

# 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 24255), 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

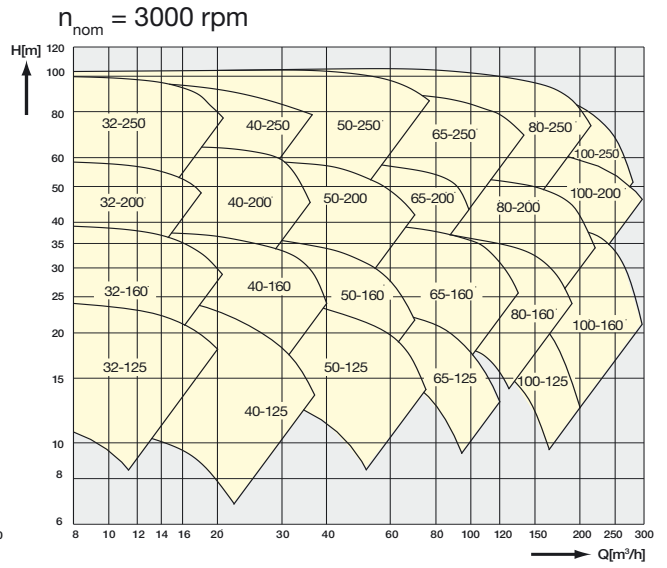
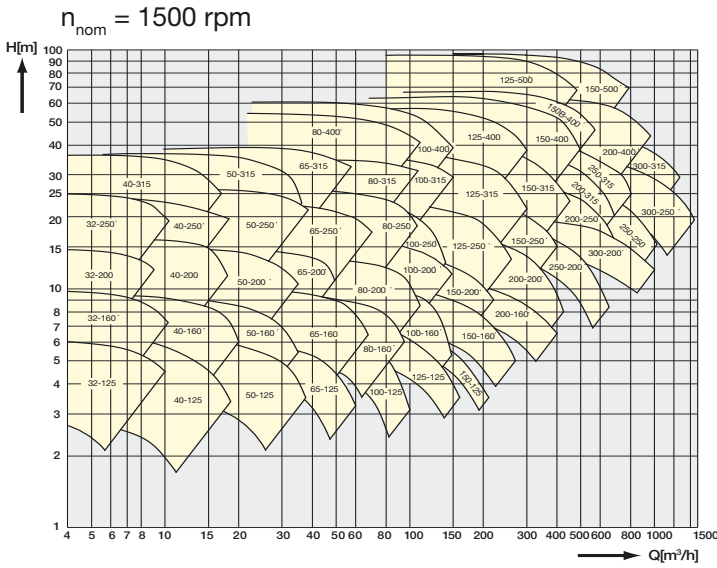
|                             |   |
|-----------------------------|---|
| Maximum capacity:           | 1500 m <sup>3</sup> /h  |
| Maximum delivery head:      | 140 m   |
| Maximum liquid temperature: | 200 °C  |
| Maximum speed:              | 3600 rpm  |
| Maximum operating pressure: | 10–16 bar (1000–1600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

## Materials

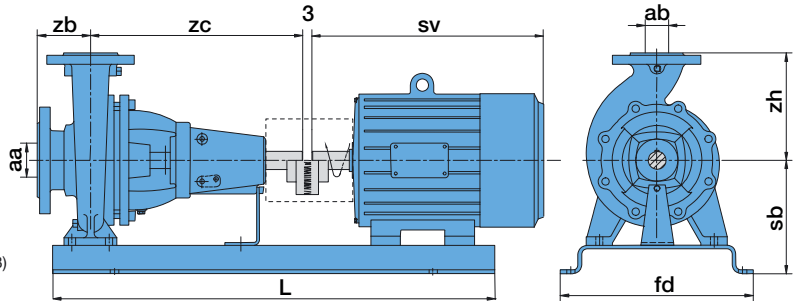
|                   |                                    |                   |                 |
|-------------------|------------------------------------|-------------------|-----------------|
| Pump casing       | Cast iron                          | Nodular cast iron | Bronze          |
| Stuffingbox 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 <sub>max</sub> |
|----------|-------------------|
| 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 (Australia) Pty. Ltd