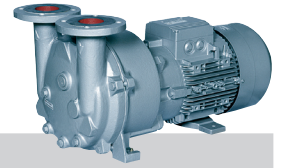
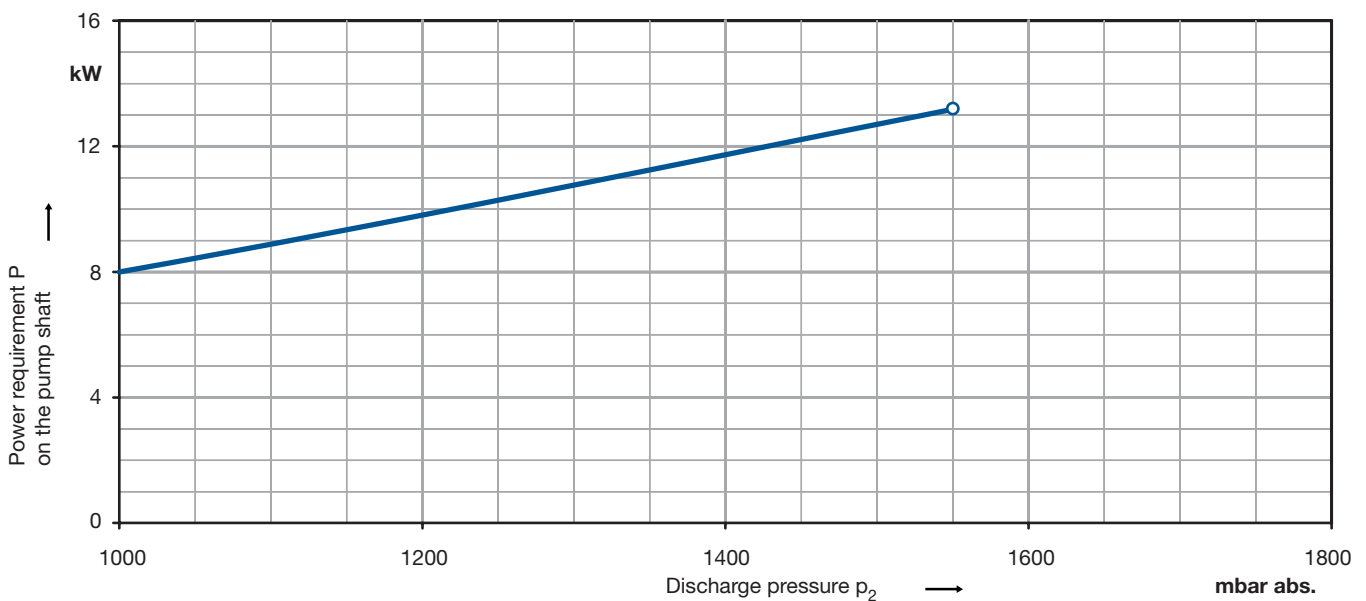
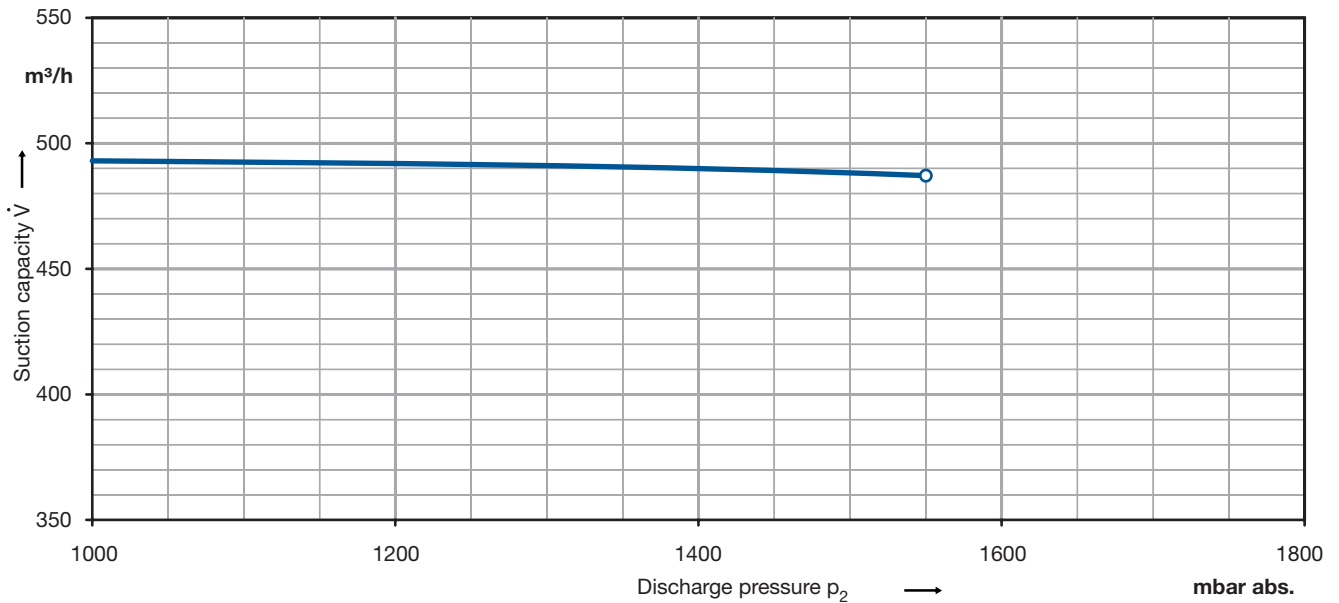


# Data sheet liquidring pump

Series L-BV5 | L\_300  
Range 2BV5 161 Compressor ATEX



## Performance curves for compressor operation



The characteristics are valid for the inlet of air with a relative humidity of 50 % and a temperature of 20 °C at a atmospheric pressure of 1013 mbar abs. and water at 15 °C as operating liquid.  
The tolerance is  $\pm 10$  %.

The motors are supplied as standard for fixed voltage of 50 resp. 60 Hz and in protection category IP 55. The Compressors are certificated according to ATEX 94/9 EG, category 2G.

## Selection and ordering data

Materials	Motor data						Order-No.	Quantity of operating liquid	Sound pressure level **	Weight approx.
	Rated									
	voltage		current		output					
V		A		kW		m³/h	dB(A)	kg		
<b>ATEX 3- 50 Hz version, protection class IP 55, insulation class F</b>										
cast iron/cast iron/bronze		400Δ	690Y	28.5	16.25	<b>13.2</b>	<b>2BV5161-8KD02-6S-Z</b> <b>Z=F91</b>	2.4	77	287
cast iron/cast iron/bronze		500Δ		22.8		<b>13.2</b>	<b>2BV5161-8KD02-5S-Z</b> <b>Z=F91</b>	2.4	77	287
CrNi steel/CrNi steel/CrNi steel		400Δ	690Y	28.5	16.25	<b>13.2</b>	<b>2BV5161-8HD02-6S-Z</b> <b>Z=F91</b>	2.4	77	287
CrNi steel/CrNi steel/CrNi steel		500Δ		22.8		<b>13.2</b>	<b>2BV5161-8HD02-5S-Z</b> <b>Z=F91</b>	2.4	77	287

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 ± 10 % for fixed voltage .  
The frequency tolerance is maximum ± 2 %.

All L-BV5 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.

\*\* 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).

## Other voltages

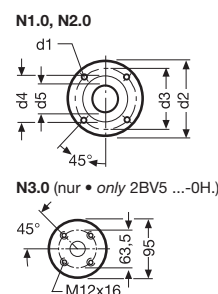
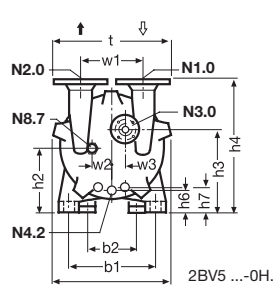
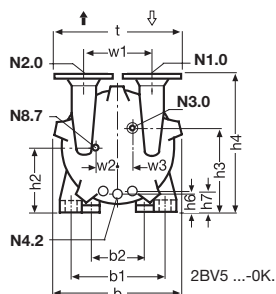
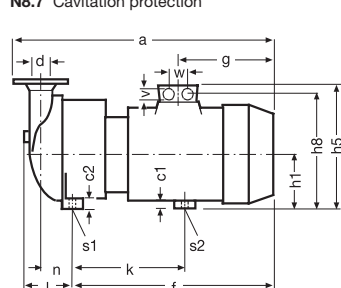
		2BV5 161-...□...□S	
50 Hz	60 Hz		
<b>3- ATEX Category 2G</b>			
230 V Δ / 400 V Y	-	D	1
400 V Δ / 690 V Y	-	D	6
500 V Δ	-	D	5

## Quantity of Operating Liquid

Frequency	for fresh water operation at Inlet pressure ***
Hz	m³/h
50	2.4
60	2.4

## Dimensions

- N1.0** Inlet flange
- N2.0** Pressure flange
- N3.0** Connection operating liquid
- N4.2** Drain/Flushing
- N8.7** Cavitation protection



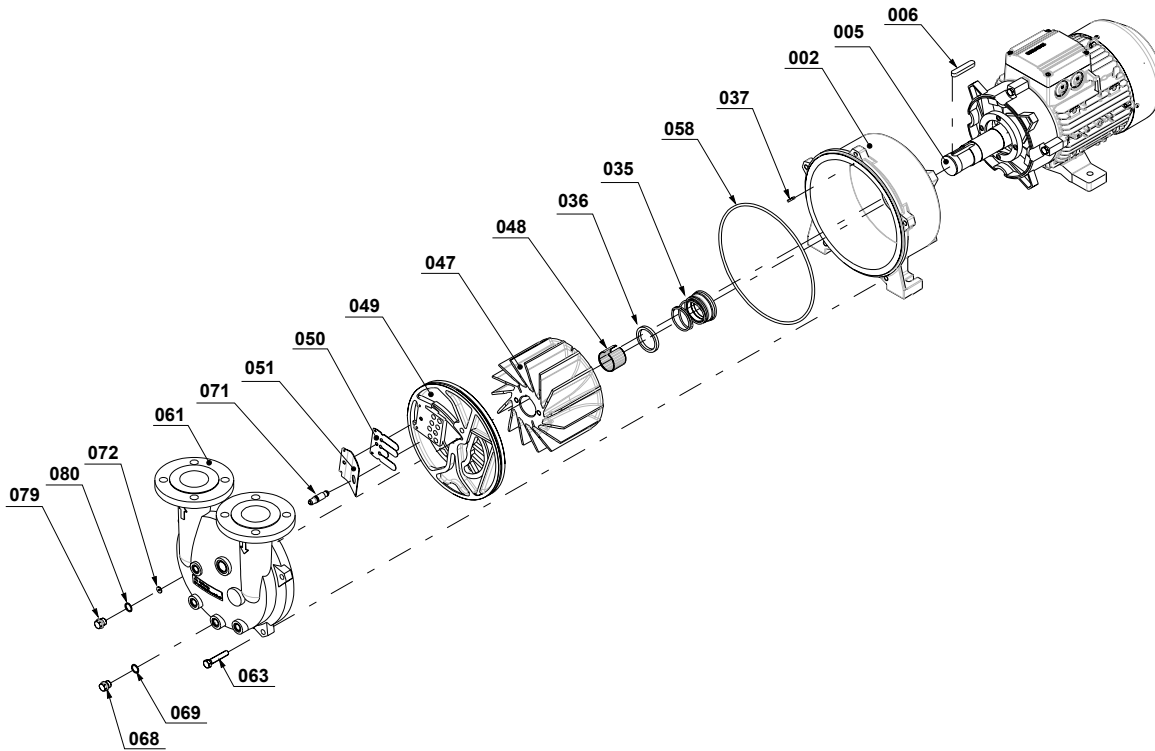
2BV5 161	a	b	b1	b2	c1	c2	h1	h2	h3 <sup>3)</sup>	h4	h5	h6	h7	h8	k	l	f	g	n	s1
[mm]	1009	481	370	188	30	29	210	225	303	427	372	53	76	302	617	201	772	412	137	15 x 27
	s2	t	v	d1	d2	d3	d4	d5	w	w1	w2	w3	d <sup>1)</sup> (N1.0, N2.0)	N3.0 <sup>2)</sup>	N4.2	N8.7				
	15	450	M40 x1.5	22	200	156	130	80	75	250	81	41	DN80 / 3"	G¾ x 24	G¾ x 25	G¾ x 11				

1) suitable for mating flange acc. to DIN 2501, ND16 or ANSI B16.5-3-150

2) suitable for round flange acc. to DIN 2633, ND16, nominal width 15 or ANSI B16.5-1/2-150

3) for 2BV5 161-H... h3 = 305

## Exploded drawing



### Materials of construction

Part-No.	Designation	Material combination	
		Grey cast iron/Grey cast iron/Bronze	CrNi steel/CrNi steel/CrNi steel
002	Casing	Grey cast iron (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-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
035	Mechanical seal	SiC / Carbon / Viton (FPM) / Chrome-nickel-molybdenum steel (EN 12756 - BQ1VGG)	SiC / Carbon / Viton (FPM) / Teflon (PTFE) sheated / Chrome-nickel-molybdenum steel (EN 12756 - Q1BM1GG)
036	Washer	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-molybdenum steel (X5CrNiMo 17-12-2 / 1.4401) EN 10088 - 2	Chrome-nickel-molybdenum 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
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
049	Port plate	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)
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
058	Gasket for cover	Nitrile-butadiene-caotchouc (NBR 70) ISO 1629	Silicone core, Teflon (PTFE) sheated
061	Cover	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)
068	Plug screw	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	Teflon (PTFE)	Teflon (PTFE)
071	Pipe of cavitation protection	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
079	Plug screw	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	Teflon (PTFE)	Teflon (PTFE)



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

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## **Gardner Denver**

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