

LIQUID RING VACUUM PUMPS

GMP 380/320 – GMP 380/400 – GMP 380/500

PRESSURE RANGE : 40 – 1013 mbara / 1.18 – 30 inHg

SUCTION CAPACITY : 600 – 2373 m³/h / 353 – 1396 cfm

GÜCÜM two stage liquid ring vacuum pumps are used for pumping dry and wet gases, small quantities of liquid can be handled. They are used in the areas at which vacuum needed between the pressures 1013 to 33 mbar

Güçüm Two stage liquid ring vacuum pumps have below features;

- Able to pump every kind of gases and vapors,
- Able to handle small quantities of liquid with gases,
- Oil-free, no need to lubrication,
- Pumped gas does not touch to oil,
- Minimum maintenance with high efficiency
- No metallic contact of the rotating parts,
- Works quiet and reduced vibration,
- Nearly everywhere used with suitable material choices.



APPLICATION

Pumps are used for the discharge of dry and humid gases (containing vapor) and a certain amount of water. It can be used in all areas where absolute pressure between 1013 and 33 mbar is required.

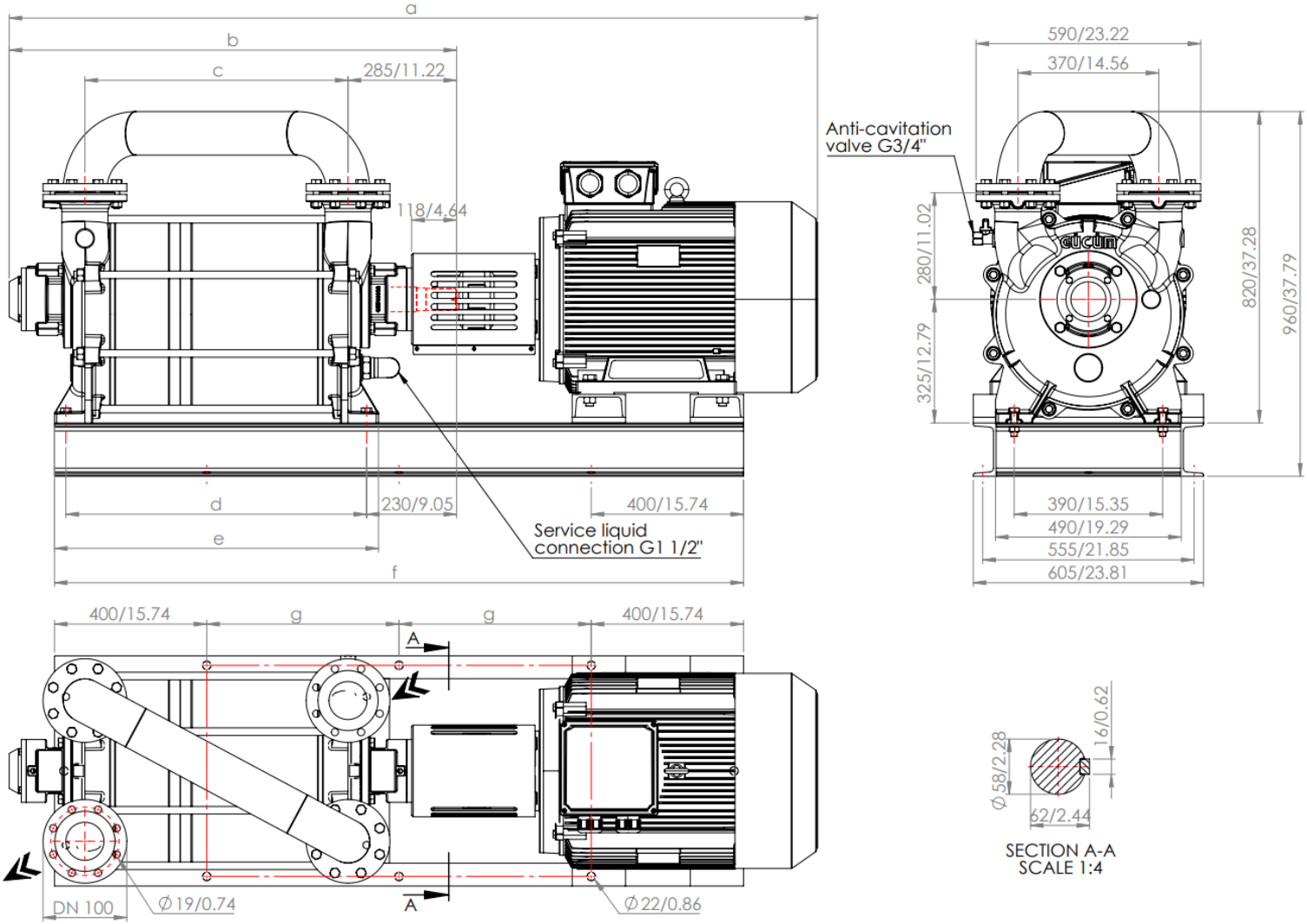
ADDITIONAL NOTE

During operation, the pump must be continuously supplied with liquid (usually water) to replenish the water from the exhaust line and to reduce the pump temperature. The water discharged from the pump is separated from the gas and is suitable for reuse.

The direction of shaft rotation is clockwise when viewed from the motor side.
The tightness is ensured by a standard mechanical seal.

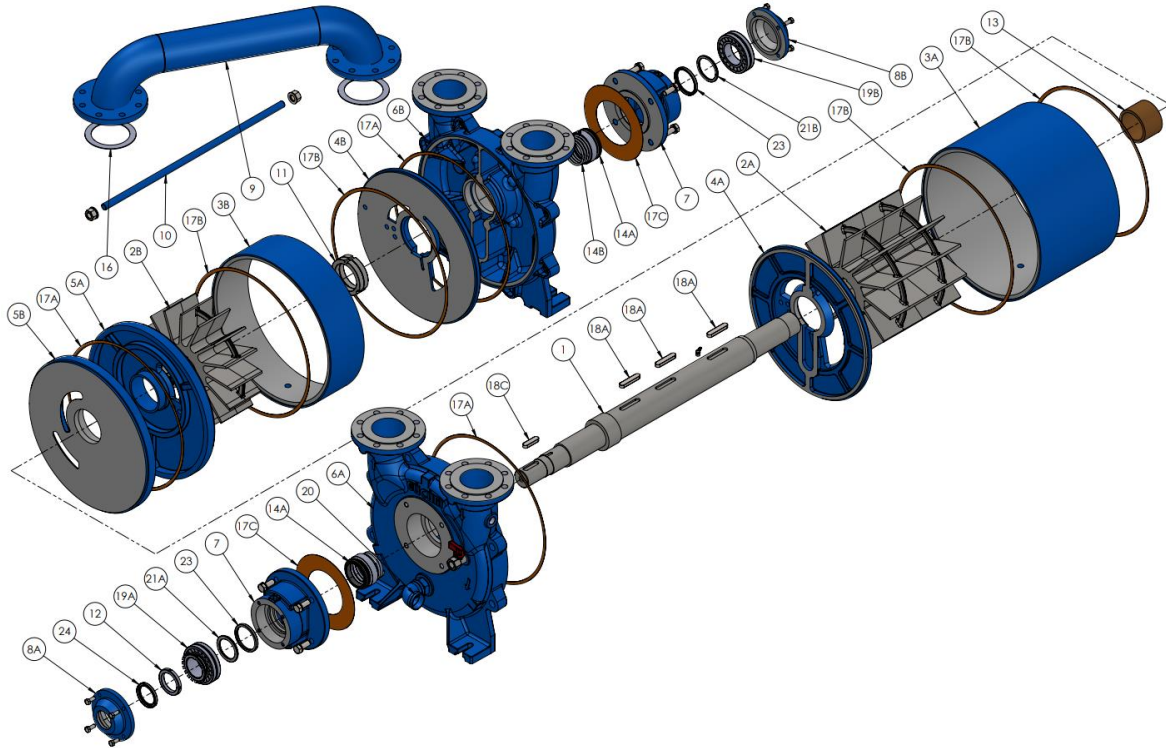
TECHNICAL FEATURES		
Maximum allowable pressure differential	1.1	bar
Highest saturated air temperature	100	°C
Highest dry air temperature	200	°C
Highest service water temperature	70	°C
Highest service water viscosity	4	mm ² /sec
Noise level (at 80 mbar vacuum)	80 ±3	dB A
Highest density of service water	1200	kg/m ³
Highest heat exchanger flow resistance	0,2	bar

OVERALL DIMENSIONS



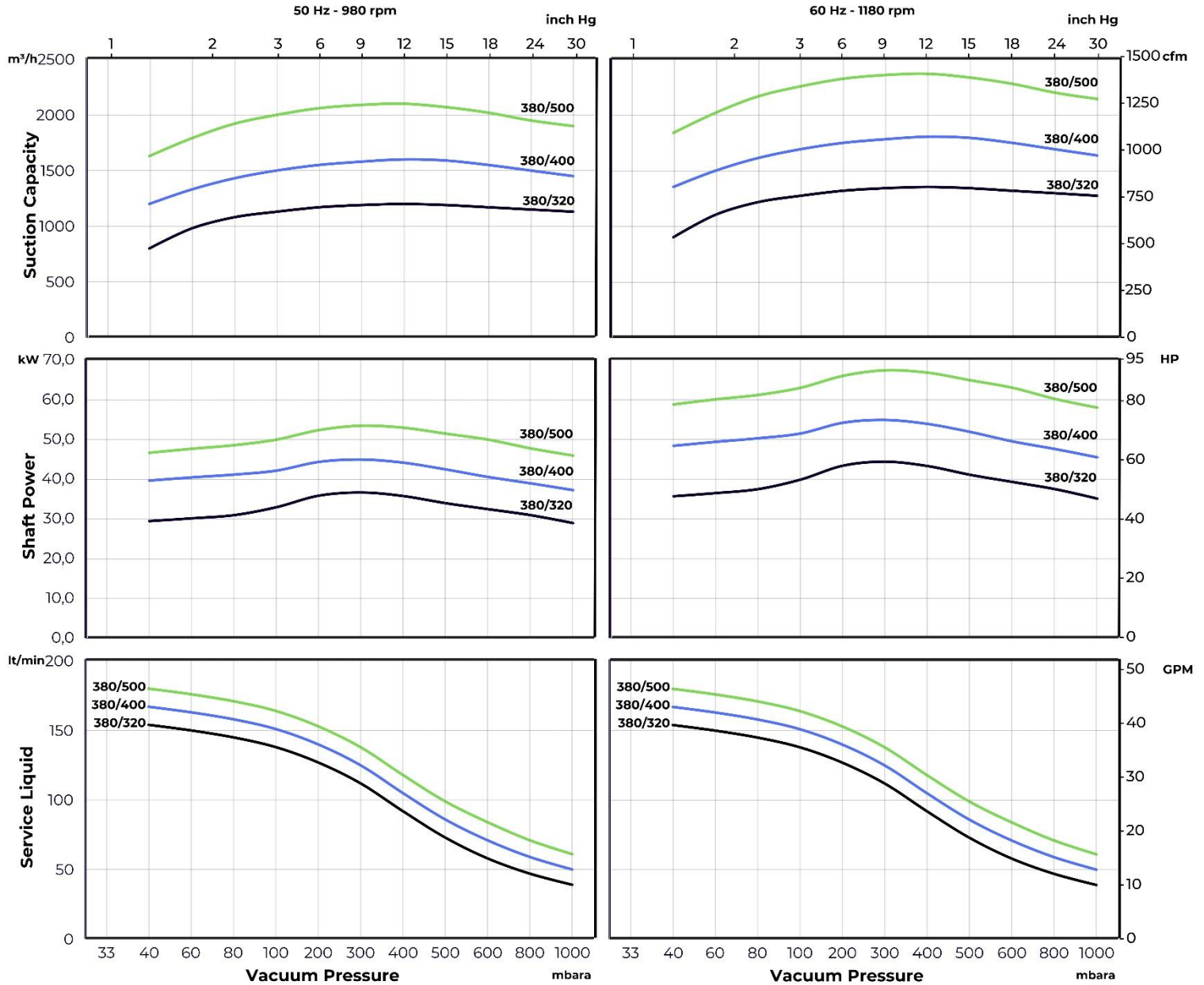
MODEL	50 Hz.	a	b	c	d	e	f	g	Weight (kg / lbs)				
		mm / inch							Bare Shaft	With Motor			
GMP 380/320		2125 / 83.66	1175 / 46.26	695 / 27.36	800 / 31.50	850 / 33.46	1810 / 71.26	505 / 19.88	540 / 1190	1050/2314			
GMP 380/400		2350 / 92.52	1285 / 50.59	805 / 31.69	910 / 35.83	960 / 37.79	1950 / 76.77	575 / 22.64	620 / 1366	1260/2777			
GMP 380/500		2550/100.39	1425 / 56.10	945 / 37.20	1050 / 41.34	1100 / 43.31	2220 / 87.40	710 / 27.95	710 / 1565	1420/3130			
MODEL	60 Hz.	a	b	c	d	e	f	g	Weight (kg / lbs)				
		mm / inch							Bare Shaft	With Motor			
GMP 380/320		2230 / 87.80	1175 / 46.26	695 / 27.36	800 / 31.50	850 / 33.46	1850 / 72.83	525 / 20.67	540 / 1190	1190/2623			
GMP 380/400		2350 / 92.52	1285 / 50.59	805 / 31.69	910 / 35.83	960 / 37.80	2010 / 79.13	605 / 23.82	620 / 1366	1330/2932			
GMP 380/500		2620/103.15	1425 / 56.10	945 / 37.20	1050 / 41.34	1100 / 43.30	2250 / 88.58	725 / 28.54	710 / 1565	1640/3615			
Motor Specifications													
			50 Hz		60 Hz		50 Hz			60 Hz			
Type			Frame Size – Flange Type			rpm		kW	HP	rpm	kW	HP	
GMP 380/320			250M – B3		280S – B3		980		37	50	1180	45	60
GMP 380/400			280S – B3		280M – B3		980		45	60	1180	55	75
GMP 380/500			280M – B3		315S – B3		980		55	75	1180	75	100

EXPLODED VIEW AND PART LIST



Part List	Gray Cast Iron	Spheroidal Cast Iron	AISI 420	AISI 304	AISI 316	Bronze	St-37	Piece
1. Shaft			✓	✓	✓			1
2A. First Stage Impeller				✓	✓	✓		1
2B. Second Stage Impeller				✓	✓	✓		1
3A. First Stage Cover				✓	✓		✓	1
3B. Second Stage Cover				✓	✓		✓	1
4A. Suction Plate		✓		✓	✓			1
4B. Discharge Plate		✓		✓	✓			1
5A. First Intermediate Plate		✓		✓	✓			1
5B. Second Intermediate Plate								1
6A. Suction Casing	✓			✓	✓			1
6B. Discharge Casing	✓			✓	✓			1
7. Bearing Carrier	✓			✓	✓			2
8A. Bearing Cover	✓			✓	✓			1
8B. Bearing End Cover	✓			✓	✓			1
9. Manifold				✓	✓		✓	1
10. Tie rod				✓	✓		✓	8
11. Impeller Nut			✓					2
12. Bearing Nut			✓					1
13. Impeller Spacer						✓		1
14A. Mechanical Seal – Stable				G13-CARBON				2
14B. Mechanical Seal – Rotary					✓			2
16. Klingrite Cover				Klingrite				2
17A. Casing Paper Gasket				Paper				3
17B. Cover Paper Gasket				Paper				4
17C. Bearing Carrier Paper Gasket				Paper				2
18A. Impeller Key				✓	✓		✓	3
18C. Coupling Key				✓	✓		✓	1
19A. Front Bearing				SKF22214_EK				1
19B. Rear Bearing				SKF22214_E				1
20. Service Liquid Connection				✓	✓		✓	1
21A. Bearing Spacer				✓	✓			1
21B. Bearing End Spacer				✓	✓			1
23. Oil Seal – 75x90x8				Rubber				2
24. Yağ Keçesi – 60x80x8				Rubber				1

CHARACTERISTIC CURVES



Suction Capacity		
Type	50 Hz	60 Hz
GMP 380/320	600 – 1000 m³/h / 353 – 588 cfm	678 – 1130 m³/h / 400 – 665 cfm
GMP 380/400	1100 – 1500 m³/h / 647 – 882 cfm	1243 – 1695 m³/h / 731 – 998 cfm
GMP 380/500	1630 – 2100 m³/h / 959 – 1236 cfm	1842 – 2373 m³/h / 1084 – 1396 cfm

The above characteristic curves have been prepared in accordance with ISO 21360 standards. The curves are valid for the vacuum of 15°C service water and 20°C dry air supplied to the liquid ring vacuum pump at atmospheric pressure (760 mmHg / 1013 mbar). The values in the chart have a tolerance of ±10%.

Characteristic curves vary under different operating conditions.