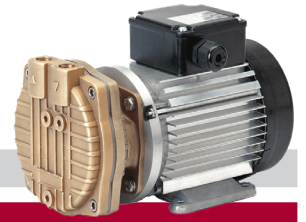
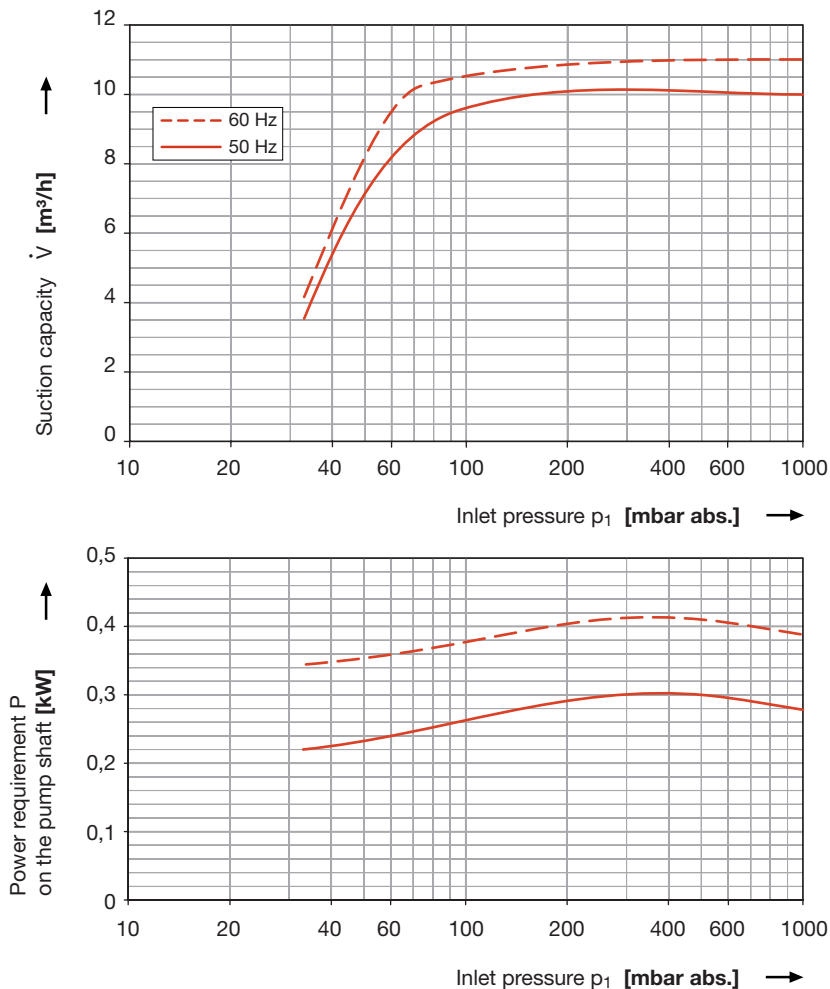


# Data sheet liquidring pump

Series L-BV3 | L\_100  
Range 2BV3 151 Vacuum pump



## Performance curves for vacuum operation



Vacuum pumps of the L-BV3 Series 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. For operation below 80 mbar abs. the cavitation protection should be connected to protect the vacuum pump. Due to the compact design the vacuum pump 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. 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 approbated for UL and CSA.

The performance curves are valid for following conditions:  
 Inlet medium: atmospheric air at 20 °C  
 Inlet pressure: 1013 mbar abs.  
 Humidity: 100 % rel.  
 Operating liquid: water of 15 °C  
 Tolerance: ±10 %

## Selection and ordering data

Materials Casing/port plate/impeller	Motor data				Service-factor SF	Order-No.	Quantity of operating liquid l/min	Sound pressure level ** dB(A)	Weight approx. kg		
	Fre-quency Hz	Rated									
		voltage V	current A	output kW							
<b>3~ 50/60 Hz version, protection class IP 55, insulation class F *</b>											
Bronze/CrNi steel/Bronze	50	185Δ...240Δ	320Y...415Y	3.8	2.2	<b>0.3</b>	1.33	<b>2BV3151-0GJ02-4E</b>	1.3	55	9
	60	200Δ...275Δ	345Y...480Y	3.8	2.2	<b>0.4</b>	1.3		1.3		
<b>1~ 50/60 Hz version, protection class IP 55, insulation class F *</b>											
Bronze/CrNi steel/Bronze	50	230		2.0		<b>0.3</b>	1.65	<b>2BV3151-0GW02-1E</b>	1.3	55	9
	60	230		2.7		<b>0.4</b>	1.45		1.3		

The motors are designed according to DIN EN 60 034 / DIN IEC 34-1 and temperature class F. For the three phase machines the tolerances are  $\pm 10 \%$  for fixed voltage and  $\pm 5 \%$  for voltage range.  
For all three phase machines according to UL and CSA norm (UL 507 and CSA 22.2 No. 100) the maximum allowed voltage tolerances are  $-10 \%$  resp.  $+6 \%$ . The frequency tolerance is maximum  $\pm 2 \%$ .

All L-BV3 achieve the standards and norms of the low voltage directive 72/23/EWG, rotating electrotechnical motor EN 60034-1-34, electromagnetic compatibility (EMC) DIN EN 61000-0/-6/-4.

\* For standard UL 507 and CSA 22.2 No 113 (Certificate Number E225239).

\*\* Measuring-surface sound-pressure level acc. to DIN EN 21680, measured at a distance of 1 m at medium inlet pressure and with connected pipes.

\*\*\* The quantities of operating liquid apply for fresh water operation without discharge liquid separator.

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).

An inlet pressure of 10 mbar abs. can be achieved by connecting a gas ejector (see accessories). The gas ejector can be mounted directly onto the vacuum pump.

## Other voltages

		2BV3 151-.. □ .. □ S	
50 Hz	60 Hz		
<b>3~</b>			
185...240 V Δ / 320...415 V Y	200...275 V Δ / 345...480 V Y	J	4
<b>1~</b>			
230 V	230 V	W	1
100 / 200 V	100 / 200 V	X	4
115 / 230 V	115 / 230 V	X	5

## Quantity of Operating Liquid

Fre-quency Hz	fresh water operation/partial recirculation Inlet pressure p (abs.) ***		
	< 200 mbar	200 - 500 mbar	> 500 mbar
	l/min	l/min	l/min
50	1.30 / -	1.30 / 0.65	1.30 / 0.65
60	1.30 / -	1.30 / 0.65	1.30 / 0.65

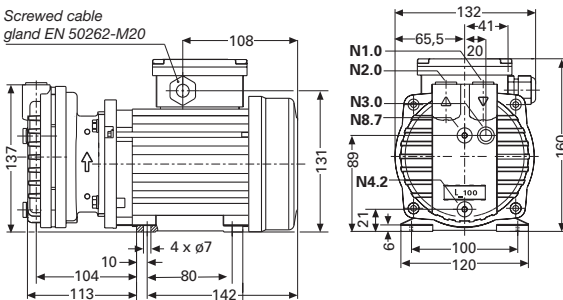
## Max. add. water carry-over or permissible back pressure

Frequency Hz	max. additional water carry-over l/min	max. permissible back pressure mbar abs.
50	3.3	1100
60	3.3	1100

## Dimensions

Kabelverschraubung  
nach EN 50262-M20

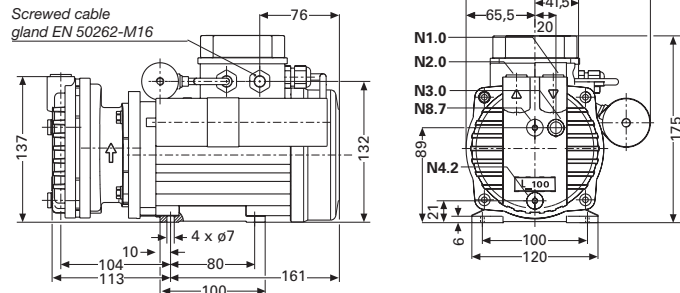
Screwed cable  
gland EN 50262-M20



**2BV3151-0GJ02-4E**

Kabelverschraubung  
nach EN 50262-M16

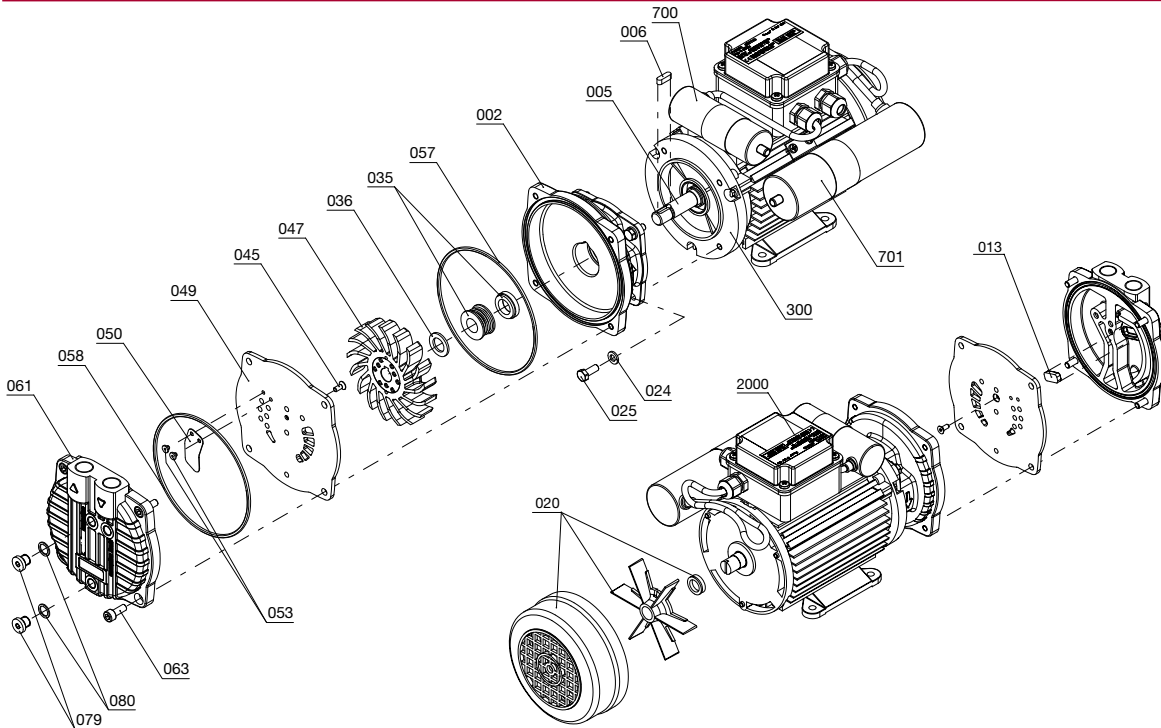
Screwed cable  
gland EN 50262-M16



**2BV3151-0GW02-1E**

**N1.0** Inlet flange G3/8 x 12  
**N2.0** Pressure flange G3/8 x 12  
**N3.0** Connection operating liquid G1/8 x 10  
**N4.2** Drain G1/8 x 10  
**N8.7** Cavitation protection G1/8 x 10

## Exploded drawing 2BV3 151



### Materials of construction

Part-No.	Designation	Materials
002	Casing	Cast aluminium bronze (G-CuAl10Fe5Ni5 / CC33G-GS) EN 1982
005	Pump shaft	Chromemolybdenum steel (X12CrMoS 17 / 1.4104) EN 10088 - 3
006	Parallel key	Chrome-nickel-molybdenum steel (X6CrNiMoTi 17-12-2 / 1.4571) EN 10088 - 3
013	Rubber pressure piece	
020	Ventilation assembly	
024	Washer	Chromenickelsteel (X5CrNi 18-10 / 1.4301) EN 10088 - 2
025	Screw	Chromenickelsteel (X5CrNi 18-10 / 1.4301) EN 10088 - 2
035	Mechanical seal	SIC / Carbon / Viton (FPM) / chrome-nickel-molybdenum steel (EN 12756 - BQ1VGG)
036	Washer	Chromenickelsteel (X5CrNi 18-10 / 1.4301) EN 10088 - 2
045	Screw	Chromenickelsteel (X5CrNi 18-10 / 1.4301) EN 10088 - 2
047	Impeller	Cast aluminium bronze (G-CuAl10Fe5Ni5 / CC33G-GS) EN 1982
049	Port plate	Chromenickelsteel (X6CrNiTi 18-10 / 1.4541) EN 10088 - 2
050	Valve plate	Teflon (PTFE)
053	Plug	Chromnickelmolybdänstahl (X10CrNiMoTi 18-10 / 1.4571) EN 10088 - 2
057	Seal	Nitrile-butadiene-caotchouc (NBR) ISO 1629
058	Seal	Nitrile-butadiene-caotchouc (NBR) ISO 1629
061	Pump cover	Cast aluminium bronze (G-CuAl10Fe5Ni5 / CC33G-GS) EN 1982
063	Screw	
079	Screw	Copper-zinc-alloy (CuZn37 / CW 508 L) EN 12449
080	Seal	Copper DIN 7603 - Cu
300	Motor	
700	Condenser	
701	Condenser	
2000	Type label	



Changes in particular the quoted performance curve, datas and weights without prior notice. The figures are without obligations.

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# **Gardner Denver**

*Elmo Rietschle is a brand of the  
Gardner Denver Blower Division*

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