

L-BV 3

Data sheet 2BV3 151

Liquid ring vacuum pump

IE2


General information

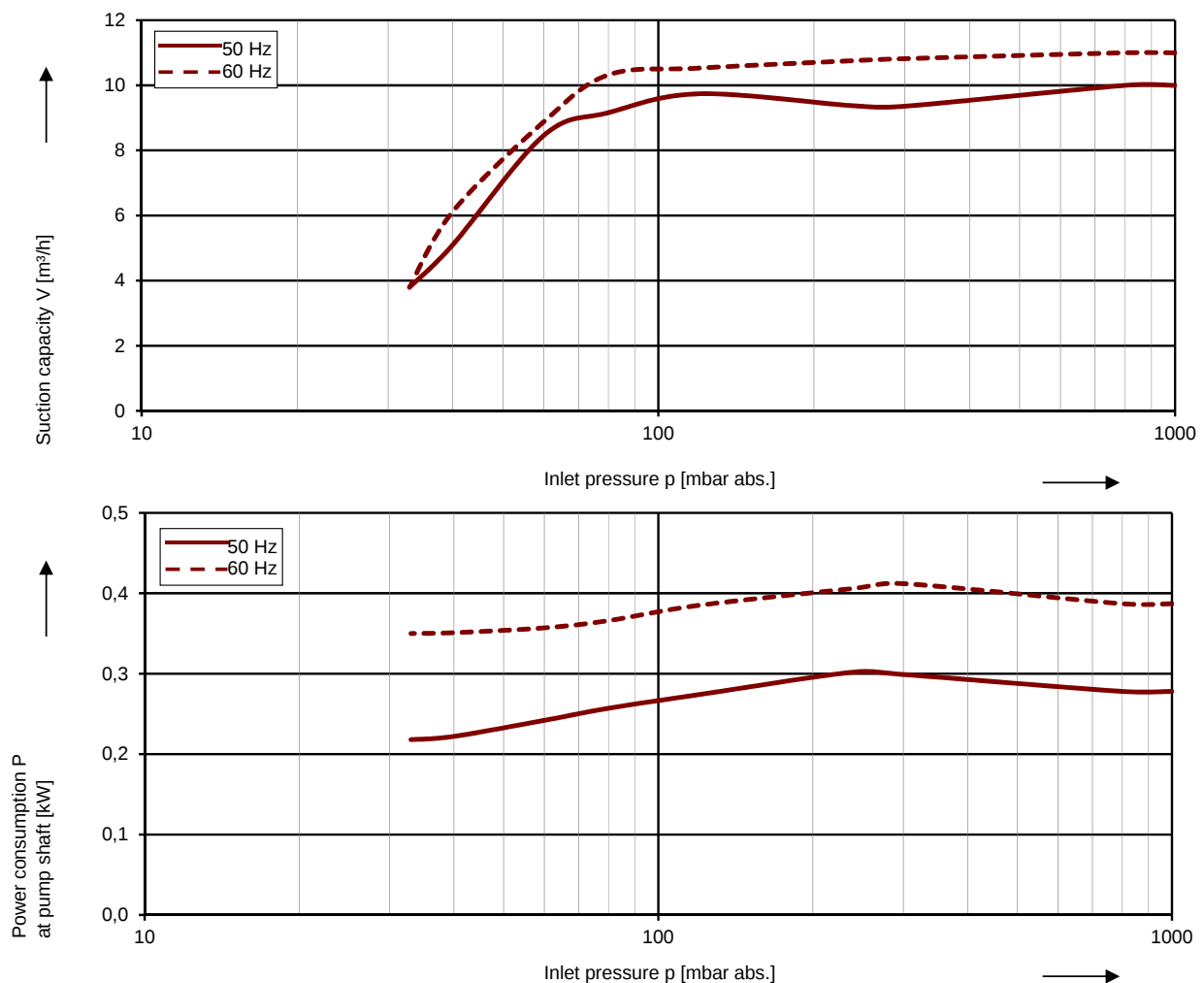
Elmo Rietschle vacuum pumps of the family L-BV3 are suitable for evacuating gases and wet vapours down to inlet pressures of 33 mbar abs. (97 % vacuum). All these vacuum pumps are equipped with built-in cavitation protection. They work cavitation free down to 80 mbar abs. For operation at lower inlet pressures the integrated cavitation protection should be connected for protecting the vacuum pump (no external pipes necessary).

Due to the compact design the vacuum pump of the family L-BV3 is the most spacesaving of their kind. By their up-to-date technology they realise high performance with very low quantities of operating liquids and required power. As standard they are available in corrosion free materials bronze and stainless steel. Thereby many of their requests can be achieved by a standard pump.



Performance curves

Vacuum 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 ± 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.

Selection and ordering data

Typ 2BV3 151

Fre- quency	Rated			Service factor	Efficiency	Quantity of operating liquid 1)	Sound pressure level 2)	Weight Approx.	Order No.
	Voltage	Current	Power						
Hz	V	A	kW	SF	-	l / min	dB(A)	kg	
3~ 50/60 Hz, IP55, Insulation material class F, UL 1450 and CAN/CSA C22.2 No. 68-09 (certificate number E225239)									
50	185-240 Δ / 320-415 Y	1,45 Δ / 0,84 Y 1,88* Δ / 1,09* Y	0,30	1,33	IE2	1,30	55	10	2BV3151-0 □ P02-4E
60	200-275 Δ / 345-480 Y	1,65 Δ / 0,95 Y 2,15* Δ / 0,95* Y	0,40	1,30	IE2	1,30	62		
1~ 50/60 Hz, IP55, Insulation material class F, Motor with UL (certificate number E176350), with capacitor for cont. Operation									
50	230	2,4	0,30	1,45	IE2	1,30	55	10	2BV3151-0 □ U02-1A
60	230	2,7	0,40	1,25	IE2	1,30	62		

Casing	Port plate	Impeller	Lantern
Bronze	Stainless steel	Bronze	-
			G

- 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).
- *) Max. current for heavy-duty conditions (water carry over, back pressure)

Other Voltages [V]

Voltage range		Efficiency				
50 Hz	60Hz		60 Hz	2BV3...~	..	
3~						
185-240 Δ / 320-415 Y ----- 190-210 Δ	200-275 Δ / 345-480 Y ----- 190-210 YY / 220-240 Δ / 380-420Y	IE2	•		P 4	
1~						
230	230	IE2	•		U 1	
100 / 200	100 / 200	IE2			V 4	
115 / 230	115 / 230	IE2			V 5	

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 $\pm 10\%$. The frequency tolerance is $\pm 2\%$ maximum.

Operation liquid quantity for 50 Hz / 60 Hz [l/min]

p1	Fresh water	Partial recirculation
mbar abs.	15°C	
>500	1,3 / 1,3	0,65 / 0,65
200-500	1,3 / 1,3	0,65 / 0,65
<200	1,3 / 1,3	-

For partial recirculation operation the quantity of the fresh applied refrigerant can be reduced by circulation of the operating liquid in a circuit (with discharge liquid separator and internal recirculation of the operating liquid, available as accessories). Complete circuit systems L-SV available on request.

Max. additional water carry over / Back pressure

Frequenz [Hz]	water carry over [l/min]	back pressure [mbar]
50	3,3	1100
60	3,3	1100

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.



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