

# L-BV 2 N

## Data sheet 2BV2 071

### Liquid ring compressor

#### General information

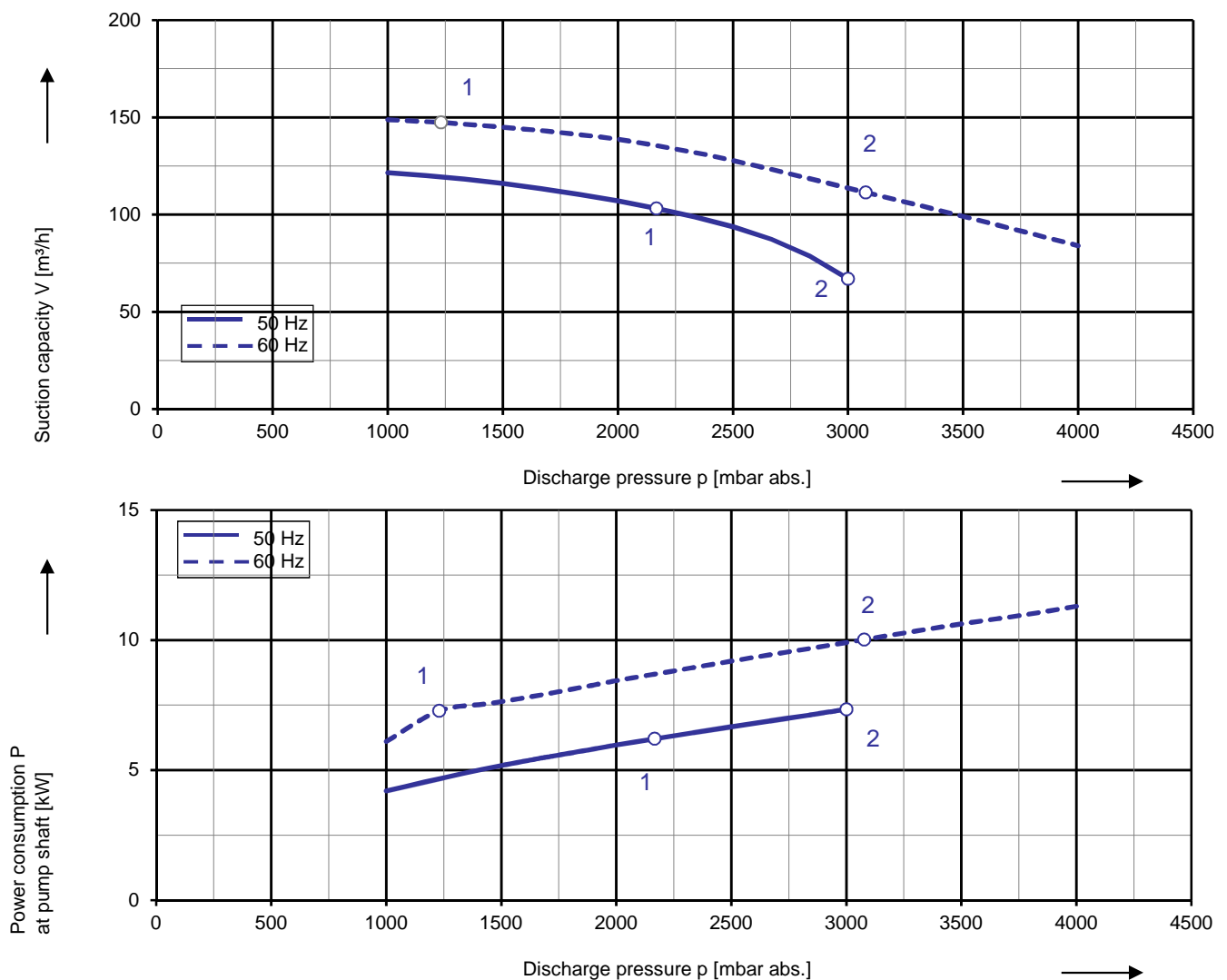
Elmo Rietschle compressors of the family L-BV2 are suitable for compressing gases and wet vapours.

The compressor of the model range 2BV2 are especially space-saving in their monoblock design. They are available in cast iron (standard color RAL 9006) and in stainless steel (all stainless steel parts are pickled and passivated). The motor is painted as standard in RAL 9006.



#### Performance curves

#### Compressor operation



The characteristic curves are based on the evacuation of 50 % 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 ± 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 2BV2 071

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	23,5 Δ	6,3	1,00	IE3	0,70	72	61 *	<b>2BV2071-8</b> □ <b>K04-1B</b>
60	190-210 YY / 380-420 Y 200 YY	27,6 YY / 13,8 Y 27,6 YY	7,3 7,3	1,00 1,00	IE3 NP	0,70 0,70	76 76	64 **	
50	190-210 Δ	30,8 Δ	8,6	1,00	IE3	0,70	72	74 *	<b>2BV2071-8</b> □ <b>K05-1B</b>
60	190-210 YY / 380-420 Y 200 YY	35,2 YY / 17,6 Y 35,2 YY	9,9 9,9	1,00 1,00	IE3 NP	0,70 0,70	76 76	77 **	
<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	20,4 Δ / 11,8 Y	6,3	1,00	IE3	0,70	72	61 *	<b>2BV2071-8</b> □ <b>K04-6B</b>
60	220-240 YY / 440-480 Y 230 YY / 460 Y	24,0 YY / 12,0 Y 24,0 YY / 12,0 Y	7,3 7,3	1,00 1,00	IE3 NP	0,70 0,70	76 76	64 **	
50	220-240 Δ / 380-420 Y	26,8 Δ / 15,5 Y	8,6	1,00	IE3	0,70	72	74 *	<b>2BV2071-8</b> □ <b>K05-6B</b>
60	220-240 YY / 440-480 Y 230 YY / 460 Y	30,6 YY / 15,3 Y 30,6 YY / 15,3 Y	9,9 9,9	1,00 1,00	IE3 NP	0,70 0,70	76 76	77 **	
<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	9,5 Y	6,3	1,00	IE3	0,70	72	61 *	<b>2BV2071-8</b> □ <b>Q04-3B</b>
60	575 Y	9,6 Y	7,3	1,00	NP	0,70	76	64 **	
50	500 Y	12,4 Y	8,6	1,00	IE3	0,70	76	73 *	<b>2BV2071-8</b> □ <b>Q05-3B</b>
60	575 Y	12,2 Y	9,9	1,00	NP	0,70	72	76 **	
<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	11,8 Δ / 6,8 Y	6,3	1,00	IE3	0,70	72	61 *	<b>2BV2071-8</b> □ <b>Q04-7B</b>
60	440-480 Δ 460 Δ	12,0 Δ 12,0 Δ	7,3 7,3	1,00 1,00	IE3 NP	0,70 0,70	76 76	64 **	
50	380-420 Δ / 660-725 Y	15,5 Δ / 8,9 Y	8,6	1,00	IE3	0,70	72	73 *	<b>2BV2071-8</b> □ <b>Q05-7B</b>
60	440-480 Δ 460 Δ	15,3 Δ 15,3 Δ	9,9 9,9	1,00 1,00	IE3 NP	0,70 0,70	76 76	76 **	

### Materials

Casing	Port plate	Impeller	Lantern	
Cast iron (internal surface with ceramic coating)	Ceramic	Bronze	-	<b>N *</b>
CrNi steel	Ceramic	CrNi steel	-	<b>P **</b>
CrNi steel	CrNi steel	CrNi steel	-	<b>H **</b>

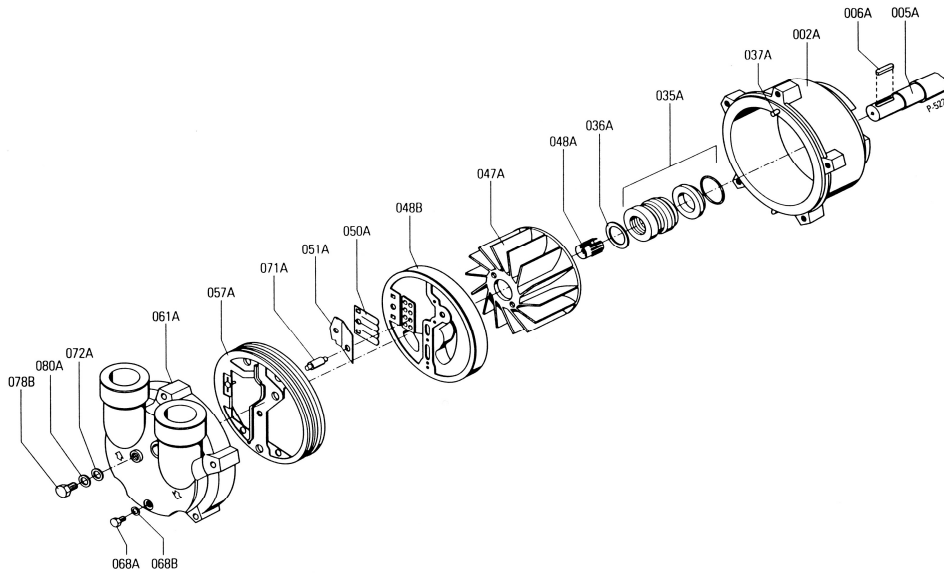
- 1) The quantities of operating liquid apply for fresh water operation without discharge liquid separator.
- 2) Measuring surface sound pressure level acc. to EN ISO 3744, measured with an equivalent unit at a distance of 1 m. The pump is throttled to an average suction pressure, with piping connected,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

Voltage range		Efficiency	c  us		
50 Hz	60Hz			60 Hz	2BV2....
<b>3~</b>					
200 VΔ	200 V YY / 230 VΔ / 400 VY		•		<b>K 1</b>
190-210 VΔ	190-210 VYY / 220-240 VΔ / 380-420VY		•		
200 V YY / 230 VΔ / 400 VY	230 V YY / 460 VY		•		<b>K 6</b>
190-210 VYY / 220-240 VΔ / 380-420VY	220-240 VYY / 440-480VY		•		
475-525 V Y	550-600 V Y		•		<b>Q 3</b>
475-525 VΔ	550-600 VΔ		•		<b>Q 5</b>
400 VΔ / 690 V Y	460 VΔ		•		<b>Q 7</b>

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.



Part No.		Materials		
		2BV2 ...-N.....	2BV2 ...-P.....	2BV2 ...-H.....
		Cast iron / ceramic / bronze	CrNi steel / ceramic / CrNi steel	CrNi steel / CrNi steel / CrNi steel
002	Casing	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-X6CrNiMo 18-10 / 1.4408) EN 10213-4	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4408) EN 10213-4
005	Pump shaft	Chrome steel (X20Cr13 / 1.4021) 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
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 / Silicon carbid / Viton (FPM) / Chrome-nickel steel (EN 12756 - BQ1VGG)	SIC / Carbon / Viton (FPM) / Teflon (PTFE) sheathed / Chrome-nickel-molybdenum steel (EN 12756 - Q1BM1GG)	SIC / Carbon / Viton (FPM) / Teflon (PTFE) sheathed / Chrome-nickel-molybdenum steel (EN 12756 - Q1BM1GG)
036	Washer	Chrome-nickel steel X10CrNiS 18-9 / 1.4305 / EN 10088 - 3	Chrome-nickel steel X10CrNiS 18-9 / 1.4305 / EN 10088 - 3	Chrome-nickel steel X10CrNiS 18-9 / 1.4305 / EN 10088 - 3
037	Set screw	Chrome-nickel-molybdenum steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2	Chrome-nickel- steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2	not applicable
047	Impeller	Cast aluminium bronze (G-CuAl10Fe5Ni5 / CC333G-GS) EN 1982	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4581) EN 10213-4	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4581) EN 10284
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	Ceramic - C221 EN 60672 - 1	Ceramic - C221 EN 60672 - 1	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4408) EN 10213-4
050	Valve plate	Teflon (PTFE)	Teflon (PTFE)	Teflon (PTFE)
051	Intercepting plate	Chrome-nickel steel (X10CrNiMoTi 18-10 / 1.4401) EN 10088 - 2	Chrome-nickel steel (X10CrNiMoTi 18-10 / 1.4401) EN 10088 - 2	Chrome-nickel steel (X10CrNiMoTi 18-10 / 1.4401) EN 10088 - 2
057	Gasket for cover	Nitrile-butadiene-caotchouc (NBR) ISO 1629	Viton (FPM)	flat gasket: Teflon (PTFE) and O-ring: silicone-caotchouc / Teflon (PTFE) sheathed
061	Cover	Cast iron (EN-GJL HB 195 / EN-JL2030) EN1561	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4408) EN 10213-4	Cast chrome-nickel-molybdenum steel (G-X6CrNiMo 18-10 / 1.4408) EN 10213-4
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	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3
069	Sealing ring	Aramid fiber, NBR, PTFE	FPM (Fluorkautschuk)FEP coated	FPM (Fluorkautschuk)FEP coated
070	O-Ring	FPM (flour rubber)	FPM (flour rubber)	FEP (Perfluorethylenpropylen) & Silicon
071	Pipe of cavitation protection	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3
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	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3	Chrome-nickel-molybdenum steel (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 3
080	Sealing ring	Aramid fiber, NBR, PTFE	FPM (Fluorkautschuk)FEP coated	FPM (Fluorkautschuk)FEP coated

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.

Elmo Rietschle is a brand of Gardner Denver



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