112M | S272 | B80 | 55 | 110 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 850 | 820 | M16X200 |
| | - | 4,00 | 112M | | | | 95 | | | | | | | | | | | 737 | | |
| 032200 | 0,55 | - | 80a | S272 | B68 | 57 | 97 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 737 | 820 | |
| | 0,75 | - | 80b | | | | 99 | | | | | | | | | | | 764 | | |
| 032200 | 1,10 | - | 90S | S272 | B68 | 57 | 99 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 764 | 820 | |
| | - | 3,00 | 100L | | | | 108 | | | | | | | | | | | 833 | | |
| 032200 | - | 4,00 | 112M | S272 | B80 | 57 | 112 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 850 | 820 | |
| | - | 5,50 | 132S | | | | 143 | | | | | | | | | | | 912 | | |
| 032200 | - | 7,50 | 132S | S303 | B95 | 57 | 149 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 912 | 820 | |
| | - | 7,50 | 132S | | | | 149 | | | | | | | | | | | 912 | | |
| 032250 | 0,75 | - | 80b | S383 | B80 | 96 | 149 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 872 | 820 | M20x400 |
| | 1,10 | - | 90S | | | | 151 | | | | | | | | | | | 893 | | |
| 032250 | 1,50 | - | 90L | S383 | B80 | 96 | 153 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 924 | 820 | M20x400 |
| | 2,20 | - | 100L | | | | 159 | | | | | | | | | | | 968 | | |
| 032250 | - | 7,50 | 132S | S385 | B95 | 96 | 217 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1047 | 820 | M20x400 |
| | - | 11,00 | 160M | | | | 261 | | | | | | | | | | | 1188 | | |
| 032250 | - | 15,00 | 160M | S385 | B95 | 96 | 275 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1188 | 820 | M20x400 |
| | - | 15,00 | 160M | | | | 275 | | | | | | | | | | | 1188 | | |
| 040160 | 0,37 | - | 71b | S272 | B68 | 55 | 85 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 700 | 820 | M16x200 |
| | 0,55 | - | 80a | | | | 94 | | | | | | | | | | | 737 | | |
| 040160 | 0,75 | - | 80b | S272 | B68 | 55 | 96 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 737 | 820 | M16x200 |
| | 1,10 | 1,50 | 90S | | | | 99 | | | | | | | | | | | 764 | | |
| 040160 | - | 2,20 | 90L | S272 | B68 | 55 | 102 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 789 | 820 | M16x200 |
| | - | 3,00 | 100L | | | | 107 | | | | | | | | | | | 833 | | |
| 040160 | - | 4,00 | 112M | S272 | B80 | 55 | 125 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 850 | 820 | M16x200 |
| | - | 5,50 | 132S | | | | 143 | | | | | | | | | | | 912 | | |
| 040200 | 0,75 | - | 80b | S301 | B68 | 63 | 102 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 757 | 820 | M16x200 |
| | 1,10 | - | 90S | | | | 105 | | | | | | | | | | | 784 | | |
| 040200 | 1,50 | - | 90L | S301 | B68 | 63 | 108 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 809 | 820 | M16x200 |
| | 2,20 | - | 100L | | | | 120 | | | | | | | | | | | 870 | | |
| 040200 | - | 4,00 | 112M | S303 | B80 | 63 | 138 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 877 | 820 | M16x200 |
| | - | 5,50 | 132S | | | | 151 | | | | | | | | | | | 932 | | |
| 040200 | - | 7,50 | 132S | S303 | B95 | 63 | 130 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 932 | 820 | M16x200 |
| | - | 11,00 | 160M | | | | 213 | | | | | | | | | | | 1073 | | |
| 040200 | - | 15,00 | 160M | S344 | B95 | 63 | 215 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1073 | 820 | M16x200 |
| | - | 15,00 | 160M | | | | 215 | | | | | | | | | | | 1073 | | |
| 040250 | 1,10 | - | 90S | S383 | B80 | 98 | 156 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 900 | 820 | M20x400 |
| | 1,50 | - | 90L | | | | 159 | | | | | | | | | | | 924 | | |
| 040250 | 2,20 | - | 100L | S383 | B80 | 98 | 162 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 968 | 820 | M20x400 |
| | 3,00 | - | 100L | | | | 165 | | | | | | | | | | | 968 | | |
| 040250 | - | 5,50 | 132S | S385 | B95 | 98 | 215 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1047 | 820 | M20x400 |
| | - | 7,50 | 132S | | | | 218 | | | | | | | | | | | 1047 | | |
| 040250 | - | 11,00 | 160M | S385 | B95 | 98 | 267 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1188 | 820 | M20x400 |
| | - | 15,00 | 160M | | | | 269 | | | | | | | | | | | 1188 | | |
| 040250 | - | 18,50 | 160L | S385 | B95 | 98 | 293 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 1232 | 820 | M20x400 |
| | - | 18,50 | 160L | | | | 293 | | | | | | | | | | | 1232 | | |

| ZEND Size | Motor | | | Base plate No. | Cplg. | Weight (kg) | | DN ₂ | DN ₁ | a | b ₂ | e ₁ | e ₂ | v | f ₁ | h ₃ | h ₄ | w* | w ₁ | Rag bolt size |
|-----------|----------|----------|------|----------------|---------|-------------|------|-----------------|-----------------|-----|----------------|----------------|----------------|-----|----------------|----------------|----------------|---------|----------------|---------------|
| | 1450 rpm | 2900 rpm | Size | | | Pump | Unit | | | | | | | | | | | | | |
| 040315 | 2,20 | - | 100L | S383 | B80 | 136 | 197 | 40 | 65 | 125 | 490 | 600 | 440 | 160 | 75 | 280 | 530 | 993 | 920 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 993 | | |
| | 4,00 | - | 112M | 1010 | | | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | 1072 | 1140 | | | | | | | | | | | | | | | |
| 050160 | 0,55 | - | 80a | S301 | B68 | 61 | 98 | 50 | 80 | 100 | 390 | 480 | 350 | 125 | 60 | 225 | 405 | 757 | 730 | M16x200 |
| | 0,75 | - | 80b | | | | | | | | | | | | | | | 100 | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 103 | | |
| | 1,50 | 2,20 | 90L | 105 | | | | | | | | | | | | | | | | |
| | - | 3,00 | 100L | 118 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 136 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 149 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 152 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 211 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 215 | 1020 | | | | | | | | | | | | | M20x400 | | |
| 050200 | 0,75 | - | 80b | S301 | B68 | 65 | 104 | 50 | 80 | 100 | 390 | 480 | 350 | 125 | 60 | 225 | 425 | 757 | 730 | M16x200 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 107 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 110 | | |
| | 2,20 | - | 100L | 122 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 140 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 157 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 160 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 215 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 217 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 232 | 1020 | | | | | | | | | | | | | M20x400 | | |
| 050250 | 1,50 | - | 90L | S383 | B80 | 101 | 162 | 65 | 100 | 125 | 490 | 600 | 440 | 160 | 60 | 260 | 485 | 949 | 920 | M20x400 |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 164 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 168 | | |
| | 4,00 | - | 112M | 184 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 221 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 264 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 272 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 297 | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | 324 | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | 433 | 1140 | | | | | | | | | | | | | M20x400 | | |
| 050315 | 4,00 | - | 112M | S486 | B80 | 140 | 254 | 65 | 100 | 125 | 610 | 840 | 550 | 205 | 75 | 325 | 605 | 1010 | 1250 | M24x400 |
| | 5,50 | - | 132S | | | | | | | | | | | | | | | 283 | | |
| | 7,50 | - | 132M | 295 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160L | 1110 | | | | | | | | | | | | | | | | |
| 065160 | 0,75 | - | 80b | S342 | B80 | 86 | 134 | 65 | 100 | 100 | 450 | 660 | 400 | 180 | 75 | 240 | 440 | 872 | 1020 | M20x400 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 146 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 149 | | |
| | 2,20 | - | 100L | 152 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 159 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 184 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 187 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 255 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 257 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 257 | 1140 | | | | | | | | | | | | | M20x400 | | |
| 065200 | 1,10 | - | 90S | S344 | B80 | 94 | 154 | 65 | 100 | 100 | 450 | 660 | 400 | 180 | 75 | 260 | 485 | 900 | 1020 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 157 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 160 | | |
| | 3,00 | - | 100L | 163 | | | | | | | | | | | | | | | | |
| | 4,00 | - | 112M | 179 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 214 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 263 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 265 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 289 | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | 317 | | | | | | | | | | | | | | | | |
| - | 30,00 | 200L | 426 | 1270 | M20x400 | | | | | | | | | | | | | | | |
| 065250 | 2,20 | - | 100L | S434 | B80 | 113 | 190 | 65 | 100 | 125 | 540 | 660 | 490 | 170 | 90 | 280 | 530 | 993 | 1000 | M24x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 193 | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | 208 | | |
| | 5,50 | - | 132S | 228 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 298 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 313 | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | 341 | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | 445 | | | | | | | | | | | | | | | | |
| | - | 37,00 | 200L | 461 | | | | | | | | | | | | | | | | |
| | - | 45,00 | 225M | 504 | 1270 | | | | | | | | | | | | | M24x400 | | |
| 065315 | 5,50 | - | 132S | S486 | B95 | 146 | 280 | 65 | 100 | 125 | 610 | 840 | 550 | 205 | 75 | 325 | 605 | 1102 | 1250 | M24x400 |
| | 7,50 | - | 132M | | | | | | | | | | | | | | | 292 | | |
| | 11,00 | - | 160M | | | | | | | | | | | | | | | 325 | | |
| | 15,00 | - | 160L | | | | | | | | | | | | | | | 341 | | |
| 080160 | 0,75 | - | 80b | S383 | B80 | 95 | 150 | 80 | 125 | 100 | 490 | 600 | 440 | 160 | 75 | 260 | 485 | 897 | 920 | M20x400 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 153 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 156 | | |
| | 2,20 | - | 100L | 159 | | | | | | | | | | | | | | | | |
| | 3,00 | - | 100L | 162 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 215 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 264 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 266 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 290 | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | 318 | | | | | | | | | | | | | | | | |
| 080200 | 1,50 | - | 90L | S383 | B80 | 102 | 162 | 80 | 125 | 100 | 490 | 600 | 440 | 160 | 75 | 260 | 510 | 949 | 920 | M20x400 |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 166 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 169 | | |

Foundation plan for units with spacer coupling



Dimensions in mm

| ZEND Size | Motor | | Base plate No. | Cplg. | Weight (kg) | | DN ₂ | DN ₁ | a | b ₂ | e ₁ | e ₂ | v | f ₁ | h ₃ | h ₄ | x | w* | w ₁ | Rag bolt size |
|-----------|-------|-------|----------------|-------|-------------|------|-----------------|-----------------|-----|----------------|----------------|----------------|-----|----------------|----------------|----------------|-----|-----|----------------|---------------|
| | rpm | KW | | | Size | pump | | | | | | | | | | | | | | |
| 031125 | 0,25 | - | 71a | S303 | H80 | 57 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 906 | 920 | M16x200 |
| | - | 2,20 | 90L | S344 | | | | | | | | | | | | | | | | |
| 031160 | 0,37 | - | 71b | S303 | H80 | 57 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 906 | 920 | M16x200 |
| | - | 3,00 | 100L | S344 | | | | | | | | | | | | | | | | |
| 031200 | 0,55 | - | 80a | S303 | H80 | 57 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 906 | 920 | M16x200 |
| | - | 4,00 | 112M | S344 | | | | | | | | | | | | | | | | |
| 031250 | 0,75 | - | 80b | S303 | H95 | 57 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 906 | 920 | M16x200 |
| | - | 5,50 | 132S | S344 | | | | | | | | | | | | | | | | |
| 032160 | 0,37 | - | 71b | S272 | H80 | 55 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 801 | 820 | M16x200 |
| | 0,55 | - | 80a | | | | | | | | | | | | | | | 96 | | |
| | - | 1,10 | 80b | | | | | | | | | | | | | | | 97 | | |
| | - | 1,50 | 90S | | | | | | | | | | | | | | | 100 | | |
| | - | 2,20 | 90L | | | | | | | | | | | | | | | 103 | | |
| | - | 3,00 | 100L | | | | | | | | | | | | | | | 113 | | |
| 032200 | 0,55 | - | 80a | S303 | H80 | 57 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 801 | 820 | M16x200 |
| | 0,75 | - | 80b | | | | | | | | | | | | | | | 98 | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 100 | | |
| | - | 3,00 | 100L | | | | | | | | | | | | | | | 102 | | |
| | - | 4,00 | 112M | | | | | | | | | | | | | | | 115 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 120 | | |
| 032250 | 0,75 | - | 80b | S383 | H80 | 96 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 801 | 820 | M16x200 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 99 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 102 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 115 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 146 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 153 | | |
| 032250 | 0,75 | - | 80b | S436 | H95 | 96 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 972 | 1140 | M20x400 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 155 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 175 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 177 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 181 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 220 | | |
| 040160 | 0,37 | - | 71b | S272 | H80 | 55 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 800 | 820 | M16x200 |
| | 0,55 | - | 80a | | | | | | | | | | | | | | | 94 | | |
| | 0,75 | - | 80b | | | | | | | | | | | | | | | 97 | | |
| | 1,10 | 1,50 | 90S | | | | | | | | | | | | | | | 99 | | |
| | - | 2,20 | 90L | | | | | | | | | | | | | | | 102 | | |
| | - | 3,00 | 100L | | | | | | | | | | | | | | | 105 | | |
| | - | 4,00 | 112M | | | | | | | | | | | | | | | 114 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 133 | | |
| 040200 | 0,75 | - | 80b | S303 | H80 | 63 | 32 | 50 | 80 | 360 | 540 | 320 | 140 | 60 | 197 | 357 | 140 | 800 | 920 | M16x200 |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 94 | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 97 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 99 | | |
| | - | 4,00 | 112M | | | | | | | | | | | | | | | 102 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 105 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 114 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 133 | | |
| 040250 | 1,10 | - | 90S | S385 | H80 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S344 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 111 | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 114 | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 117 | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | 122 | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | 142 | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | 154 | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | 157 | | |
| 040250 | 1,10 | - | 90S | S436 | H95 | 98 | 32 | 50 | 100 | 490 | 740 | 440 | 200 | 75 | 260 | 485 | 140 | 800 | 1140 | M20x400 |

| ZEND Size | Motor rpm | | Size | Base plate No. | Cplg. | Weight (kg) | | DN ₂ | DN ₁ | a | b ₂ | e ₁ | e ₂ | v | f ₁ | h ₃ | h ₄ | x | w* | w ₁ | Rag bolt size |
|-----------|-----------|------|------|----------------|-------|-------------|------|-----------------|-----------------|-----|----------------|----------------|----------------|-----|----------------|----------------|----------------|------|------|----------------|---------------|
| | 1450 KW | 2900 | | | | pump | unit | | | | | | | | | | | | | | |
| 040315 | 2,20 | - | 100L | S385 | H80 | 136 | 221 | 40 | 65 | 125 | 490 | 740 | 440 | 200 | 75 | 280 | 530 | | 1106 | 1140 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | | | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | | 1125 | | |
| | 5,50 | - | 132S | | H95 | | | | | | | | | | | | | | 1185 | | |
| 0,55 | - | 80a | S303 | H80 | | 61 | 107 | | | | | | | | | | | 857 | 920 | M16x200 | |
| 0,75 | - | 80b | | | | | | | | | | | | | | | | 857 | | | |
| 1,10 | - | 90S | | | | | | | | | | | | | | | | 884 | | | |
| 1,50 | 2,20 | 90L | | | | | | | | | | | | | | | | 912 | | | |
| - | 3,00 | 100L | | 953 | | | | | | | | | | | | | | | | | |
| - | 4,00 | 112M | | 977 | | | | | | | | | | | | | | | | | |
| - | 5,50 | 132S | | 1032 | | | | | | | | | | | | | | | | | |
| - | 7,50 | 132S | | 1032 | | | | | | | | | | | | | | | | | |
| - | 11,00 | 160M | S344 | H95 | | 155 | | | | | | | | | | | | 1032 | | | |
| | | | | | | 214 | | | | | | | | | | | | | 1173 | 1020 | M20x400 |
| | | | | | | | | | | 450 | 660 | 400 | 180 | | | 240 | 420 | | 857 | | |
| | | | | | | | | | | | | | | | | | | | 884 | | |
| | | | | | | | | | | | | | | | | | | | 909 | | |
| | | | | | | | | | | | | | | | | | | | 970 | | |
| | | | | | | | | | | | | | | | | | | | 1032 | | |
| | | | | | | | | | | | | | | | | | | | 1032 | | |
| | | | | | | | | | | | | | | | | | | | 1173 | 1020 | M20x400 |
| | | | | | | | | | | | | | | | | | | | 857 | | |
| | | | | | | | | | | | | | | | | | | | 884 | | |
| | | | | | | | | | | | | | | | | | | | 909 | | |
| | | | | | | | | | | | | | | | | | | | 970 | 920 | M16x200 |
| | | | | | | | | | | | | | | | | | | | 1032 | | |
| | | | | | | | | | | | | | | | | | | | 1032 | | |
| | | | | | | | | | | | | | | | | | | | 1173 | 1020 | M20x400 |
| | | | | | | | | | | | | | | | | | | | 1173 | 1020 | M20x400 |
| | | | | | | | | | | | | | | | | | | | 1213 | | |
| | | | | | | | | | | | | | | | | | | | 1049 | | |
| | | | | | | | | | | | | | | | | | | | 1093 | | |
| | | | | | | | | | | | | | | | | | | | 1093 | | |
| | | | | | | | | | | | | | | | | | | | 1110 | | |
| | | | | | | | | | | | | | | | | | | | 1172 | | |
| | | | | | | | | | | | | | | | | | | | 1313 | | |
| | | | | | | | | | | | | | | | | | | | 1313 | | |
| | | | | | | | | | | | | | | | | | | | 1357 | 1270 | |
| | | | | | | | | | | | | | | | | | | | 1380 | | |
| | | | | | | | | | | | | | | | | | | | 1468 | | |
| | | | | | | | | | | | | | | | | | | | 1125 | | |
| | | | | | | | | | | | | | | | | | | | 1185 | 1250 | M24x400 |
| | | | | | | | | | | | | | | | | | | | 1223 | | |
| | | | | | | | | | | | | | | | | | | | 857 | | |
| | | | | | | | | | | | | | | | | | | | 884 | | |
| | | | | | | | | | | | | | | | | | | | 909 | 1020 | |
| | | | | | | | | | | | | | | | | | | | 953 | | |
| | | | | | | | | | | | | | | | | | | | 1094 | | |
| | | | | | | | | | | | | | | | | | | | 1147 | 1140 | |
| | | | | | | | | | | | | | | | | | | | 1147 | | |
| | | | | | | | | | | | | | | | | | | | 1288 | 1270 | |
| | | | | | | | | | | | | | | | | | | | 1288 | | |
| | | | | | | | | | | | | | | | | | | | 1039 | | |
| | | | | | | | | | | | | | | | | | | | 1064 | | |
| | | | | | | | | | | | | | | | | | | | 1108 | 1020 | M20x400 |
| | | | | | | | | | | | | | | | | | | | 1108 | | |
| | | | | | | | | | | | | | | | | | | | 1125 | | |
| | | | | | | | | | | | | | | | | | | | 1255 | | |
| | | | | | | | | | | | | | | | | | | | 1328 | | |
| | | | | | | | | | | | | | | | | | | | 1328 | 1270 | |
| | | | | | | | | | | | | | | | | | | | 1372 | | |
| | | | | | | | | | | | | | | | | | | | 1425 | | |
| | | | | | | | | | | | | | | | | | | | 1483 | 1420 | M24x400 |
| | | | | | | | | | | | | | | | | | | | 1133 | | |
| | | | | | | | | | | | | | | | | | | | 1133 | | |
| | | | | | | | | | | | | | | | | | | | 1150 | 1140 | M20x400 |
| | | | | | | | | | | | | | | | | | | | 1212 | | |
| | | | | | | | | | | | | | | | | | | | 1420 | | |
| | | | | | | | | | | | | | | | | | | | 1420 | 1270 | |
| | | | | | | | | | | | | | | | | | | | 1425 | | |
| | | | | | | | | | | | | | | | | | | | 1508 | | |
| | | | | | | | | | | | | | | | | | | | 1508 | 1420 | |
| | | | | | | | | | | | | | | | | | | | 1565 | | |
| | | | | | | | | | | | | | | | | | | | 1252 | | |
| | | | | | | | | | | | | | | | | | | | 1290 | 1250 | M24x400 |
| | | | | | | | | | | | | | | | | | | | 1393 | | |
| | | | | | | | | | | | | | | | | | | | 1437 | 1420 | |
| | | | | | | | | | | | | | | | | | | | 1037 | | |
| | | | | | | | | | | | | | | | | | | | 1064 | | |
| | | | | | | | | | | | | | | | | | | | 1089 | 1020 | |
| | | | | | | | | | | | | | | | | | | | 1133 | | |
| | | | | | | | | | | | | | | | | | | | 1133 | | |
| | | | | | | | | | | | | | | | | | | | 1212 | 1140 | |
| | | | | | | | | | | | | | | | | | | | 1353 | | |
| | | | | | | | | | | | | | | | | | | | 1353 | | |
| | | | | | | | | | | | | | | | | | | | 1397 | 1270 | |
| | | | | | | | | | | | | | | | | | | | 1420 | | |
| | | | | | | | | | | | | | | | | | | | 1089 | | |
| | | | | | | | | | | | | | | | | | | | 1133 | 1140 | |
| | | | | | | | | | | | | | | | | | | | 1133 | | |

| ZEND Size | Motor | | Size | Base plate No. | Cplg. | Weight (kg) | | DN ₂ | DN ₁ | a | b ₂ | e ₁ | e ₂ | v | f ₁ | h ₃ | h ₄ | x | w* | w ₁ | Rag bolt size |
|-----------|-------|-------|------|----------------|-------|-------------|------|-----------------|-----------------|-----|----------------|----------------|----------------|-----|----------------|----------------|----------------|-----|------|----------------|---------------|
| | rpm | KW | | | | pump | unit | | | | | | | | | | | | | | |
| 080200 | 4,00 | - | 112M | S385 | H80 | 102 | 209 | 80 | 125 | 125 | 490 | 740 | 440 | 200 | 75 | 260 | 510 | | 1150 | 1140 | M20x400 |
| | 5,50 | - | 132S | | | | 221 | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | | | | 282 | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | S436 | H95 | | 289 | | | | | | | | | | | | 313 | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | S487 | H125 | | 469 | | | | | | | | | | | | 478 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | | | |
| - | 37,00 | 200L | 610 | 840 | 550 | 205 | | | | | | | | | | | | | | | |
| 080250 | 3,00 | - | 100L | S486 | H80 | 125 | 235 | 100 | 125 | 140 | 540 | 740 | 490 | 200 | 90 | 325 | 605 | 140 | 1133 | 1250 | M24x400 |
| | 4,00 | - | 112M | | | | 254 | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | | | | 267 | | | | | | | | | | | | | | |
| | 7,50 | - | 132M | S487 | H95 | | 269 | | | | | | | | | | | | 372 | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | S487 | H110 | | 492 | | | | | | | | | | | | 501 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | | | |
| | - | 37,00 | 200L | S538 | H140 | | 540 | | | | | | | | | | | | 671 | | |
| | - | 45,00 | 225M | | | | | | | | | | | | | | | | | | |
| | - | 55,00 | 250M | 610 | 940 | | 240 | | | | | | | | | | | | | | |
| 080315 | 5,50 | - | 132S | S486 | H95 | 150 | 296 | 100 | 125 | 140 | 540 | 740 | 490 | 200 | 90 | 350 | 665 | 140 | 1250 | 1250 | M24x400 |
| | 7,50 | - | 132M | | | | 307 | | | | | | | | | | | | | | |
| | 11,00 | - | 160M | S487 | H110 | | 342 | | | | | | | | | | | | 389 | | |
| | 15,00 | - | 160L | | | | | | | | | | | | | | | | | | |
| | - | - | - | 610 | 940 | | 240 | | | | | | | | | | | | | | |
| 100160 | 2,20 | - | 100L | S435 | H80 | 126 | 219 | 100 | 125 | 140 | 540 | 740 | 490 | 200 | 90 | 280 | 560 | 140 | 1148 | 1140 | M20x400 |
| | 3,00 | - | 100L | | | | 222 | | | | | | | | | | | | | | |
| | 4,00 | - | 112M | | | | 238 | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | S436 | H95 | | 251 | | | | | | | | | | | | 338 | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | S487 | H110 | | 493 | | | | | | | | | | | | 503 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | | | |
| - | 37,00 | 200L | 610 | 940 | 240 | | | | | | | | | | | | | | | | |
| 100200 | 2,20 | - | 100L | S435 | H80 | 118 | 211 | 100 | 125 | 125 | 540 | 740 | 490 | 200 | 90 | 280 | 560 | 140 | 1133 | 1140 | M20x400 |
| | 3,00 | - | 100L | | | | 214 | | | | | | | | | | | | | | |
| | 4,00 | - | 112M | | | | 230 | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | S436 | H95 | | 243 | | | | | | | | | | | | 245 | | |
| | 7,50 | - | 132M | | | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | S487 | H110 | | 358 | | | | | | | | | | | | 495 | | |
| | - | 22,00 | 180M | | | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | S487 | H125 | | 495 | | | | | | | | | | | | 534 | | |
| - | 37,00 | 200L | 610 | | | 940 | | 240 | | | | | | | | | | | | | |
| - | 45,00 | 225M | 660 | 1060 | 600 | 280 | | | | | | | | | | | | | | | |
| 100250 | 4,00 | - | 112M | S486 | H95 | 132 | 262 | 100 | 125 | 140 | 610 | 840 | 550 | 205 | 90 | 325 | 605 | 140 | 1195 | 1250 | M24x400 |
| | 5,50 | - | 132S | | | | 274 | | | | | | | | | | | | | | |
| | 7,50 | - | 132M | | | | 276 | | | | | | | | | | | | | | |
| | 11,00 | - | 160M | S487 | H110 | | 329 | | | | | | | | | | | | 515 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | | | |
| | - | 37,00 | 200L | S487 | H125 | | 509 | | | | | | | | | | | | 553 | | |
| | - | 45,00 | 225M | | | | | | | | | | | | | | | | | | |
| - | 55,00 | 250M | S538 | H140 | 679 | 880 | | | | | | | | | | | | | | | |
| - | 75,00 | 280S | | | | | 660 | 1060 | 600 | 280 | | | | | | | | | | | |
| 100315 | 11,00 | - | 160M | S486 | H95 | 153 | 346 | 100 | 125 | 140 | 610 | 840 | 550 | 205 | 90 | 350 | 665 | 140 | 1408 | 1250 | M24x400 |
| | 15,00 | - | 160L | | | | 392 | | | | | | | | | | | | | | |
| | 18,50 | - | 180M | S487 | H110 | | 424 | | | | | | | | | | | | 443 | | |
| | 22,00 | - | 180L | | | | | | | | | | | | | | | | | | |
| 125200 | 7,50 | - | 132M | S486 | H95 | 142 | 286 | 125 | 150 | 125 | 660 | 1060 | 600 | 280 | 90 | 380 | 695 | 140 | 1295 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | 339 | | | | | | | | | | | | | | |
| | 15,00 | - | 160L | | | | 362 | | | | | | | | | | | | | | |
| | - | 45,00 | 225M | S538 | H125 | | 613 | | | | | | | | | | | | 706 | | |
| | - | 55,00 | 250M | | | | | | | | | | | | | | | | | | |
| - | 75,00 | 280S | 890 | | | | | | | | | | | | | | | | | | |
| 125250 | 7,50 | - | 132M | S486 | H95 | 147 | 291 | 100 | 125 | 140 | 610 | 840 | 550 | 205 | 90 | 350 | 705 | 140 | 1295 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | 344 | | | | | | | | | | | | | | |
| | 15,00 | - | 160L | S487 | H110 | | 367 | | | | | | | | | | | | 392 | | |
| | 18,50 | - | 180M | | | | | | | | | | | | | | | | | | |
| - | - | - | 610 | 940 | 240 | | | | | | | | | | | | | | | | |

* Motor protection type IP 55, dimensions depend on the motor manufacturer.
Some sizes are not corresponding to the drawing in small details.
Foundation plan for 60Hz on request.
** Weight higher by 20 % in case of cast steel.

Data regarding pump size

| Type + Pump size | Hydraulic + Bearing | Shaft sealing | Material desing | Casing gasket |
|------------------|---|--|--|---|
| | A hydraulic 1 S grease lubricated reinforced antifriction bearing and one internal liquid flushed sleeve bearing | BG3 balanced standard mechanical seal | 1B main parts of spheroidal cast iron 2B main parts of cast steel | 2 confined flat gasket of graphite with A4 insertion |
| ZEND | AS | BG3 | 031125 | 2 |
| | | | 031160 | |
| | | | 031200 | |
| | | | 031250 | |
| | | | 032160 | |
| | | | 032200 | |
| | | | 032250 | |
| | | | 040160 | |
| | | | 040200 | |
| | | | 040250 | |
| | | | 040315 | |
| | | | 050160 | |
| | | | 050200 | |
| | | | 050250 | |
| | | | 050315 | |
| | | | 065160 | |
| | | | 065200 | |
| | | | 065250 | |
| | | | 065315 | |
| | | | 080160 | |
| | | | 080200 | |
| | | | 080250 | |
| | | | 080315 | |
| 100160 | | | | |
| 100200 | | | | |
| 100250 | | | | |
| 100315 | | | | |
| 125200 | | | | |
| 125250 | | | | |

Any changes in the interest of the technical development are reserved.

