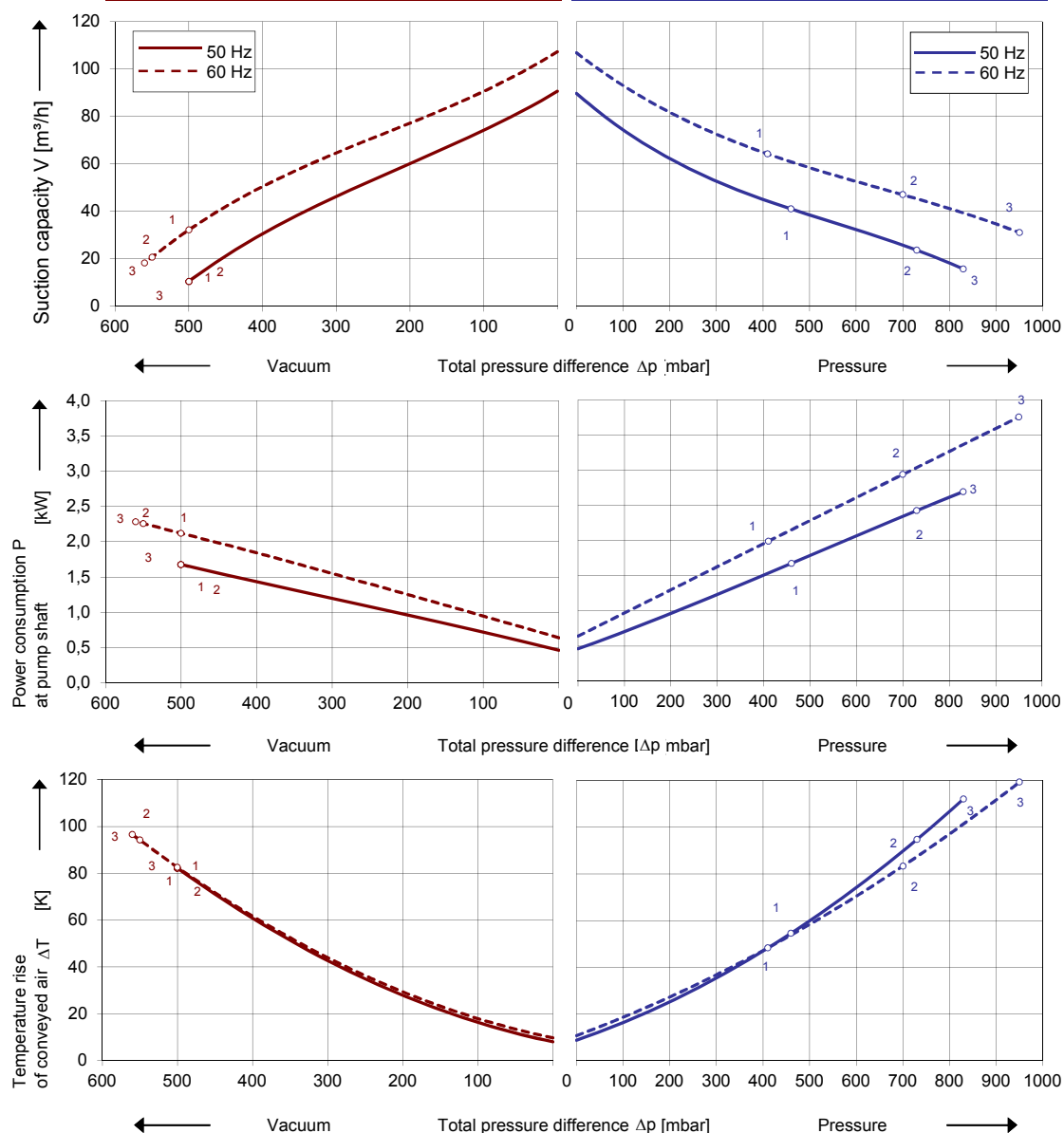


#### Performance curves

##### Vacuum operation

##### Compressor operation



The performance curves are based on air at a temperature of 15 °C and an atmospheric pressure of 1013 mbar with a tolerance of  $\pm 10\%$ . The total pressure differences are valid for suction and ambient temperature up to 25 °C. For other conditions please get in touch with us.

Every 4RB pump can be used both as vacuum pump and compressor in continuous operation over the total performance curve range. The motors are available as standard in protection category IP 55 and insulation class F.

| Selection and ordering data                                                       |                |                        |                |       |                                             |          |                                          |                          |                   |                 |
|-----------------------------------------------------------------------------------|----------------|------------------------|----------------|-------|---------------------------------------------|----------|------------------------------------------|--------------------------|-------------------|-----------------|
| Type 4RB 420                                                                      |                |                        |                |       |                                             |          |                                          |                          |                   |                 |
| No.                                                                               | Fre-<br>quency | Rated                  |                |       | Max. differential<br>pressure <sup>2)</sup> |          | Sound<br>pressure<br>level <sup>3)</sup> | Efficiency <sup>4)</sup> | Weight<br>Approx. | Order No.       |
|                                                                                   |                | Voltage <sup>1)</sup>  | Current        | Power | Vacuum                                      | Pressure |                                          |                          |                   |                 |
|                                                                                   | Hz             | V                      | A              | kW    | mbar                                        |          | dB(A)                                    | 0                        | kg                |                 |
| IE3 3~ 50/60 Hz, IP55, Insulation material class F(UL certificate number E481218) |                |                        |                |       |                                             |          |                                          |                          |                   |                 |
| 1                                                                                 | 50             | 190-210△               | 6.9 △          | 1,75  | -500                                        | 460      | 64                                       | IE3                      | 38                | 4RB 420-0AP21-1 |
|                                                                                   | 60             | 190-210 YY/ 380-420 Y  | 7,8 YY / 3.9Y  | 2,0   | -500                                        | 410      | 67                                       | IE3                      |                   |                 |
| 2                                                                                 | 50             | 190-210△               | 9.9 △          | 2,5   | -500                                        | 730      | 64                                       | IE3                      | 43                | 4RB 420-0AP31-1 |
|                                                                                   | 60             | 220-240 YY / 380-420 Y | 12.0 YY/ 6.0 Y | 3,0   | -550                                        | 700      | 67                                       | IE3                      |                   |                 |
| 3                                                                                 | 50             | 190-210△               | 13.3 △         | 3,45  | -500                                        | 830      | 67                                       | IE3                      | 47                | 4RB 420-0AP41-1 |
|                                                                                   | 60             | 220-240 YY / 380-420 Y | 15.2 YY/ 7.6 Y | 4,0   | -560                                        | 950      | 73                                       | IE3                      |                   |                 |
| IE3 3~ 50/60 Hz, IP55, Insulation material class F(UL certificate number E481218) |                |                        |                |       |                                             |          |                                          |                          |                   |                 |
| 1                                                                                 | 50             | 220-240 △ / 380-420 Y  | 6,0 △/ 3.5Y    | 1,75  | -500                                        | 460      | 64                                       | IE3                      | 38                | 4RB 420-0AP26-1 |
|                                                                                   | 60             | 220-240 YY / 440-480 Y | 6,8 △/ 3.4 Y   | 2,0   | -500                                        | 410      | 67                                       | IE3                      |                   |                 |
| 2                                                                                 | 50             | 220-240 △ / 380-420 Y  | 8.6 △/ 5.0Y    | 2,5   | -500                                        | 730      | 64                                       | IE3                      | 43                | 4RB 420-0AP36-1 |
|                                                                                   | 60             | 220-240 YY / 440-480 Y | 10,4 △/ 5.2 Y  | 3,0   | -550                                        | 700      | 67                                       | IE3                      |                   |                 |
| 3                                                                                 | 50             | 220-240 △ / 380-420 Y  | 11.6 △/ 6.7Y   | 3,45  | -500                                        | 830      | 67                                       | IE3                      | 47                | 4RB 420-0AP46-1 |
|                                                                                   | 60             | 220-240 YY / 440-480 Y | 13,2 △/ 6.6 Y  | 4,0   | -560                                        | 950      | 73                                       | IE3                      |                   |                 |
| IE3 3~ 50/60 Hz, IP55, Insulation material class F(UL certificate number E481218) |                |                        |                |       |                                             |          |                                          |                          |                   |                 |
| 1                                                                                 | 50             | 220-240 △ / 380-420 Y  | 6,0 △/ 3,5Y    | 1,75  | -500                                        | 460      | 64                                       | IE3                      | 38                | 4RB 420-0AQ26-1 |
|                                                                                   | 60             | 440-480 Y              | 3,4 Y          | 2,0   | -500                                        | 410      | 67                                       | IE3                      |                   |                 |
| 2                                                                                 | 50             | 220-240 △ / 380-420 Y  | 8.6△/ 5,0Y     | 2,5   | -500                                        | 730      | 64                                       | IE3                      | 43                | 4RB 420-0AQ36-1 |
|                                                                                   | 60             | 440-480 Y              | 5,2 Y          | 3,0   | -550                                        | 700      | 67                                       | IE3                      |                   |                 |
| 3                                                                                 | 50             | 220-240 △ / 380-420 Y  | 11,6 △/ 6,7Y   | 3,45  | -500                                        | 830      | 67                                       | IE3                      | 47                | 4RB 420-0AQ46-1 |
|                                                                                   | 60             | 440-480 Y              | 6,6 Y          | 4,0   | -560                                        | 950      | 73                                       | IE3                      |                   |                 |

- 1) In case of frequency converter operation the standard motor insulation system is suitable for converter input voltages up to 500 V.
- 2) Relief valves available for limiting differential pressure.
- 3) Measuring surface sound pressure level acc. to EN ISO 3744, measured with an equivalent unit at a distance of 1 m. The pump is throttled to an average suction pressure, with piping connected, but no relief valves fitted, tolerance ±3 dB (A).
- 4) The motors according to NEMA MG1-12. NP=NEMA Premium; NEMA Premium includes IE3.

All 4RB blowers match the 2006/42/EC (machinery) and 2014/35/EU (low voltage) directives and the EN 60034 norm "Rotating electrical machines".

Service factor (SF) and motor efficiency according NEMA MG1-12.

Voltage tolerances for three phase motors are +/-10%.

The frequency tolerance is +/- 2 % maximum.

| Motor for alternate voltages         |                                      |                                                                                       |       |            |     |      |
|--------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|-------|------------|-----|------|
| Voltage range                        |                                      | Efficiency                                                                            |       |            |     |      |
| 50 Hz                                | 60Hz                                 |                                                                                       | 60 Hz | 4RB ...-0. | □ . | □ -1 |
| 3~                                   |                                      |                                                                                       |       |            |     |      |
| 200 VΔ                               | 200 V YY / 230 VΔ / 400 VY           |  | •     |            | P   | 1    |
| 190-210 VΔ                           | 190-210 VYY / 220-240 VΔ / 380-420VY |  |       |            |     |      |
| 200 V YY / 230 VΔ / 400 VY           | 230 V YY / 460 VY                    |  | •     |            | P   | 6    |
| 190-210 VYY / 220-240 VΔ / 380-420VY | 220-240 VYY / 440-480VY              |  |       |            |     |      |
| 475-525 V Y                          | 550-600 V Y                          |  | •     |            | Q   | 3    |
| 475-525 VΔ                           | 550-600 VΔ                           |  |       |            |     |      |
| 220-240 VΔ / 380-420VY               | 440-480VY                            |  | •     |            | Q   | 6    |
| 400 VΔ / 690 V Y                     | 460 VΔ                               |  | •     |            | Q   | 7    |

Changes in particular of the quoted performance curve, data and weights may occur without prior notice. The data given do not constitute an obligation from our side to deliver as shown.