



Elmo Rietschle

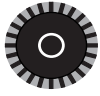
# G-BH 1 N

## Data sheet 2BH1 500

Side channel blower with IE3-motors

IE3

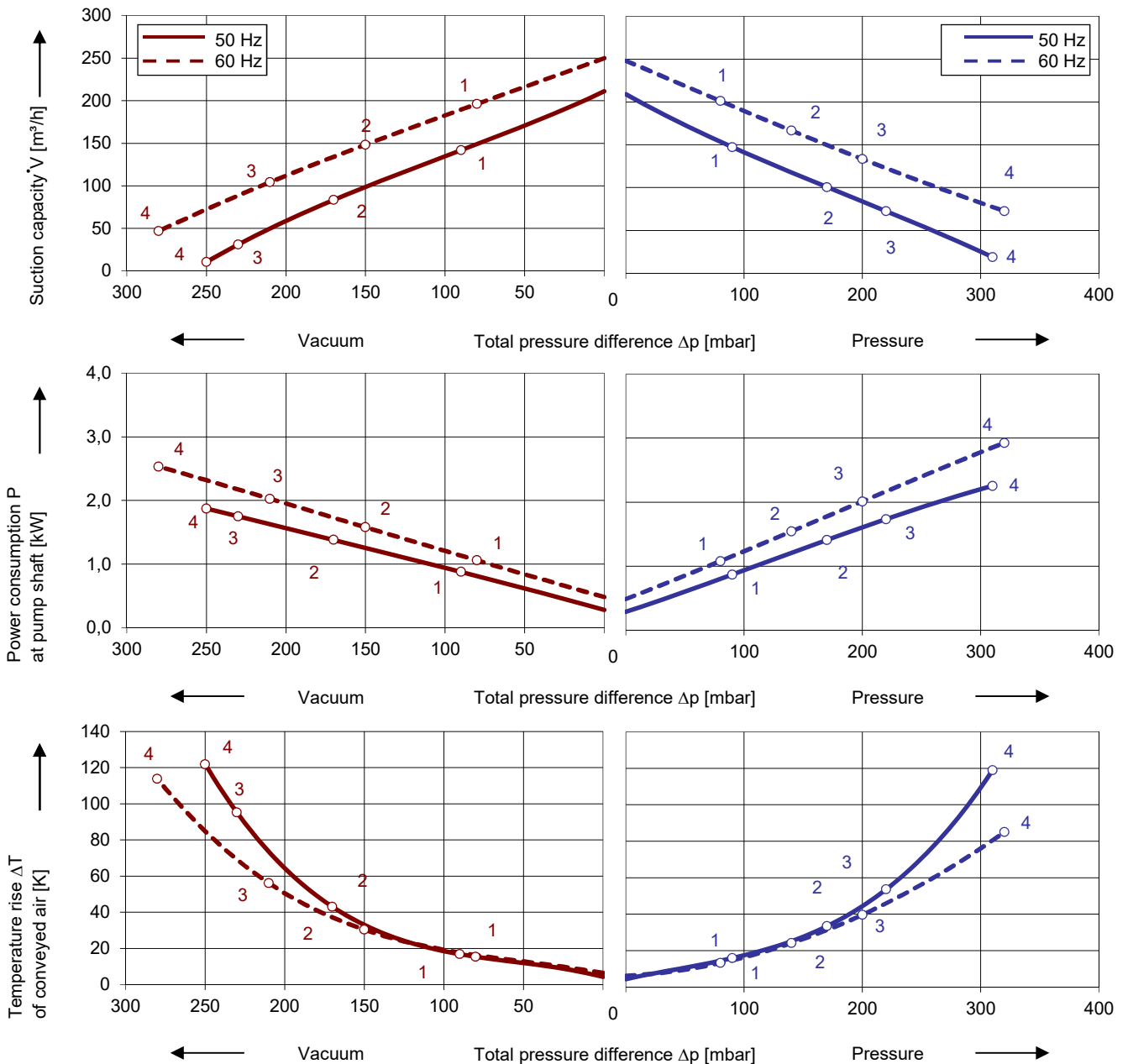
UL US



### 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 G-BH 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. The vacuum pumps / compressors are UL and CSA approved.

| Selection and ordering data   |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
|---|----------------|------------------------|-----------------|---------|----------------------------------|--------|-------------------|------------------------|-------------------|---------------|----------|
| Type  |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| No.   | Fre-<br>quency | Rated                  |                 |         | Max. differential<br>pressure 2) |        | Sound<br>pres. 3) | Efficiency<br>class 4) | Weight<br>approx. | Order No.     |          |
|   |                | Voltage 1)             |                 | Current | Power                            | Vacuum |                   |                        |                   |               | Pressure |
|   |                | Hz                     | V               | A       | kW                               | mbar   |                   |                        |                   |               |          |
| <b>IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b> |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| 1   | 50             | 190-210 Δ              | 4,2 Δ           | 0,95    | -90                              | 90     | 59                | IE3                    | 21                | 2BH1500-0AK01 |          |
|   | 60             | 190-210 YY / 380-420 Y | 4,8 YY / 2,4 Y  | 1,10    | -80                              | 80     | 65                | IE3                    |                   |               |          |
|   | 60             | 200 YY                 | 4,8 YY          | 1,10    | -80                              | 80     | 65                | NP                     |                   |               |          |
| 2   | 50             | 190-210 Δ              | 5,6 Δ           | 1,30    | -170                             | 170    | 60                | IE3                    | 24                | 2BH1500-0AK11 |          |
|   | 60             | 190-210 YY / 380-420 Y | 6,3 YY / 3,2 Y  | 1,60    | -150                             | 140    | 69                | IE3                    |                   |               |          |
|   | 60             | 200 YY                 | 6,3 YY          | 1,60    | -150                             | 140    | 69                | NP                     |                   |               |          |
| 3   | 50             | 190-210 Δ              | 6,9 Δ           | 1,75    | -230                             | 220    | 64                | IE3                    | 26                | 2BH1500-0AK21 |          |
|   | 60             | 190-210 YY / 380-420 Y | 7,8 YY / 3,9 Y  | 2,0     | -210                             | 200    | 72                | IE3                    |                   |               |          |
|   | 60             | 200 YY                 | 7,8 YY          | 2,0     | -210                             | 200    | 72                | NP                     |                   |               |          |
| 4   | 50             | 190-210 Δ              | 9,9 Δ           | 2,50    | -250                             | 310    | 69                | IE3                    | 30                | 2BH1500-0AK31 |          |
|   | 60             | 190-210 YY / 380-420 Y | 12,0 YY / 6,0 Y | 3,00    | -280                             | 320    | 70                | IE3                    |                   |               |          |
|   | 60             | 200 YY                 | 12,0 YY         | 3,00    | -280                             | 320    | 70                | NP                     |                   |               |          |
| <b>IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b> |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| 1   | 50             | 220-240 Δ / 380-420 Y  | 3,7 Δ / 2,1 Y   | 0,95    | -90                              | 90     | 59                | IE3                    | 21                | 2BH1500-0AK06 |          |
|   | 60             | 220-240 YY / 440-480 Y | 4,2 YY / 2,1 Y  | 1,10    | -80                              | 80     | 65                | IE3                    |                   |               |          |
|   | 60             | 230 YY / 460 Y         | 4,2 YY / 2,1 Y  | 1,10    | -80                              | 80     | 65                | NP                     |                   |               |          |
| 2   | 50             | 220-240 Δ / 380-420 Y  | 4,9 Δ / 2,9 Y   | 1,30    | -170                             | 170    | 60                | IE3                    | 24                | 2BH1500-0AK16 |          |
|   | 60             | 220-240 YY / 440-480 Y | 5,5 YY / 2,8 Y  | 1,60    | -150                             | 140    | 69                | IE3                    |                   |               |          |
|   | 60             | 230 YY / 460 Y         | 5,5 YY / 2,8 Y  | 1,60    | -150                             | 140    | 69                | NP                     |                   |               |          |
| 3   | 50             | 220-240 Δ / 380-420 Y  | 6,0 Δ / 3,5 Y   | 1,75    | -230                             | 220    | 64                | IE3                    | 26                | 2BH1500-0AK26 |          |
|   | 60             | 220-240 YY / 440-480 Y | 6,8 YY / 3,4 Y  | 2,00    | -210                             | 200    | 72                | IE3                    |                   |               |          |
|   | 60             | 230 YY / 460 Y         | 6,8 YY / 3,4 Y  | 2,00    | -210                             | 200    | 72                | NP                     |                   |               |          |
| 4   | 50             | 220-240 Δ / 380-420 Y  | 8,6 Δ / 5,0 Y   | 2,5     | -250                             | 310    | 69                | IE3                    | 30                | 2BH1500-0AK36 |          |
|   | 60             | 220-240 YY / 440-480 Y | 10,4 YY / 5,2 Y | 3,0     | -280                             | 320    | 70                | IE3                    |                   |               |          |
|   | 60             | 230 YY / 460 Y         | 10,4 YY / 5,2 Y | 3,0     | -280                             | 320    | 70                | NP                     |                   |               |          |
| <b>IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b> |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| 1   | 50             | 475-525 Y              | 1,7 Y           | 0,95    | -90                              | 90     | 59                | IE3                    | 21                | 2BH1500-0AQ03 |          |
|   | 60             | 550-600 Y              | 1,7 Y           | 1,10    | -80                              | 80     | 65                | NP                     |                   |               |          |
|   | 50             | 475-525 Y              | 2,3 Y           | 1,30    | -170                             | 170    | 60                | IE3                    |                   |               |          |
| 2   | 50             | 550-600 Y              | 2,2 Y           | 1,60    | -150                             | 140    | 69                | NP                     | 24                | 2BH1500-0AQ13 |          |
|   | 60             | 550-600 Y              | 2,2 Y           | 1,60    | -150                             | 140    | 69                | NP                     |                   |               |          |
|   | 50             | 475-525 Y              | 2,8 Y           | 1,75    | -230                             | 220    | 64                | IE3                    |                   |               |          |
| 3   | 50             | 475-525 Y              | 2,7 Y           | 2,00    | -210                             | 200    | 72                | NP                     | 26                | 2BH1500-0AQ23 |          |
|   | 60             | 550-600 Y              | 2,7 Y           | 2,00    | -210                             | 200    | 72                | NP                     |                   |               |          |
|   | 50             | 475-525 Y              | 4,0 Y           | 2,50    | -250                             | 310    | 69                | IE3                    |                   |               |          |
| 4   | 50             | 550-600 Y              | 4,1 Y           | 3,00    | -280                             | 320    | 70                | NP                     | 30                | 2BH1500-0AQ33 |          |
|   | 60             | 550-600 Y              | 4,1 Y           | 3,00    | -280                             | 320    | 70                | NP                     |                   |               |          |
|   | 50             | 475-525 Y              | 4,0 Y           | 2,50    | -250                             | 310    | 69                | IE3                    |                   |               |          |
| <b>IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b> |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| 1   | 50             | 380-420 Δ / 660-725 Y  | 2,1 Δ / 1,2 Y   | 0,95    | -90                              | 90     | 59                | IE3                    | 21                | 2BH1500-0AQ07 |          |
|   | 60             | 440-480 Δ              | 2,1 Δ           | 1,10    | -80                              | 80     | 65                | IE3                    |                   |               |          |
|   | 60             | 460 Δ                  | 2,1 Δ           | 1,10    | -80                              | 80     | 65                | NP                     |                   |               |          |
| 2   | 50             | 380-420 Δ / 660-725 Y  | 2,9 Δ / 1,7 Y   | 1,30    | -170                             | 170    | 60                | IE3                    | 24                | 2BH1500-0AQ17 |          |
|   | 60             | 440-480 Δ              | 2,8 Δ           | 1,60    | -150                             | 140    | 69                | IE3                    |                   |               |          |
|   | 60             | 460 Δ                  | 2,8 Δ           | 1,60    | -150                             | 140    | 69                | NP                     |                   |               |          |
| 3   | 50             | 380-420 Δ / 660-725 Y  | 3,5 Δ / 2,0 Y   | 1,75    | -230                             | 220    | 64                | IE3                    | 26                | 2BH1500-0AQ27 |          |
|   | 60             | 440-480 Δ              | 3,4 Δ           | 2,00    | -210                             | 200    | 72                | IE3                    |                   |               |          |
|   | 60             | 460 Δ                  | 3,4 Δ           | 2,00    | -210                             | 200    | 72                | NP                     |                   |               |          |
| 4   | 50             | 380-420 Δ / 660-725 Y  | 5,0 Δ / 2,9 Y   | 2,50    | -250                             | 310    | 69                | IE3                    | 30                | 2BH1500-0AQ37 |          |
|   | 60             | 440-480 Δ              | 5,2 Δ           | 3,00    | -280                             | 320    | 70                | IE3                    |                   |               |          |
|   | 60             | 460 Δ                  | 5,2 Δ           | 3,00    | -280                             | 320    | 70                | NP                     |                   |               |          |
| <b>IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b> |                |                        |                 |         |                                  |        |                   |                        |                   |               |          |
| 1   | 50             | 220-240 Δ / 380-420 Y  | 3,7 Δ / 2,1 Y   | 0,95    | -90                              | 90     | 59                | IE3                    | 21                | 2BH1500-0AQ06 |          |
|   | 60             | 440-480 Y              | 2,1 Y           | 1,10    | -80                              | 80     | 65                | IE3                    |                   |               |          |
|   | 50             | 220-240 Δ / 380-420 Y  | 4,9 Δ / 2,9 Y   | 1,30    | -170                             | 170    | 60                | IE3                    |                   |               |          |
| 2   | 50             | 440-480 Y              | 2,8 Y           | 1,60    | -150                             | 140    | 69                | IE3                    | 24                | 2BH1500-0AQ16 |          |
|   | 60             | 440-480 Y              | 2,8 Y           | 1,60    | -150                             | 140    | 69                | IE3                    |                   |               |          |
|   | 50             | 220-240 Δ / 380-420 Y  | 6,0 Δ / 3,5 Y   | 1,75    | -230                             | 220    | 64                | IE3                    |                   |               |          |
| 3   | 50             | 440-480 Y              | 3,4 Y           | 2,0     | -210                             | 200    | 72                | IE3                    | 26                | 2BH1500-0AQ26 |          |
|   | 60             | 440-480 Y              | 3,4 Y           | 2,0     | -210                             | 200    | 72                | IE3                    |                   |               |          |
|   | 50             | 220-240 Δ / 380-420 Y  | 8,8 Δ / 5,1 Y   | 2,50    | -250                             | 310    | 69                | IE3                    |                   |               |          |
| 4   | 50             | 440-480 Y              | 5,2 Y           | 3,00    | -280                             | 320    | 70                | IE3                    | 30                | 2BH1500-0AQ36 |          |
|   | 60             | 440-480 Y              | 5,2 Y           | 3,00    | -280                             | 320    | 70                | IE3                    |                   |               |          |
|   | 50             | 220-240 Δ / 380-420 Y  | 8,8 Δ / 5,1 Y   | 2,50    | -250                             | 310    | 69                | 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 G-BH 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.

| Voltage range                         |                                       | Efficiency 4) | c <sub>RU</sub> us | 60 Hz | 2BH1...-0. □ . □ |
|---------------------------------------|---------------------------------------|---------------|--------------------|-------|------------------|
| 50 Hz                                 | 60Hz                                  |               |                    |       |                  |
| <b>3~</b>                             |                                       |               |                    |       |                  |
| 200 V Δ                               | 200 V YY / 230 V Δ / 400 VY           |               |                    |       | K 1              |
| 190-210 V Δ                           | 190-210 VYY / 220-240 V Δ / 380-420VY | IE3           |                    |       | K 6              |
| 200 V YY / 230 V Δ / 400 VY           | 230 V YY / 460 VY                     |               |                    |       | K 6              |
| 190-210 VYY / 220-240 V Δ / 380-420VY | 220-240 VYY / 440-480VY               | IE3           |                    |       | K 6              |
| 475-525 V Y                           | 550-600 V Y                           |               |                    |       | Q 3              |
| 475-525 V Δ                           | 550-600 V Δ                           |               |                    |       | Q 5              |
| 220-240 V Δ / 380-420VY               | 440-480VY                             | IE3           |                    |       | Q 6              |
| 400 V Δ / 690 V Y                     | 460 V Δ                               |               |                    |       | Q 7              |

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



Your Ultimate Source for Vacuum and Pressure

Gardner Denver Deutschland GmbH  
 Industriestraße 26  
 97616 Bad Neustadt - Germany  
 Tel.: +49 9771 6888-0  
 Fax: +49 9771 6888-4000  
 www.gd-elmorietschle.com • er.de@gardnerdenver.com

Gardner Denver Schopfheim GmbH  
 Johann-Sutter-Straße 6+8  
 79650 Schopfheim - Germany  
 Tel.: +49 7622 392-0  
 Fax: +49 7622 392-300