



**Elmo
Rietschle**

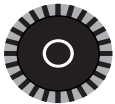
IE3

CE **US**



G-BH1 e Data sheet 2BH1 810

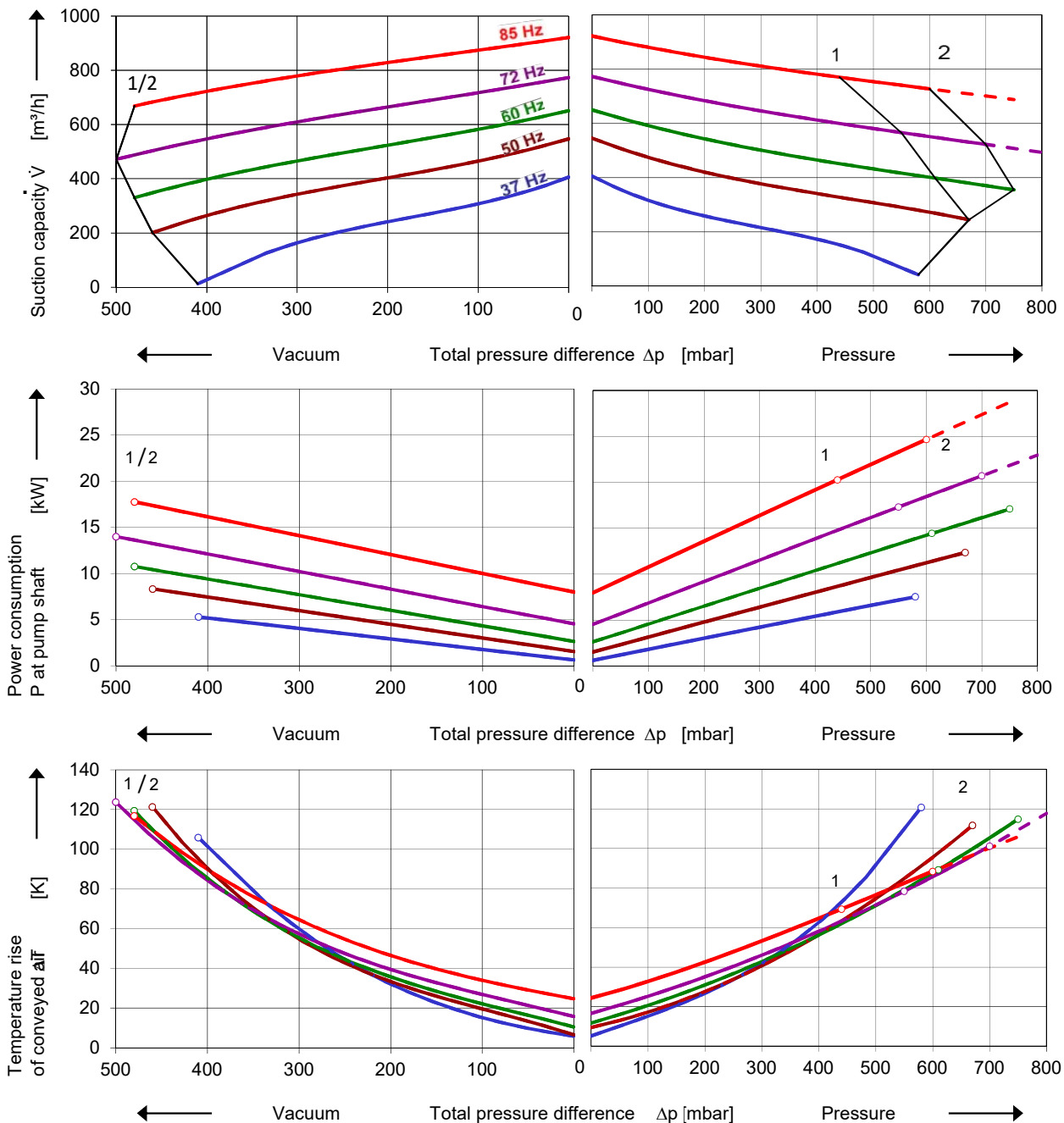
Side channel blower with Frequency Converter



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.

The performance curves are based on frequency converter operation and a pulse frequency of 4 kHz minimum. Rated voltage/frequency set point is 345 V / 87 Hz and delta connection of motor. Frequency converters must be connected to a mains voltage of 380 V minimum.

Selection and ordering data

Type 2BH1 810

No.	Fre- quency Hz	Rated motor			Max. differential pressure ¹⁾		Sound pressure level dB(A)	Weight Approx. kg	Order No.	VFD type		
		Voltage V	Current A	Power kW	Vacuum mbar	Pressure						
IE3 Integrated VFD 3~ 400V -15% ... 480V +10%, 50/60 Hz ±6% with thermistor (PTC), IP55, UL 1450												
1	85	370 Y	40,0 Y	20,5	-480	440	85	80/81	223	229	2BH1810-1H336	J
2	85	370 Y	48,0 Y	25,0	-480	600	85	80/81	232	238	2BH1810-1H346	K
IE3 3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)												
	37	-	-	-	-410	450	70	80/81	188	193	2BH1810-1HK26	3)
	50	-	-	-	-460	420	71					
	60	-	-	-	-420	350	76					
	85	400 Δ	26,0 Δ	14,0	-280	200	85					
1	37	-	-	-	-410	580	70	80/81	203	208	2BH1810-1HK36	3)
	50	-	-	-	-460	670	71					
	60	-	-	-	-480	610	76					
	85	400 Δ	39,5 Δ	20,5	-480	440	85					
2	37	-	-	-	-410	580	70	80/81	212	217	2BH1810-1HK46	3)
	50	-	-	-	-460	670	71					
	60	-	-	-	-480	750	76					
	85	400 Δ	53,7 Δ	28,2	-480	750	85					

With separately driven fan (order option G17)⁴⁾

- We recommend differential pressure indicators / switches for limiting differential pressure. Relief valves are only useable at defined frequency.
- 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).
- PTC recommended for motor overload protection. Ordering example: 2BH1810-□□□□-Z Z=A11
- Sound pressure level with G17 dependent on voltage (50Hz / 60Hz)

All G-BH match the 2006/42/EC (machinery) and 2014/35/EU (low voltage) directives and the EN 60034 norm "Rotating electrical machines".
The motors comply with EN 60 034 (IEC 60034) and thermal class F.

Frequency converter (IP55) motor integrated / for wall mounting

Frequency Converter		Rated mains voltage V	Max. motor current A	Typical motor power kW	Rated mains current A	Fuse Protection A	Weight Approx. kg	Adaptor for wall mounting
Order No.								Order No.
A	2FC4152-1 □□ 00	400V (-15%) ... 480V (+10%)	4,0	1,5	3,3	10	3,9	2FX16190ER00
B	2FC4222-1 □□ 00		5,6	2,2	4,6	10	5,0	2FX16490ER00
C	2FC4302-1 □□ 00		7,5	3,0	6,2	16		
D	2FC4402-1 □□ 00		9,5	4,0	7,9	16		
E	2FC4552-1 □□ 00		13,0	5,5	10,8	20	8,7	2FX16690ER00
F	2FC4752-1 □□ 00		17,8	7,5	14,8	25		
G	2FC4113-1 □□ 00		28,0	11,0	23,3	35	21,0	2FX16990ER00
H	2FC4153-1 □□ 00		34,0	15,0	28,3	50		
J	2FC4183-1 □□ 00		40,0	18,5	33,3	50		
K	2FC4223-1 □□ 00		48,0	22,0	39,9	63		

I/O's and automation	Order option	Example:
ST 2 AIN / 2 AOUT / 4 DIGIN / 1 DIGOUT / 2 RELAYS	STANDARD	2BH1810-1H336-Z Z=U51 VFD type 2FC4183-1PB00 to be delivered already installed
PB 2 AIN / 2 AOUT / 4 DIGIN / 1 DIGOUT / 2 RELAYS / ProfiBus interface	Z = U51	
CB 2 AIN / 2 AOUT / 4 DIGIN / 1 DIGOUT / 2 RELAYS / CANopen interface	Z = U52	
PN 2 AIN / 2 AOUT / 4 DIGIN / 1 DIGOUT / 2 RELAYS / ProfiNet interface	Z = U53	
SC 2 AIN / 2 AOUT / 4 DIGIN / 1 DIGOUT / 2 RELAYS / SERCOS3 interface	Z = U54	

VFD accessories

Item	Order No.	Item	Order No.
Manual control		Differential pressure transmitters	
MMI handheld	2FX4520-0ER00	Vacuum -1000 ... 0 mbar	2FX6022-0BD00
USB adaptor cable	2FX4521-0ER00	Pressure 0 ... 600 mbar	2FX6013-0BD00
		0 ... 1000 mbar	2FX6014-0BD00
INVERTERpc Software			
Free download at www.gd-elmoietschle.com >Downloads >frequency-converters >Miscellaneous >Software			

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.

Elmo Rietschle is a brand of Gardner Denver



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