



**Elmo  
Rietschle**

**IE3**



# L-BV 5 N

## Data sheet 2BV5 161

### Liquid ring compressor

#### General information

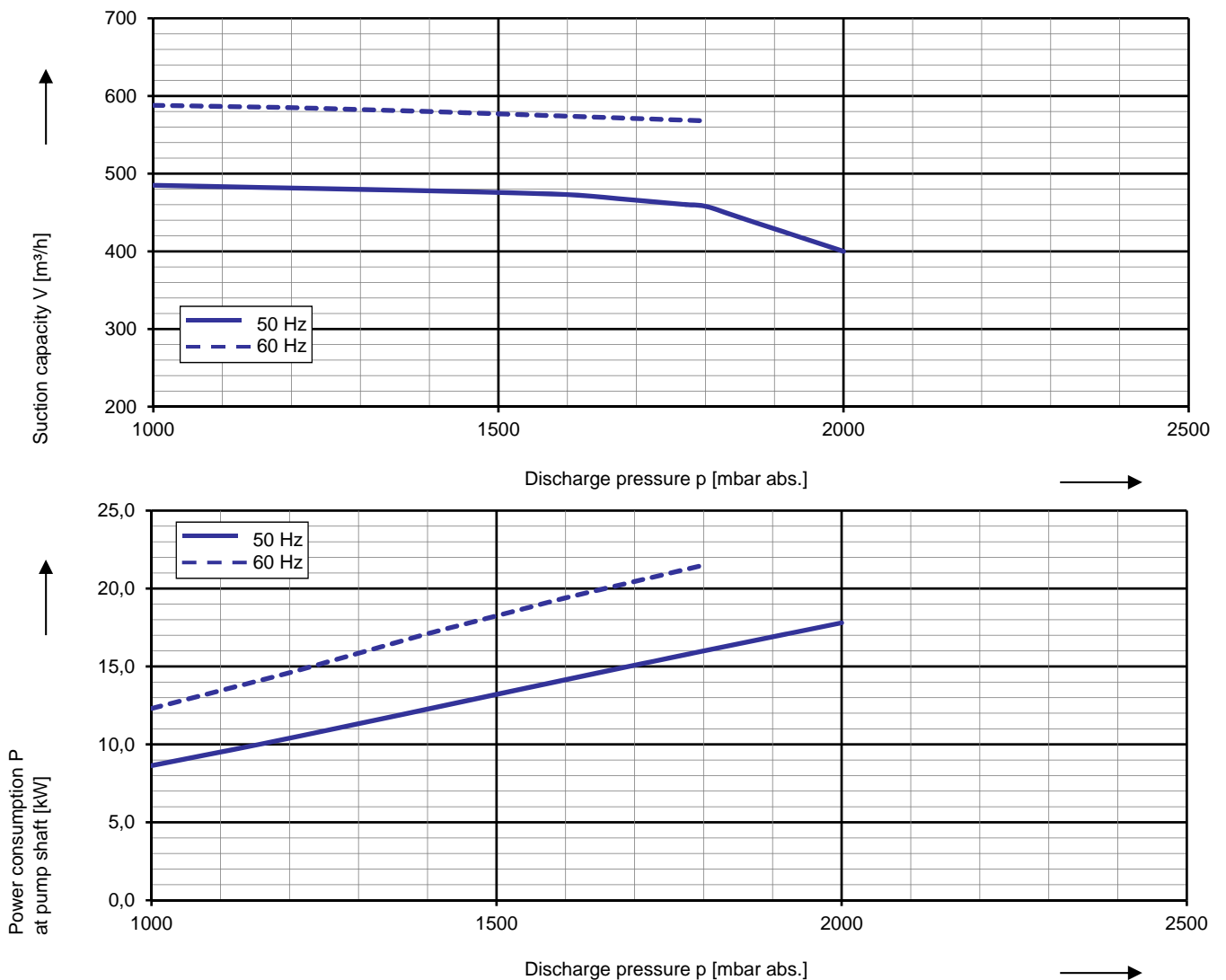
Elmo Rietschle compressors of the model range L-BV5 are suitable for compressing gases and wet vapours.

The compressors are particularly space-saving, reliable and robust in their monoblock design. The reinforced stainless steel shaft, the permanently lubricated bearings and the ceramic internal coating of the pump housings prevent wear, corrosion and calcification.



#### Performance curves

##### Compressor operation



The characteristic curves are based on the evacuation of 100 % saturated air and an intake temperature of 20 °C. At a suction pressure of 1013 mbar abs. and a temperature of the operating liquid of 15 °C (water as operating liquid) the characteristic curves will be achieved. The tolerance is  $\pm 10\%$ .

The motors are supplied as standard for the input voltage ranges of 50 and 60 Hz and for the protection category IP55 as well as approved for UL and CSA. ATEX-Compressors with 2006/42 EG for category 2G are available, too.

# Selection and ordering data

## Typ 2BV5 161

Fre- quency	Rated			Service factor	Efficiency <sup>3)</sup>	Quantity of operating liquid <sup>1)</sup>	Sound pressure level <sup>2)</sup>	Weight Approx.	Order No.
	Voltage	Current	Power						
Hz	V	A	kW	SF	-	m <sup>3</sup> /h	dB(A)	kg	
<b>3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b>									
50	190-210 Δ	70,5 Δ	17,3	1,00	IE3	2,40	74	313 *	2BV5161-8 □ K02-1B
60	190-210 Y / 380-420 Y	78,0 Y / 39,0 Y	19,8	1,00	IE3	2,40	75	316 **	
	200 YY	78,0 YY	19,8	1,00	NP	2,40	75		
<b>3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b>									
50	220-240 Δ / 380-420 Y	61,5 Δ / 35,5 Y	17,3	1,00	IE3	2,40	74	313 *	2BV5161-8 □ K02-6B
60	220-240 YY / 440-480 Y	68,0 YY / 34,0 Y	19,8	1,00	IE3	2,40	75	316 **	
	230 YY / 460 Y	68,0 YY / 34,0 Y	19,8	1,00	NP	2,40	75		
<b>3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b>									
50	500 Y	28,0 Y	17,3	1,00	IE3	2,40	74	300 *	2BV5161-8 □ Q02-3B
60	575 Y	26,4 Y	19,8	1,00	NP	2,40	75	316 **	
<b>3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)</b>									
50	380-420 Δ / 660-725 Y	35,0 Δ / 20,2 Y	17,3	1,00	IE3	2,40	74	300 *	2BV5161-8 □ Q02-7B
60	440-480 Δ	33,0 Δ	19,8	1,00	IE3	2,40	75	316 **	
	460 Δ	33,0 Δ	19,8	1,00	NP	2,40	75		

Materials			
Casing	Port plate	Impeller	Lantern
Cast iron (internal surface with ceramic coating)	Cast iron	Bronze	-
CrNi steel	CrNi steel	CrNi steel	-

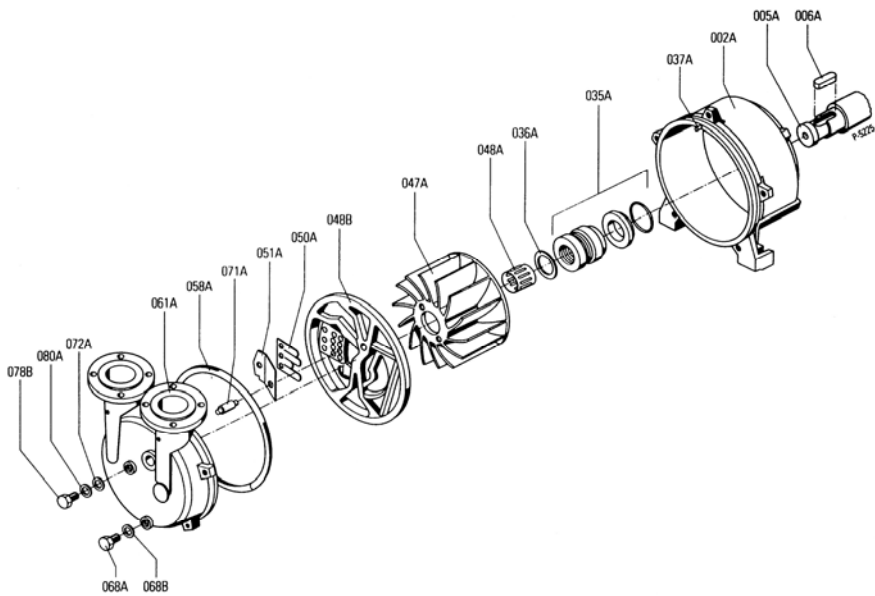
- 1) The quantities of operating liquid apply for fresh water operation without discharge liquid separator.
- 2) Measuring surface sound pressure level acc. to EN ISO 3744, measured with an equivalent unit at a distance of 1 m. The pump is throttled to an average suction pressure, with piping connected, but no relief valves fitted, tolerance ±3 dB (A).
- 3) Efficiency is maintained at rated motor power.

Voltage range		Efficiency	60 Hz	2BV5...-.. □ .. □
50 Hz	60Hz			
<b>3~</b>				
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

All L-BV fulfil the 2006/42/EC (machinery) and 2014/35/EU (low voltage) directives and the EN 60034-1 norm "Rotating electrical machines". The motors comply with EN 60 034 (IEC 60034) and thermal class F. Voltage tolerances for three phase motors are +/-10%. The frequency tolerance is +/- 2 % maximum. Service factor (SF) and motor efficiency according NEMA MG1-12.

The cast iron machines are completely painted in standard color RAL 9006.  
All cast parts of the stainless steel version are pickled and passivated, the motor is standardly painted in RAL 9006.

# Materials



Part No.		Materials		
		2BV5 ...-K....	2BV5 ...-C....	2BV5 ...-H....
		Housing: cast iron Port plate: cast iron Impeller: bronze	Housing: cast iron Port plate: cast iron Impeller: CrNi steel	Housing: CrNi steel Port plate: CrNi steel Impeller: CrNi steel
002	Casing	Grey cast iron - internal surface with ceramic coating against corrosion and abrasion EN-GJL HB 195 / EN-JL2030 EN 1561	Grey cast iron - internal surface with ceramic coating against corrosion and abrasion EN-GJL HB 195 / EN-JL2030 EN 1561	Cast chrome-nickel-molybdenum steel (G-X5CrNiMoNb 18-10 / 1.4581) EN 10283
005	Pump shaft	Chrome steel (X20Cr13 / 1.4021) EN 10088 - 3	Chrome steel (X20Cr13 / 1.4021) EN 10088 - 3	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3
006	Feather key	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3
035	Mechanical seal	Carbon / SIC / Viton (FPM) / Chrome-nickel-molybdenum steel (EN 12756 - BQ1VGG)	Carbon / SIC / Viton (FPM) / Chrome-nickel-molybdenum steel (EN 12756 - BQ1VGG)	Carbon / SIC / Viton (FPM) / FEP-sheated Chro-ni-mo steel (EN 12756 - Q1BM1GG)
036	Washer	Chrome steel (X20Cr13 / 1.4021) EN 10088 - 3	Chrome steel (X20Cr13 / 1.4021) EN 10088 - 3	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3
037	Set screw	Chrome-nickel steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2	Chrome-nickel steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2	Chrome-nickel steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2
047	Impeller	Cast aluminium bronze (G-CuAl10Fe5Ni5 / CC33G-GS) EN 1982	Cast chrome-nickel-molybdenum steel (G-X5CrNiMoNb 18-10 / 1.4581) EN 10283	Cast chrome-nickel-molybdenum steel (G-X5CrNiMoNb 18-10 / 1.4581) EN 10283
048	Tolerance ring for impeller	Chrome-nickel steel (X12CrNi 17-7 / 1.4310) EN 10088 - 2	Chrome-nickel steel (X12CrNi 17-7 / 1.4310) EN 10088 - 2	Chrome-nickel steel (X12CrNi 17-7 / 1.4310) EN 10088 - 2
049	Port plate	Grey cast iron (EN-GJL HB 195 / EN-JL2030) EN 1561	Grey cast iron (EN-GJL HB 195 / EN-JL2030) EN 1561	Cast chrome-nickel-molybdenum steel (G-X5CrNiMoNb 18-10 / 1.4581) EN 10283
050	Valve plate	Teflon (PTFE)	Teflon (PTFE)	Teflon (PTFE)
051	Intercepting plate	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 2	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 2	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 2
058	Gasket for cover	Nitrile-butadiene-caotchouc (NBR 70) ISO 1629	Nitrile-butadiene-caotchouc (NBR 70) ISO 1629	Silicone core, Teflon (PTFE) sheathed
061	Cover	Grey cast iron (EN-GJL HB 195 / EN-JL2030) EN 1561	Grey cast iron (EN-GJL HB 195 / EN-JL2030) EN 1561	Cast chrome-nickel-molybdenum steel (G-X5CrNiMoNb 18-10 / 1.4581) EN 10283
063	Screw	Steel (DIN ISO 8992)	Steel (DIN ISO 8992)	Steel (DIN ISO 8992)
068	Plug screw	Machining steel, lead alloyed (11SMnPb30 / 1.0718) EN 10087	Machining steel, lead alloyed (11SMnPb30 / 1.0718) EN 10087	Chrome-nickel-molybdenum steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 3
069	Sealing ring	Aramid fiber, NBR, PTFE	Aramid fiber, NBR, PTFE	Aramid fiber, NBR, PTFE
071	Pipe of cavitation	Teflon (PTFE)	Teflon (PTFE)	Teflon (PTFE)
072	Washer for cavitation protection	Chrome-nickel steel (X5CrNi 18-10 / 1.4301) EN 10088 - 3	Chrome-nickel steel (X5CrNi 18-10 / 1.4301) EN 10088 - 3	Chrome-nickel steel (X5CrNi 18-10 / 1.4301) EN 10088 - 3
079	Plug screw	Machining steel, lead alloyed (11SMnPb30 / 1.0718) EN 10087	Machining steel, lead alloyed (11SMnPb30 / 1.0718) EN 10087	Chrome-nickel-molybdenum steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 3
080	Sealing ring	Aramid fiber, NBR, PTFE	Aramid fiber, NBR, PTFE	Aramid fiber, NBR, PTFE

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.