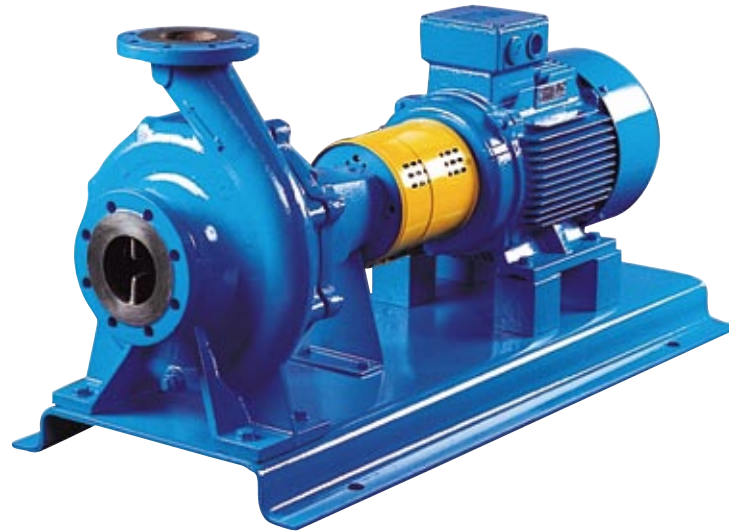


CombiNorm

*Horizontal centrifugal pump
 according to EN 733 (DIN 24555)*



System characteristics

The CombiNorm is a part of the CombiSystem, a family of different pump types having a high interchangeability in parts.

The CombiNorm, designed to EN 733 (DIN 24555), offers a great variety in materials, shaft seals and bearing systems. Its modular design offers a high interchangeability between the variants. Hence, a CombiNorm is available to handle most pump duties.

Applications

The CombiNorm is suitable for handling low-viscosity, clean or slightly contaminated liquids, for virtually any applications.

Pump specifics

- Suitable for a wide span of duties
- Large hydraulic field of application
- High interchangeability in spare parts between different sizes, thus limiting spare parts stock levels
- Suitable for various liquids, thanks to the large number of standard and non-standard material options
- Simple maintenance thanks to the use of standard components and the Back-Pull-Out principle applied
- Flexible choice in bearings and shaft seal modules
- The entire pump family features only four bearing bracket groups

Technical data

| | |
|-----------------------------|---|
| Maximum capacity: | 1500 m ³ /h |
| Maximum delivery head: | 140 m |
| Maximum liquid temperature: | 200 °C |
| Maximum speed: | 3600 rpm |
| Maximum operating pressure: | 10–16 bar (1000–1600 kPa) (depending on pump size/materials) |

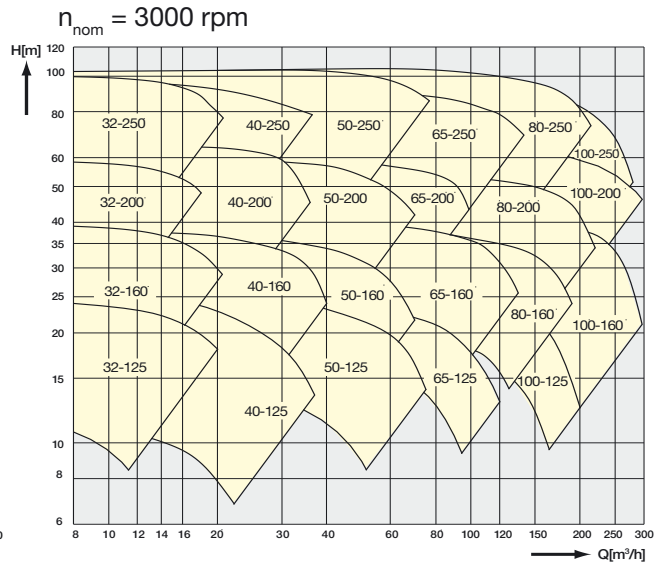
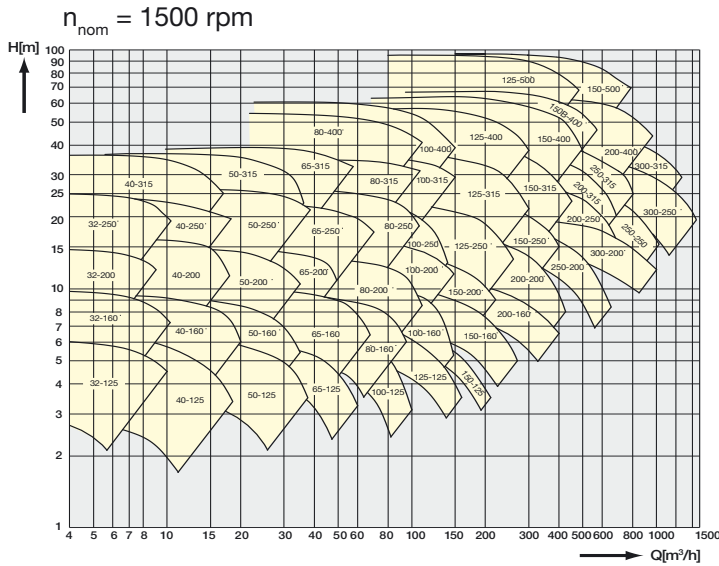
Materials

| | | | |
|-------------------|------------------------------------|-------------------|-----------------|
| Pump casing | Cast iron | Nodular cast iron | Bronze |
| Stuffingbox cover | Cast iron | Nodular cast iron | Bronze |
| Impeller | Cast iron/Bronze | | Bronze |
| Pump shaft | Alloy steel | | Stainless steel |
| Shaft sleeve | Alloy steel/Bronze/Stainless steel | | |
| Bearing bracket | Cast iron | | |

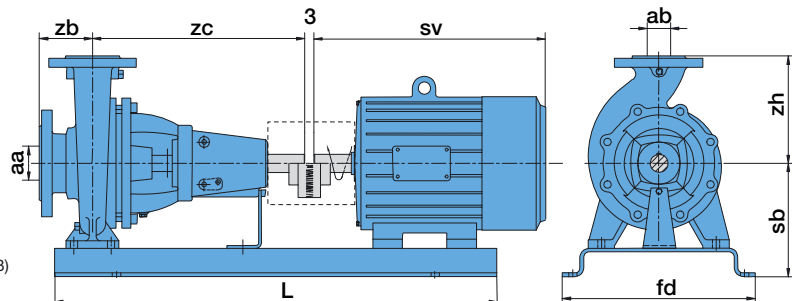
Other materials upon request



Performance data



Dimensions



Flanges according to ISO 7005 PN 16 = EN 1092-2 (DIN 2532/DIN 2533)

| CombiNorm | ISO 7005 PN16 | | | | | | | |
|-----------|---------------|-----|-----|-----|---------|---------|-----|-----------|
| | aa | ab | zb | zc | sb | fd | zh | L |
| 32-125 | 50 | 32 | 80 | 360 | 157-175 | 433-473 | 140 | 800-1000 |
| 32-160 | 50 | 32 | 80 | 360 | 177-195 | 433-473 | 160 | 800-1000 |
| 32-200 | 50 | 32 | 80 | 360 | 205-223 | 433-473 | 180 | 800-1000 |
| 32-250 | 50 | 32 | 100 | 360 | 243-260 | 473-545 | 225 | 1000-1250 |
| 40-125 | 65 | 40 | 80 | 360 | 157-195 | 433-473 | 140 | 800-1000 |
| 40-160 | 65 | 40 | 80 | 360 | 177-223 | 433-473 | 160 | 800-1000 |
| 40-200 | 65 | 40 | 100 | 360 | 205-223 | 433-473 | 180 | 800-1000 |
| 40-250 | 65 | 40 | 100 | 360 | 243-260 | 473-545 | 225 | 1000-1250 |
| 40-315 | 65 | 40 | 125 | 470 | 280 | 545 | 250 | 1250 |
| 50-125 | 65 | 50 | 100 | 360 | 177-223 | 433-473 | 160 | 800-1000 |
| 50-160 | 65 | 50 | 100 | 360 | 205-223 | 433-473 | 180 | 800-1000 |
| 50-200 | 65 | 50 | 100 | 360 | 205-290 | 433-678 | 200 | 800-1250 |
| 50-250 | 65 | 50 | 100 | 360 | 243-290 | 473-678 | 225 | 1000-1250 |
| 50-315 | 80 | 50 | 125 | 470 | 305 | 545 | 280 | 1250 |
| 65-125 | 80 | 65 | 100 | 360 | 205-240 | 433-545 | 180 | 800-1250 |
| 65-160 | 80 | 65 | 100 | 360 | 205-290 | 433-678 | 200 | 800-1250 |
| 65-200 | 80 | 65 | 100 | 360 | 243-290 | 473-678 | 225 | 1000-1250 |
| 65-250 | 80 | 65 | 100 | 470 | 280-325 | 545-678 | 250 | 1250-1600 |
| 65-315 | 80 | 65 | 125 | 470 | 315 | 678 | 280 | 1250 |
| 80-160 | 100 | 80 | 125 | 360 | 243-290 | 473-678 | 225 | 1000-1250 |
| 80-200 | 100 | 80 | 125 | 470 | 260-410 | 545-788 | 250 | 1250-1650 |
| 80-250 | 100 | 80 | 125 | 470 | 290-410 | 678-788 | 280 | 1250-1650 |
| 80-315 | 100 | 80 | 125 | 470 | 340-350 | 658-678 | 315 | 1250-1600 |
| 80-400 | 125 | 80 | 125 | 530 | 370-380 | 658-678 | 355 | 1250-1650 |
| 100-125 | 100 | 100 | 125 | 360 | 243-260 | 473-545 | 250 | 1000-1250 |
| 100-160 | 125 | 100 | 125 | 470 | 280-300 | 545-678 | 315 | 1250-1600 |
| 100-200 | 125 | 100 | 125 | 470 | 280-410 | 545-788 | 280 | 1250-1650 |
| 100-250 | 125 | 100 | 140 | 470 | 315-410 | 678-788 | 280 | 1250-1650 |
| 100-315 | 125 | 100 | 140 | 470 | 340-350 | 658-678 | 315 | 1250-1600 |
| 100-400 | 125 | 100 | 140 | 530 | 370-410 | 678-788 | 355 | 1250-1650 |

| EC Motor | sv _{max} |
|----------|-------------------|
| 71 | 235 |
| 80 | 270 |
| 90S | 300 |
| 90L | 325 |
| 100L | 390 |
| 112M | 425 |
| 132S | 485 |
| 132M | 520 |
| 160M | 630 |
| 160L | 670 |
| 180M | 700 |
| 180L | 735 |
| 200L | 805 |
| 225S | 835 |
| 225M | 860 |
| 250M | 960 |
| 280S | 1065 |
| 280M | 1115 |
| 315S | 1235 |
| 315M | 1260 |
| 315L | 1340 |
| 315LX | 1340 |
| 355S | 1590 |

| CombiNorm | ISO 7005 PN16 | | | | | | | |
|-----------|---------------|------|-----|-----|---------|----------|-----|-----------|
| | aa | ab | zb | zc | sb | fd | zh | L |
| 125-125 | 125 | 125 | 140 | 360 | 288-305 | 473-545 | 300 | 1000-1250 |
| 125-250 | 150 | 125 | 140 | 470 | 340-350 | 658-678 | 355 | 1250-1600 |
| 125-315 | 150 | 125 | 140 | 530 | 370-410 | 678-788 | 355 | 1250-1650 |
| 125-400 | 150 | 125 | 140 | 530 | 405-445 | 678-788 | 400 | 1250-1650 |
| 125-500 | 200 | 125 | 200 | 680 | 530-560 | 850-1040 | 500 | 1600-2350 |
| 150-125 | 150 | 150 | 160 | 360 | 370 | 678 | 400 | 1250 |
| 150-160 | 150 | 150 | 160 | 470 | 340-380 | 678-788 | 315 | 1250-1650 |
| 150-200 | 150 | 150 | 160 | 470 | 340 | 678 | 315 | 1250 |
| 150-250 | 200* | 150 | 160 | 530 | 370-410 | 678-788 | 400 | 1250-1650 |
| 150-315 | 200* | 150 | 160 | 530 | 410 | 778 | 400 | 1650 |
| 150-400 | 200* | 150 | 160 | 530 | 445 | 788 | 450 | 1650 |
| 150B-400 | 250 | 150 | 200 | 690 | 485-515 | 740-890 | 500 | 1600-2250 |
| 150-500 | 250 | 150 | 230 | 685 | 580-610 | 850-1040 | 550 | 1600-2350 |
| 200-160 | 200* | 200* | 200 | 470 | 370 | 678 | 400 | 1250 |
| 200-200 | 200* | 200* | 200 | 470 | 370-410 | 678-788 | 400 | 1250-1650 |
| 200-250 | 250 | 200 | 260 | 696 | 485 | 740 | 425 | 1600-1800 |
| 200-315 | 250 | 200 | 180 | 695 | 485-515 | 740-850 | 450 | 1600-2000 |
| 200-400 | 300 | 200 | 230 | 695 | 530-560 | 850-1040 | 550 | 1600-2350 |
| 250-200 | 250* | 250* | 200 | 530 | 445 | 788 | 450 | 1650 |
| 250-250 | 300 | 250 | 260 | 716 | 530-560 | 850 | 550 | 1600-2000 |
| 250-315 | 300 | 250 | 230 | 700 | 505-535 | 850-890 | 500 | 1600-2250 |
| 300-200 | 300* | 300* | 250 | 530 | 580 | 788 | 600 | 1650 |
| 300-250 | 300 | 300 | 250 | 720 | 580-610 | 850 | 550 | 1600-2000 |
| 300-315 | 300 | 300 | 230 | 720 | 580-610 | 850-890 | 550 | 1600-2350 |

sv, L: depending on motor-frame size
 sb, fd, L: depends of choice of standard or spacer coupling
 *: Flanges aa & ab according ISO 7005 PN 10



JOHNSON PUMP

An SPX Process Equipment Operation

Johnson Pump Water B.V.

