



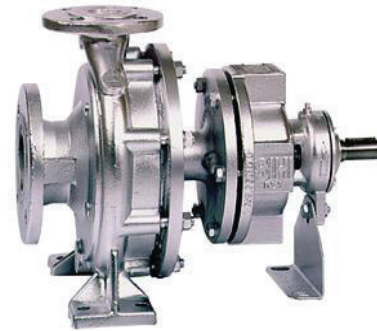
ZHND Series

End Suction Pumps

For hot water up to 180°C

TECHNICAL DATA

| | |
|---------------------|--|
| Output: | max. 600 m ³ /h |
| Delivery head: | max. 95 m |
| Speed: | max. 3600 rpm |
| Medium temperature: | max. 180 °C |
| Casing pressure: | PN 16 |
| Shaft sealing: | standard mechanical seal uncooled |
| Flange connections: | DIN EN 1092-2 PN 16 |
| Sense of rotation: | clockwise, when looking at the pump from the drive end |



APPLICATION

The volute pumps of the series ZHND 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 application are

- the energy production,
- the heat transport and
- the industry

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

DESIGN

Horizontal, single-stage volute pumps with dimensions and nominal ratings to **EN 733** in back pull out design.

The series **ZHND** has especially designed for the trouble free handling of hot water up to 180 °C and is distinguished by:

- A heat barrier that causes an optimal energy consumption by the pump and reduces the temperature level in the mechanical seal chamber to less than 80 °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 22 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.

CONSTRUCTION

Casing pressure

Max 16 bar

Please note:

Technical rules and safety regulations.

Max. casing pressure = inlet pressure + zero head

Max test pressure = 21 bar

Flange location:

Axial suction flange, discharge flange radially upwards.

Flanges:

The flanges comply with DIN EN 1092-2 resp. PN 16. Flanges drilled according to ANSI (previous ASA) 150 can be supplied.

Hydraulic:

Designation of this construction type: A or B

Bearing:

One grease lubricated antifriction bearing to DIN 625 and one internal liquid flushed sleeve bearing. Designation of this construction type: ·A

Direction of rotation:

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

Shaft sealing:

Code BJ3: Unbalanced standard mechanical seal
Seal face materials SIC/carbon
Elastomer EPDM



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Material design:

| Item | Components | Material | | | | | | Execution 1B | | | | | | | |
|-------------------------|--|---------------------------|---------------------------------|----------------------------|----------------------------------|-----------------|------|-----------------|------------|------------|--------|------------|----------------|-----|---|
| | | EN material- number | EN material- denomination | DIN material- number | DIN material- denomination | US denomination | | | | | | | | | |
| | | | | | | ASTM Standard | AISI | | | | | | | | |
| 10.20 16.10 33.00 | volute casing casing cover bearing bracket | EN-JS 1025 | EN-GJS-400-18-LT | 0.7043 | GGG 40.3 | A 395 | | X | | | | | | | |
| 21.00 | shaft | | | | | | | | 1.4021 | X 20 Cr 13 | 1.4021 | X 20 Cr 13 | A 276 Type 420 | 420 | 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 |
| 43.30 | mechanical seal | SIC / carbon | | | | | | X | | | | | | | |
| 52.90 54.00 | sleeve bearing | SIC / SIC | | | | | | X | | | | | | | |

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 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 | 032160 | 3000 | 032250 | 1800 | 125250 |
| | 065160 | | 125200 | | 150200 |
| | 032200 | | 040250 | | 150250 |
| | 065200 | | 050250 | | |
| | 040160 | | 065250 | | |
| | 080160 | | 080250 | | |
| 3600 | 040200 | 3000 | 080250 | 1800 | |
| | 050160 | | 100250 | | |
| | 050200 | | 100250 | | |

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 | 032160 032200 032250 040160 040200 040250 050160 050200 050250 065160 065200 080160 |
| Bracket 35 | 065250 080200 080250 100160 100200 100250 125200 125250 150200 150250 |

General remarks:

For equipping hot media systems a complete programme is available for a flow range between 1-600 m³/h consisting of the range:

- ZEN** volute pumps to DIN EN 22858, t_{max} 230 °C PN 40. Hot water design
- ZDN** volute pumps to DIN EN 22858, t_{max} 207 °C PN 25. 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.

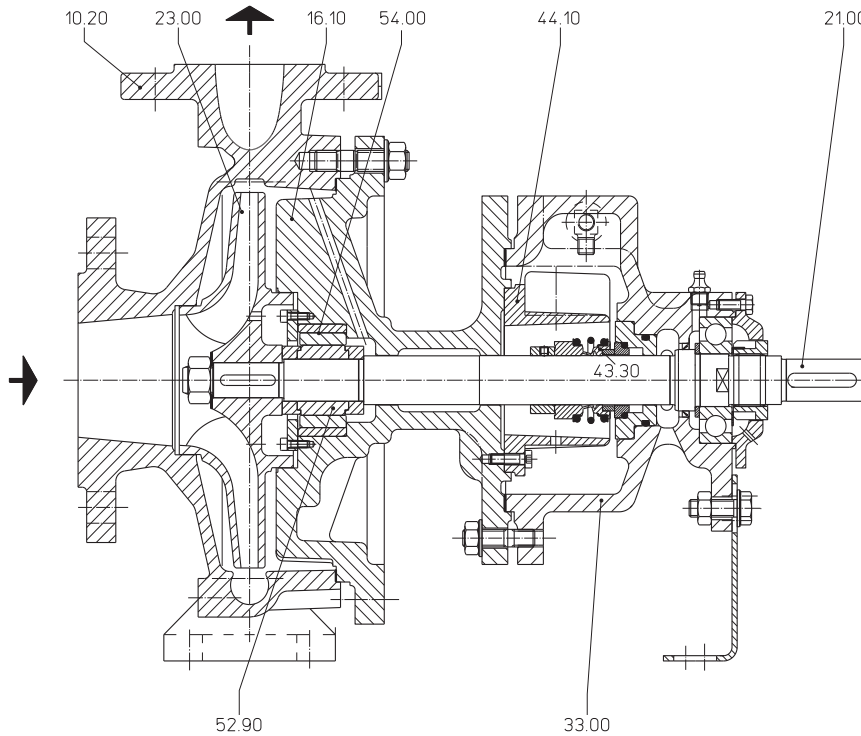


ZHND Series

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For hot water up to 180°C

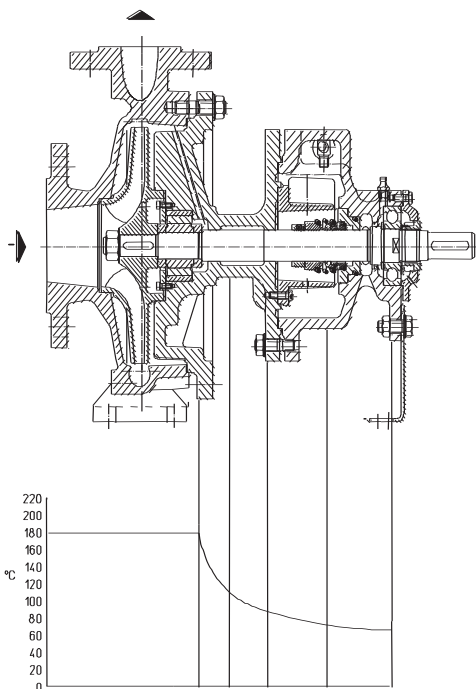
Sectional drawing and nomenclature



10.20 volute casing
16.10 casing cover
21.00 shaft

23.00 impeller
33.00 bearing bracket
43.30 shaft seal

44.10 casing for mechanical seal
52.90, 54.00 sleeve bearing



curve of temperature decrease

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 ZHND 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 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 **180 °C**.

ZHND Series

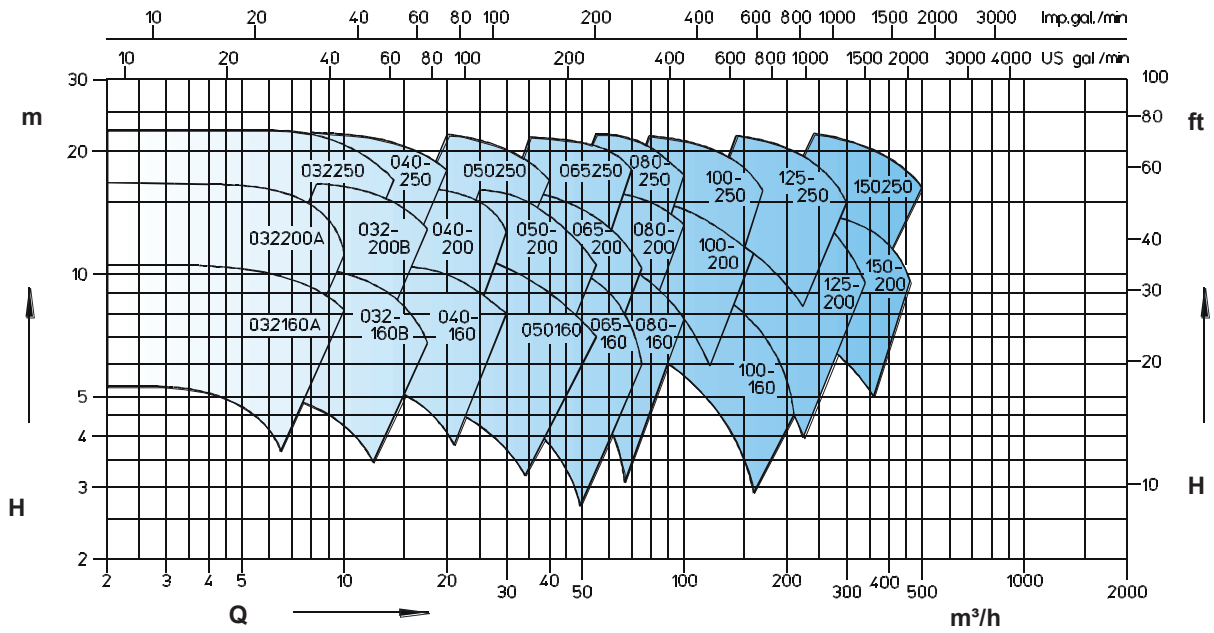
End Suction Pumps

For hot water up to 180°C

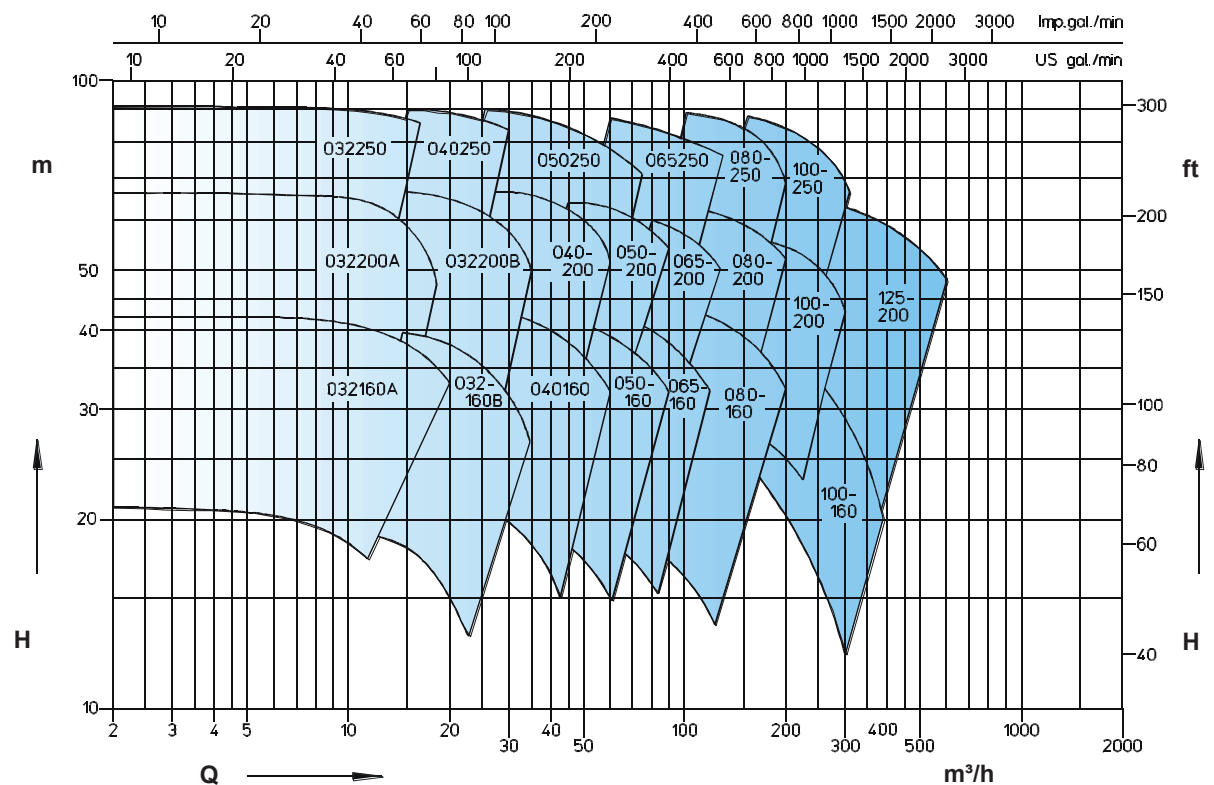


Performance graph

50 Hz
n = 1450 rpm



n = 2900 rpm



ZHND Series

End Suction Pumps

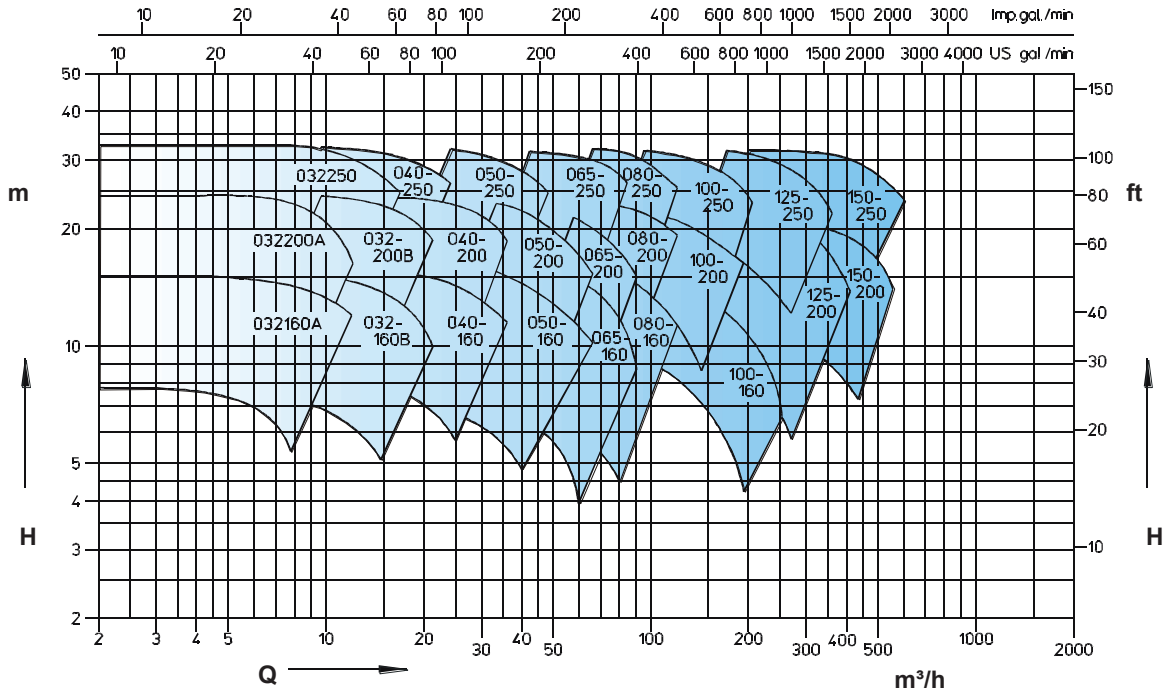
For hot water up to 180°C



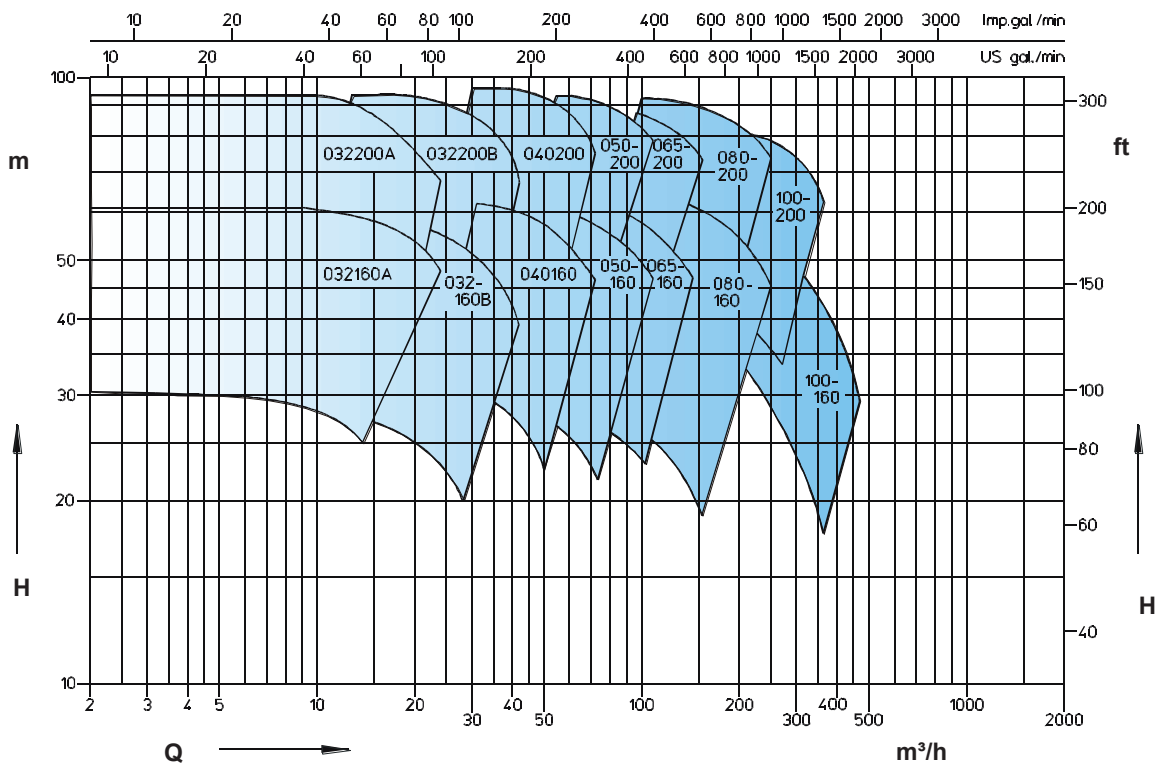
Performance graph

60 Hz

n = 1750 rpm



n = 3500 rpm



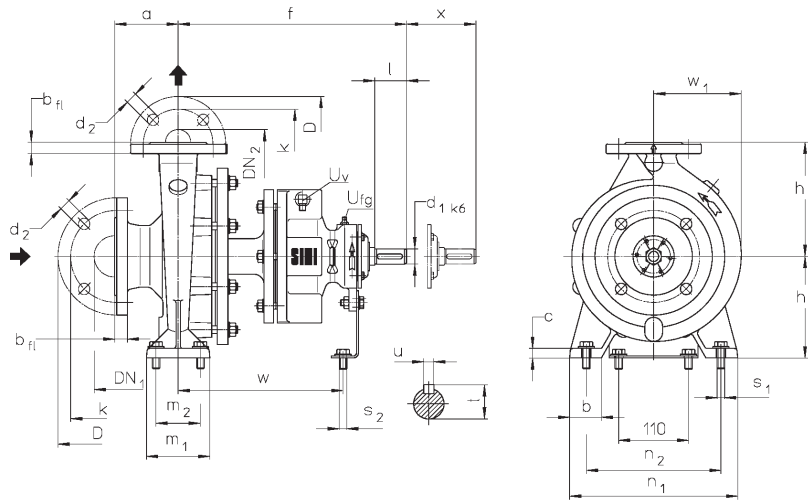


ZHND Series

End Suction Pumps

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Dimension table



u_v = vent connection (G1/8)

u_{fg} = 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 | | | |
|----------------------|-----------------|-----------------|-----|-----|----|-----|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|-----|----------------|-----|----------------|----|----|----|-----|-----|-----|
| 032160 | 32 | 50 | 80 | 50 | 15 | 360 | 132 | 160 | 100 | 70 | 240 | 190 | M12 | | 267 | 120 | 100 | 24 | 50 | 27 | 8 | | | |
| 032200 | | | 160 | 180 | | | 127 | | | | | | | | | | | | | | | | | |
| 032250 ¹⁾ | | | 100 | 65 | | | 180 | 225 | | | | | | | | | | | | | | 125 | 95 | 320 |
| 040160 | 40 | 65 | 80 | 50 | 15 | 360 | 132 | 160 | 100 | 70 | 240 | 190 | M12 | | 267 | 128 | 100 | 24 | 50 | 27 | 8 | | | |
| 040200 | | | 160 | 180 | | | 140 | | | | | | | | | | | | | | | | | |
| 040250 | | | 65 | 65 | | | 180 | 225 | | | | | | | | | | | | | | 125 | 95 | 320 |
| 050160 | 50 | 100 | 80 | 50 | 15 | 360 | 160 | 180 | 100 | 70 | 265 | 212 | M12 | | 267 | 130 | 100 | 24 | 50 | 27 | 8 | | | |
| 050200 | | | 200 | 150 | | | | | | | | | | | | | | | | | | | | |
| 050250 | | | 180 | 225 | | | 169 | | | | | | | | | | | | | | | | | |
| 065160 | 65 | 80 | 80 | 65 | 15 | 360 | 160 | 200 | 125 | 95 | 320 | 212 | M12 | | 267 | 147 | 100 | 24 | 50 | 27 | 8 | | | |
| 065200 | | | 180 | 225 | | | 147 | | | | | | | | | | | | | | | | | |
| 065250 | | | 80 | 80 | | | 180 | 225 | | | | | | | | | | | | | | 125 | 95 | 320 |
| 080160 | 80 | 100 | 80 | 65 | 18 | 470 | 200 | 250 | 160 | 120 | 360 | 280 | M16 | M12 | 340 | 183 | 100 | 32 | 80 | 35 | 10 | | | |
| 080200 | | | 360 | 225 | | | 125 | 95 | | | | | | | | | | | | | | 320 | 250 | 165 |
| 080250 | | | 180 | 250 | | | 125 | 95 | | | | | | | | | | | | | | 345 | 280 | 180 |
| 100160 ¹⁾ | 100 | 125 | 80 | 80 | 18 | 470 | 200 | 280 | 160 | 120 | 360 | 280 | M16 | M12 | 340 | 202 | 100 | 32 | 80 | 35 | 10 | | | |
| 100200 | | | 225 | 315 | | | 400 | 315 | | | | | | | | | | | | | | 202 | 140 | |
| 100250 | | | 225 | 315 | | | 400 | 315 | | | | | | | | | | | | | | 212 | 120 | |
| 125200 ¹⁾ | 125 | 150 | 140 | 80 | 18 | 470 | 250 | 315 | 160 | 120 | 400 | 315 | M16 | M12 | 340 | 242 | 100 | 32 | 80 | 35 | 10 | | | |
| 125250 | | | | | | | 355 | 400 | | | | | | | | | | | | | | 315 | 242 | 140 |
| 150200 ¹⁾ | 150 | 200 | 160 | 100 | 20 | 470 | 280 | 400 | 200 | 150 | 550 | 450 | M20 | M12 | 340 | 274 | 100 | 32 | 80 | 35 | 10 | | | |
| 150250 ¹⁾ | | | | | | | 500 | 400 | | | | | | | | | | | | | | 550 | 400 | 274 |

¹⁾ Transnom pump sizes, not included in EN 733. Flanges drilled according to ANSI 150 can be supplied.

* 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 16 | | | | | | | | | |
|--|--------------|------|------|------|------|------|------|------|-------|
| DN ₂ /DN ₁ | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| D | 140 | 150 | 165 | 185 | 200 | 220 | 250 | 285 | 340 |
| k | 100 | 110 | 125 | 145 | 160 | 180 | 210 | 240 | 295 |
| b _n | 18 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 20 |
| Tolerances | +4,0 -3,0 | | | | | | | | |
| d ₂ x number | 19x4 | 19x4 | 19x4 | 19x4 | 19x8 | 19x8 | 19x8 | 23x8 | 23x12 |

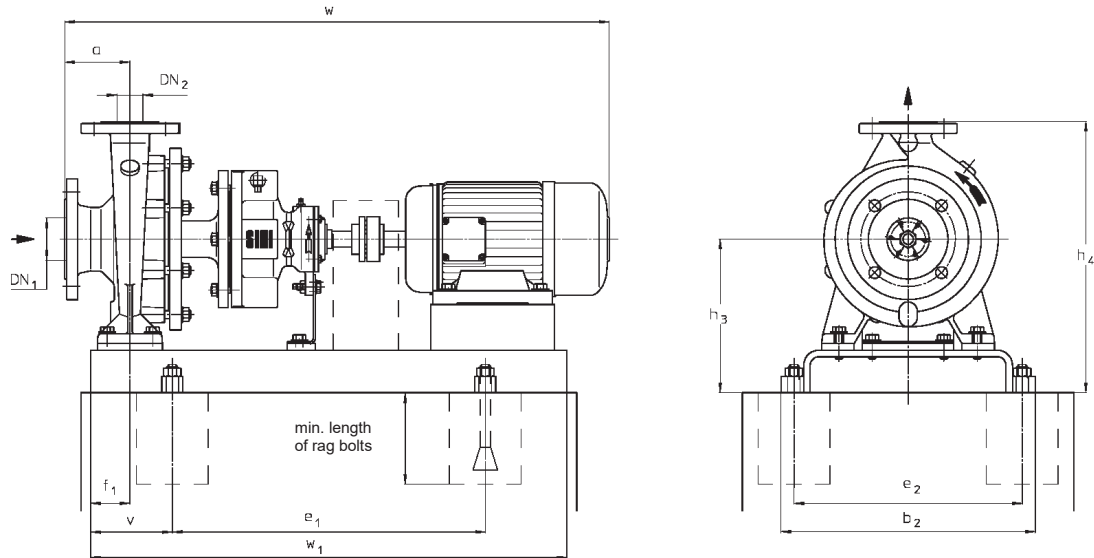
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Foundation plan



Dimensions in mm

| ZHND Size | Motor Speed | | Size | Base-plate No. | Coupling | 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 kW | 2900 kW | | | | Pump | Unit | | | | | | | | | | | | | |
| 032160 | 0,37 | - | 71 | S270 | B68 | 50 | 78 | | | | 360 | 420 | 320 | 115 | | 197 | 357 | 682 | 650 | M16x200 |
| | 0,55 | 1,10 | 80 | | | | | | | | | | | | | | | 716 | | |
| | - | 1,50 | 90S | 774 | | | | | | | | | | | | | | | | |
| | - | 2,20 | 90L | 774 | | | | | | | | | | | | | | | | |
| | - | 3,00 | 100L | 815 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 836 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| 032200 | 0,55 | - | 80 | S270 | B68 | 55 | 86 | 32 | 50 | 80 | 360 | 420 | 320 | 115 | 60 | 225 | 405 | 716 | 650 | M16x200 |
| | 0,75 | - | 80 | | | | | | | | | | | | | | | 716 | | |
| | 1,10 | 1,50 | 90S | 774 | | | | | | | | | | | | | | | | |
| | 1,50 | 2,20 | 90L | 774 | | | | | | | | | | | | | | | | |
| | - | 3,00 | 100L | 815 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 836 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 1030 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 1030 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | 1150 | | | | | | | | | | | | | | | | |
| | 032250 | 0,75 | - | 80 | S383 | | | | | | | | | | | | | B68 | 56 | |
| 1,10 | | - | 90S | 794 | | | | | | | | | | | | | | | | |
| 1,50 | | - | 90L | 794 | | | | | | | | | | | | | | | | |
| 2,20 | | - | 100L | 835 | | | | | | | | | | | | | | | | |
| - | | 7,50 | 132S | 932 | | | | | | | | | | | | | | | | |
| - | | 11,00 | 160M | 1050 | | | | | | | | | | | | | | | | |
| - | 15,00 | 160M | 1050 | | | | | | | | | | | | | | | | | |
| 040160 | 0,37 | - | 71 | S270 | B68 | 44 | 72 | | | 80 | 360 | 420 | 320 | 115 | | 197 | 357 | 682 | 650 | M16x200 |
| | 0,55 | - | 80 | | | | | | | | | | | | | | | 716 | | |
| | 0,75 | 1,10 | 80 | 716 | | | | | | | | | | | | | | | | |
| | 1,10 | 1,50 | 90S | 774 | | | | | | | | | | | | | | | | |
| | - | 2,20 | 90L | 774 | | | | | | | | | | | | | | | | |
| | - | 3,00 | 100L | 815 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 836 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 912 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 1030 | | | | | | | | | | | | | | | | |
| 040200 | 0,55 | - | 80 | S301 | B68 | 46 | 81 | | | 100 | 390 | 480 | 350 | 125 | | 225 | 405 | 736 | 730 | M16x200 |
| | 0,75 | - | 80 | | | | | | | | | | | | | | | 736 | | |
| | 1,10 | - | 90S | 84 | | | | | | | | | | | | | | | | |
| | 1,50 | - | 90L | 86 | | | | | | | | | | | | | | | | |
| | - | 3,00 | 100L | 97 | | | | | | | | | | | | | | | | |
| | - | 4,00 | 112M | 98 | | | | | | | | | | | | | | | | |
| | - | 5,50 | 132S | 135 | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | 135 | | | | | | | | | | | | | | | | |
| | - | 11,00 | 160M | 161 | | | | | | | | | | | | | | | | |
| | - | 15,00 | 160M | 161 | | | | | | | | | | | | | | | | |

ZHND Series

End Suction Pumps

For hot water up to 180°C



| ZHND Size | Motor | | Base-plate No. | Coup-ling | 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 | |
|-----------|----------------------|-------|----------------|-----------|-------------|------|-----------------|-----------------|-----|----------------|----------------|----------------|-----|----------------|----------------|----------------|------|----------------|---------------|---------|
| | Speed 1450 2900 kW | Size | | | Pump | Unit | | | | | | | | | | | | | | |
| 080250 | 3,00 | - | 100L | S486 | B80 | 97 | 80 | 100 | | 610 | 840 | 550 | 205 | | 300 | 580 | 205 | 970 | 1250 | M24x400 |
| | 4,00 | - | 112M | | | | | | | | | | | | | | 206 | 991 | | |
| | 5,50 | - | 132S | | | | | | | | | | | | | | 235 | 1067 | | |
| | 7,50 | - | 132M | | | | | | | | | | | | | | 238 | 1093 | | |
| | - | 22,00 | 180M | | 295 | | | | | | | | | | | | 1309 | | | |
| | - | 30,00 | 200L | | 355 | | | | | | | | | | | | 1367 | | | |
| | - | 37,00 | 200L | | 355 | | | | | | | | | | | | 1367 | | | |
| | - | 45,00 | 225M | | 420 | | | | | | | | | | | | 1367 | | | |
| - | 55,00 | 250M | 642 | 1397 | | | | | | | | | | | | | | | | |
| | | | S607 | B140 | | | | | 730 | 940 | 670 | 230 | | 325 | 605 | 1397 | 1400 | | | |
| 100160 | 2,20 | - | 100L | S434 | B80 | 94 | | | 125 | | 660 | | 170 | | 280 | 560 | 177 | 970 | 1000 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | 177 | 970 | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | 178 | 991 | | |
| | 5,50 | - | 132S | | | | | | | | | | | | | | 206 | 1067 | | |
| | - | 18,50 | 160L | 260 | 1247 | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | 273 | 1309 | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | 340 | 1367 | | | | | | | | | | | | | | | |
| | - | 37,00 | 200L | 340 | 1367 | | | | | | | | | | | | | | | |
| | | | S435 | B110 | | | | | 740 | | | 200 | | 280 | 560 | 1247 | 1309 | 1140 | | |
| | | | S436 | B125 | | | | | 840 | | | 215 | | 280 | 560 | 1367 | 1367 | 1270 | | |
| 100200 | 2,20 | - | 100L | S434 | B80 | 92 | 100 | 125 | | 540 | | 490 | | 90 | 280 | 560 | 175 | 970 | 1000 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | 175 | 970 | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | 176 | 991 | | |
| | 5,50 | - | 132S | | | | | | | | | | | | | | 204 | 1067 | | |
| | 7,50 | - | 132M | | | | | | | | | | | | | | 207 | 1093 | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | 258 | 1247 | | |
| | - | 22,00 | 180M | | | | | | | | | | | | | | 271 | 1309 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | 338 | 1367 | | |
| - | 37,00 | 200L | 338 | 1367 | | | | | | | | | | | | | | | | |
| - | 45,00 | 225M | 415 | 1397 | | | | | | | | | | | | | | | | |
| | | | S435 | B110 | | | | | 740 | | | 200 | | 280 | 560 | 1247 | 1309 | 1140 | | |
| | | | S436 | B125 | | | | | | | | 215 | | 280 | 560 | 1367 | 1367 | 1270 | | |
| 100250 | 4,00 | - | 112M | S486 | B80 | 103 | | | 140 | 610 | 840 | 550 | 205 | | 325 | 605 | 212 | 1006 | 1250 | M24x400 |
| | 5,50 | - | 132S | | | | | | | | | | | | | | 241 | 1082 | | |
| | 7,50 | - | 132M | | | | | | | | | | | | | | 244 | 1108 | | |
| | 11,00 | - | 160M | | | | | | | | | | | | | | 259 | 1200 | | |
| | - | 30,00 | 200L | | 361 | | | | | | | | | | | | 1382 | | | |
| | - | 37,00 | 200L | | 361 | | | | | | | | | | | | 1382 | | | |
| | - | 45,00 | 225M | | 426 | | | | | | | | | | | | 1412 | | | |
| | - | 55,00 | 250M | | 648 | | | | | | | | | | | | 1542 | | | |
| - | 75,00 | 280S | 917 | 1642 | | | | | | | | | | | | | | | | |
| | | | S607 | B140 | | | | | 730 | 940 | 670 | 230 | | 350 | 630 | 1542 | 1400 | | | |
| | | | S609A | B160 | | | | | 744 | 1200 | 696 | 300 | | 380 | 660 | 1642 | 1800 | | | |
| 125200 | 7,50 | - | 132M | S486 | B95 | 117 | 125 | 150 | 140 | 610 | 840 | 550 | 205 | | 350 | 665 | 258 | 1108 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | 274 | 1200 | | |
| | 15,00 | - | 160L | | 303 | | | | | | | | | | | | 1262 | | | |
| | - | 55,00 | 250M | | 662 | | | | | | | | | | | | 1542 | | | |
| - | 75,00 | 280S | 931 | 1642 | | | | | | | | | | | | | | | | |
| | | | S607 | B140 | | | | | 744 | 1200 | 696 | 300 | | 380 | 695 | 1642 | 1800 | | | |
| | | | S609A | B160 | | | | | | | | | | 380 | 660 | 1642 | 1800 | | | |
| 125250 | 7,50 | - | 132M | S486 | B95 | 124 | | | | 610 | 840 | 550 | 205 | | 350 | 705 | 265 | 1108 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | 281 | 1200 | | |
| | 15,00 | - | 160L | | 310 | | | | | | | | | | | | 1262 | | | |
| 150200 | 7,50 | - | 132M | S605 | B95 | 128 | 150 | 200 | 160 | 730 | 740 | 670 | 190 | 110 | 380 | 780 | 286 | 1128 | 1120 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | 302 | 1220 | | |
| | 15,00 | - | 160L | | | | | | | | | | | | | | 332 | 1282 | | |
| | 18,50 | - | 180M | | 344 | | | | | | | | | | | | 1344 | | | |
| | 15,00 | - | 160L | | 351 | | | | | | | | | | | | 1282 | | | |
| 18,50 | - | 180M | 353 | 1344 | | | | | | | | | | | | | | | | |
| 22,00 | - | 180L | 390 | 1344 | | | | | | | | | | | | | | | | |
| 30,00 | - | 200L | 434 | 1402 | | | | | | | | | | | | | | | | |
| | | | S606 | B125 | | | | | | 840 | | 205 | | | | | | | | |

* 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.

ZHND Series

End Suction Pumps

For hot water up to 180°C



| ZHND Size | Motor Speed | | | Base plate No. | Coupling | Weight (kg) Pump unit | 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 | 2900 | Size | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 040250 | 1,10 | - | 90S | S383 | H80 | 58 | 40 | | | 490 | 600 | 440 | 160 | 75 | 260 | 485 | 100 | 892 | 920 | M20x400 | | | | | | | | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 892 | | | | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 126 | | | 933 | | | | | | | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 126 | | | 933 | | | | | | | | |
| | - | 7,50 | 132S | S434 | H95 | 190 | | | | 540 | 660 | 490 | 170 | | | | | | | | | | 1030 | 1000 | | | | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | | | | | | 1148 | | | | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 1148 | | | | | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | | | 1210 | | | 1140 | | | |
| | - | - | - | | | | | | | S385 | | 220 | 490 | 740 | 440 | 200 | | | | | | | | | | | 1148 | | |
| | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | 1210 | | |
| 050160 | 0,55 | - | 80 | S342 | H80 | 48 | 65 | | | 450 | 540 | 400 | 140 | | 240 | 420 | 100 | 834 | 820 | M16x200 | | | | | | | | | |
| | 0,75 | - | 80 | | | | | | | | | | | | | | | 834 | | | | | | | | | | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 97 | | | 892 | | | | | | | | |
| | - | 2,20 | 90L | | | | | | | | | | | | | | | 99 | | | 892 | | | | | | | | |
| | - | 3,00 | 100L | S303 | H95 | 110 | | | | 390 | 600 | 350 | 160 | | | | | | | | | | 1030 | 920 | | | | | |
| | - | 4,00 | 112M | | | | | | | | | | | | | | | | | | | | 109 | | | 933 | | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | | | | | | 136 | | | 1030 | | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | | | | | | 136 | | | 1030 | | | |
| | - | 11,00 | 160M | | | | | | | 165 | 1148 | 1020 | | | | | | | | | | | | | | | | | |
| | - | - | - | | | | | | | S344 | | 165 | | | | | | | | | | | | | | | 1148 | | |
| - | - | - | 1148 | 1020 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 050200 | 0,75 | - | 80 | S342 | H80 | 46 | 50 | | | 450 | 540 | 400 | 140 | 60 | 240 | 440 | 100 | 834 | 820 | M20x400 | | | | | | | | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 95 | | | 892 | | | | | | | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 97 | | | 892 | | | | | | | | |
| | - | 2,20 | 100L | | | | | | | | | | | | | | | 107 | | | 933 | | | | | | | | |
| | - | 4,00 | 112M | S303 | H95 | 134 | | | | 390 | 600 | 350 | 160 | | | | | | | | | | 1030 | 920 | M16x200 | | | | |
| | - | 5,50 | 132S | | | | | | | | | | | | | | | | | | | | 134 | | | 1030 | | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | | | | | | 134 | | | 1030 | | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | | | | | | 163 | | | 1148 | 1020 | | |
| | - | 15,00 | 160M | | | | | | | 163 | 1148 | | | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | | | | | | | 198 | 1210 | 1140 | | | | | | | | | | | | | | | | | |
| 050250 | 1,50 | - | 90L | S383 | H80 | 58 | 100 | | | 490 | 600 | 440 | 160 | | 260 | 485 | 100 | 892 | 920 | M20x400 | | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 126 | | | 933 | | | | | | | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 126 | | | 933 | | | | | | | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | 127 | | | 954 | | | | | | | | |
| | - | 11,00 | 160M | S434 | H95 | 190 | | | | 540 | 660 | 490 | 170 | | | | | | | | | | 1148 | 1000 | | | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 190 | | | 1148 | | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | | | 220 | | | 1210 | | | |
| | - | - | - | | | | | | | | | | | | | | | | | | | | S385 | | | | 239 | 490 | 440 |
| | - | 22,00 | 180M | | | | | | | 300 | 1330 | | | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | | | | | | | S435 | H110 | 300 | 540 | 740 | 490 | 200 | | | | | | | | | | | 1330 | | |
| - | - | - | H125 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 065160 | 0,75 | - | 80 | S342 | H80 | 54 | 65 | 80 | | 450 | 540 | 400 | 140 | 60 | 240 | 440 | 100 | 834 | 820 | M20x400 | | | | | | | | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 103 | | | 892 | | | | | | | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 105 | | | 892 | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 115 | | | 933 | | | | | | | | |
| | - | 5,50 | 132S | S383 | H95 | 151 | | | | 490 | 600 | 440 | 160 | | | | | | | | | | 1030 | 920 | | | | | |
| | - | 7,50 | 132S | | | | | | | | | | | | | | | | | | | | 151 | | | 1030 | | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | | | | | | 171 | | | 1148 | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 171 | | | 1148 | | | |
| | - | - | - | | | | | | | S344 | | 171 | | | | | | | | | | | | | | | 1148 | 1020 | |
| | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | 1148 | | |
| 065200 | 1,10 | - | 90S | S383 | H80 | 63 | 65 | 80 | | 490 | 600 | 440 | 160 | 75 | 260 | 485 | 100 | 932 | 920 | M20x400 | | | | | | | | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 121 | | | 932 | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 131 | | | 973 | | | | | | | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 131 | | | 973 | | | | | | | | |
| | 4,00 | - | 112M | S385 | H95 | 132 | | | | 490 | 600 | 440 | 160 | | | | | | | | | | 994 | 1140 | | | | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | | | | | | 197 | | | 1188 | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 197 | | | 1188 | | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | | | 225 | | | 1250 | | | |
| | - | 22,00 | 180M | | | | | | | 244 | 1312 | 1270 | | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | | | | | | | 312 | 1370 | 1270 | | | | | | | | | | | | | | | | | |
| 065250 | 2,20 | - | 100L | S434 | H80 | 90 | 90 | | | 540 | 660 | 490 | 170 | | 280 | 530 | 100 | 1083 | 1000 | M24x400 | | | | | | | | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 174 | | | 1083 | | | | | | | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | 175 | | | 1104 | | | | | | | | |
| | 5,50 | - | 132S | | | | | | | | | | | | | | | 210 | | | 1180 | 1140 | | | | | | | |
| | - | 18,50 | 160L | S436 | H95 | 264 | | | | 540 | 660 | 490 | 170 | | | | | | | | | | 1360 | 1270 | | | | | |
| | - | 22,00 | 180M | | | | | | | | | | | | | | | | | | | | 278 | | | 1422 | | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | | | | | 374 | | | 1480 | | | |
| | - | 37,00 | 200L | | | | | | | | | | | | | | | | | | | | 374 | | | 1480 | | | |
| | - | 45,00 | 225M | | | | | | | 457 | 1510 | 1400 | | | | | | | | | | | | | | | | | |
| | - | - | - | | | | | | | S487 | H125 | 374 | 610 | 940 | 550 | 240 | | | | | | | | | | | 1510 | 1400 | |
| - | - | - | S607 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 080160 | 0,75 | - | 80 | S383 | H80 | 55 | 80 | 100 | 125 | 490 | 600 | 440 | 160 | | | 485 | 100 | 899 | 920 | M20x400 | | | | | | | | | |
| | 1,10 | - | 90S | | | | | | | | | | | | | | | 111 | | | 957 | | | | | | | | |
| | 1,50 | - | 90L | | | | | | | | | | | | | | | 113 | | | 957 | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 123 | | | 998 | | | | | | | | |
| | 3,00 | - | 100L | 123 | 998 | | | | | | | | | | | | | | | | | | | | | | | | |
| | - | 7,50 | 132S | S434 | H95 | 168 | | | | 540 | 660 | 490 | 170 | | | | | | | | | | 1095 | 1000 | | | | | |
| | - | 11,00 | 160M | | | | | | | | | | | | | | | | | | | | 189 | | | 1213 | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 189 | | | 1213 | | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | | | 217 | | | 1275 | | | |
| | - | 22,00 | 180M | | | | | | | 236 | 1337 | | | | | | | | | | | | | | | | | | |
| - | - | - | S385 | | | | | 236 | 490 | 740 | 440 | 200 | | | | | | | | 1337 | 1140 | | | | | | | | |
| - | - | - | | S435 | H110 | | | | | | | | | | | | | | | | | | | | | | | | |
| 080200 | 1,50 | - | 90L | S434 | H80 | 91 | 90 | | | 540 | 660 | 490 | 170 | | | 510 | 100 | 1067 | 1000 | M20x400 | | | | | | | | | |
| | 2,20 | - | 100L | | | | | | | | | | | | | | | 175 | | | 1108 | | | | | | | | |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | 175 | | | 1108 | | | | | | | | |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | 176 | | | 1129 | | | | | | | | |
| | 5,50 | - | 132S | S435 | H95 | 211 | | | | 540 | 660 | 490 | 170 | | | | | | | | | | 1205 | 1140 | | | | | |
| | - | 15,00 | 160M | | | | | | | | | | | | | | | | | | | | 230 | | | 1323 | | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | | | | | 264 | | | 1385 | | | |
| | - | 22,00 | 180M | | | | | | | | | | | | | | | | | | | | 278 | | | 1447 | | | |
| | - | 30,00 | 200L | | | | | | | 374 | 1505 | | | | | | | | | | | | | | | | | | |
| | - | 37,00 | 200L | | | | | | | 374 | 1505 | | | | | | | | | | | | | | | | | | |

ZHND Series

End Suction Pumps

For hot water up to 180°C



| ZHND Size | Motor Speed | | Size | Base plate No. | Coupling | 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 KW | | | | Pump | unit | | | | | | | | | | | | | | |
| 080250 | 3,00 | - | 100L | S486 | H80 | 97 | 80 | 100 | | | 610 | 840 | 550 | 205 | | 300 | 580 | | 1108 | 1250 | M24x400 |
| | 4,00 | - | 112M | | | | | | | | | | | | | | | | 1129 | | |
| | 5,50 | - | 132S | | 1205 | | | | | | | | | | | | | | | | |
| | 7,50 | - | 132M | | 1231 | | | | | | | | | | | | | | | | |
| | - | 22,00 | 180M | S487 | H110 | | | | | | | | | | | | | | 1447 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | 1505 | | |
| | - | 37,00 | 200L | S607 | H125 | | | | | | | | | | | | | | 1505 | | |
| | - | 45,00 | 225M | | | | | | | | | | | | | | | | 1535 | | |
| - | 55,00 | 250M | S608 | H140 | 1460 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1665 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1600 | | | | | | | | | | | | | | | | |
| 100160 | 2,20 | - | 100L | S434 | H80 | 94 | | | 125 | | 540 | 660 | 490 | 170 | | 280 | 560 | | 1108 | 1000 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | | 1108 | | |
| | 4,00 | - | 112M | | 1129 | | | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | | 1205 | | | | | | | | | | | | | | | | |
| | - | 18,50 | 160L | S436 | H110 | | | | | | | | | | | | | | 1268 | | |
| | - | 22,00 | 180M | | | | | | | | | | | | | | | | 1385 | | |
| | - | 30,00 | 200L | S487 | H125 | | | | | | | | | | | | | | 1447 | | |
| | - | 37,00 | 200L | | | | | | | | | | | | | | | | 1505 | | |
| - | - | - | - | - | 1505 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1420 | | | | | | | | | | | | | | | | |
| 100200 | 2,20 | - | 100L | S434 | H80 | 92 | 100 | 125 | | | 540 | 660 | 490 | 170 | | 280 | 560 | | 1108 | 1000 | M20x400 |
| | 3,00 | - | 100L | | | | | | | | | | | | | | | | 1108 | | |
| | 4,00 | - | 112M | | 1129 | | | | | | | | | | | | | | | | |
| | 5,50 | - | 132S | | 1205 | | | | | | | | | | | | | | | | |
| | 7,50 | - | 132M | S436 | H110 | | | | | | | | | | | | | | 1231 | | |
| | - | 18,50 | 160L | | | | | | | | | | | | | | | | 1385 | | |
| | - | 22,00 | 180M | S487 | H125 | | | | | | | | | | | | | | 1447 | | |
| | - | 30,00 | 200L | | | | | | | | | | | | | | | | 1505 | | |
| - | 37,00 | 200L | 1505 | | | | | | | | | | | | | | | | | | |
| - | 45,00 | 225M | S607 | H140 | 1420 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1400 | | | | | | | | | | | | | | | | |
| 100250 | 4,00 | - | 112M | S486 | H80 | 103 | | | 140 | | 610 | 840 | 550 | 205 | | 325 | 605 | | 1144 | 1250 | M24x400 |
| | 5,50 | - | 132S | | | | | | | | | | | | | | | | 1220 | | |
| | 7,50 | - | 132M | | 1246 | | | | | | | | | | | | | | | | |
| | 11,00 | - | 160M | | 1338 | | | | | | | | | | | | | | | | |
| | - | 30,00 | 200L | S487 | H125 | | | | | | | | | | | | | | 1520 | | |
| | - | 37,00 | 200L | | | | | | | | | | | | | | | | 1520 | | |
| | - | 45,00 | 225M | S607 | H140 | | | | | | | | | | | | | | 1550 | | |
| | - | 55,00 | 250M | | | | | | | | | | | | | | | | 1680 | | |
| - | 75,00 | 280S | S609A | H160 | 1600 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1780 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1800 | | | | | | | | | | | | | | | | |
| 125200 | 7,50 | - | 132M | S486 | H95 | 117 | 125 | 150 | | | 610 | 840 | 550 | 205 | | 350 | 665 | | 1246 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | | | 1338 | | |
| | 15,00 | - | 160L | S608 | H140 | | | | | | | | | | | | | | 1400 | | |
| | - | 55,00 | 250M | | | | | | | | | | | | | | | | 1680 | | |
| | - | 75,00 | 280S | S609A | H160 | | | | | | | | | | | | | | 1600 | | |
| | - | - | - | | | | | | | | | | | | | | | | 1780 | | |
| - | - | - | - | - | 1800 | | | | | | | | | | | | | | | | |
| 125250 | 7,50 | - | 132M | S486 | H95 | 124 | | | | | 610 | 840 | 550 | 205 | | 350 | 705 | | 1246 | 1250 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | | | 1338 | | |
| | 15,00 | - | 160L | | | | | | | | | | | | | | | | 1400 | | |
| 150200 | 7,50 | - | 132M | S605 | H95 | 128 | | | | | 160 | 730 | 840 | 670 | 205 | 110 | 380 | 780 | 1266 | 1120 | M24x400 |
| | 11,00 | - | 160M | | | | | | | | | | | | | | | | 1314 | | |
| | 15,00 | - | 160L | S606 | H110 | | | | | | | | | | | | | | 1345 | | |
| | 18,50 | - | 180M | | | | | | | | | | | | | | | | 1423 | | |
| 15,00 | - | 160L | S607 | H125 | 1411 | | | | | | | | | | | | | | | | |
| 18,50 | - | 180M | | | 1482 | | | | | | | | | | | | | | | | |
| 22,00 | - | 180L | | | 1420 | | | | | | | | | | | | | | | | |
| 30,00 | - | 200L | | | 1484 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1400 | | | | | | | | | | | | | | | | |
| - | - | - | - | - | 1540 | | | | | | | | | | | | | | | | |

* 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.

ZHND Series

End Suction Pumps

For hot water up to 180°C



Data regarding pump size

| Type + Pump size | Hydraulic + Bearing | Shaft sealing | Material desing | Casing gasket |
|------------------|--|---|---------------------------------------|--|
| | A hydraulic 1 B hydraulic 2 A grease lubricated reinforced antifriction bearing and one internal liquid flushed sleeve bearing | BJ3 unbalanced standard mechanical seal | 1B main parts of spheroidal cast iron | 2 confined flat gasket of graphite with A4 insertion |
| ZHND | 032160 | BJ3 | 1B | 2 |
| | 032160 | | | |
| | 032200 | | | |
| | 032200 | | | |
| | 032250 | | | |
| | 040160 | | | |
| | 040200 | | | |
| | 040250 | | | |
| | 050160 | | | |
| | 050200 | | | |
| | 050250 | | | |
| | 065160 | | | |
| | 065200 | | | |
| | 065250 | | | |
| | 080160 | | | |
| | 080200 | | | |
| | 080250 | | | |
| | 100160 | | | |
| | 100200 | | | |
| | 100250 | | | |
| 125200 | | | | |
| 125250 | | | | |
| 150200 | | | | |
| 150250 | | | | |

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

Available in New Zealand from:

Prime Fluid Management

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Greymouth, West Coast

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