

NR(D), NR(D)4 In-line Pumps

$n \approx 2900$ rpm

$n \approx 1450$ rpm



Construction

Close-coupled, single-impeller, centrifugal pumps; electric motor with extended shaft directly connected to the pump.

NR, NR4: Single head pump.

NRD, NRD4: Twin head pump with built-in automatic switching valve. The two head can operate singularly or in parallel.

Pump casing with suction and delivery connections with the same diameter and on the same axis (in-line).

Connections: Flanges PN 10, EN 1092-2.

Counterflanges (on request)

| Sizes | Flanges |
|--------------------|--------------------------------------|
| NR,NR4 32,40,50,65 | Screwed flanges PN 16, EN 1092-1 |
| NRD, NRD4 50,65 | |
| NR4 100, NR4 125 | Flanges for welding PN 10, EN 1092-1 |

Version with frequency converter (on request)

Applications

For clean liquids, without abrasives, which are non-aggressive for the pump materials (contents of solids up to 0.2%).

For heating, conditioning, cooling and circulation plants.

For civil and industrial applications.

When low noise operation is required ($n \approx 1450$ rpm).

Operating conditions

Liquid temperature from -10 °C to $+90$ °C.

Ambient temperature up to 40 °C.

Total suction lift up to 7 m.

Maximum permissible working pressure up to 10 bar.

Continuous duty.

Motor

2-pole induction motor, 50 Hz ($n \approx 2900$ rpm).

NR(D) : three-phase $230/400$ V $\pm 10\%$ up to 3 kW;
 $400/690$ V $\pm 10\%$ from 4 to $18,5$ kW.

NRM : single-phase 230 V $\pm 10\%$.

4-pole induction motor, 50 Hz ($n \approx 1450$ rpm).

NR(D)4: three-phase $230/400$ V $\pm 10\%$ up to 3 kW;
 $400/690$ V $\pm 10\%$ for 4 kW.

NRM4: single-phase 230 V $\pm 10\%$.

Insulation class F.

Protection IP 54.

Motor suitable for operation with frequency converter from $0,75$ kW for NR4 and from $1,1$ kW for NR(D).

IE3 efficiency class for three-phase motors (IE2 up to $0,65$ kW).

Constructed in accordance with EN 60034-1, EN 60034-30-1,
EN 60335-1, EN 60335-2-41.

The electropumps NR, NR4 series comply with the European Regulation no. 547/2012.

Materials

| Component | Material |
|--------------------------------|--|
| Pump casing Lantern bracket | Cast iron GJL 200 EN 1561 |
| Impeller | Cast iron GJL 200 EN 1561 (Brass CW617N EN 12165 for NR-NR4 32..., 40..., 50/200) |
| Shaft | Chrome-nickel steel AISI 303 (Chrome steel AISI 430 from 3 kW to $18,5$ kW) |
| Valve | Chrome-nickel steel AISI 304 - NBR |
| Mecanical seal | Carbon - Ceramic - NBR |
| Counterflanges | Steel 1.0044 EN 10025-2 (Fe 430B) |

Special features on request

- Other voltages.
- Protection IP 55.
- Frequency 60 Hz
- Special mechanical seal.
- Higher or lower liquid or ambient temperatures.
- Motor suitable for operation with frequency converter up to $0,55$ kW for NR(D)4 and up to $0,75$ kW for NR(D).

Pumps with frequency converter

The **NR(D) EI, NR4 EI**, pumps are available with power from 0,25 kW up to 18,5 kW, the pumps are equipped with **I-MAT** installed on board which allows to realize a variable-speed system extremely compact and efficient, ideal in applications of water supply and in the distribution of hot and cold water.

The pump is equipped with transducers suitable for operation and is already programmed at the factory.

Advantages

- Energy saving
- Compact design
- Easy to use
- Programmable to suit the system requirements
- Reliability

Costruction

The system comprises of:

- Pump
- Induction motor (2 for NRD, NRD4)
- I-MAT Frequency converter (2 for NRD, NRD4)
- Motor adapter for the motor mounting of the frequency converter (2 for NRD, NRD4)
- Connection cable between frequency converter and induction motor
- Transducers
- Communication cable for cascade mode for NRD, NRD4
- 2 Cascade mode expansion board for NRD, NRD4

Main features

- Rated motor power output from 0,25 kW to 18,5 kW
- Control range from 1750 to 2900 rpm (2-pole)
- Control range from 870 to 1450 rpm (4-pole)
- Protection against dry running
- Protection against operations with closed valve ports
- Protection against system leakages
- Protection against overcurrent in the motor
- Protection against overvoltage and undervoltage of the power supply
- Protection against current unbalances between phases

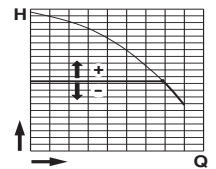


Operating modes



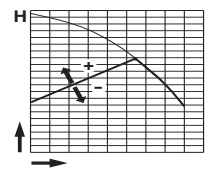
Constant pressure mode with pressure transducer

In this mode, the system maintains the preset pressure when the flow required by the installation changes.



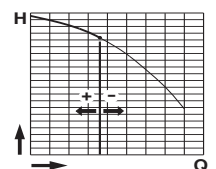
Proportional pressure mode with pressure transducer

In this mode the system changes the working pressure according to the required flow rate.



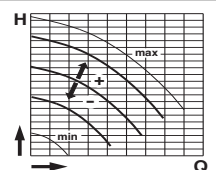
Constant flow mode with flow meter

In this mode the system maintains a constant flow rate value in a point of the installation according to the required pressure.



Fixed speed mode with setting of the speed preferential rotation.

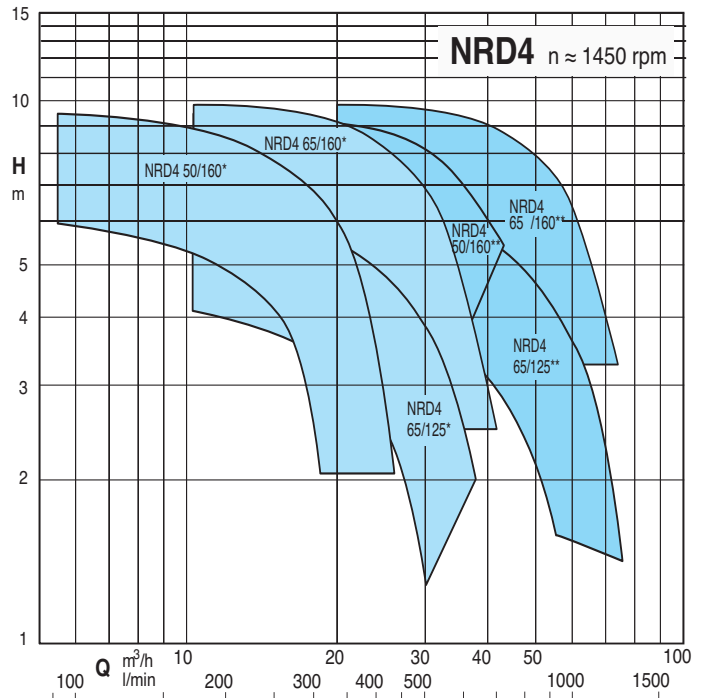
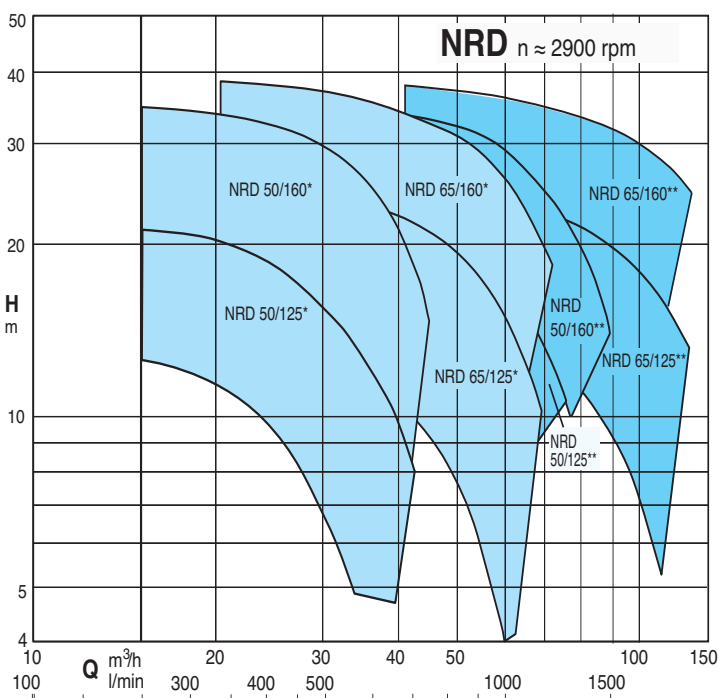
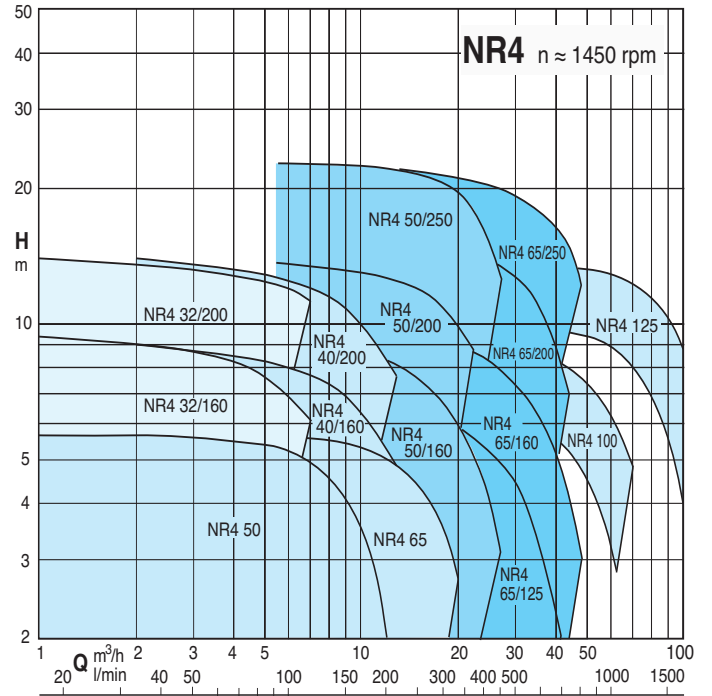
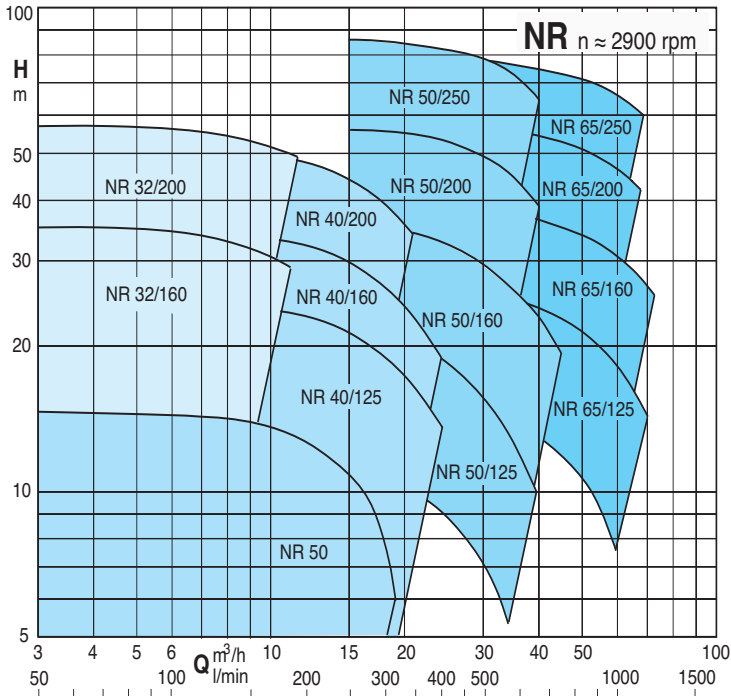
In this mode, by changing the working frequency, you may choose any operational curve included within the working range.



Constant temperature mode with temperature transducer

In this mode the system keeps the temperature constant inside a system by changing the speed of the pump.

Coverage chart



* Single operation



** Parallel operation

Performance $n \approx 2900$ rpm
Single operation

| 3 ~ | 230V 400V | | P ₂ | | Q m ³ /h l/min | 0 | 15 | 16,8 | 18,9 | 21 | 24 | 27 | 30 | 33 | 37,8 | 39 | 42 | 45 | | | | |
|-------------|-----------|-----|----------------|-----|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| | A | A | kW | HP | | 0 | 250 | 280 | 315 | 350 | 400 | 450 | 500 | 550 | 630 | 650 | 700 | 750 | | | | |
| NRD 50/125F | 4,6 | 2,7 | 1,1 | 1,5 | H m | 13,7 | 13,2 | 12,7 | 12,0 | 11,2 | 9,9 | 8,5 | 6,8 | 4,8 | | | | | | | | |
| NRD 50/125C | 7,5 | 4,3 | 1,5 | 2 | | 17,8 | 17,8 | 17,4 | 16,8 | 16,0 | 14,8 | 13,3 | 11,7 | 9,9 | 6,8 | 5,9 | | | | | | |
| NRD 50/125A | 9,2 | 5,3 | 2,2 | 3 | | 20,8 | 21,2 | 20,9 | 20,5 | 19,9 | 18,7 | 17,4 | 15,8 | 14,1 | 11,1 | 10,4 | 8,3 | | | | | |
| NRD 50/160C | 9,2 | 5,3 | 2,2 | 3 | | 23,4 | 22,9 | 22,4 | 21,7 | 20,9 | 19,4 | 17,7 | 15,7 | 13,4 | 9,1 | 7,8 | | | | | | |
| NRD 50/160B | 11,5 | 6,6 | 3 | 4 | | 25,6 | 25,0 | 24,6 | 24,0 | 23,3 | 22,0 | 20,4 | 18,5 | 16,2 | 11,9 | 10,7 | 7,5 | | | | | |
| NRD 50/160A | | 9,6 | 4 | 5,5 | | 34,0 | 34,6 | 34,3 | 33,8 | 33,2 | 32,0 | 30,5 | 28,7 | 26,7 | 22,8 | 21,7 | 18,8 | 15,6 | | | | |

| 3 ~ | 230V 400V | | P ₂ | | Q m ³ /h l/min | 0 | 21 | 24 | 27 | 30 | 33 | 37,8 | 42 | 48 | 54 | 60 | 66 | 69 | 72 | | | | | |
|-------------|-----------|------|----------------|-----|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|
| | A | A | kW | HP | | 0 | 350 | 400 | 450 | 500 | 550 | 630 | 700 | 800 | 900 | 1000 | 1100 | 1150 | 1200 | | | | | |
| NRD 65/125F | 9,2 | 5,3 | 2,2 | 3 | H m | 16,2 | 14,9 | 14,4 | 13,8 | 13,2 | 12,5 | 11,3 | 10,1 | 8,2 | 6,1 | 3,9 | | | | | | | | |
| NRD 65/125D | 11,5 | 6,6 | 3 | 4 | | 20,4 | 19,1 | 18,6 | 18,1 | 17,5 | 16,9 | 15,7 | 14,4 | 12,4 | 10,0 | 7,2 | 4,3 | | | | | | | |
| NRD 65/125A | | 9,6 | 4 | 5,5 | | 25,3 | 25,0 | 24,7 | 24,3 | 23,8 | 23,2 | 22,1 | 21,0 | 19,1 | 16,9 | 14,3 | 11,5 | 9,9 | | | | | | |
| NRD 65/160B | | 10,8 | 5,5 | 7,5 | | 30,7 | 31,3 | 31,1 | 30,8 | 30,4 | 29,9 | 28,6 | 27,2 | 24,7 | 21,7 | 18,2 | 14,5 | 12,5 | 10,4 | | | | | |
| NRD 65/160A | | 14,3 | 7,5 | 10 | | 37,5 | 37,7 | 37,6 | 37,4 | 37,1 | 36,6 | 35,6 | 34,4 | 32,1 | 29,3 | 26,0 | 22,5 | 20,6 | 18,5 | | | | | |

Parallel operation

| 3 ~ | 230V 400V | | P ₂ | | Q m ³ /h l/min | 0 | 30 | 33 | 37,8 | 42 | 48 | 54 | 60 | 66 | 75 | 84 | 90 | | | | | | |
|-------------|-----------|--------|----------------|--------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|
| | A | A | kW | HP | | 0 | 500 | 550 | 630 | 700 | 800 | 900 | 1000 | 1100 | 1250 | 1400 | 1500 | | | | | | |
| NRD 50/125F | 4,6 x2 | 2,7 x2 | 1,1 x2 | 1,5 x2 | H m | 13,7 | 13,3 | 12,9 | 12,0 | 11,1 | 9,7 | 8,1 | | | | | | | | | | | |
| NRD 50/125C | 7,5 x2 | 4,3 x2 | 1,5 x2 | 2 x2 | | 17,8 | 17,7 | 17,4 | 16,7 | 15,9 | 14,5 | 12,9 | 11,1 | 9,3 | | | | | | | | | |
| NRD 50/125A | 9,2 x2 | 5,3 x2 | 2,2 x2 | 3 x2 | | 20,8 | 21,0 | 20,8 | 20,3 | 19,7 | 18,5 | 17,1 | 15,4 | 13,5 | 10,8 | | | | | | | | |
| NRD 50/160C | 9,2 x2 | 5,3 x2 | 2,2 x2 | 3 x2 | | 23,4 | 22,9 | 22,5 | 21,7 | 20,8 | 19,2 | 17,2 | 15,0 | 12,3 | | | | | | | | | |
| NRD 50/160B | 11,5 x2 | 6,6 x2 | 3 x2 | 4 x2 | | 25,6 | 25,0 | 24,6 | 23,9 | 23,1 | 21,6 | 19,9 | 17,7 | 15,1 | 10,3 | | | | | | | | |
| NRD 50/160A | | 9,6 x2 | 4 x2 | 5,5 x2 | | 34,0 | 34,2 | 34,0 | 33,5 | 32,9 | 31,7 | 30,2 | 28,2 | 25,9 | 21,8 | 17,0 | 13,2 | | | | | | |

| 3 ~ | 230V 400V | | P ₂ | | Q m ³ /h l/min | 0 | 42 | 48 | 54 | 60 | 66 | 75 | 84 | 96 | 108 | 120 | | | | | | | |
|-------------|-----------|---------|----------------|--------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|
| | A | A | kW | HP | | 0 | 700 | 800 | 900 | 1000 | 1100 | 1250 | 1400 | 1600 | 1800 | 2000 | | | | | | | |
| NRD 65/125F | 9,2 x2 | 5,3 x2 | 2,2 x2 | 3 x2 | H m | 16,2 | 15,2 | 14,8 | 14,4 | 13,8 | 13,0 | 11,7 | 10,2 | 7,9 | 5,2 | | | | | | | | |
| NRD 65/125D | 11,5 x2 | 6,6 x2 | 3 x2 | 4 x2 | | 20,4 | 19,8 | 19,4 | 18,9 | 18,4 | 17,7 | 16,5 | 15,0 | 12,7 | 10,0 | | | | | | | | |
| NRD 65/125A | | 9,6 x2 | 4 x2 | 5,5 x2 | | 25,3 | 24,9 | 24,6 | 24,2 | 23,7 | 23,1 | 22,0 | 20,7 | 18,5 | 16,0 | 13,1 | | | | | | | |
| NRD 65/160B | | 10,8 x2 | 5,5 x2 | 7,5 x2 | | 30,7 | 30,8 | 30,6 | 30,4 | 30,0 | 29,4 | 28,0 | 26,2 | 23,3 | 20,0 | 16,4 | | | | | | | |
| NRD 65/160A | | 14,3 x2 | 7,5 x2 | 10 x2 | | 37,5 | 37,1 | 36,9 | 36,6 | 36,2 | 35,7 | 34,6 | 33,2 | 30,7 | 27,7 | 24,1 | | | | | | | |

P1 Max. power input. P2 Rated motor power output. Tolerances according to UNI EN ISO 9906:2012

Performance $n \approx 1450$ rpm

Single operation

| 3 ~ | 230V | | 400V | | P ₂ | | Q | | | | | | | | | | | | | | | | |
|--------------|------|------|------|------|-------------------|-----|-----|-----|-----|-----|------|-----|------|-----|------|------|-----|-----|-----|--|--|--|--|
| | A | A | kW | HP | m ³ /h | | | | | | | | | | | | | | | | | | |
| | | | | | 0 | 5,4 | 6 | 7,5 | 8,4 | 9,6 | 10,8 | 12 | 13,2 | 15 | 16,8 | 18,9 | 21 | 24 | 27 | | | | |
| NRD4 50/160C | 1,65 | 0,95 | 0,37 | 0,5 | 5,9 | 5,9 | 5,8 | 5,7 | 5,5 | 5,3 | 5,1 | 4,8 | 4,5 | 3,9 | 3,1 | 2,1 | | | | | | | |
| NRD4 50/160B | 2,6 | 1,5 | 0,55 | 0,75 | 7,3 | 7,5 | 7,5 | 7,4 | 7,3 | 7,1 | 6,8 | 6,6 | 6,3 | 5,7 | 5,1 | 4,1 | 3,0 | 1,3 | | | | | |
| NRD4 50/160A | 3,3 | 1,9 | 0,75 | 1 | 9,3 | 9,5 | 9,5 | 9,4 | 9,3 | 9,2 | 9,1 | 8,9 | 8,6 | 8,1 | 7,6 | 6,8 | 5,8 | 4,1 | 2,1 | | | | |

| 3 ~ | 230V | | 400V | | P ₂ | | Q | | | | | | | | | | | | | | | | |
|--------------|------|------|------|------|-------------------|------|-----|------|-----|------|------|-----|-----|-----|-----|-----|------|-----|--|--|--|--|--|
| | A | A | kW | HP | m ³ /h | | | | | | | | | | | | | | | | | | |
| | | | | | 0 | 10,8 | 12 | 13,2 | 15 | 16,8 | 18,9 | 21 | 24 | 27 | 30 | 33 | 37,8 | 42 | | | | | |
| NRD4 65/125F | 1,65 | 0,95 | 0,37 | 0,5 | 4,3 | 4,1 | 4,0 | 3,9 | 3,7 | 3,5 | 3,3 | 3,0 | 2,5 | 2,0 | 1,3 | | | | | | | | |
| NRD4 65/125D | 2,6 | 1,5 | 0,55 | 0,75 | 5,4 | 5,2 | 5,1 | 5,0 | 4,9 | 4,7 | 4,4 | 4,1 | 3,6 | 3,1 | 2,5 | 1,7 | | | | | | | |
| NRD4 65/125A | 3,3 | 1,9 | 0,75 | 1 | 6,5 | 6,4 | 6,3 | 6,3 | 6,1 | 6,0 | 5,8 | 5,5 | 5,0 | 4,4 | 3,8 | 3,1 | 2,0 | | | | | | |
| NRD4 65/160B | 4,6 | 2,7 | 1,1 | 1,5 | 8,1 | 8,2 | 8,2 | 8,1 | 8,0 | 7,9 | 7,6 | 7,3 | 6,7 | 6,0 | 5,1 | 4,1 | 2,5 | | | | | | |
| NRD4 65/160A | 4,6 | 2,7 | 1,1 | 1,5 | 9,8 | 9,8 | 9,8 | 9,7 | 9,6 | 9,4 | 9,2 | 8,9 | 8,3 | 7,7 | 6,9 | 6,0 | 4,3 | 2,6 | | | | | |

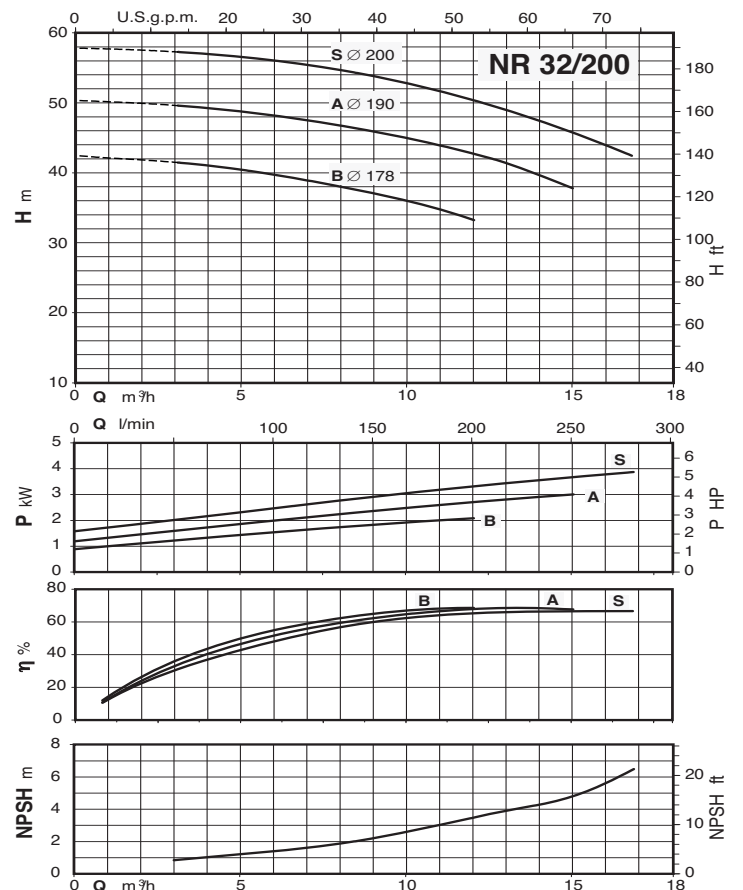
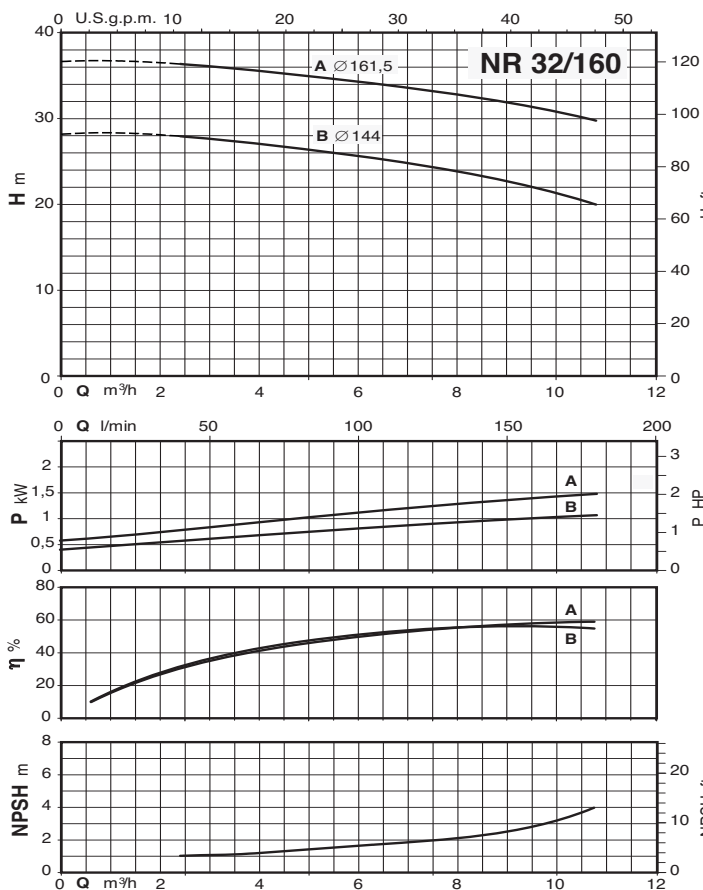
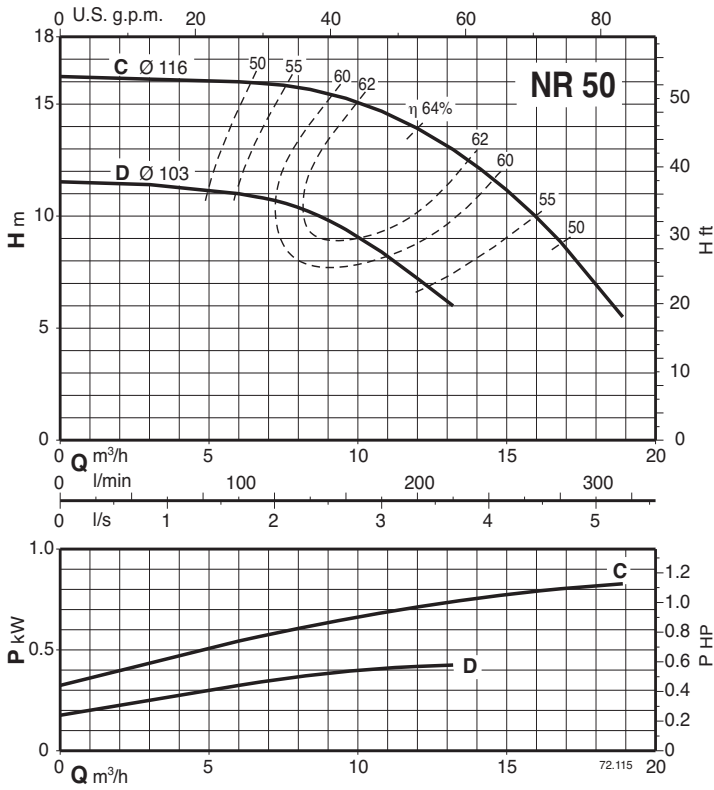
Parallel operation

| 3 ~ | 230V | | 400V | | P ₂ | | Q | | | | | | | | | | | | | | | | |
|--------------|---------|---------|---------|---------|-------------------|------|-----|------|-----|------|------|-----|-----|-----|-----|-----|------|-----|--|--|--|--|--|
| | A | A | kW | HP | m ³ /h | | | | | | | | | | | | | | | | | | |
| | | | | | 0 | 10,8 | 12 | 13,2 | 15 | 16,8 | 18,9 | 21 | 24 | 27 | 30 | 33 | 37,8 | 42 | | | | | |
| NRD4 50/160C | 1,65 x2 | 0,95 x2 | 0,37 x2 | 0,5 x2 | 5,9 | 6,0 | 5,9 | 5,9 | 5,7 | 5,6 | 5,4 | 5,2 | 4,8 | 4,3 | 3,7 | 3,0 | | | | | | | |
| NRD4 50/160B | 2,6 x2 | 1,5 x2 | 0,55 x2 | 0,75 x2 | 7,3 | 7,4 | 7,4 | 7,4 | 7,3 | 7,2 | 7,0 | 6,9 | 6,5 | 6,1 | 5,5 | 4,9 | 3,8 | | | | | | |
| NRD4 50/160A | 3,3 x2 | 1,9 x2 | 0,75 x2 | 1 x2 | 9,3 | 9,5 | 9,5 | 9,5 | 9,4 | 9,3 | 9,2 | 9,1 | 8,8 | 8,4 | 8,0 | 7,4 | 6,4 | 5,4 | | | | | |

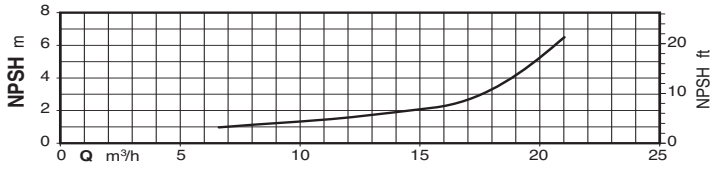
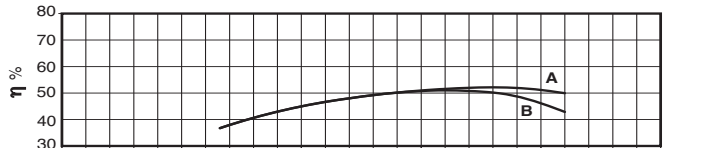
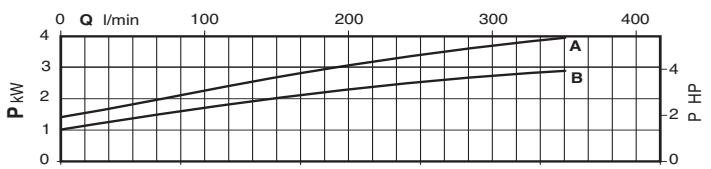
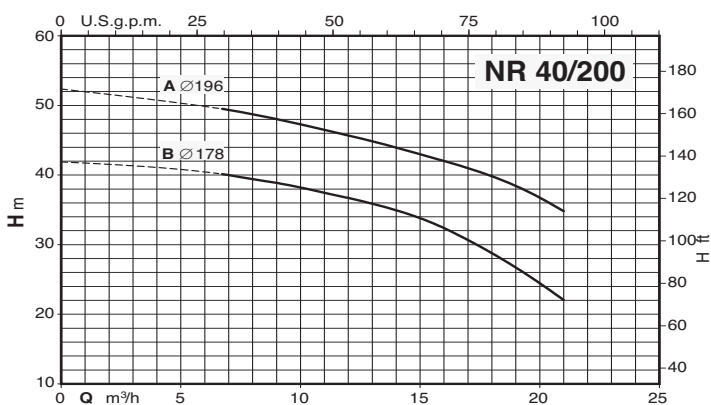
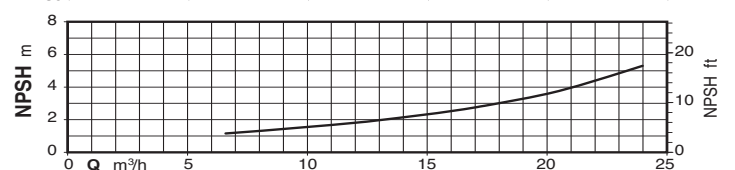
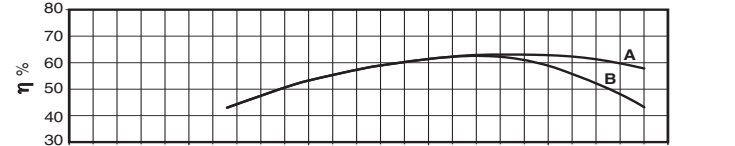
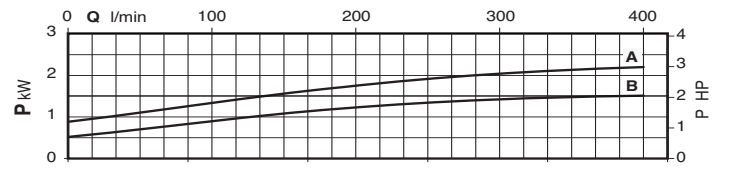
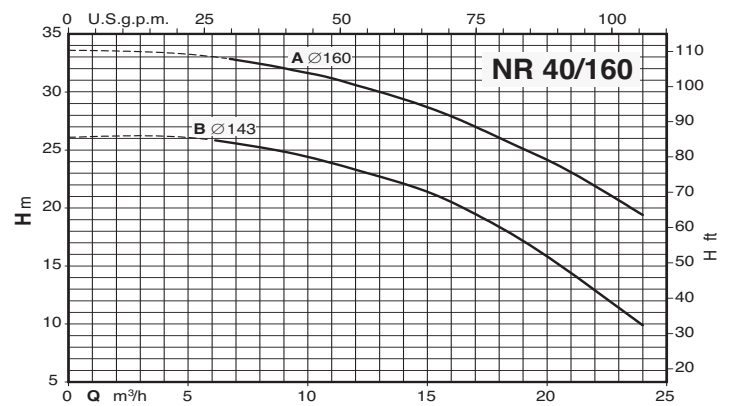
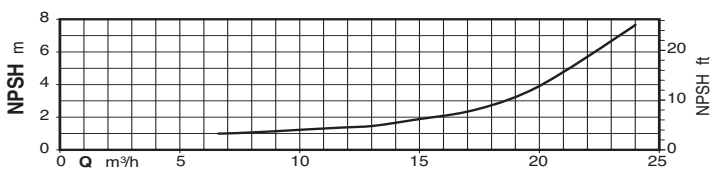
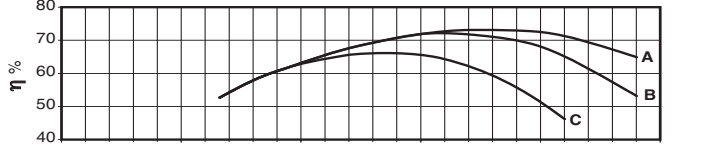
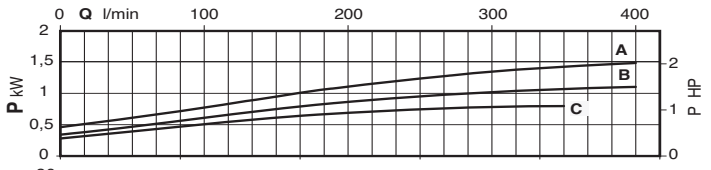
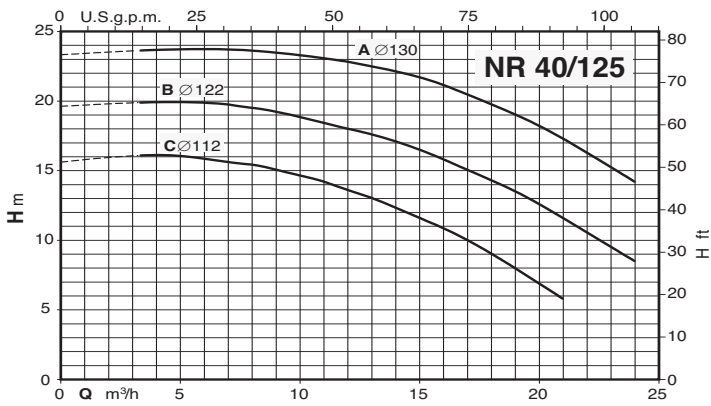
| 3 ~ | 230V | | 400V | | P ₂ | | Q | | | | | | | | | | | | | | | | |
|--------------|---------|---------|---------|---------|-------------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| | A | A | kW | HP | m ³ /h | | | | | | | | | | | | | | | | | | |
| | | | | | 0 | 21 | 24 | 27 | 30 | 33 | 37,8 | 42 | 48 | 54 | 60 | 66 | 75 | | | | | | |
| NRD4 65/125F | 1,65 x2 | 0,95 x2 | 0,37 x2 | 0,5 x2 | 4,3 | 4,1 | 4,0 | 3,9 | 3,7 | 3,6 | 3,2 | 2,9 | 2,3 | 1,7 | | | | | | | | | |
| NRD4 65/125D | 2,6 x2 | 1,5 x2 | 0,55 x2 | 0,75 x2 | 5,4 | 5,2 | 5,1 | 5,0 | 4,9 | 4,7 | 4,4 | 4,1 | 3,5 | 2,9 | 2,1 | 1,4 | | | | | | | |
| NRD4 65/125A | 3,3 x2 | 1,9 x2 | 0,75 x2 | 1 x2 | 6,5 | 6,4 | 6,3 | 6,3 | 6,1 | 6,0 | 5,7 | 5,4 | 5,0 | 4,3 | 3,6 | 2,8 | 1,5 | | | | | | |
| NRD4 65/160B | 4,6 x2 | 2,7 x2 | 1,1 x2 | 1,5 x2 | 8,1 | 8,0 | 8,0 | 7,9 | 7,8 | 7,7 | 7,5 | 7,1 | 6,5 | 5,7 | 4,8 | 3,8 | | | | | | | |
| NRD4 65/160A | 4,6 x2 | 2,7 x2 | 1,1 x2 | 1,5 x2 | 9,8 | 9,6 | 9,6 | 9,5 | 9,4 | 9,3 | 9,1 | 8,7 | 8,1 | 7,4 | 6,5 | 5,5 | 3,8 | | | | | | |

P1 Max. power input. P2 Rated motor power output. Tolerances according to UNI EN ISO 9906:2012

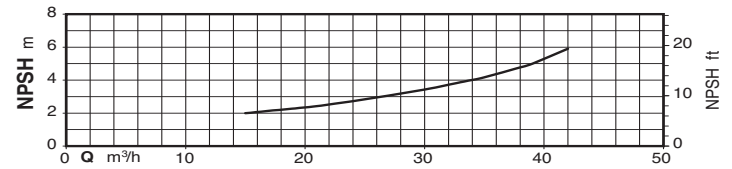
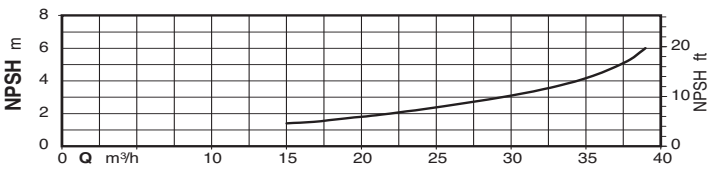
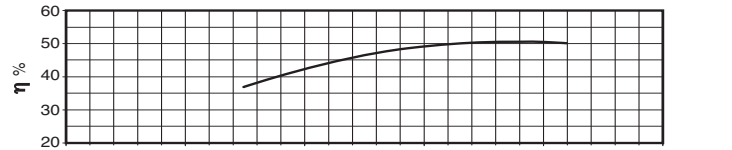
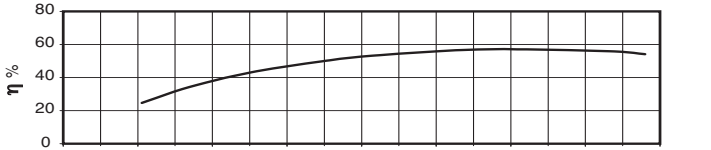
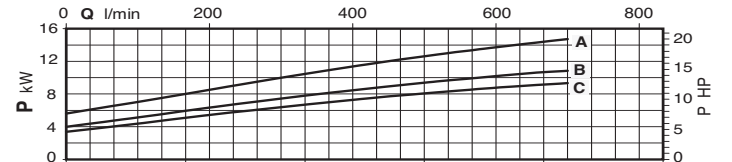
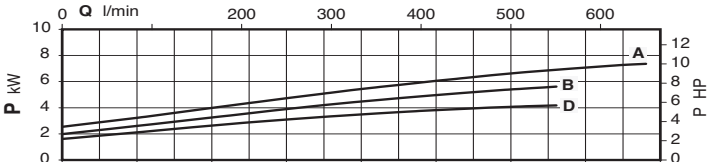
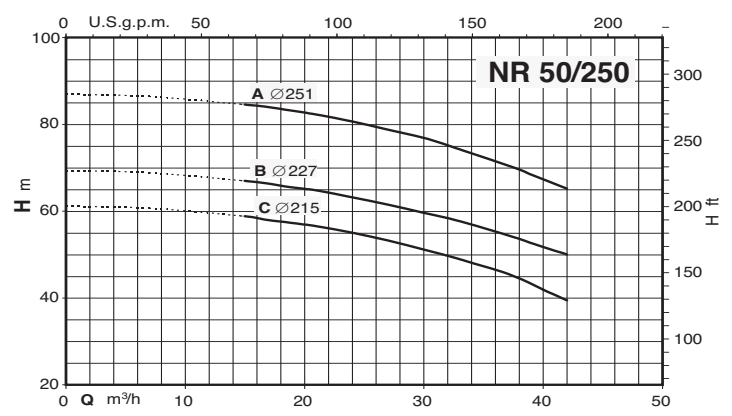
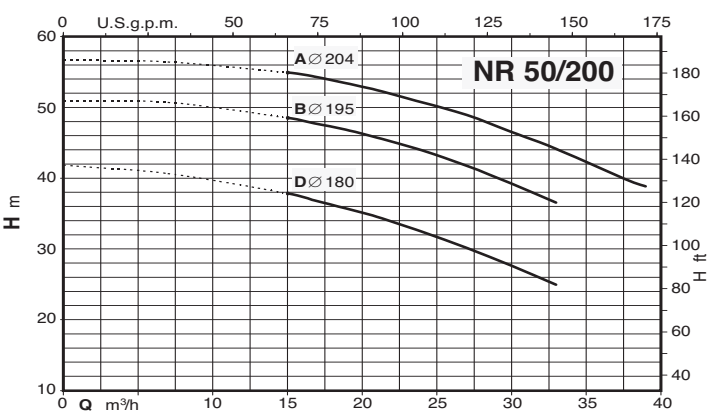
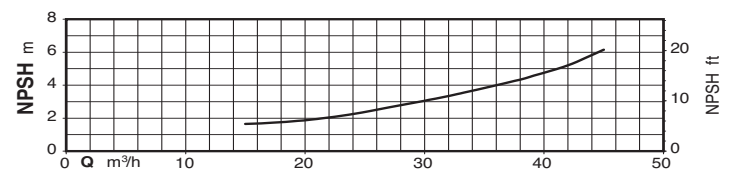
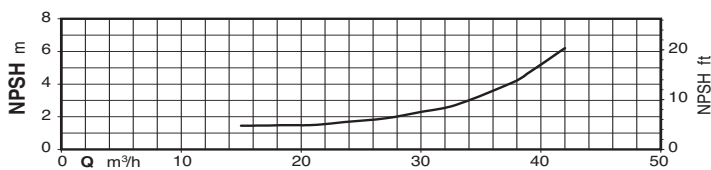
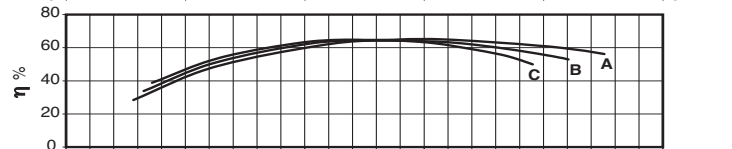
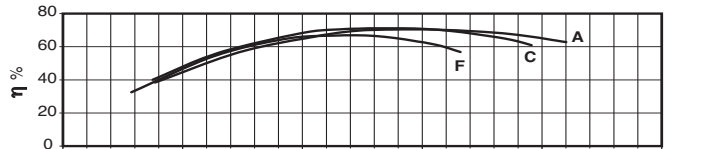
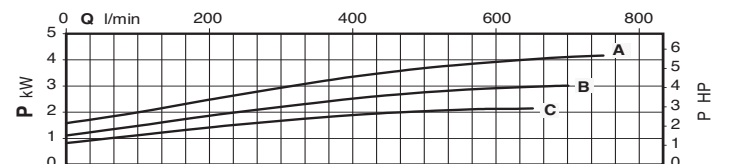
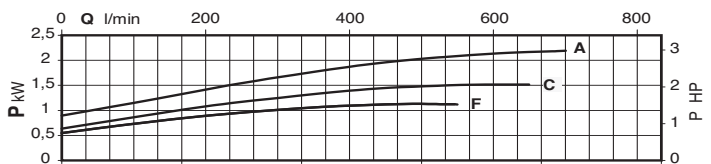
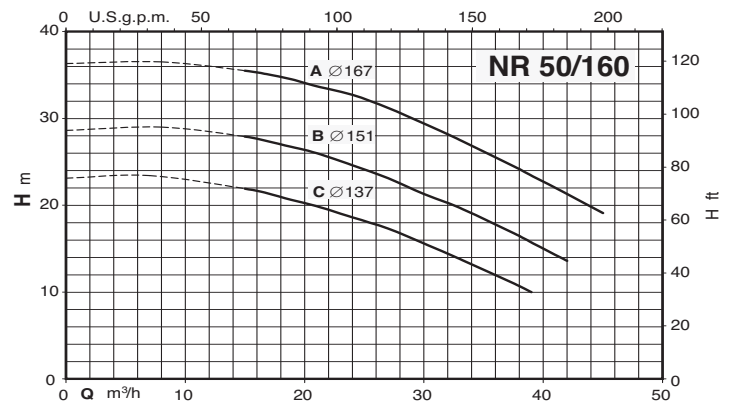
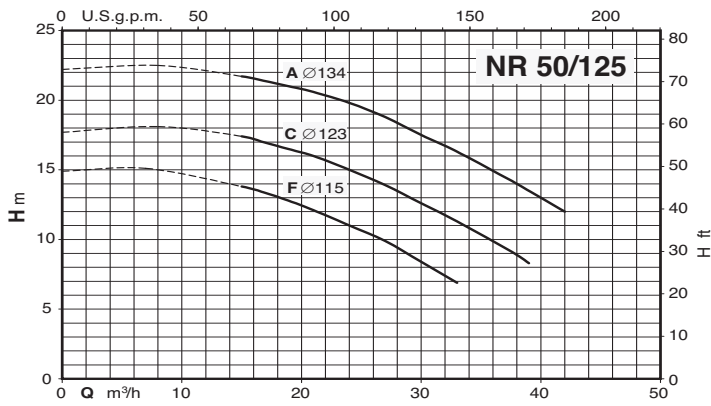
Characteristic curves $n \approx 2900$ rpm



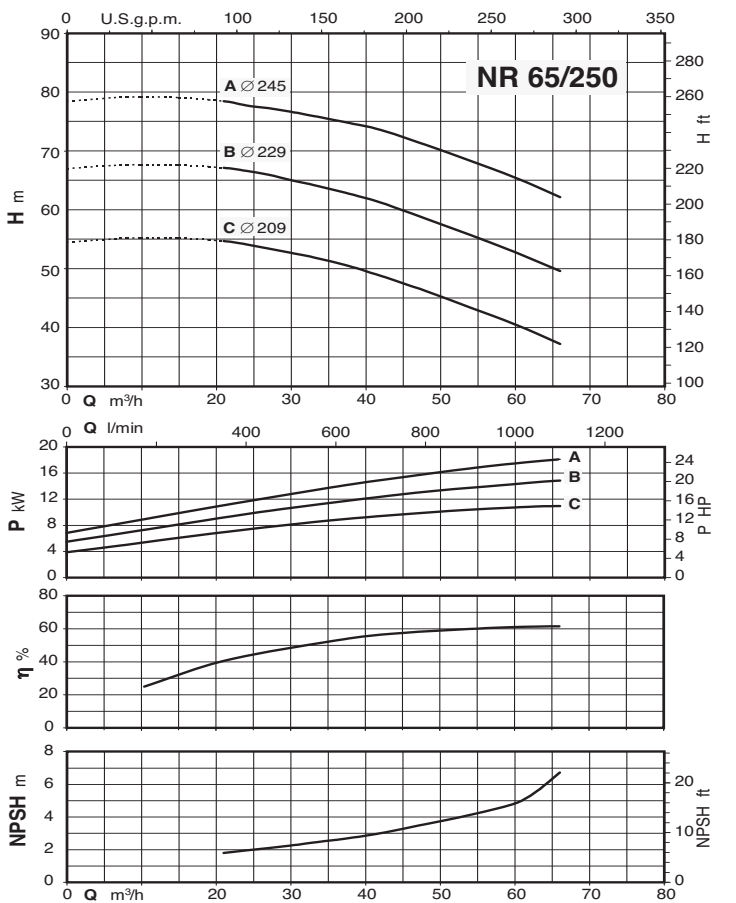
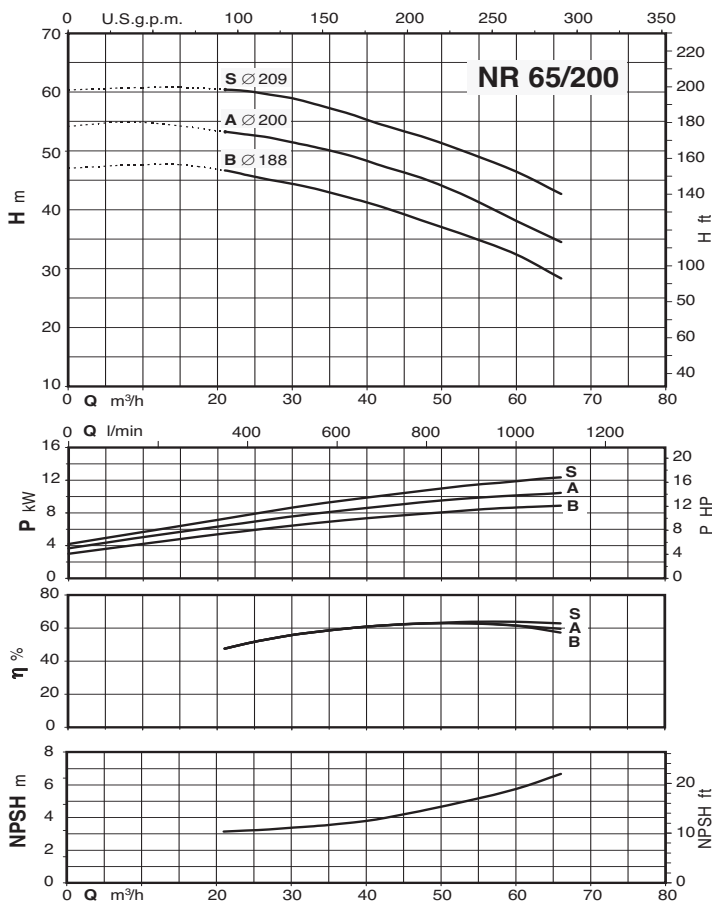
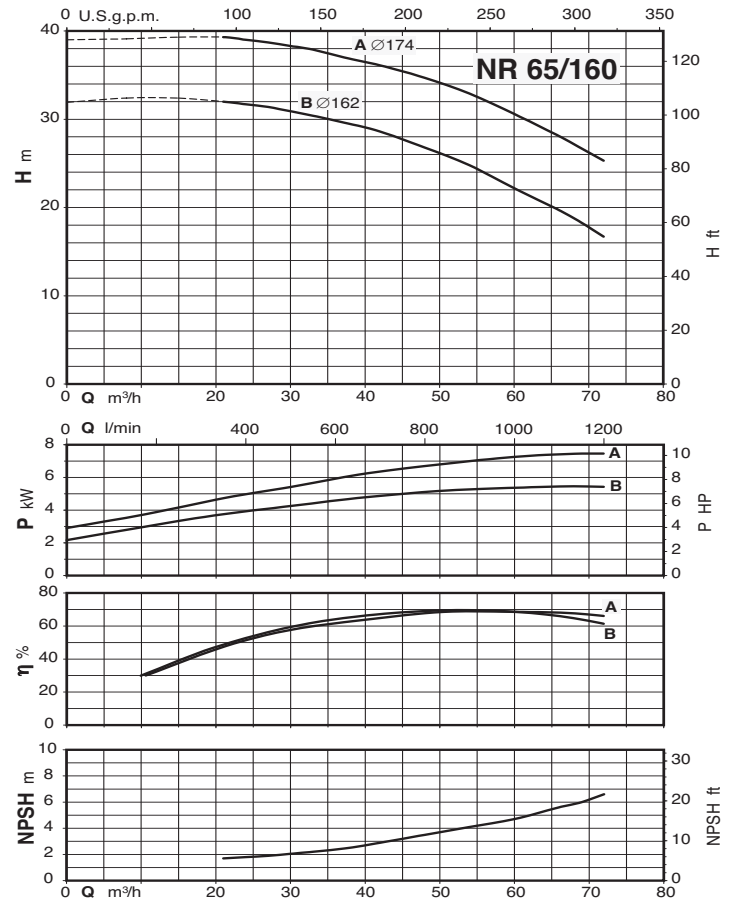
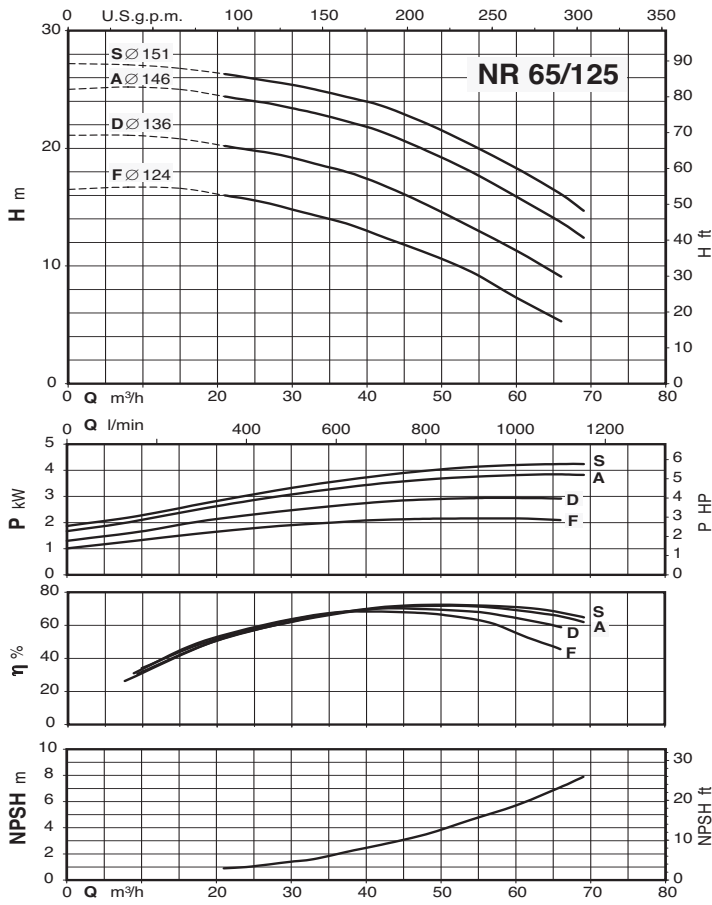
Characteristic curves $n \approx 2900$ rpm



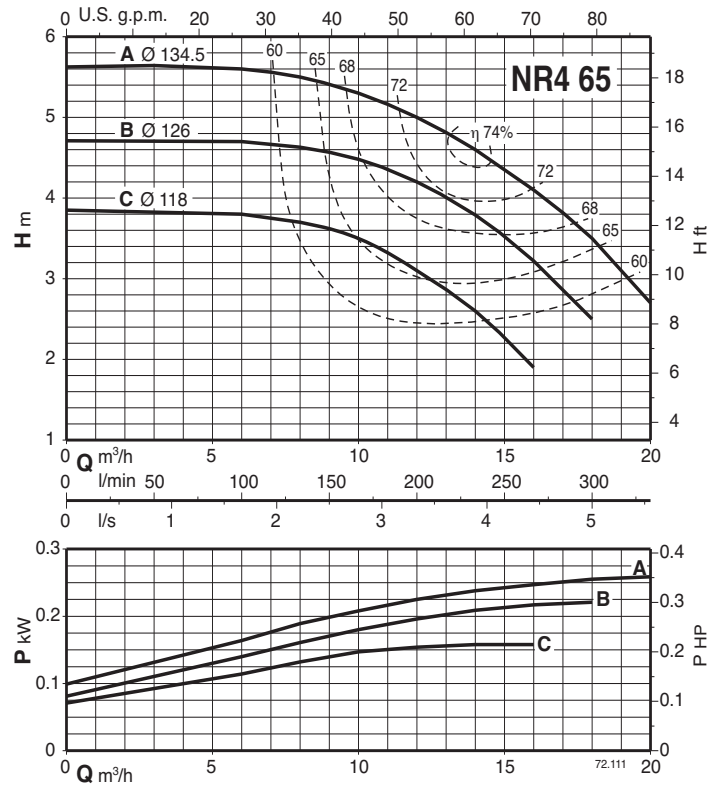
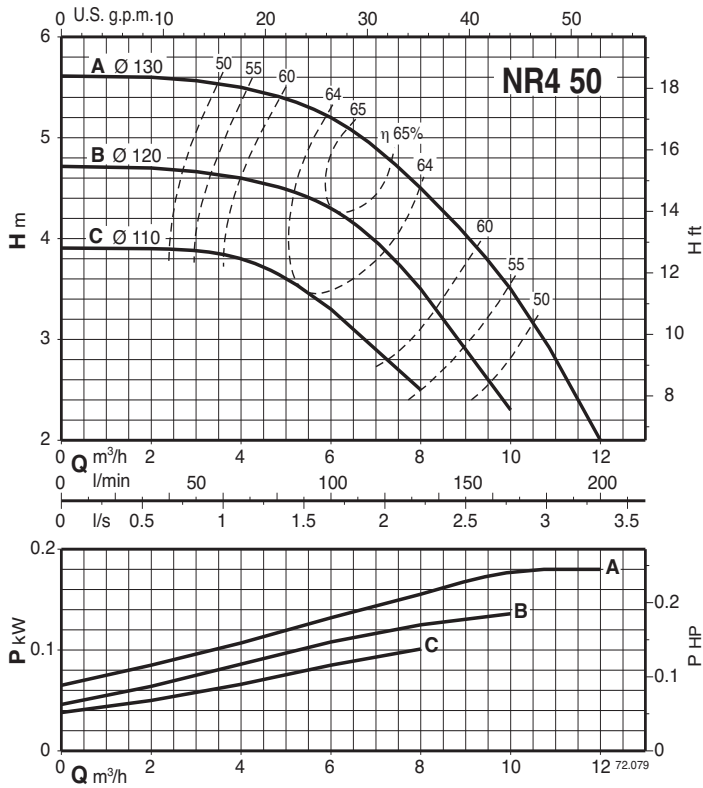
Characteristic curves $n \approx 2900$ rpm



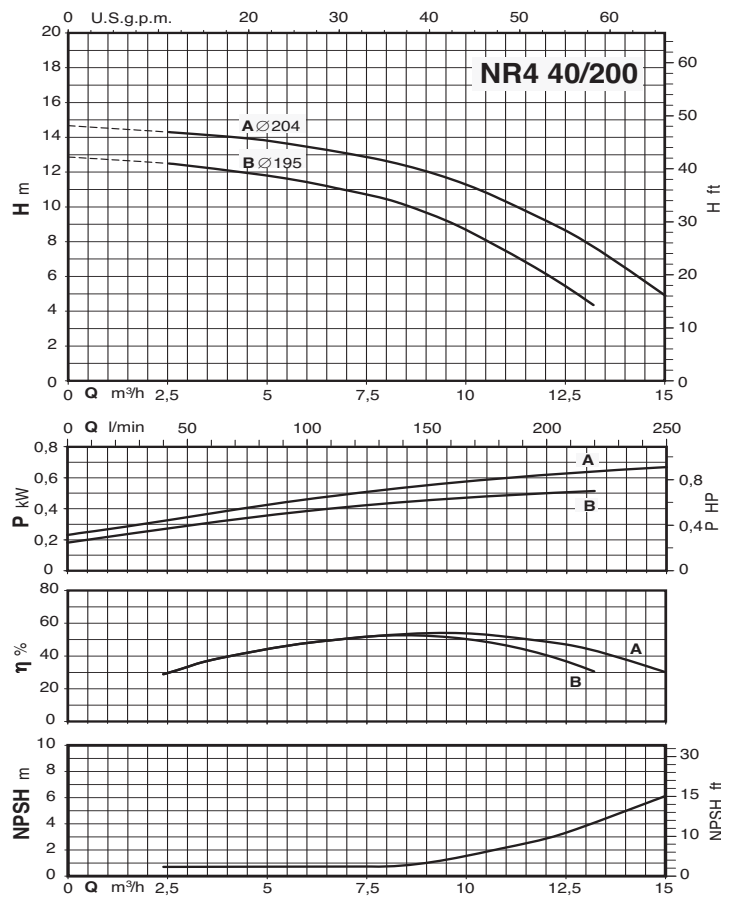
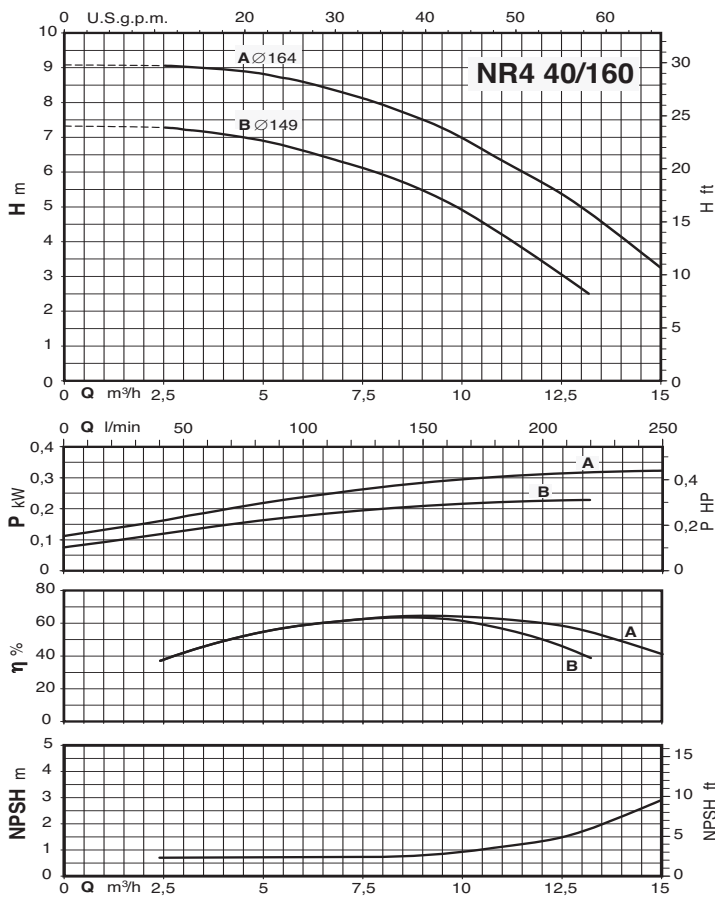
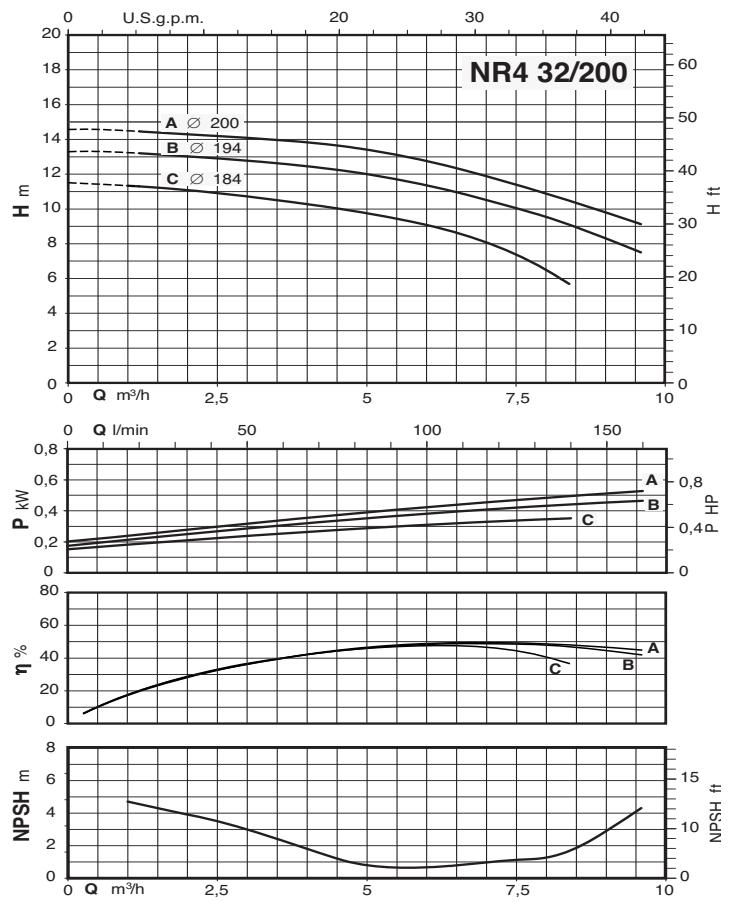
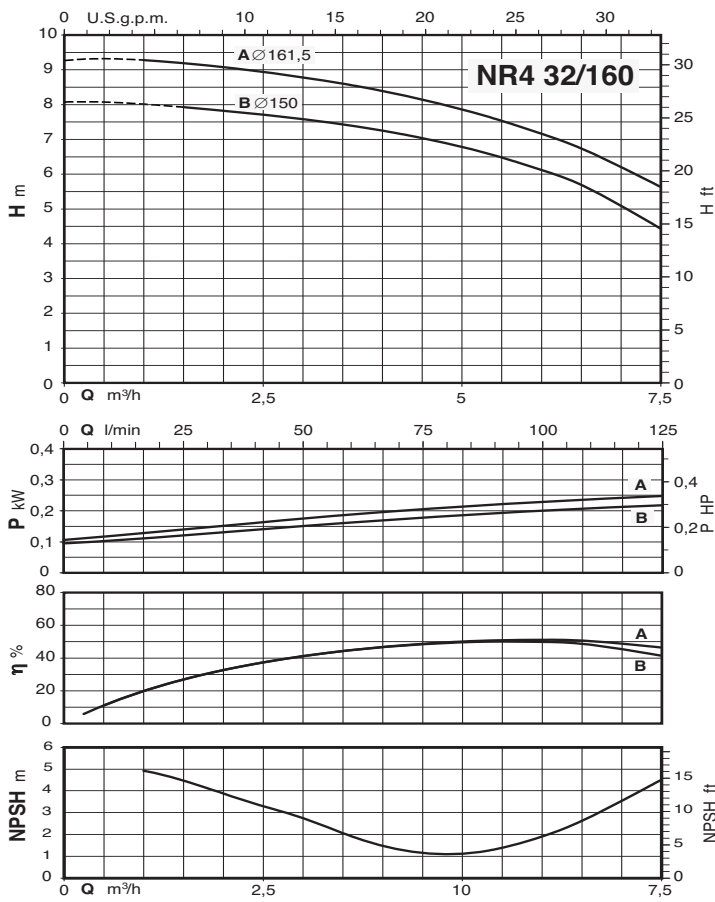
Characteristic curves $n \approx 2900$ rpm



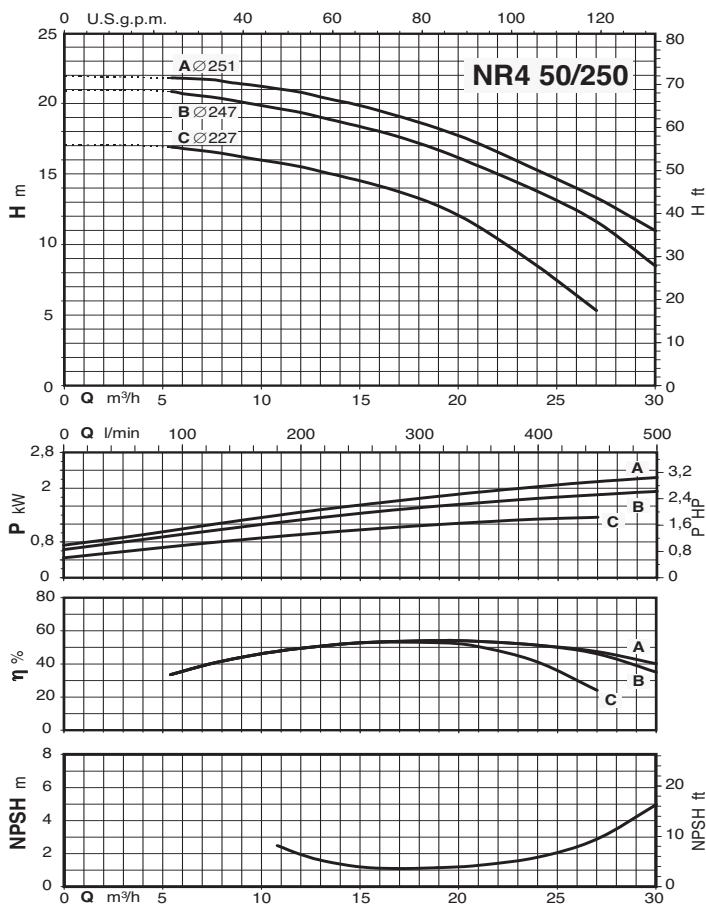
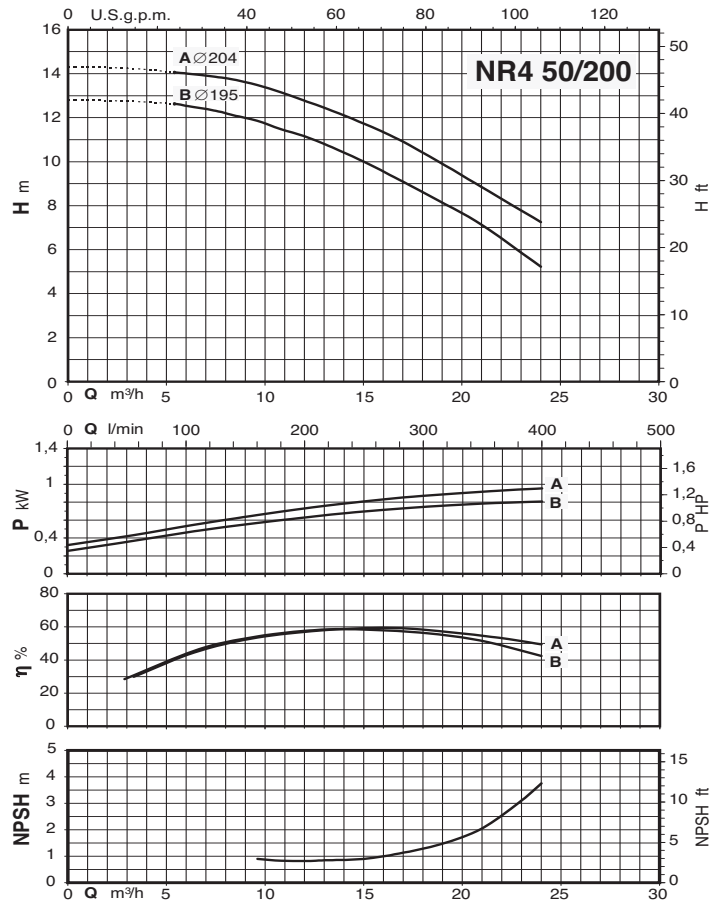
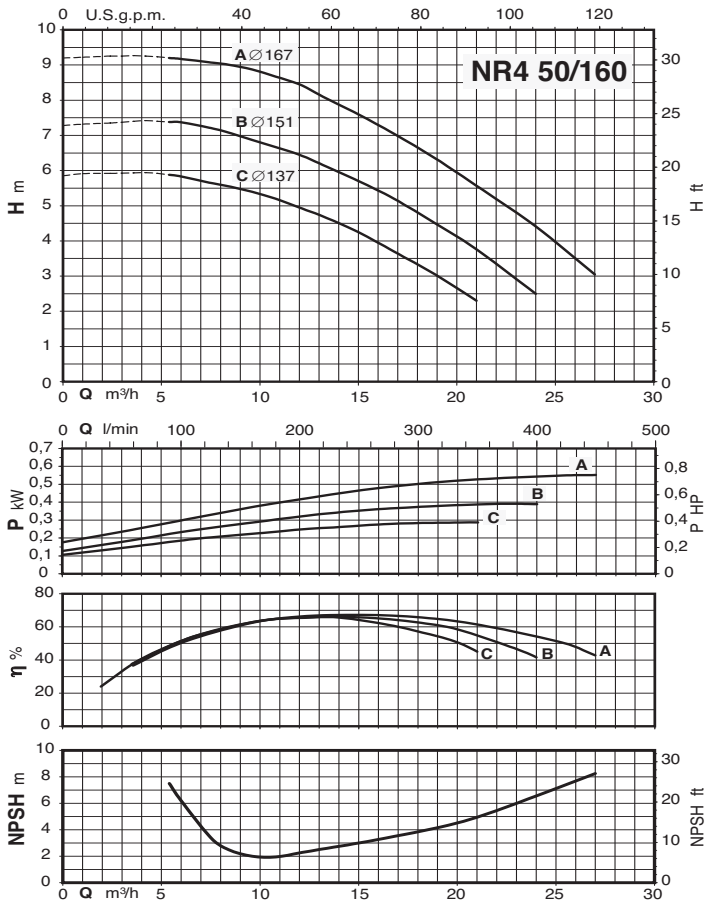
Characteristic curves $n \approx 1450$ rpm



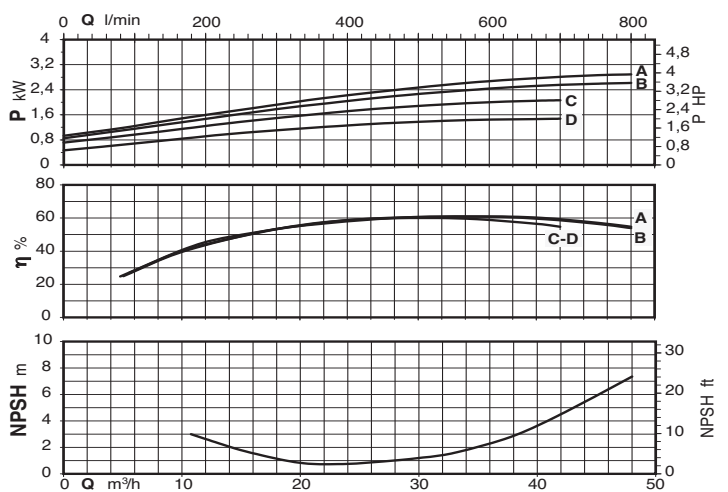
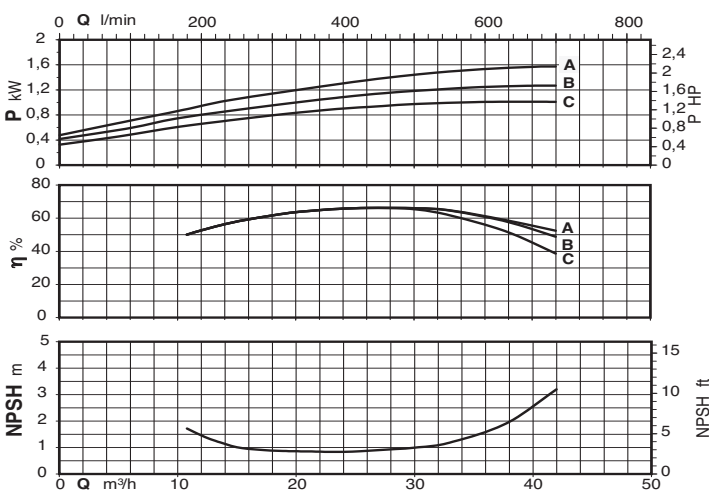
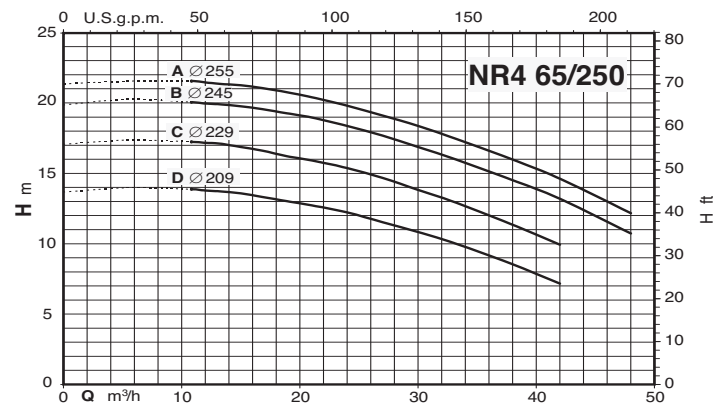
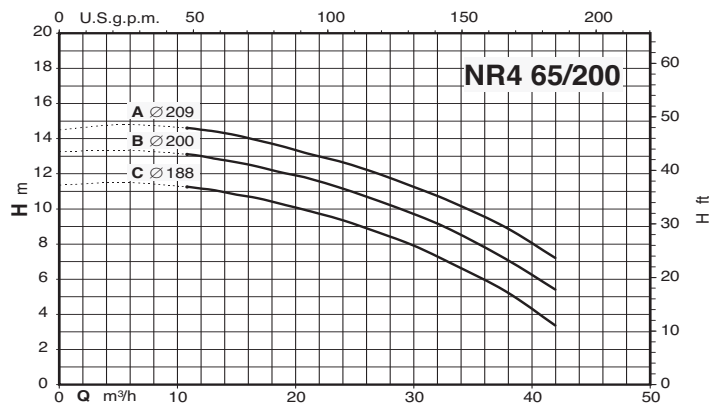
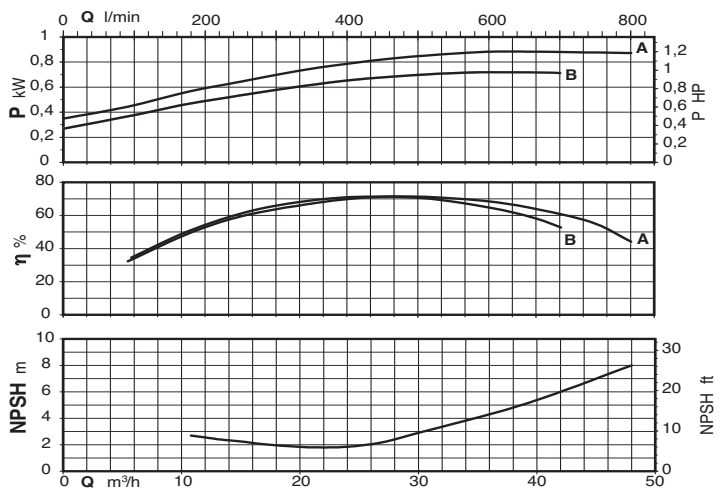
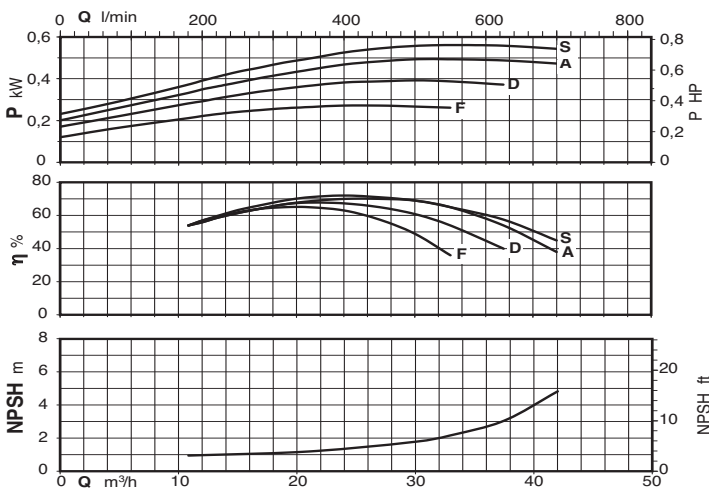
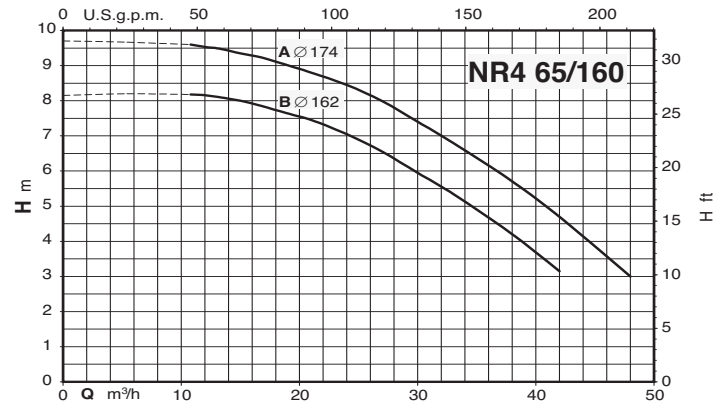
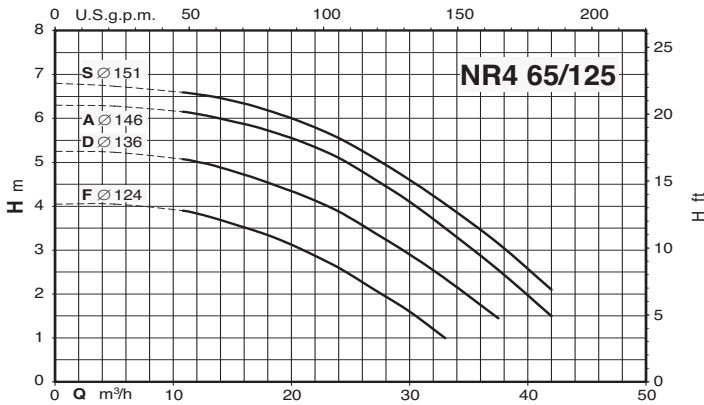
Characteristic curves $n \approx 1450$ rpm



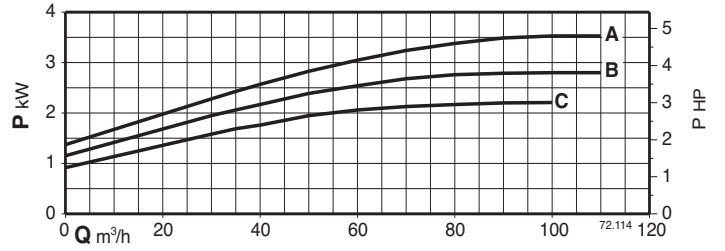
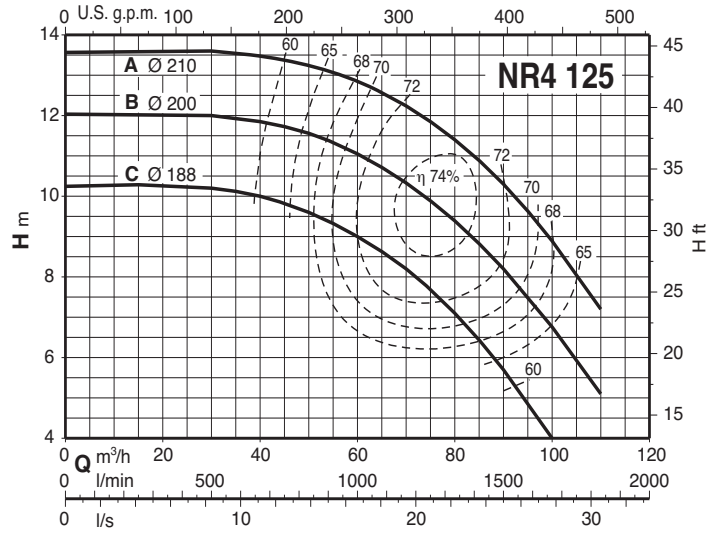
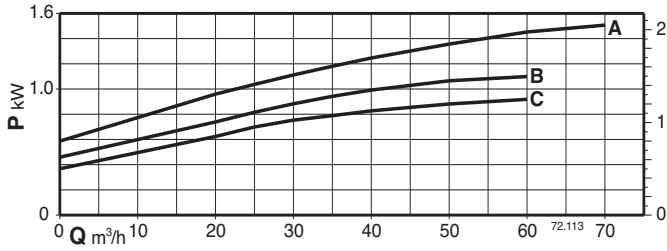
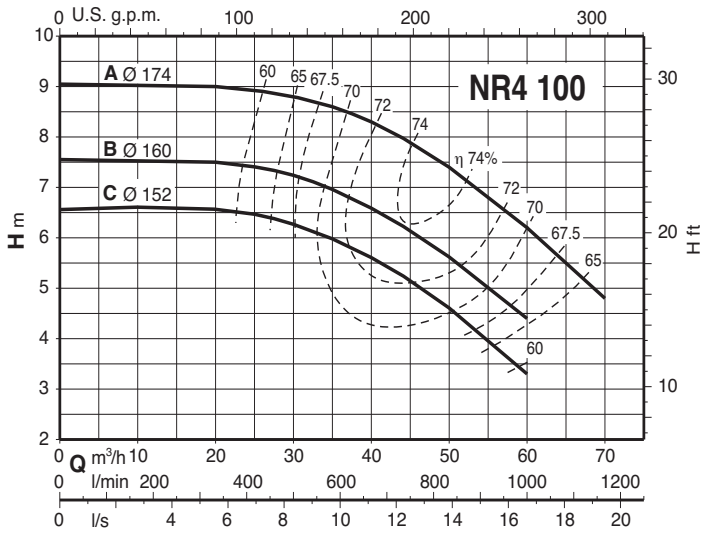
Characteristic curves $n \approx 1450$ rpm



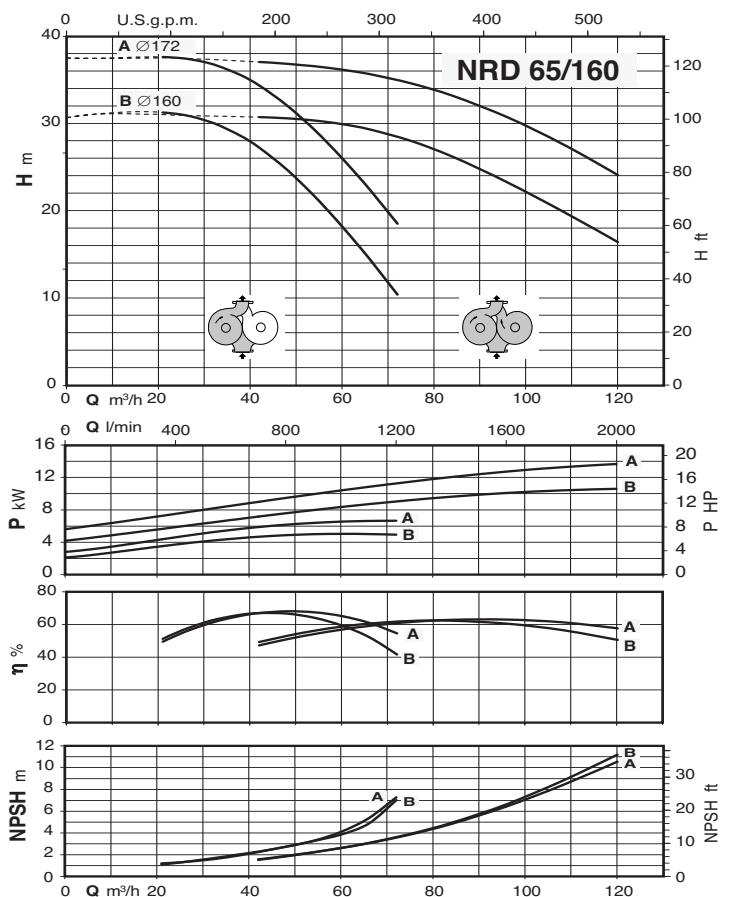
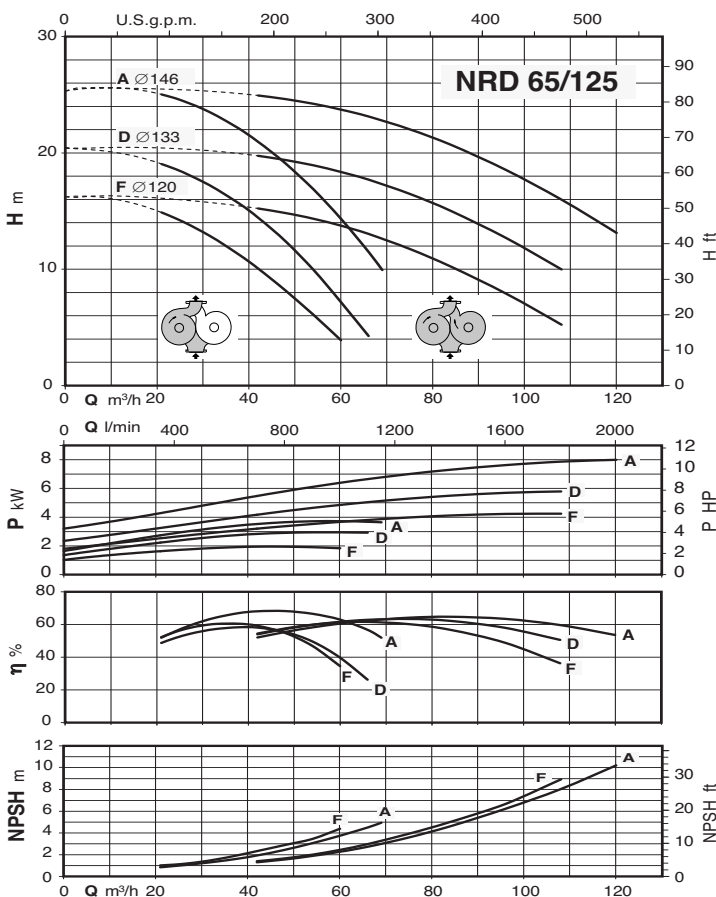
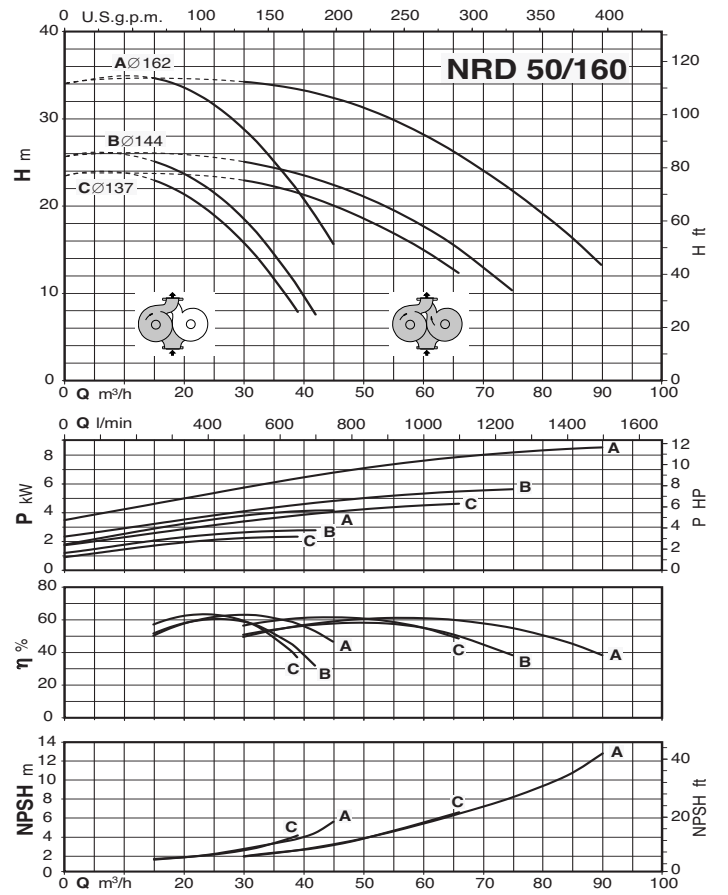
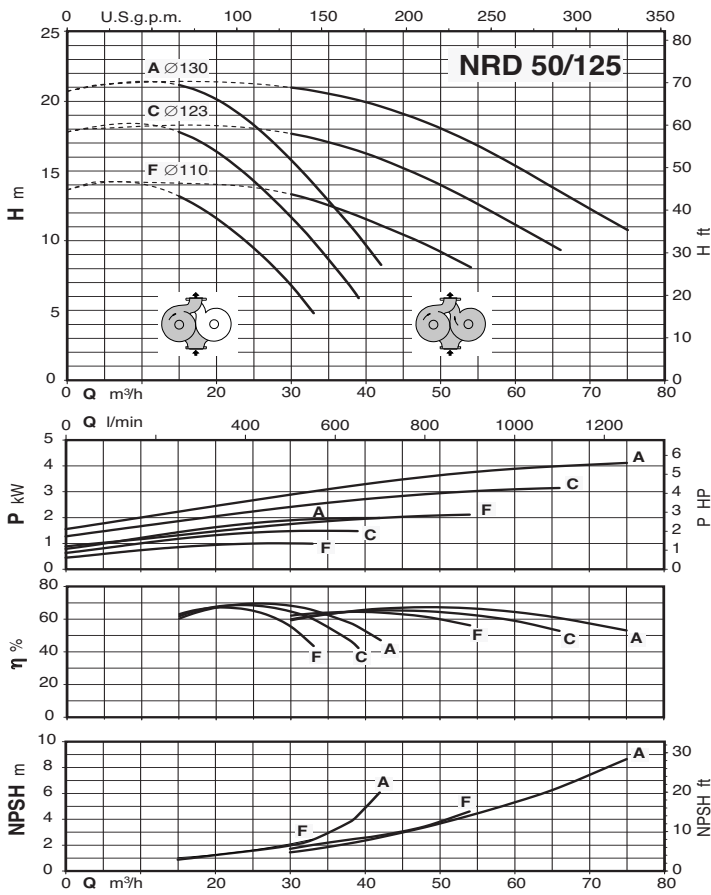
Characteristic curves $n \approx 1450$ rpm



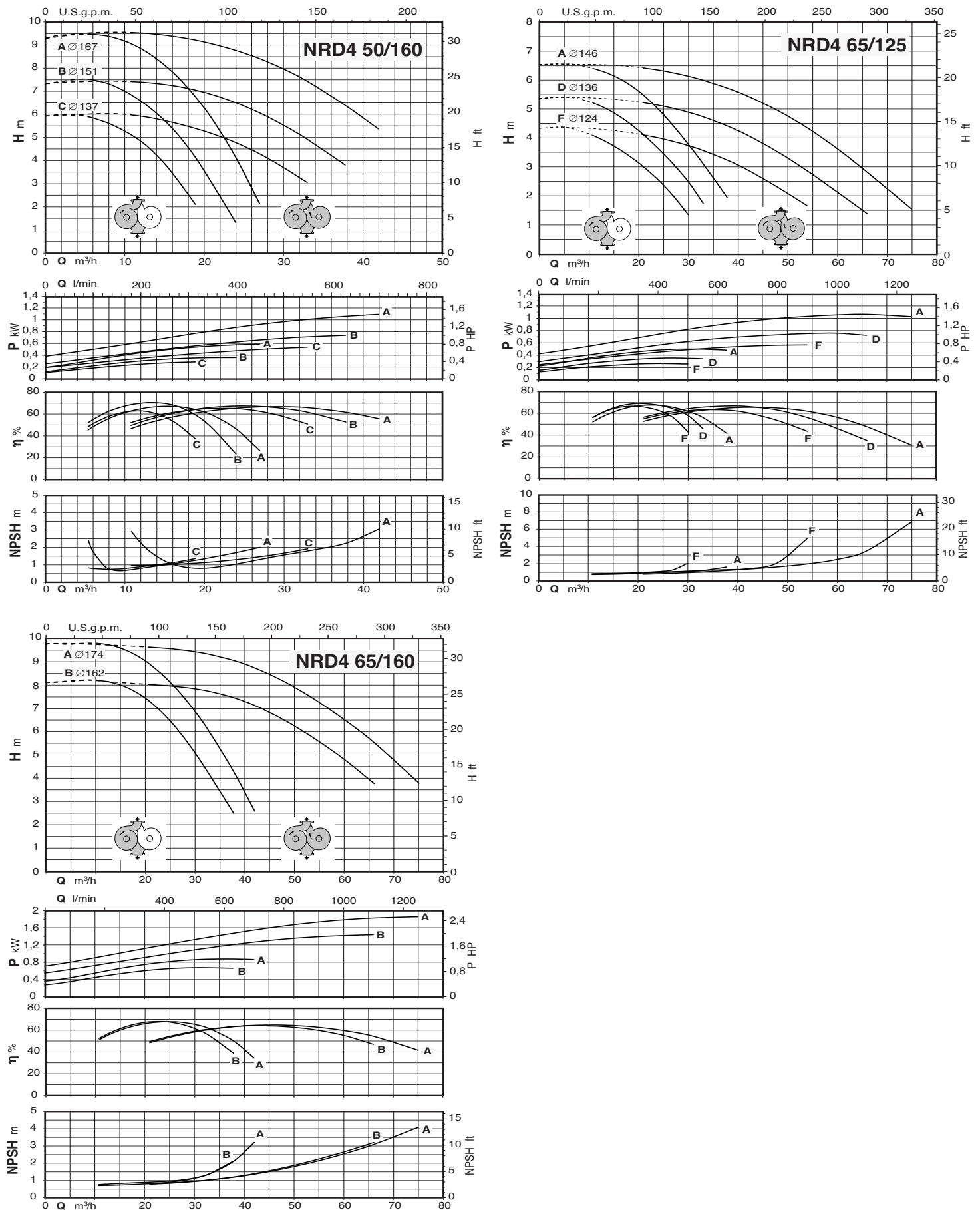
Characteristic curves $n \approx 1450$ rpm



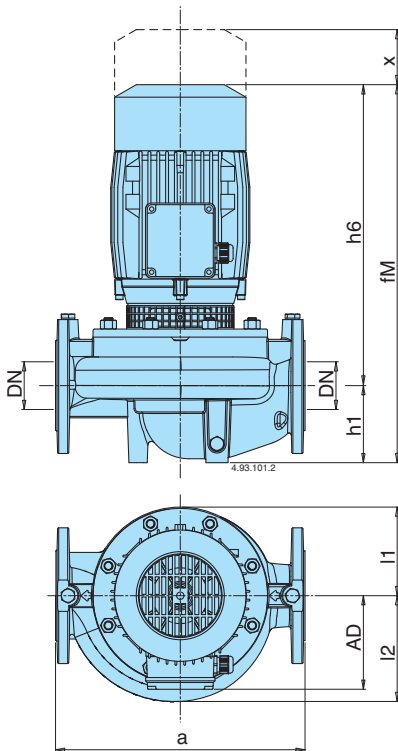
Curve caratteristiche $n \approx 2900$ 1/min



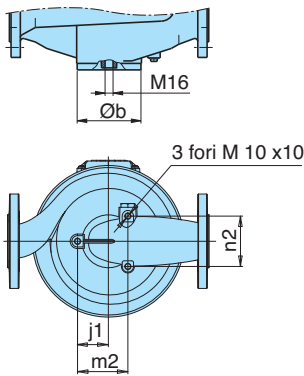
Characteristic curves $n \approx 1450$ rpm



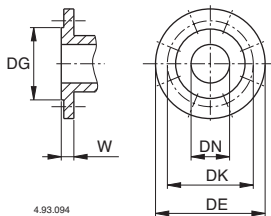
Dimensions and weights



| TYPE | mm | | | | | | | | | | | | | kg |
|----------------------|----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|----|----------------|
| | DN | a | fM | h1 | h6 | n2 | m2 | j1 | Øb | AD | l1 | l2 | x | |
| NR 50D/A-C/B | 50 | 320 | 360 | 90 | 270 | - | - | - | 98 | 111 | 93 | 100 | 70 | 21,7-23,8 |
| NR 32/160A/A-B/A | 32 | 340 | 421 | 80 | 341 | 76 | 90 | 50 | - | 128 | 102 | 102 | 60 | 28,6-27 |
| NR 32/200B | 32 | 440 | 469 | 85 | 384 | 84 | 104 | 60 | - | 128 | 126 | 126 | 60 | 36,3 |
| NR 32/200A/A-S/A | 32 | 440 | 495 | 85 | 410 | 84 | 104 | 60 | - | 138 | 126 | 126 | 60 | 44-47 |
| NR 40/125A/A-B/A-C | 40 | 320 | 420 | 81 | 339 | 80 | 80 | 49 | - | 128 | 93 | 98 | 70 | 29,5-27,5-26,5 |
| NR 40/160B/A | 40 | 320 | 430 | 81 | 349 | 80 | 80 | 49 | - | 128 | 119 | 119 | 75 | 35,0 |
| NR 40/160A/A | 40 | 320 | 470 | 81 | 389 | 80 | 80 | 49 | - | 128 | 119 | 119 | 75 | 40,0 |
| NR 40/200A/A-B | 40 | 440 | 496 | 81 | 430 | 95 | 102 | 62 | - | 138 | 140 | 140 | 75 | 56,6-53,4 |
| NR 50/125C/A-F/A | 50 | 340 | 437 | 90 | 347 | 79 | 85 | 45 | - | 128 | 96 | 115 | 75 | 31,5-29,5 |
| NR 50/125A/B | 50 | 340 | 477 | 90 | 387 | 79 | 85 | 45 | - | 128 | 96 | 115 | 75 | 36,1 |
| NR 50/160C/B | 50 | 340 | 480 | 90 | 390 | 79 | 85 | 45 | - | 128 | 120 | 128 | 75 | 41,6 |
| NR 50/160A/B-B/A | 50 | 340 | 506 | 90 | 416 | 79 | 85 | 45 | - | 138 | 120 | 128 | 75 | 51,8-48,5 |
| NR 50/200D/B | 50 | 440 | 516 | 100 | 416 | 79 | 85 | 45 | - | 138 | 140 | 140 | 80 | 59,7 |
| NR 50/200A/A-B/A | 50 | 440 | 544 | 100 | 444 | 79 | 85 | 45 | - | 160 | 140 | 140 | 80 | 77,2-69,7 |
| NR 50/250B/A-C/B | 50 | 440 | 657 | 100 | 557 | 79 | 85 | 45 | - | 185 | 175 | 175 | 85 | --114 |
| NR 50/250A/B | 50 | 440 | 732 | 100 | 632 | 79 | 85 | 45 | - | 185 | 175 | 175 | 85 | 149,5 |
| NR 65/125F/B | 65 | 340 | 494 | 105 | 389 | 110 | 110 | 60 | - | 128 | 121 | 145 | 95 | 46 |
| NR 65/125S/B-A/B-D/A | 65 | 340 | 520 | 105 | 415 | 110 | 110 | 60 | - | 138 | 121 | 145 | 95 | 56,1-56,1-54,6 |
| NR 65/160A/A-B/A | 65 | 340 | 552 | 105 | 447 | 110 | 110 | 60 | - | 160 | 121 | 142 | 95 | 74-67,5 |
| NR 65/200A/A-B/B | 65 | 475 | 666 | 105 | 561 | 110 | 110 | 60 | - | 185 | 140 | 153 | 90 | -- 108 |
| NR 65/200S/B | 65 | 475 | 741 | 105 | 636 | 110 | 110 | 60 | - | 185 | 140 | 153 | 90 | 142,5 |
| NR 65/250C/A | 65 | 475 | 672 | 105 | 517 | 110 | 110 | 60 | - | 185 | 175 | 175 | 90 | - |
| NR 65/250B/B | 65 | 475 | 747 | 105 | 642 | 110 | 110 | 60 | - | 185 | 175 | 175 | 90 | 155 |
| NR 65/250A/C | 65 | 475 | 793 | 105 | 688 | 110 | 110 | 60 | - | 206 | 175 | 175 | 90 | - |

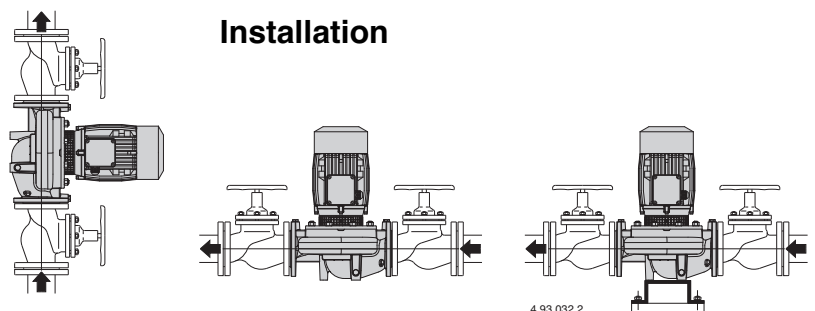


Flanges PN 10, EN 1092-2

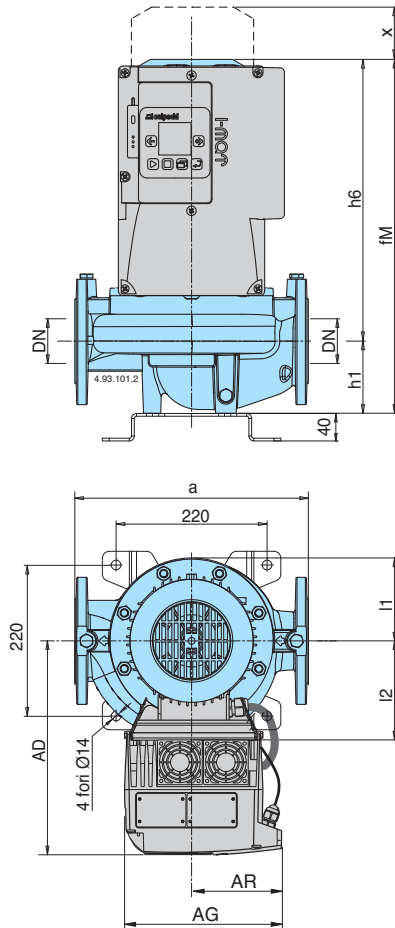


| DN | mm | | | | | |
|-----|-----|-----|-----|----------|----|----|
| | DG | DK | DE | Holes N° | Ø | W |
| 32 | 76 | 100 | 140 | 4 | 19 | 18 |
| 40 | 84 | 110 | 150 | 4 | 19 | 18 |
| 50 | 99 | 125 | 165 | 4 | 19 | 20 |
| 65 | 118 | 145 | 185 | 4 | 19 | 20 |
| 80 | 132 | 160 | 200 | 8 | 19 | 22 |
| 100 | 156 | 180 | 220 | 8 | 19 | 24 |
| 125 | 184 | 210 | 250 | 8 | 19 | 24 |

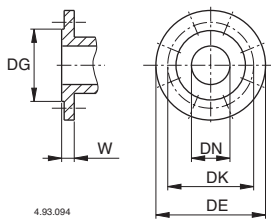
| TYPE | mm | | | | | | | | | | | | | kg |
|--------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-------------|
| | DN | a | fM | h1 | h6 | n2 | m2 | j1 | Øb | AD | l1 | l2 | x | |
| NR4 50A/A-B/A-C/A | 50 | 320 | 360 | 90 | 270 | - | - | - | 98 | 111 | 93 | 100 | 70 | 22-22-22 |
| NR4 65A/A-B/A-C/A | 65 | 360 | 370 | 100 | 270 | - | - | - | 118 | 111 | 102 | 114 | 70 | 28-28-28 |
| NR4 100A/B-B/B-C/B | 100 | 500 | 549 | 150 | 399 | - | - | - | 162 | 138 | 153 | 173 | 105 | 67-59-59 |
| NR4 125C/B | 125 | 600 | 589 | 170 | 419 | - | - | - | 194 | 138 | 172 | 195 | 120 | 91,5 |
| NR4 125A/A-B/A | 125 | 600 | 608 | 160 | 438 | - | - | - | 194 | 160 | 172 | 195 | 120 | 110-108 |
| NR4 32/160A/A-B/A | 32 | 340 | 421 | 80 | 341 | 76 | 90 | 50 | - | 128 | 102 | 102 | 60 | 24,6-24,5 |
| NR4 32/200B/A-C/A | 32 | 440 | 429 | 85 | 344 | 84 | 104 | 60 | - | 128 | 126 | 126 | 60 | 32,4-30,8 |
| NR4 32/200A/A | 32 | 440 | 469 | 85 | 344 | 84 | 104 | 60 | - | 128 | 126 | 126 | 60 | 36,8 |
| NR4 40/160A/A-B/A | 40 | 320 | 430 | 81 | 349 | 80 | 80 | 49 | - | 128 | 119 | 119 | 75 | 33,1 - 32,6 |
| NR4 40/200B/A | 40 | 440 | 430 | 81 | 349 | 95 | 102 | 62 | - | 128 | 140 | 140 | 75 | 41,1 |
| NR4 40/200A/A | 40 | 440 | 470 | 81 | 349 | 95 | 102 | 62 | - | 128 | 140 | 140 | 75 | 43 |
| NR4 50/160B/A-C/A | 50 | 340 | 440 | 90 | 350 | 79 | 85 | 45 | - | 128 | 120 | 128 | 75 | 37,1-35,1 |
| NR4 50/160A/B | 50 | 340 | 480 | 90 | 350 | 79 | 85 | 45 | - | 128 | 120 | 128 | 75 | 37,5 |
| NR4 50/200A/B-B/B | 50 | 440 | 516 | 100 | 416 | 79 | 85 | 45 | - | 138 | 140 | 140 | 80 | 56 |
| NR4 50/250C/B | 50 | 440 | 516 | 100 | 416 | 79 | 85 | 45 | - | 138 | 175 | 175 | 85 | 77,5 |
| NR4 50/250A/B-B/B | 50 | 440 | 545 | 100 | 445 | 79 | 85 | 45 | - | 160 | 175 | 175 | 85 | 93,5-80 |
| NR4 65/125D/A-F/A | 65 | 340 | 454 | 105 | 349 | 110 | 110 | 60 | - | 128 | 121 | 145 | 95 | 40,6-38,6 |
| NR4 65/125S/B-A/B | 65 | 340 | 494 | 105 | 349 | 110 | 110 | 60 | - | 128 | 121 | 145 | 95 | 42-41,5 |
| NR4 65/160A/B-B/B | 65 | 340 | 504 | 105 | 399 | 110 | 110 | 60 | - | 138 | 121 | 142 | 95 | 42,7-42,5 |
| NR4 65/200C/B | 65 | 475 | 536 | 105 | 431 | 110 | 110 | 60 | - | 138 | 140 | 153 | 90 | 52 |
| NR4 65/200B/B | 65 | 475 | 536 | 105 | 431 | 110 | 110 | 60 | - | 138 | 140 | 153 | 90 | 60 |
| NR4 65/200A/B | 65 | 475 | 552 | 105 | 447 | 110 | 110 | 60 | - | 160 | 140 | 153 | 90 | 64,5 |
| NR4 65/250C/B-D/B | 65 | 475 | 555 | 105 | 450 | 110 | 110 | 60 | - | 160 | 175 | 175 | 90 | 75,5-75,5 |
| NR4 65/250A/B-A | 65 | 475 | 555 | 105 | 450 | 110 | 110 | 60 | - | 160 | 175 | 175 | 90 | 98-85 |



Dimensions and weights



Flanges PN 10, EN 1092-2

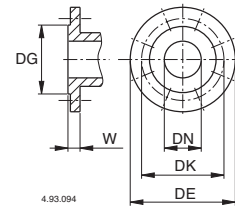
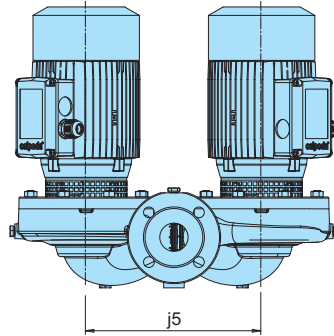
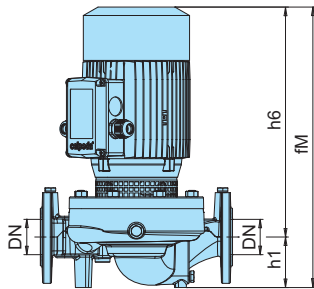


| DN | mm | | | | |
|-----|-----|-----|-----|----------|----|
| | DG | DK | DE | Holes N° | W |
| 32 | 76 | 100 | 140 | 4 | 19 |
| 40 | 84 | 110 | 150 | 4 | 19 |
| 50 | 99 | 125 | 165 | 4 | 19 |
| 65 | 118 | 145 | 185 | 4 | 19 |
| 80 | 132 | 160 | 200 | 8 | 19 |
| 100 | 156 | 180 | 220 | 8 | 19 |
| 125 | 184 | 210 | 250 | 8 | 19 |

| TYPE | mm | | | | | | | | | | | kg |
|-------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----------------|
| | DN | a | fM | h1 | h6 | AD | AG | AR | l1 | l2 | x | |
| NR EI 50D/A-C/B | 50 | 320 | 399 | 90 | 270 | 270 | 190 | 105 | 93 | 100 | 70 | 28-30,2 |
| NR EI 32/160A/A-B/A | 32 | 340 | 421 | 80 | 341 | 286 | 190 | 105 | 102 | 102 | 60 | 35-33,3 |
| NR EI 32/200B | 32 | 440 | 469 | 85 | 384 | 286 | 210 | 118 | 126 | 126 | 60 | 43,8 |
| NR EI 32/200A/A-S/A | 32 | 440 | 495 | 85 | 410 | 294 | 210 | 118 | 126 | 126 | 60 | 51,5-54,5 |
| NR EI 40/125A/A-B/A-C | 40 | 320 | 420 | 81 | 339 | 286 | 190 | 105 | 93 | 98 | 70 | 35,9-33,9-32,9 |
| NR EI 40/160B/A | 40 | 320 | 430 | 81 | 349 | 286 | 190 | 105 | 119 | 119 | 75 | 41,4 |
| NR EI 40/160A/A | 40 | 320 | 470 | 81 | 389 | 286 | 210 | 118 | 119 | 119 | 75 | 47,5 |
| NR EI 40/200A/A-B | 40 | 440 | 496 | 81 | 430 | 294 | 210 | 118 | 140 | 140 | 75 | 64,1-61 |
| NR EI 50/125C/A-F/A | 50 | 340 | 437 | 90 | 347 | 286 | 190 | 105 | 96 | 115 | 75 | 37,9-35,9 |
| NR EI 50/125A/B | 50 | 340 | 477 | 90 | 387 | 286 | 210 | 118 | 96 | 115 | 75 | 43,6 |
| NR EI 50/160C/B | 50 | 340 | 480 | 90 | 390 | 286 | 210 | 118 | 120 | 128 | 75 | 49,1 |
| NR EI 50/160A/B-B/A | 50 | 340 | 506 | 90 | 416 | 294 | 210 | 118 | 120 | 128 | 75 | 59,3-56 |
| NR EI 50/200D/B | 50 | 440 | 516 | 100 | 416 | 294 | 210 | 118 | 140 | 140 | 80 | 67,2 |
| NR EI 50/200B/A | 50 | 440 | 544 | 100 | 444 | 322 | 210 | 118 | 140 | 140 | 80 | 84,5 |
| NR EI 50/200A/A | 50 | 440 | 544 | 100 | 444 | 368 | 281 | 153 | 140 | 140 | 80 | 92 |
| NR EI 50/250B/A-C/B | 50 | 440 | 657 | 100 | 557 | 393 | 281 | 153 | 175 | 175 | 85 | - - 128,8 |
| NR EI 50/250A/B | 50 | 440 | 732 | 100 | 632 | 471 | 350 | 190 | 175 | 175 | 85 | 184,5 |
| NR EI 65/125F/B | 65 | 340 | 494 | 105 | 389 | 286 | 210 | 118 | 121 | 145 | 95 | 53,5 |
| NR EI 65/125S/B-A/B-D/A | 65 | 340 | 520 | 105 | 415 | 294 | 210 | 118 | 121 | 145 | 95 | 63,6-63,6-62,1 |
| NR EI 65/160B/A | 65 | 340 | 552 | 105 | 447 | 322 | 210 | 118 | 121 | 142 | 95 | 82,3 |
| NR EI 65/160A/A | 65 | 340 | 552 | 105 | 447 | 368 | 281 | 153 | 121 | 142 | 95 | 88,8 |
| NR EI 65/200A/A-B/B | 65 | 475 | 666 | 105 | 561 | 368 | 281 | 153 | 140 | 153 | 90 | - 122,8 |
| NR EI 65/200S/B | 65 | 475 | 741 | 105 | 636 | 471 | 350 | 190 | 140 | 153 | 90 | 177,5 |
| NR EI 65/250C/A | 65 | 475 | 672 | 105 | 517 | 393 | 281 | 153 | 175 | 175 | 90 | - |
| NR EI 65/250B/B | 65 | 475 | 747 | 105 | 642 | 471 | 350 | 190 | 175 | 175 | 90 | 190 |
| NR EI 65/250A/C | 65 | 475 | 793 | 105 | 688 | 491 | 350 | 190 | 175 | 175 | 90 | - |

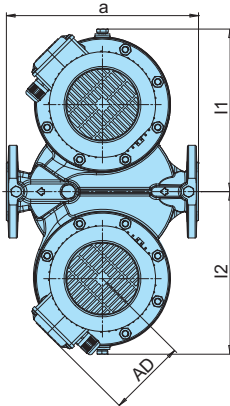
| TYPE | mm | | | | | | | | | | | kg |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|
| | DN | a | fM | h6 | h2 | AD | AG | AR | l1 | l2 | x | |
| NR4 EI 50A/A-B/A-C/A | 50 | 320 | 399 | 90 | 270 | 270 | 190 | 105 | 93 | 100 | 70 | 28,4-28,4-28,4 |
| NR4 EI 65A/A-B/A-C/A | 65 | 360 | 409 | 100 | 270 | 270 | 190 | 105 | 102 | 114 | 70 | 34,4-34,4-34,4 |
| NR4 EI 100B/B-C/B | 100 | 500 | 549 | 150 | 399 | 294 | 190 | 105 | 153 | 173 | 105 | 65,4-65,4 |
| NR4 EI 100A/B | 100 | 500 | 549 | 150 | 399 | 294 | 190 | 105 | 153 | 173 | 105 | 73,4 |
| NR4 EI 125A/A-B/A-C/B | 125 | 600 | 608 | 160 | 438 | 368 | 210 | 118 | 172 | 195 | 120 | 117,5-115,5-97,9 |
| NR4 EI 32/160A/A-B/A | 32 | 340 | 421 | 80 | 341 | 286 | 190 | 105 | 102 | 102 | 60 | 31-30,9 |
| NR4 EI 32/200B/A-C/A | 32 | 440 | 429 | 85 | 344 | 286 | 190 | 105 | 126 | 126 | 60 | 38,8-36,8 |
| NR4 EI 32/200A/A | 32 | 440 | 469 | 85 | 344 | 286 | 190 | 105 | 126 | 126 | 60 | 45,8 |
| NR4 EI 40/160A/A-B/A | 40 | 320 | 430 | 81 | 349 | 286 | 190 | 105 | 119 | 119 | 75 | 39,5-39 |
| NR4 EI 40/200B/A | 40 | 440 | 430 | 81 | 349 | 286 | 190 | 105 | 140 | 140 | 75 | 47,5 |
| NR4 EI 40/200A/A | 40 | 440 | 470 | 81 | 349 | 286 | 190 | 105 | 140 | 140 | 75 | 49,4 |
| NR4 EI 50/160B/A-C/A | 50 | 340 | 440 | 90 | 350 | 286 | 190 | 105 | 120 | 128 | 75 | 43,5-41,5 |
| NR4 EI 50/160A/B | 50 | 340 | 480 | 90 | 350 | 286 | 190 | 105 | 120 | 128 | 75 | 43,9 |
| NR4 EI 50/200A/B-B/B | 50 | 440 | 516 | 100 | 416 | 294 | 190 | 105 | 140 | 140 | 80 | 62,4 |
| NR4 EI 50/250C/B | 50 | 440 | 516 | 100 | 416 | 294 | 190 | 105 | 175 | 175 | 85 | 83,9 |
| NR4 EI 50/250A/A-B/B | 50 | 440 | 545 | 100 | 445 | 368 | 210 | 118 | 175 | 175 | 85 | 101-86,4 |
| NR4 EI 65/125D/A-F/A | 65 | 340 | 454 | 105 | 349 | 286 | 190 | 105 | 121 | 145 | 95 | 47-45 |
| NR4 EI 65/125S/B-A/B | 65 | 340 | 494 | 105 | 349 | 286 | 190 | 105 | 121 | 145 | 95 | 48,4-48 |
| NR4 EI 65/160A/B-B/B | 65 | 340 | 504 | 105 | 399 | 294 | 190 | 105 | 121 | 142 | 95 | 49,1-48,9 |
| NR4 EI 65/200C/B | 65 | 475 | 536 | 105 | 431 | 294 | 190 | 105 | 140 | 153 | 90 | 58,4 |
| NR4 EI 65/200B/B | 65 | 475 | 536 | 105 | 431 | 294 | 190 | 105 | 140 | 153 | 90 | 66,4 |
| NR4 EI 65/200A/B | 65 | 475 | 552 | 105 | 447 | 368 | 210 | 118 | 175 | 175 | 90 | 70,9 |
| NR4 EI 65/250C/B-D/B | 65 | 475 | 555 | 105 | 450 | 365 | 210 | 118 | 175 | 175 | 90 | 81,9-81,9 |
| NR4 EI 65/250A/A-B/A | 65 | 475 | 555 | 105 | 450 | 368 | 210 | 118 | 175 | 175 | 90 | 105,5-92,5 |

Dimensions and weights



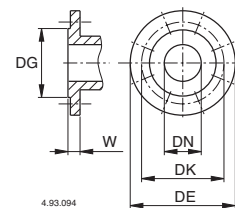
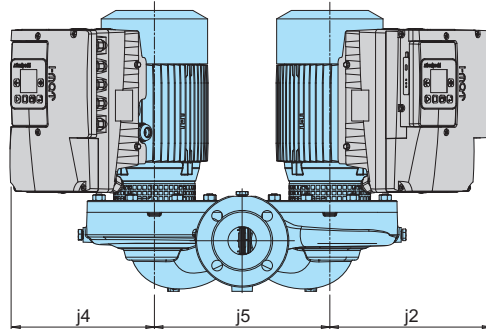
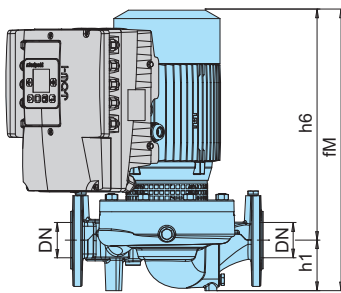
Flanges PN 10, EN 1092-2

| DN | mm | | | | | |
|----|-----|-----|-----|----------|----|----|
| | DG | DK | DE | Holes N° | Ø | W |
| 50 | 99 | 125 | 165 | 4 | 19 | 20 |
| 65 | 118 | 145 | 185 | 4 | 19 | 20 |



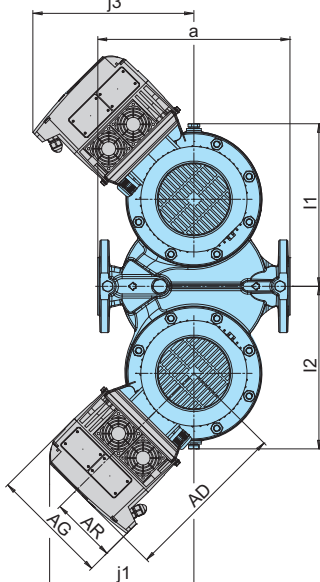
| TYPE | mm | | | | | | | | | | kg |
|---------------|----|-----|-------|-----|-------|-----|-----|-------|-------|-------------|----|
| | DN | a | fM | h1 | h6 | AD | j5 | l1 | l2 | | |
| NRD 50/125C-F | 50 | 340 | 433,5 | 90 | 343,5 | 130 | 310 | 278,5 | 278,5 | 62,2 - 62,7 | |
| NRD 50/125A | 50 | 340 | 473,5 | 90 | 383,5 | 130 | 310 | 278,5 | 278,5 | 72 | |
| NRD 50/160C | 50 | 340 | 473,5 | 90 | 383,5 | 130 | 310 | 291,5 | 291,5 | 79 | |
| NRD 50/160A-B | 50 | 340 | 499,5 | 90 | 409,5 | 139 | 310 | 291,5 | 291,5 | 101,5-91,8 | |
| NRD 65/125F | 65 | 340 | 488,5 | 105 | 383,5 | 130 | 310 | 303,5 | 303,5 | 86,8 | |
| NRD 65/125A-D | 65 | 340 | 514,5 | 105 | 409,5 | 139 | 310 | 303,5 | 303,5 | 106,2-99,6 | |
| NRD 65/160A-B | 65 | 340 | 543,5 | 105 | 438,5 | 160 | 310 | 303,5 | 303,5 | - | |

| TYPE | mm | | | | | | | | | | kg |
|----------------|----|-----|-------|-----|-------|-----|-----|-------|-------|---|----|
| | DN | a | fM | h1 | h6 | AD | j5 | l1 | l2 | | |
| NRD4 50/160B-C | 50 | 340 | 433,5 | 90 | 343,5 | 130 | 310 | 291,5 | 291,5 | - | |
| NRD4 50/160A | 50 | 340 | 473,5 | 90 | 383,5 | 130 | 310 | 291,5 | 291,5 | - | |
| NRD4 65/125D-F | 65 | 340 | 448,5 | 105 | 343,5 | 130 | 310 | 303,5 | 303,5 | - | |
| NRD4 65/125A | 65 | 340 | 488,5 | 105 | 383,5 | 130 | 310 | 303,5 | 303,5 | - | |
| NRD4 65/160A-B | 65 | 340 | 514,5 | 105 | 409,5 | 138 | 310 | 303,5 | 303,5 | - | |



Flanges PN 10, EN 1092-2

| DN | mm | | | | | |
|----|-----|-----|-----|----------|----|----|
| | DG | DK | DE | Holes N° | Ø | W |
| 50 | 99 | 125 | 165 | 4 | 19 | 20 |
| 65 | 118 | 145 | 185 | 4 | 19 | 20 |



| TYPE | mm | | | | | | | | | | | | | | | kg |
|------------------|----|-----|-------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|----|
| | DN | a | fM | h1 | h6 | AD | AG | AR | j1 | j2 | j3 | j4 | j5 | l1 | l2 | |
| NRD EI 50/125C-F | 50 | 340 | 433,5 | 90 | 343,5 | 284 | 190 | 105 | 243 | 269 | 269 | 243 | 310 | 278,5 | 278,5 | |
| NRD EI 50/125A | 50 | 340 | 473,5 | 90 | 383,5 | 284 | 210 | 118 | 249 | 277 | 277 | 249 | 310 | 278,5 | 278,5 | |
| NRD EI 50/160C | 50 | 340 | 473,5 | 90 | 383,5 | 284 | 210 | 118 | 249 | 277 | 277 | 249 | 310 | 291,5 | 291,5 | |
| NRD EI 50/160A-B | 50 | 340 | 499,5 | 90 | 409,5 | 293 | 210 | 118 | 256 | 283 | 283 | 256 | 310 | 291,5 | 291,5 | |
| NRD EI 65/125F | 65 | 340 | 488,5 | 105 | 383,5 | 284 | 210 | 118 | 249 | 277 | 277 | 249 | 310 | 303,5 | 303,5 | |
| NRD EI 65/125A-D | 65 | 340 | 514,5 | 105 | 409,5 | 293 | 210 | 118 | 256 | 283 | 283 | 256 | 310 | 303,5 | 303,5 | |
| NRD EI 65/160B | 65 | 340 | 543,5 | 105 | 438,5 | 322 | 210 | 118 | 274 | 304 | 304 | 274 | 310 | 303,5 | 303,5 | |
| NRD EI 65/160A | 65 | 340 | 543,5 | 105 | 438,5 | 364 | 283 | 156 | 331 | 358 | 358 | 331 | 310 | 303,5 | 303,5 | |

| TYPE | mm | | | | | | | | | | | | | | | kg |
|-------------------|----|-----|-------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|----|
| | DN | a | fM | h1 | h6 | AD | AG | AR | j1 | j2 | j3 | j4 | j5 | l1 | l2 | |
| NRD4 EI 50/160B-C | 50 | 340 | 433,5 | 90 | 343,5 | 284 | 190 | 105 | 243 | 269 | 269 | 243 | 310 | 291,5 | 291,5 | |
| NRD4 EI 50/160A | 50 | 340 | 473,5 | 90 | 383,5 | 284 | 190 | 105 | 243 | 269 | 269 | 243 | 310 | 291,5 | 291,5 | |
| NRD4 EI 65/125D-F | 65 | 340 | 448,5 | 105 | 343,5 | 284 | 190 | 105 | 243 | 269 | 269 | 243 | 310 | 303,5 | 303,5 | |
| NRD4 EI 65/125A | 65 | 340 | 488,5 | 105 | 383,5 | 284 | 190 | 105 | 243 | 269 | 269 | 243 | 310 | 303,5 | 303,5 | |
| NRD4 EI 65/160A-B | 65 | 340 | 514,5 | 105 | 409,5 | 293 | 190 | 105 | 250 | 275 | 275 | 249 | 310 | 303,5 | 303,5 | |

Features

New Compact Design

A compact structure allows for simple installation even in confined spaces

A Unique Design

An innovative guard (patented) prevents contact with rotating parts, providing protection to the end user whilst allowing for inspection of the mechanical seal.

Advanced hydraulics

Optimum impeller geometry provides maximum efficiency and excellent suction characteristics.

Silent operation

Specially designed fluid ducts provide very quiet operation

Exceptional Fluid Dynamics

The fluid dynamics through the impeller and casing are designed to minimize losses and increase performance.

