



**Elmo
Rietschle**

IE3

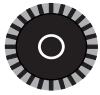
UL [®] **US**



G-BH 1 N

Data sheet 2BH1 610

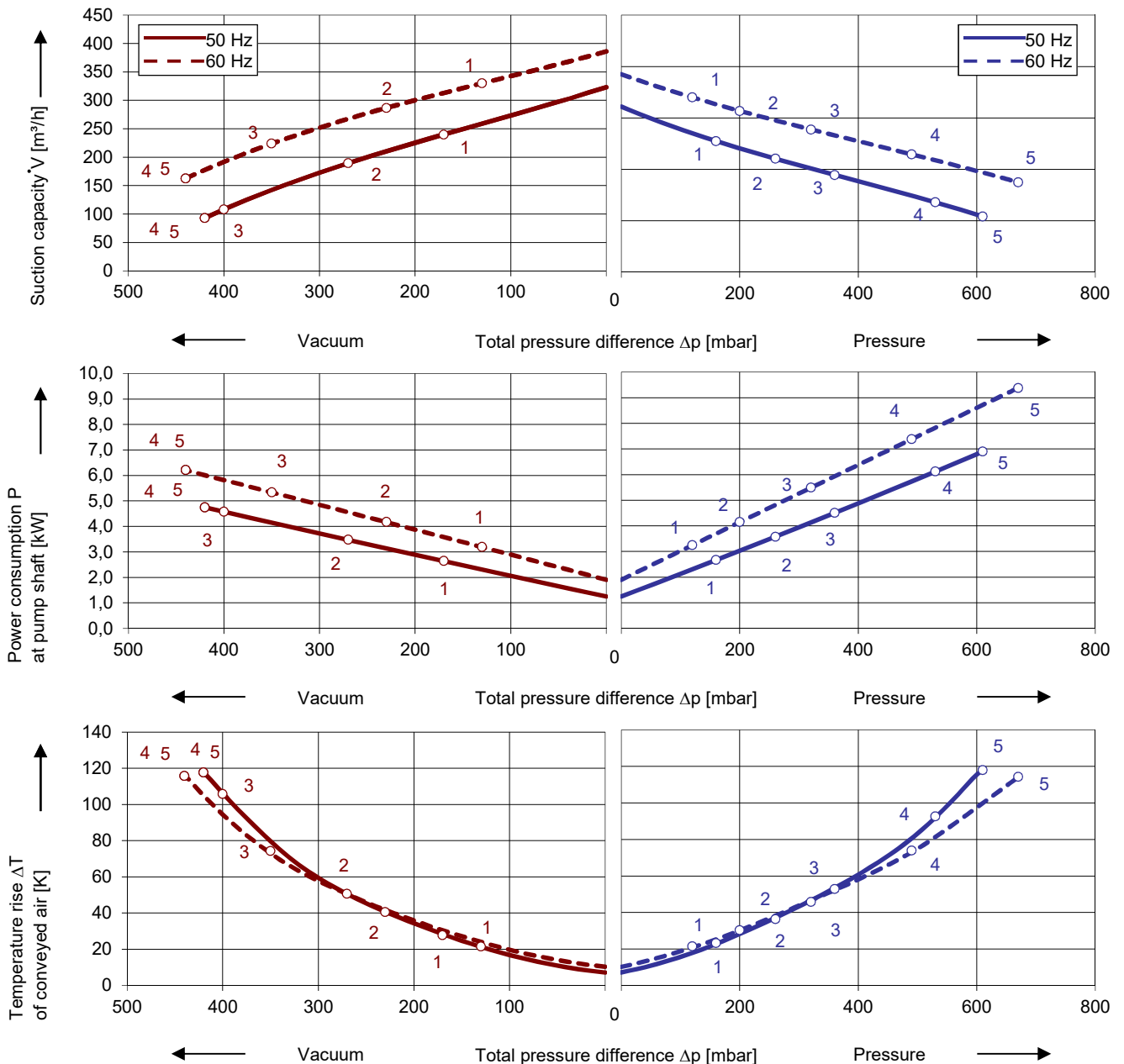
Side channel blower with IE3-motors



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- quency	Rated			Max. differential pressure ²⁾		Sound pres. ³⁾ Level	Efficiency class ⁴⁾	Weight approx. kg	Order No.
		Voltage ¹⁾	Current	Power	Vacuum	Pressure				
		Hz	V	A	kW	mbar				
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)										
1	50	190-210 Δ	9,90 Δ	2,50	-170	160	69	IE3	48	2BH1610-0HK11
	60	190-210 YY / 380-420 Y	12,0 YY / 6,0 Y	3,00	-130	120	73	IE3		
	60	200 YY	12,0 YY	3,00	-130	120	73	NP		
2	50	190-210 Δ	13,3 Δ	3,45	-270	260	75	IE3	58	2BH1610-1HK21
	60	190-210 YY / 380-420 Y	15,2 YY / 7,6 Y	4,0	-230	200	73	IE3		
	60	200 YY	15,2 YY	4,0	-230	200	73	NP		
3	50	190-210 Δ	17,1 Δ	4,6	-400	360	67	IE3	65	2BH1610-1HK31
	60	190-210 YY / 380-420 Y	19,6 YY / 9,8 Y	5,3	-350	320	71	IE3		
	60	200 YY	19,6 YY	5,3	-350	320	71	NP		
4	50	190-210 Δ	23,5 Δ	6,3	-420	530	71	IE3	73	2BH1610-1HK41
	60	190-210 YY / 380-420 Y	27,6 YY / 13,8 Y	7,3	-440	490	75	IE3		
	60	200 YY	27,6 YY	7,3	-440	490	75	NP		
5	50	190-210 Δ	30,8 Δ	8,6	-420	610	71	IE3	85	2BH1610-1HK51
	60	190-210 YY / 380-420 Y	35,2 YY / 17,6 Y	9,9	-440	670	75	IE3		
	60	200 YY	35,2 YY	9,9	-440	670	75	NP		
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)										
1	50	220-240 Δ / 380-420 Y	8,60 Δ / 5,0 Y	2,50	-170	160	69	IE3	48	2BH1610-0HK16
	60	220-240 YY / 440-480 Y	10,4 YY / 5,2 Y	3,00	-130	120	73	IE3		
	60	230 YY / 460 Y	10,4 YY / 5,2 Y	3,00	-130	120	73	NP		
2	50	220-240 Δ / 380-420 Y	11,6 Δ / 6,7 Y	3,45	-270	260	75	IE3	58	2BH1610-1HK26
	60	220-240 YY / 440-480 Y	13,2 YY / 6,6 Y	4,0	-230	200	73	IE3		
	60	230 YY / 460 Y	13,2 YY / 6,6 Y	4,0	-230	200	73	NP		
3	50	220-240 Δ / 380-420 Y	14,9 Δ / 8,6 Y	4,6	-400	360	67	IE3	65	2BH1610-1HK36
	60	220-240 YY / 440-480 Y	17,0 YY / 8,5 Y	5,3	-350	320	71	IE3		
	60	230 YY / 460 Y	17,0 YY / 8,5 Y	5,3	-350	320	71	NP		
4	50	220-240 Δ / 380-420 Y	20,4 Δ / 11,8 Y	6,3	-420	530	71	IE3	73	2BH1610-1HK46
	60	220-240 YY / 440-480 Y	24,0 YY / 12,0 Y	7,3	-440	490	75	IE3		
	60	230 YY / 460 Y	24,0 YY / 12,0 Y	7,3	-440	490	75	NP		
5	50	220-240 Δ / 380-420 Y	26,8 Δ / 15,5 Y	8,6	-420	610	71	IE3	85	2BH1610-1HK56
	60	220-240 YY / 440-480 Y	30,6 YY / 15,3 Y	9,9	-440	670	75	IE3		
	60	230 YY / 460 Y	30,6 YY / 15,3 Y	9,9	-440	670	75	NP		
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)										
1	50	475-525 Y	4,0 Y	2,50	-170	160	69	IE3	48	2BH1610-0HQ13
	60	550-600 Y	4,1 Y	3,00	-130	120	73	NP		
2	50	475-525 Y	5,4 Y	3,45	-270	260	75	IE3	58	2BH1610-1HQ23
	60	550-600 Y	5,2 Y	4,0	-230	200	73	NP		
3	50	475-525 Y	6,9 Y	4,6	-400	360	67	IE3	65	2BH1610-1HQ33
	60	550-600 Y	6,8 Y	5,3	-350	320	71	NP		
4	50	475-525 Y	9,5 Y	6,3	-420	530	71	IE3	75	2BH1610-1HQ43
	60	550-600 Y	9,6 Y	7,3	-440	490	75	NP		
5	50	475-525 Y	12,4 Y	8,6	-420	610	71	IE3	87	2BH1610-1HQ53
	60	550-600 Y	12,2 Y	9,9	-440	670	75	NP		
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)										
1	50	380-420 Δ / 660-725 Y	5,00 Δ / 2,90 Y	2,50	-170	160	69	IE3	48	2BH1610-0HQ17
	60	440-480 Δ	5,20 Δ	3,00	-130	120	73	IE3		
	60	460 Δ	5,20 Δ	3,00	-130	120	73	NP		
2	50	380-420 Δ / 660-725 Y	6,7 Δ / 3,85 Y	3,45	-270	260	75	IE3	58	2BH1610-1HQ27
	60	440-480 Δ	6,6 Δ	4,0	-230	200	73	IE3		
	60	460 Δ	6,6 Δ	4,0	-230	200	73	NP		
3	50	380-420 Δ / 660-725 Y	8,6 Δ / 5,0 Y	4,6	-400	360	67	IE3	65	2BH1610-1HQ37
	60	440-480 Δ	8,5 Δ	5,3	-350	320	71	IE3		
	60	460 Δ	8,5 Δ	5,3	-350	320	71	NP		
4	50	380-420 Δ / 660-725 Y	11,8 Δ / 6,8 Y	6,3	-420	530	71	IE3	75	2BH1610-1HQ47
	60	440-480 Δ	12,0 Δ	7,3	-440	490	75	IE3		
	60	460 Δ	12,0 Δ	7,3	-440	490	75	NP		
5	50	380-420 Δ / 660-725 Y	15,5 Δ / 8,9 Y	8,6	-420	610	71	IE3	87	2BH1610-1HQ57
	60	440-480 Δ	15,3 Δ	9,9	-440	670	75	IE3		
	60	460 Δ	15,3 Δ	9,9	-440	670	75	NP		
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)										
1	50	220-240 Δ	8,8 Δ	2,50	-170	160	69	IE3	48	2BH1610-0HQ16
	60	440-480 Y	5,2 Y	3,00	-130	120	73	IE3		
2	50	220-240 Δ	11,6 Δ	3,45	-270	260	75	IE3	58	2BH1610-0HQ26
	60	440-480 Y	6,6 Y	4,00	-230	200	73	IE3		

- In case of frequency converter operation the standard motor insulation system is suitable for converter input voltages up to 500 V.
- Relief valves available for limiting differential pressure.
- 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).
- 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.

Motor for alternate voltages											
Voltage range				Wirkungs- grad	 US						
50 Hz		60Hz				60 Hz	2BH1...-0.   				
3~											
200 VΔ		200 V YY / 230 VΔ / 400 VY			•		K	1			
190-210 VΔ		190-210 VYY / 220-240 VΔ / 380-420VY									
200 V YY / 230 VΔ / 400 VY		230 V YY / 460 VY			•		K	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			•		Q	5			
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 does not constitute an obligation from our side to deliver as shc