

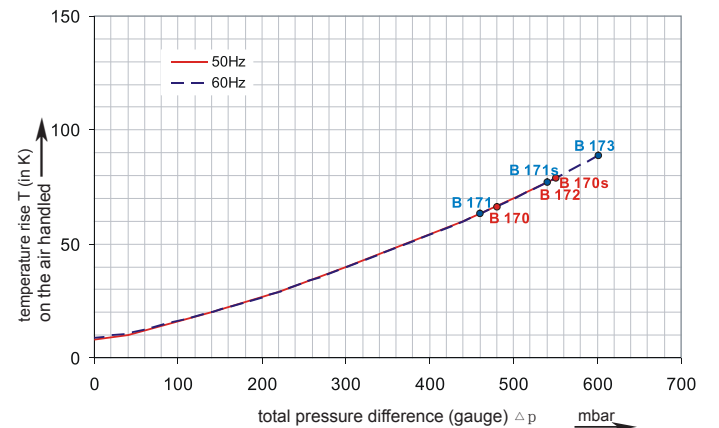
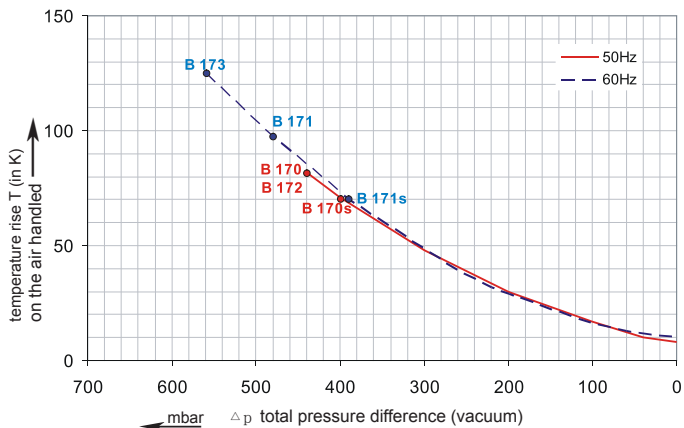
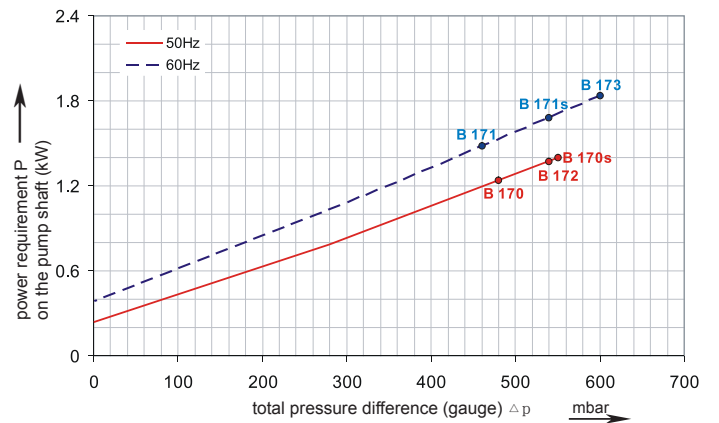
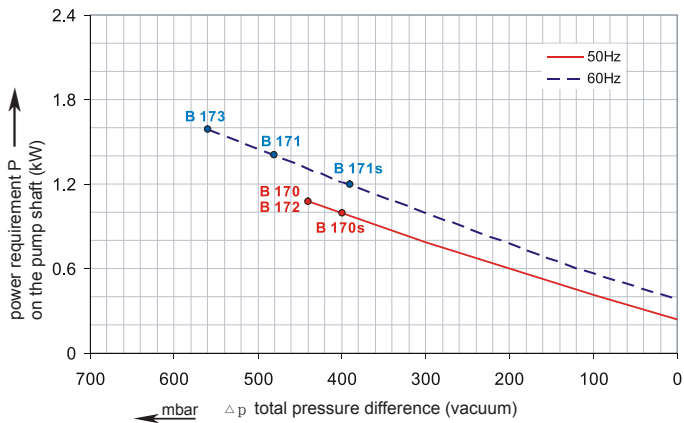
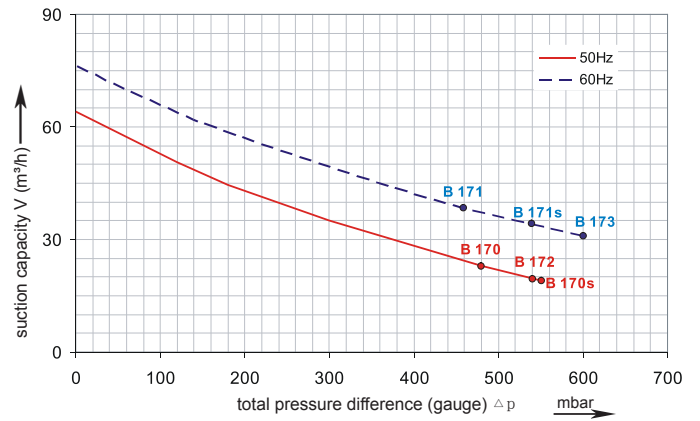
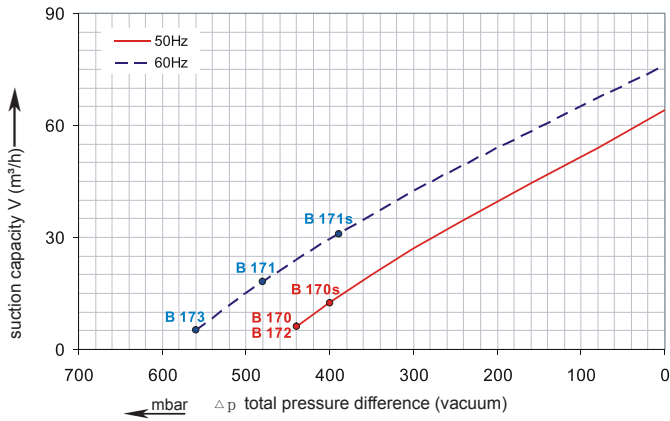
Data sheet 4HB 320

4HB



Performance curve for Vacuum pump

Performance curve for Compressor



The performance curves are based on air at a temperature of 15 °C and an atmospheric pressure of 1013 mbar with a tolerance of +/- 10 %.
 The total pressure differences are valid for suction and ambient temperatures up to 25 °C.
 For other conditions please confer with us.

Each 4HB type can be applied both as vacuum pump and compressor in continuous operation over the total stated performance curve range. The motors are available as standard for the input voltage range of 50 and 60 Hz and for protection category IP 55 as well as approved for UL and CSA.



Data sheet 4HB 320

4HB

Selection and ordering data

Type 4HB320

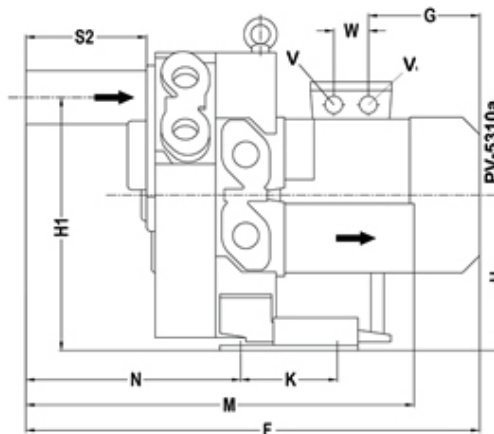
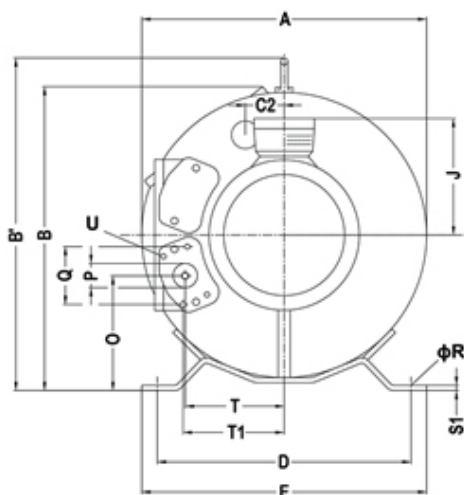
| Curve No. | Order No. | Fre- quency Hz | Rated power kW | Input voltage V | Input current | | Permissible total differential pressure ²⁾ | | Sound pressure level ³⁾ dB(A) | Weight ca. kg |
|-----------|-----------|----------------------|----------------------|--------------------|---------------|--|--|--------------------|---|---------------------|
| | | | | | A | | Vacuum mbar | Compressor mbar | | |

3~ 50/60 Hz IP55 isolation material class F 1)

| | | | | | | | | | | | |
|-------|--------------|----|------|---------------|-------------|------|------|------|-----|----|----|
| B 170 | 4HB 320-110T | 50 | 1.1 | 200D ... 240D | 345Y...415Y | 5.4D | 3.1Y | -440 | 480 | 59 | 29 |
| B 171 | 4HB 320-110T | 60 | 1.3 | 220D ... 275D | 380Y...480Y | 5.4D | 3.1Y | -480 | 460 | 63 | 29 |
| B 172 | 4HB 320-150T | 50 | 1.5 | 200D ... 240D | 345Y...415Y | 7.5D | 4.3Y | -440 | 540 | 59 | 30 |
| B 173 | 4HB 320-150T | 60 | 1.75 | 220D ... 275D | 380Y...480Y | 7.5D | 4.3Y | -560 | 600 | 63 | 30 |

1~ 50/60 Hz IP55 with attached condenser for continuous operation

| | | | | | | | | | | | |
|--------|--------------|----|------|-----|-----|------|-------|------|-----|----|----|
| B 170s | 4HB 320-150S | 50 | 1.5 | 100 | 200 | 22.3 | 11.2 | -400 | 550 | 59 | 32 |
| B 171s | 4HB 320-150S | 60 | 1.75 | 100 | 200 | 23.7 | 11.85 | -390 | 540 | 63 | 32 |
| B 170s | 4HB 320-150S | 50 | 1.5 | 115 | 230 | 19.4 | 9.7 | -400 | 550 | 59 | 32 |
| B 171s | 4HB 320-150S | 60 | 1.75 | 115 | 230 | 20.6 | 10.3 | -390 | 540 | 63 | 32 |



| | | | | | | | | | |
|----------|----------|------------|-----------|-----------|-----------|----------|-----------|--|--|
| A | B | C'' | D | E | F | | | | |
| 331 | 345 | 47 | 290 | 325 | 421 | | | | |
| G | H | H' | J | K | M | N | | | |
| 185 | 177 | 291 | 128 | 105 | 431 | 243 | | | |
| O | P | Q | ϕR | S1 | S2 | T | T1 | | |
| 130 | G 1 ¼ | 64 | 14 | 4 | 140 | 125 | 127 | | |
| U | V | V1 | W | | | | | | |
| M6×17 | M25×1.5 | M16×1.5 | 32 | | | | | | |

All 4HB achieve the standards and norms of the low voltage directive (LVD)2006/95/EC, rotating electrotechnical motor EN 60034-1-2004, electromagnetic compatibility(EMC)EN55014-1/2,EN61000-2/-3/-4/-6.

- 1) For standard UL for ELECTRIC MOTOR UL 1004-1.
- 2) Relief-valve are available for limiting differential pressure.
- 3) Measuring-surface sound-pressure level acc. to DIN EN 21680, measured at a distance of 1 m. The pump is throttled to an average suction pressure, a hose is connected to the discharge side (compressor) / suction side (vacuum pump), but is not fitted with relief valves.

The motors are designed according to the DIN EN 60 034 / DIN IEC 34-1 and temperature class F.

For the three phase machines the tolerances are +/- 10 % for fixed voltage and +/- 5 % for voltage range.

The single phase machines are designed with a +/- 5 % tolerances. If only 90 % of the maximum allowed pressure will be used for the continuous operating then the allowed voltage range add to +/- 10 %.

For all single and three phase machines which designed according to the UL and CSA norm (UL 1004-1) the maximum allowed voltage tolerances are - 10 % resp. + 6 %.

The frequency tolerance is maximum +/- 2 %.