LIQUID RING VACUUM PUMPS

GMVP 120/030 – GMVP 120/050

PRESSURE RANGE : 33 – 1013 mbara / 0.98 – 30 inHg

SUCTION CAPACITY : 10 – 59 m³/h / 6 – 35 cfm

GÜCÜM single stage liquid ring vacuum pumps
offer the following features with its monoblock structure;

- Operate safely and efficiently,
- Vacuum of all kinds of gases and vapors is ensured,
- Lesser amounts of liquid can also be vacuumed,
- The compression of the absorbed gases is isothermal,
- The rotating parts make no metallic contact,
- Operate quietly and without vibration,
- Low operating and investment costs,
- Can be used in any environment with a wide choice of materials.
- They operate at high efficiency for a long time without maintenance,
- It is oil-free and does not require any lubricant in its work environment,

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.

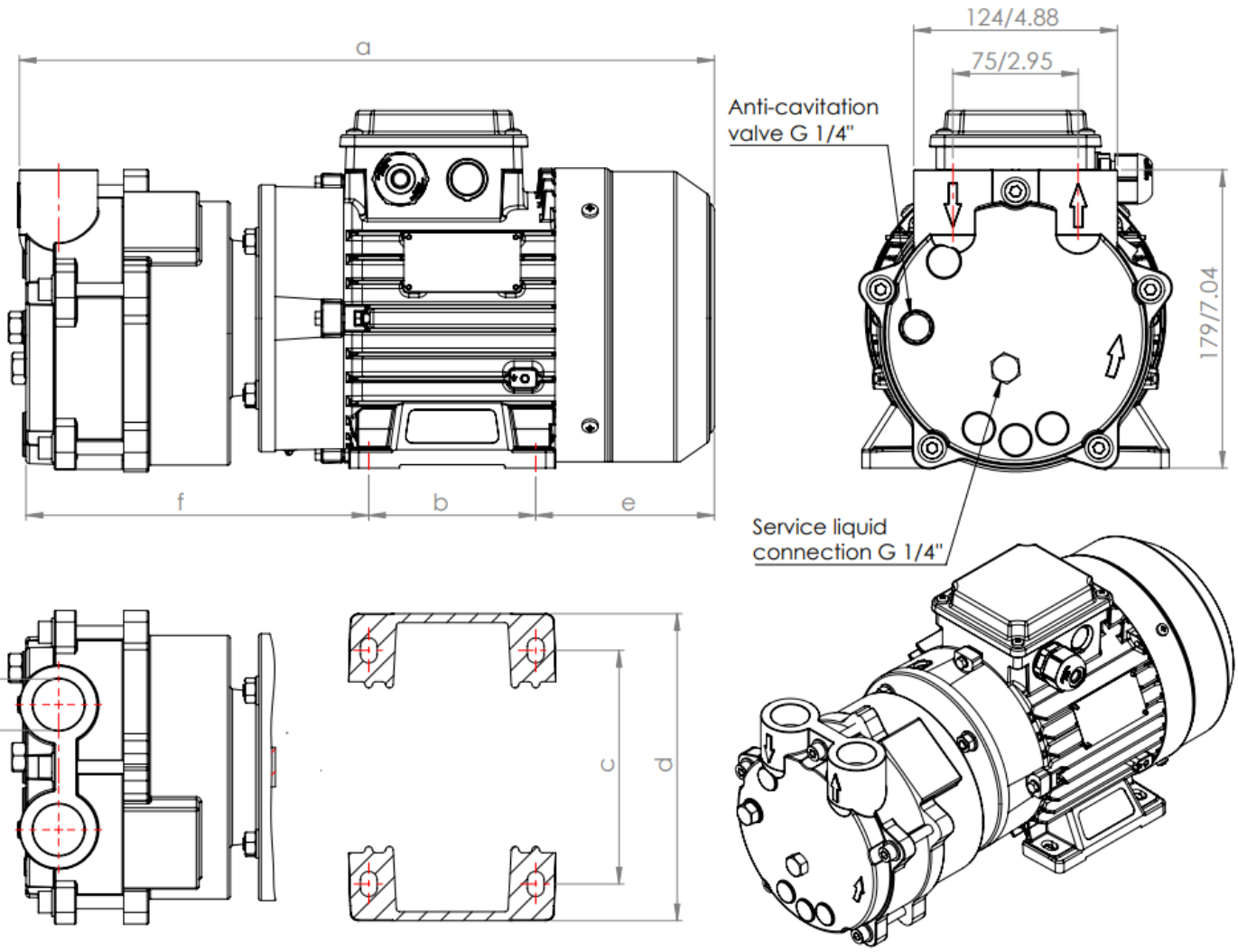
ADDITIONAL NOTE

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.
A standard mechanical seal ensures tightness.
It must be driven directly with the electric motor instead of using a coupling.

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	mm²/sec
Noise level (at 80 mbar vacuum)	70 ±3	dB A
Highest density of service water	1200	kg/m³
Highest heat exchanger flow resistance	0,2	bar

OVERALL DIMENSIONS

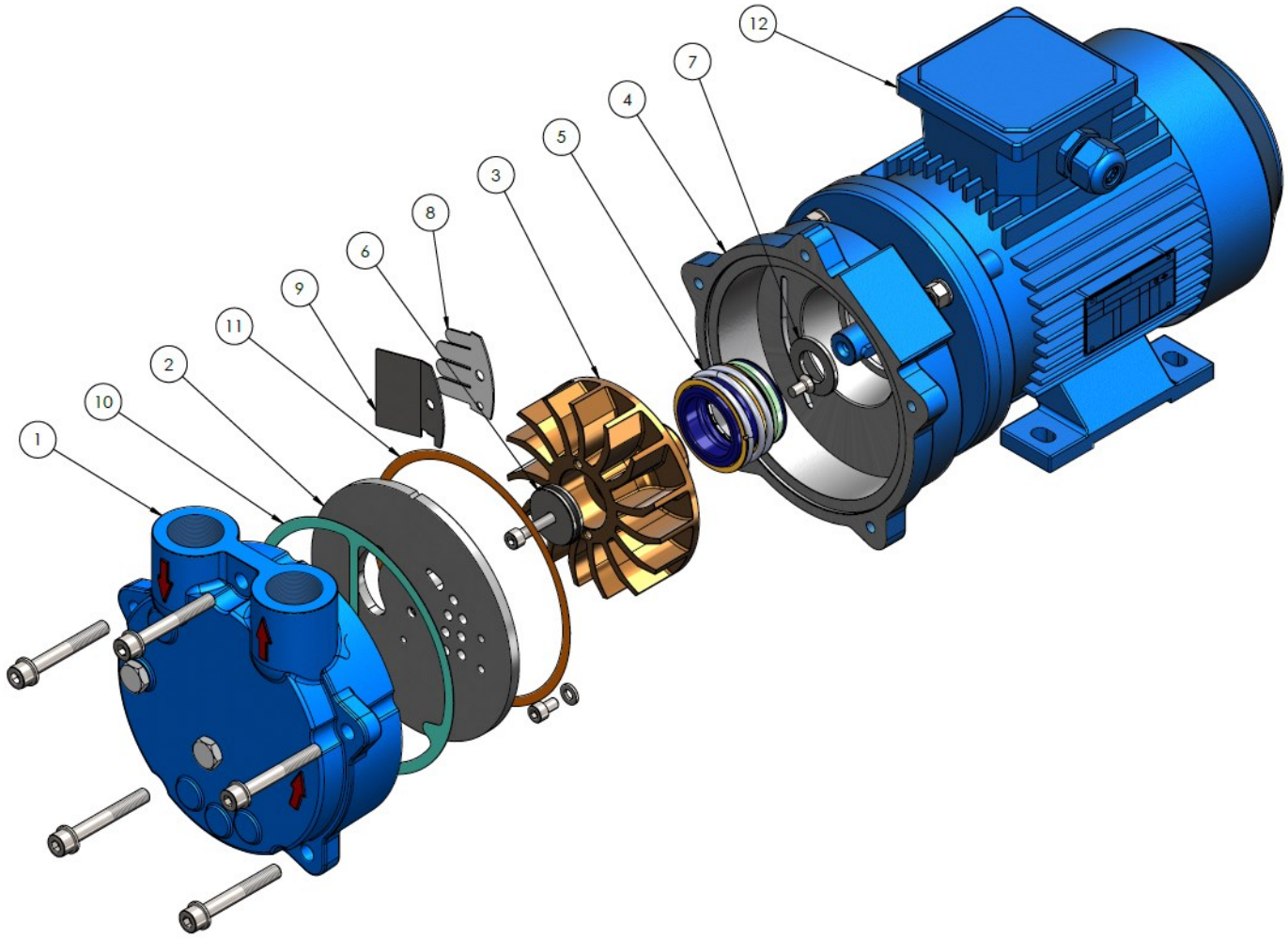


MODEL	50 Hz.	a	b	c	d	e	f	Weight
		mm / inch						kg / lbs
GMVP 120/030		383 / 15.07	100 / 3.93	125 / 4.92	164 / 6.45	100 / 3.93	180 / 7.08	18 / 40
GMVP 120/050		415 / 16.33	100 / 3.93	140 / 5.51	184 / 7.24	107 / 4.21	205 / 8.07	23 / 51

MODEL	60 Hz.	a	b	c	d	e	f	Weight
		mm / inch						kg / lbs
GMVP 120/030		395 / 15.55	100 / 3.9	140 / 5.5	184 / 7.25	107 / 4.2	185 / 7.3	19 / 42
GMVP120/050		441 / 17.4	125 / 4.9	140 / 5.5	184 / 7.25	107 / 4.2	205 / 8.1	26 / 57

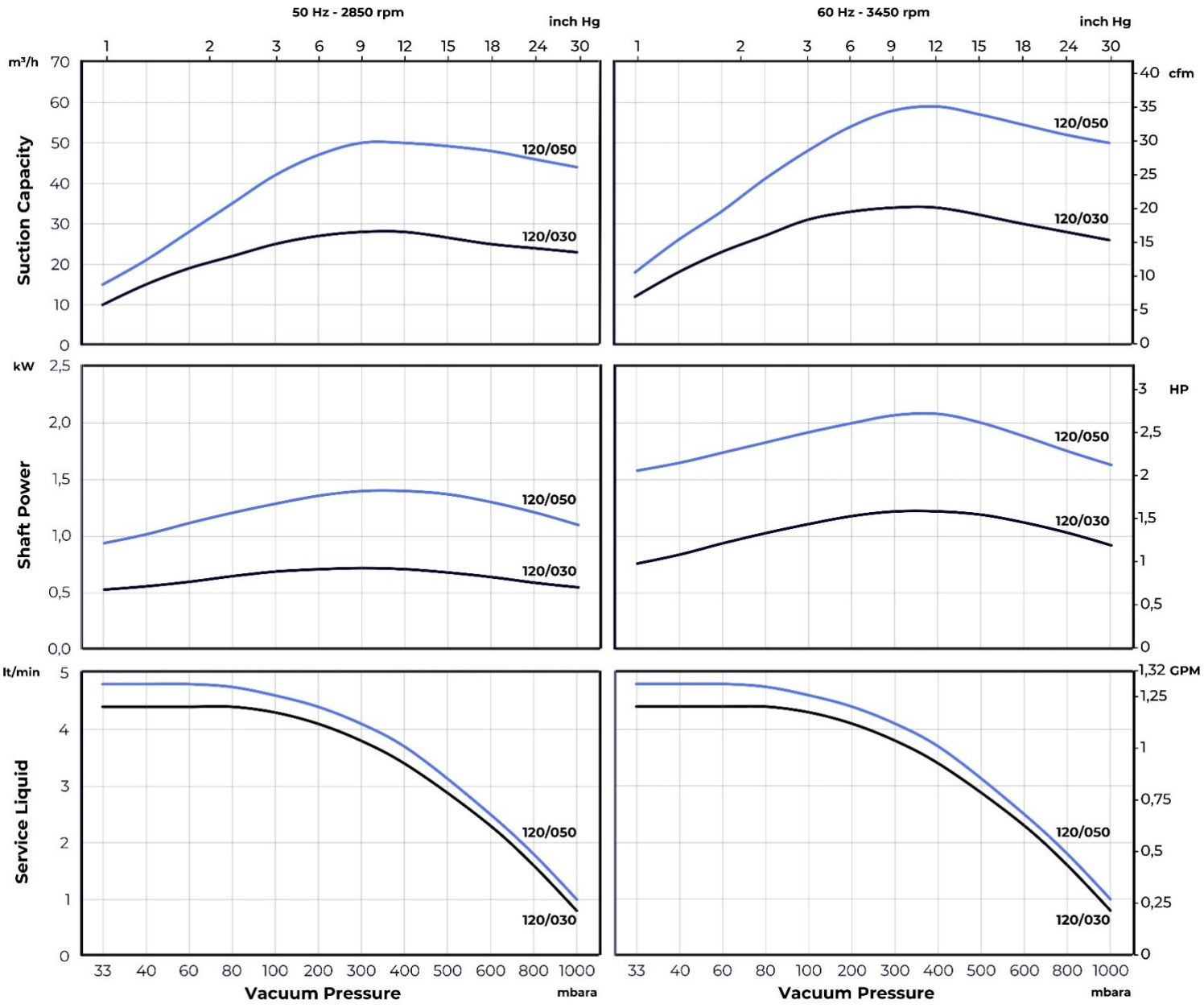
Motor Specifications								
	50 Hz	60 Hz	50 Hz			60 Hz		
Type	Frame Size – Flange Type		rpm	kW	HP	rpm	kW	HP
GMVP 120/030	80M – B34	80M – B34	2850	0.75	1	3450	1.5	2
GMVP 120/050	90S – B34	90L – B34	2850	1.5	2	3450	2.2	3

EXPLODED VIEW AND PART LIST



PART LIST	Cast Iron	Nodular Cast Iron	AISI 420	AISI 304	AISI 316	Bronze	St-37	Qty.
1. Suction & Discharge Casing	✓			✓	✓			1
2. Plate				✓	✓			1
3. Impeller				✓	✓	✓		1
4. Body		✓		✓	✓			1
5. Mechanical Seal	MG1 – Ø35 – G6 / SiC – Carbon – Viton							1
6. Impeller Cover				✓	✓			1
7. Impeller Washer				✓	✓			1
8. Valve	PTFE							1
9. Valve Cover				✓	✓			1
10. Casing Gasket	Klingrite							1
11. Body Gasket	Paper							1
12. Electrical Motor	Aluminum Frame							1

CHARACTERISTIC CURVES



Suction Capacity		
Type	**50 Hz**	**60 Hz**
GMVP 120/030	10 – 28 m³/h / 6 – 17 cfm	12 – 34 m³/h / 7 – 20 cfm
GMVP 120/050	15 – 50 m³/h / 9 – 30 cfm	18 – 59 m³/h / 11 – 35 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.

LIQUID RING VACUUM PUMPS

GMVP 145/050 – GMVP 145/080

PRESSURE RANGE : 33 – 1013 mbara / 0.98 – 30 inHg

SUCTION CAPACITY : 35 – 141 m³/h / 20 – 83 cfm

GÜCÜM single stage liquid ring vacuum pumps
offer the following features with its monoblock structure;

- Operate safely and efficiently,
- Vacuum of all kinds of gases and vapors is ensured,
- Lesser amounts of liquid can also be vacuumed,
- The compression of the absorbed gases is isothermal,
- The rotating parts make no metallic contact,
- Operate quietly and without vibration,
- Low operating and investment costs,
- Can be used in any environment with a wide choice of materials.
- They operate at high efficiency for a long time without maintenance,
- It is oil-free and does not require any lubricant in its work environment,

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.

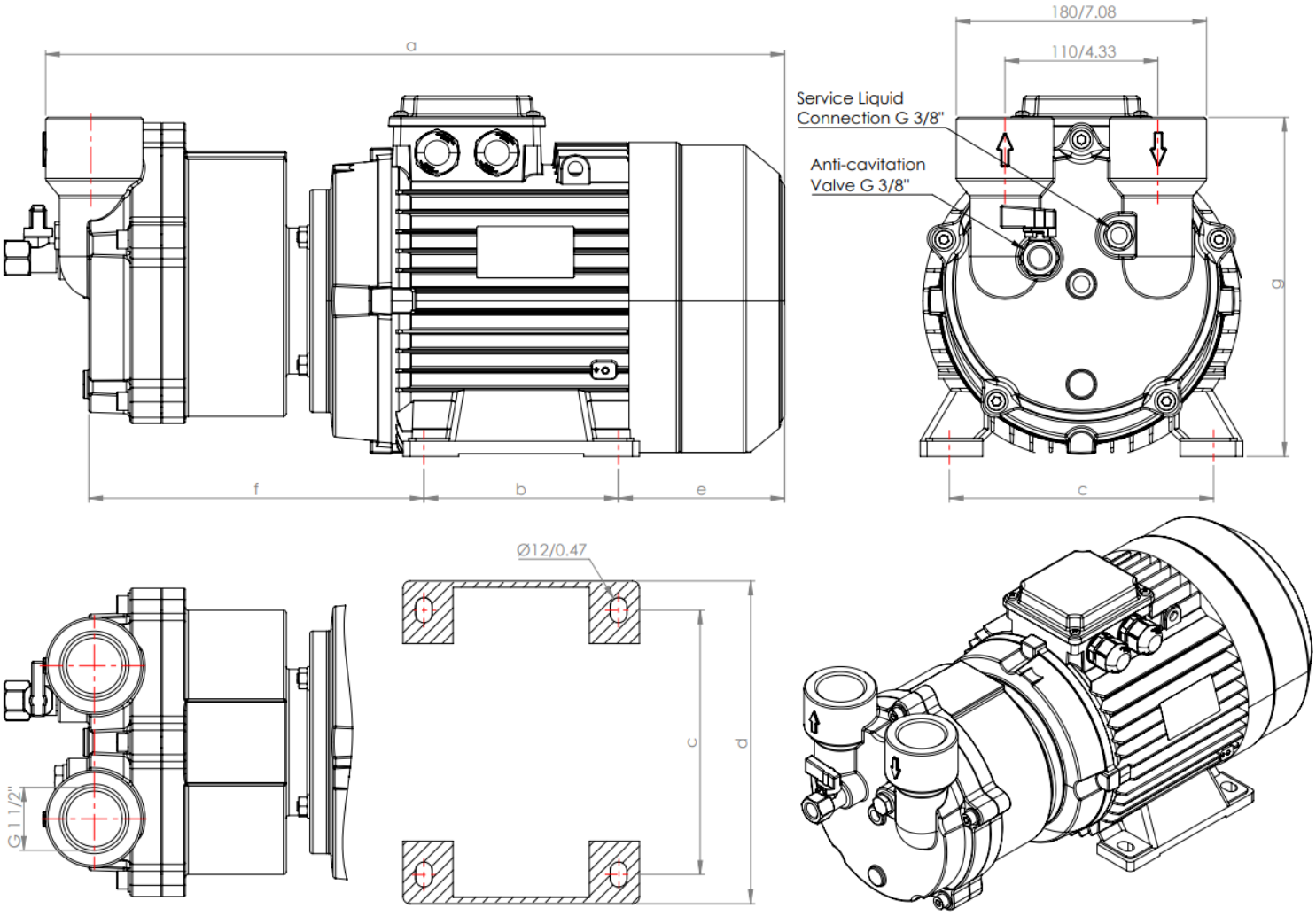
ADDITIONAL NOTE

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.
A standard mechanical seal ensures tightness.
It must be driven directly with the electric motor instead of using a coupling.

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	mm²/sec
Noise level (at 80 mbar vacuum)	70 ±3	dB A
Highest density of service water	1200	kg/m³
Highest heat exchanger flow resistance	0,2	bar

OVERALL DIMENSIONS

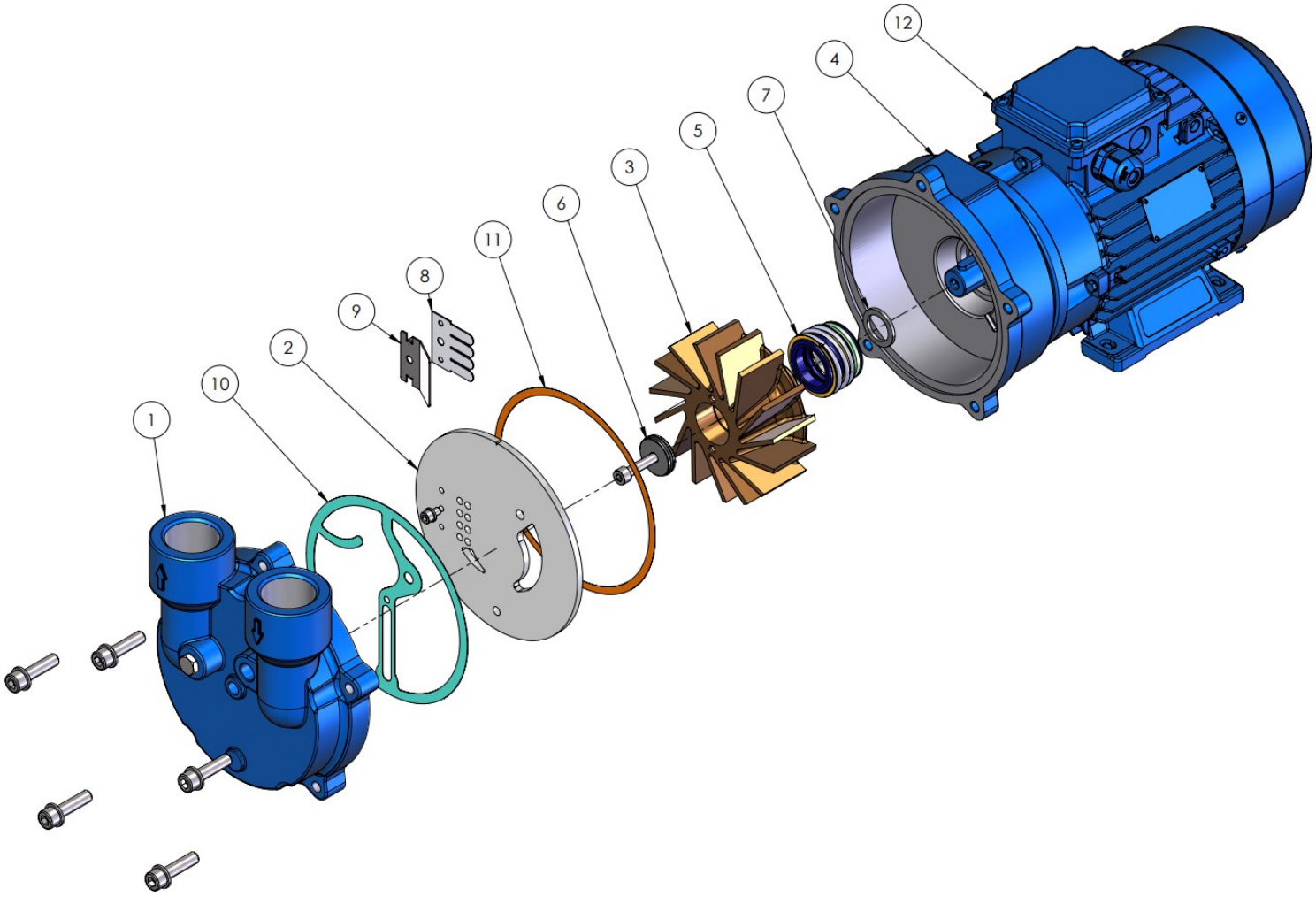


MODEL	50 Hz.	a	b	c	d	e	f	g	Weight
		mm / inch							kg / lbs
GMVP 145/050		458 / 18.03	125 / 4.92	140 / 5.51	184 / 7.24	107 / 4.21	195 / 7.67	222 / 8.74	32 / 70
GMVP 145/080		530 / 20.86	140 / 5.51	190 / 7.48	232 / 9.13	120 / 4.72	241 / 9.48	245 / 9.64	47 / 104

MODEL	60 Hz.	a	b	c	d	e	f	g	Weight
		mm / inch							kg / lbs
GMVP 145/050		500 / 19.68	140 / 5.51	190 / 7.48	232 / 9.13	120 / 4.72	211 / 8.3	222 / 8.74	38 / 84
GMVP 145/080		530 / 20.86	140 / 5.51	190 / 7.48	232 / 9.13	120 / 4.72	541 / 9.48	245 / 9.64	61 / 134

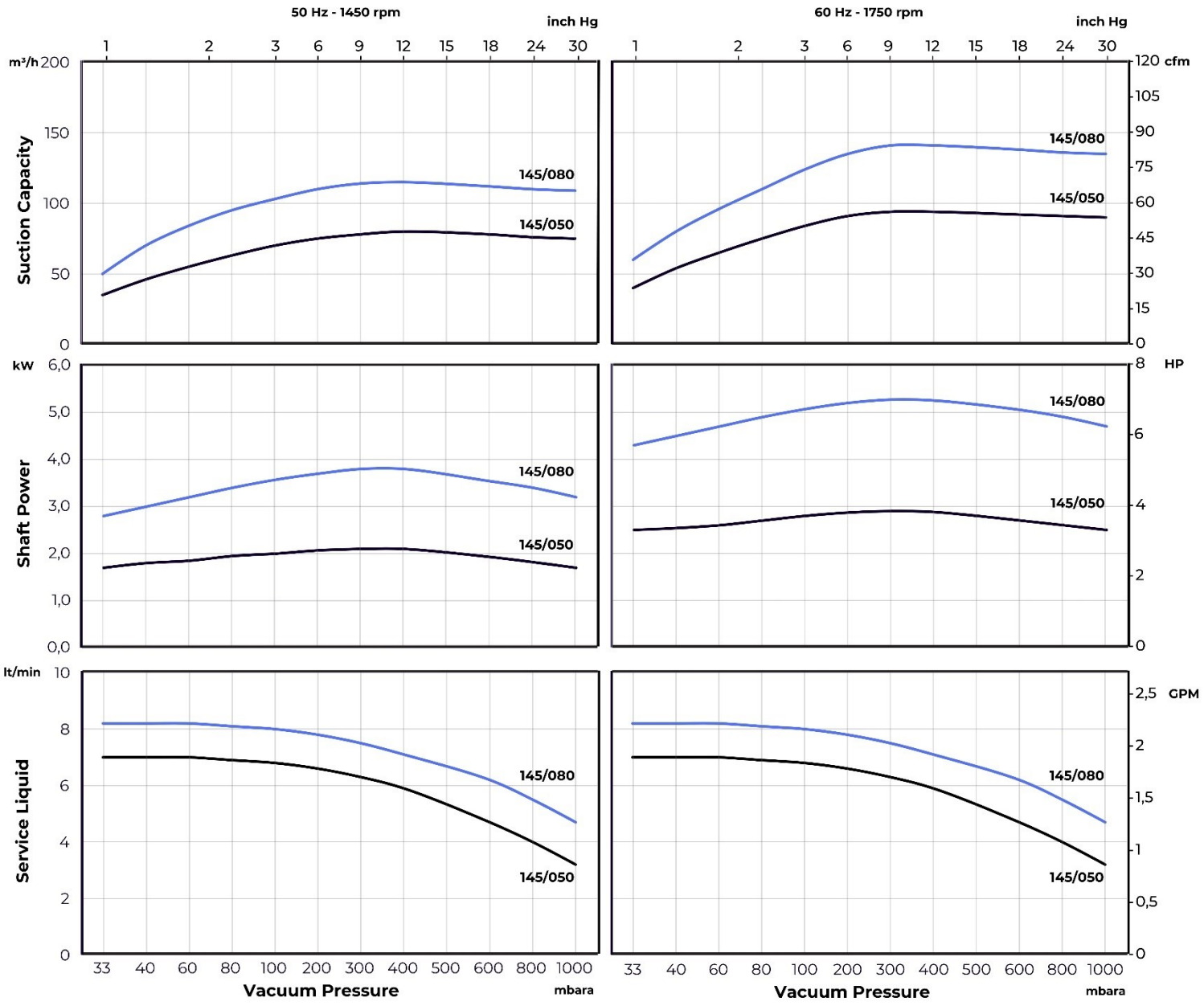
Motor Specifications								
	50 Hz	60 Hz	50 Hz			60 Hz		
Type	Frame Size – Flange Type		rpm	kW	HP	rpm	kW	HP
GMVP 145/050	90L – B34	112M – B34	2850	2.2	3	3450	3	4
GMVP 145/080	112M – B34	132S – B34	2850	4	5.5	3450	5.5	7.5

EXPLODED VIEW AND PART LIST



PART LIST	Cast Iron	Nodular Cast Iron	AISI 420	AISI 304	AISI 316	Bronze	St-37	Qty.
1. Suction & Discharge Casing	✓			✓	✓			1
2. Plate				✓	✓			1
3. Impeller				✓	✓	✓		1
4. Body		✓		✓	✓			1
5. Mechanical Seal	MG1 – Ø35/Ø45 – G6 / SiC – Carbon – Viton							1
6. Impeller Cover				✓	✓			1
7. Impeller Washer				✓	✓			1
8. Valve	PTFE							1
9. Valve Cover				✓	✓			1
10. Casing Gasket	Klingrite							1
11. Body Gasket	Paper							1
12. Electrical Motor	Aluminum Frame							1

CHARACTERISTIC CURVES



Suction Capacity		
Type	**50 Hz**	**60 Hz**
GMVP 145/050	35 – 80 m³/h / 20 – 47 cfm	40 – 94 m³/h / 23 – 55 cfm
GMVP 145/080	50 – 115 m³/h / 29 – 68 cfm	60 – 141 m³/h / 35 – 83 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.

LIQUID RING VACUUM PUMPS

GMVP 200/055 – GMVP 200/065 – GMVP 200/085

PRESSURE RANGE : 33 – 1013 mbara / 0.98 – 30 inHg

SUCTION CAPACITY : 33 – 165 m³/h / 19 – 97 cfm

GÜCÜM single stage liquid ring vacuum pumps
offer the following features with its monoblock structure;

- Operate safely and efficiently,
- Vacuum of all kinds of gases and vapors is ensured,
- Lesser amounts of liquid can also be vacuumed,
- The compression of the absorbed gases is isothermal,
- The rotating parts make no metallic contact,
- Operate quietly and without vibration,
- Low operating and investment costs,
- Can be used in any environment with a wide choice of materials.
- They operate at high efficiency for a long time without maintenance,
- It is oil-free and does not require any lubricant in its work environment,

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.

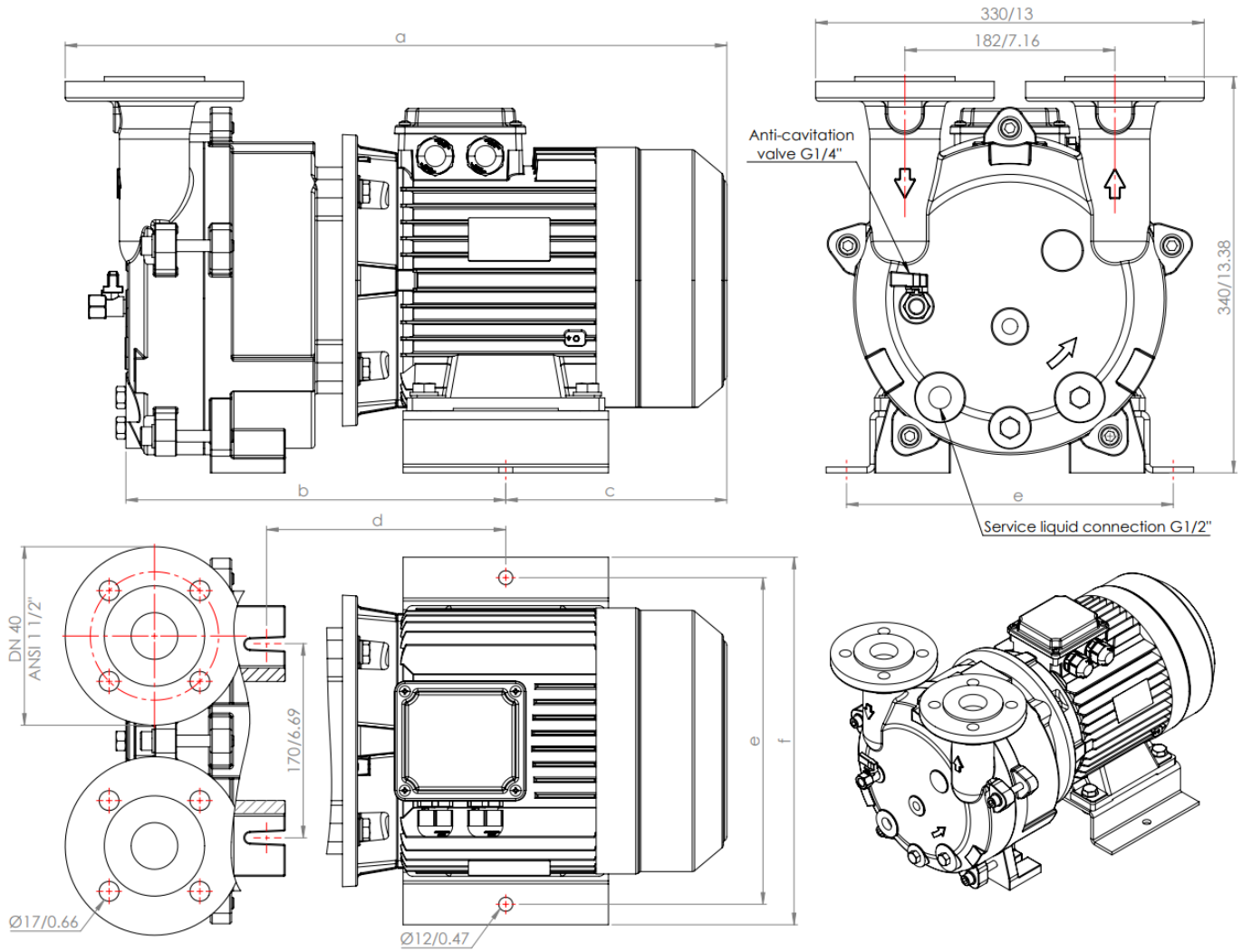
ADDITIONAL NOTE

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.
A standard mechanical seal ensures tightness.
It must be driven directly with the electric motor instead of using a coupling.

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	mm²/sec
Noise level (at 80 mbar vacuum)	70 ±3	dB A
Highest density of service water	1200	kg/m³
Highest heat exchanger flow resistance	0,2	bar

OVERALL DIMENSIONS

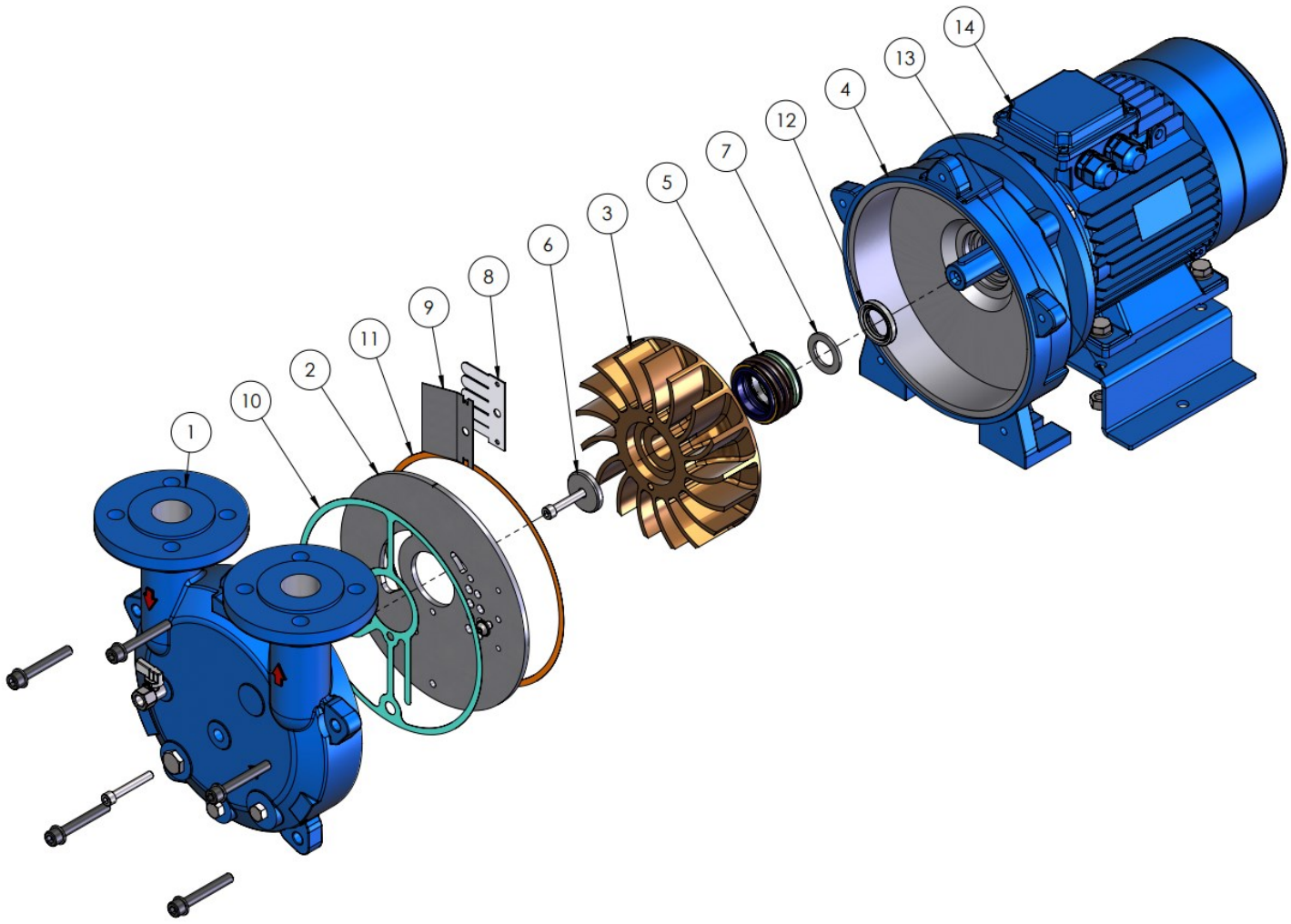


MODEL	50 Hz.	a	b	c	d	e	f	Weight
		mm / inch						kg / lbs
GMVP 200/055		520 / 20.5	279 / 11	183 / 7.2	165 / 6.5	250 / 9.85	279 / 11	55 / 121
GMVP 200/065		533 / 21	300 / 11.8	183 / 7.2	180 / 7.1	250 / 9.85	279 / 11	61 / 134
GMVP 200/085		564 / 22.2	325 / 12.8	190 / 7.5	206 / 8.1	279 / 11	318 / 12.5	72 / 159

MODEL	60 Hz.	a	b	c	d	e	f	Weight
		mm / inch						kg / lbs
GMVP 200/055		533 / 21	300 / 11.8	183 / 7.2	180 / 7.1	250 / 9.85	279 / 11	61 / 134
GMVP 200/065		564 / 22.2	325 / 12.8	190 / 7.5	203 / 8	279 / 11	318 / 12.5	72 / 159
GMVP 200/085		584 / 23	345 / 13.6	195 / 7.7	223 / 8.8	318 / 12.5	355 / 14	91 / 200

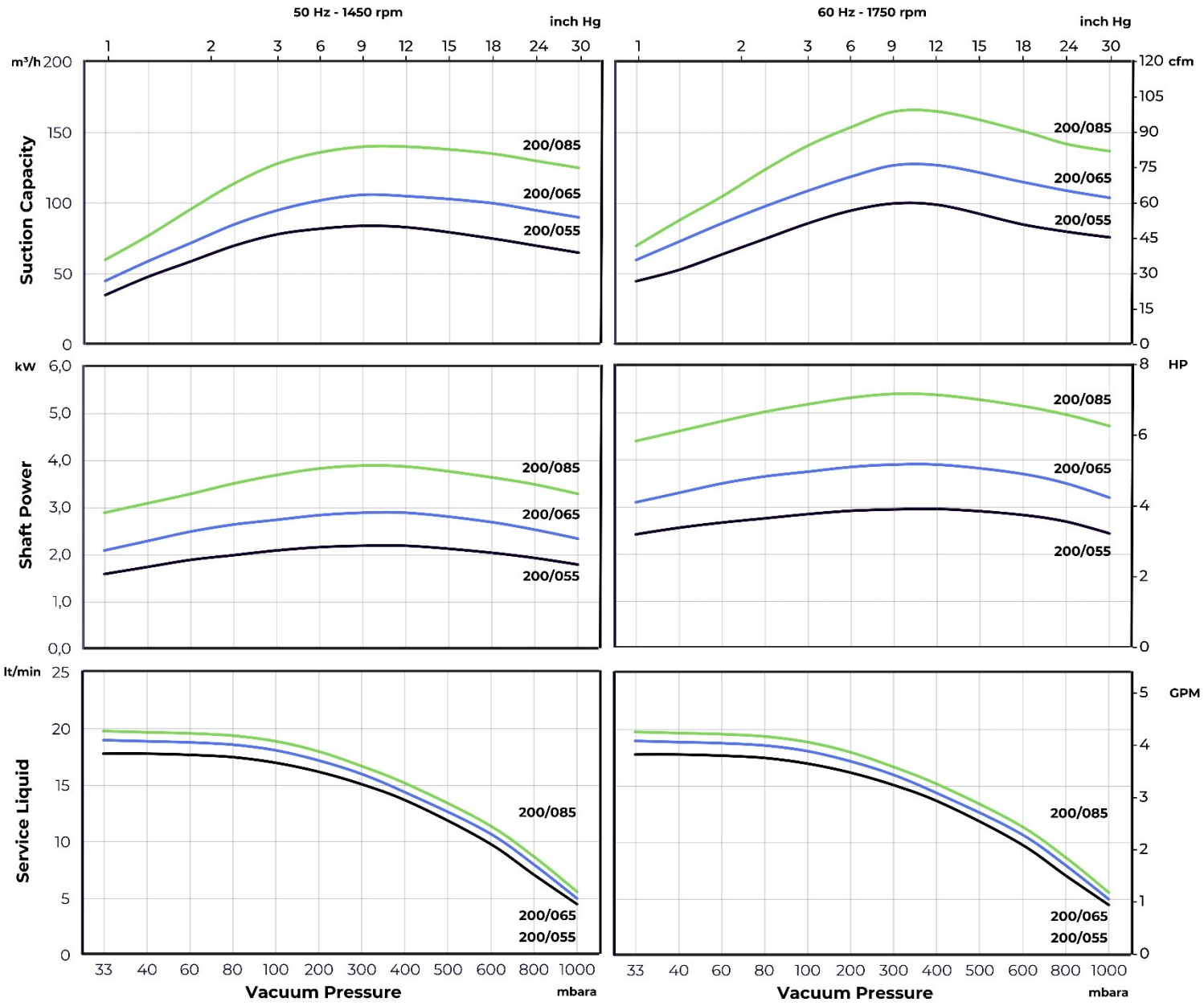
Motor Specifications								
	50 Hz.	60 Hz.	50 Hz.			60 Hz.		
Type	Frame Size – Flange Type		rpm	kW	HP	rpm	kW	HP
GMVP 200/055	100L – B35	100L – B35	1450	2.2	3.0	1750	3.0	4
GMVP 200/065	100L – B35	112M – B35	1450	3	4.0	1750	4	5.5
GMVP 200/085	112M – B35	132S – B35	1450	4	5.5	1750	5.5	7.5

EXPLODED VIEW AND PART LIST



PART LIST	Cast Iron	Nodular Cast Iron	AISI 420	AISI 304	AISI 316	Bronze	St-37	Qty.
1. Suction & Discharge Casing	✓			✓	✓			1
2. Plate				✓	✓			1
3. Impeller				✓	✓	✓		1
4. Body		✓		✓	✓			1
5. Mechanical Seal	MG1 – Ø45 – G6 / SiC – Carbon – Viton							1
6. Impeller Cover				✓	✓			1
7. Impeller Washer				✓	✓			1
8. Valve	PTFE							1
9. Valve Cover				✓	✓			1
10. Casing Gasket	Klingrite							1
11. Body Gasket	Paper							1
12. Oil Seal	Rubber							1
13. Chasis							✓	1
14. Electrical Motor	Aluminum Frame							1

CHARACTERISTIC CURVES



Suction Capacity		
Type	**50 Hz**	**60 Hz**
GMVP 200/055	33 – 84 m³/h / 19 – 50 cfm	45 – 100 m³/h / 26 – 59 cfm
GMVP 200/065	45 – 106 m³/h / 26 – 63 cfm	60 – 127 m³/h / 35 – 75 cfm
GMVP 200/085	60 – 140 m³/h / 35 – 83 cfm	70 – 165 m³/h / 41 – 97 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.

LIQUID RING VACUUM PUMPS

GMVP 230/090 – GMVP 230/120

PRESSURE RANGE : 33 – 1013 mbara / 0.98 – 30 inHg

SUCTION CAPACITY : 100 – 265 m³/h / 60 – 156 cfm

GÜCÜM single stage liquid ring vacuum pumps
offer the following features with its monoblock structure;

- Operate safely and efficiently,
- Vacuum of all kinds of gases and vapors is ensured,
- Lesser amounts of liquid can also be vacuumed,
- The compression of the absorbed gases is isothermal,
- The rotating parts make no metallic contact,
- Operate quietly and without vibration,
- Low operating and investment costs,
- Can be used in any environment with a wide choice of materials.
- They operate at high efficiency for a long time without maintenance,
- It is oil-free and does not require any lubricant in its work environment,

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.

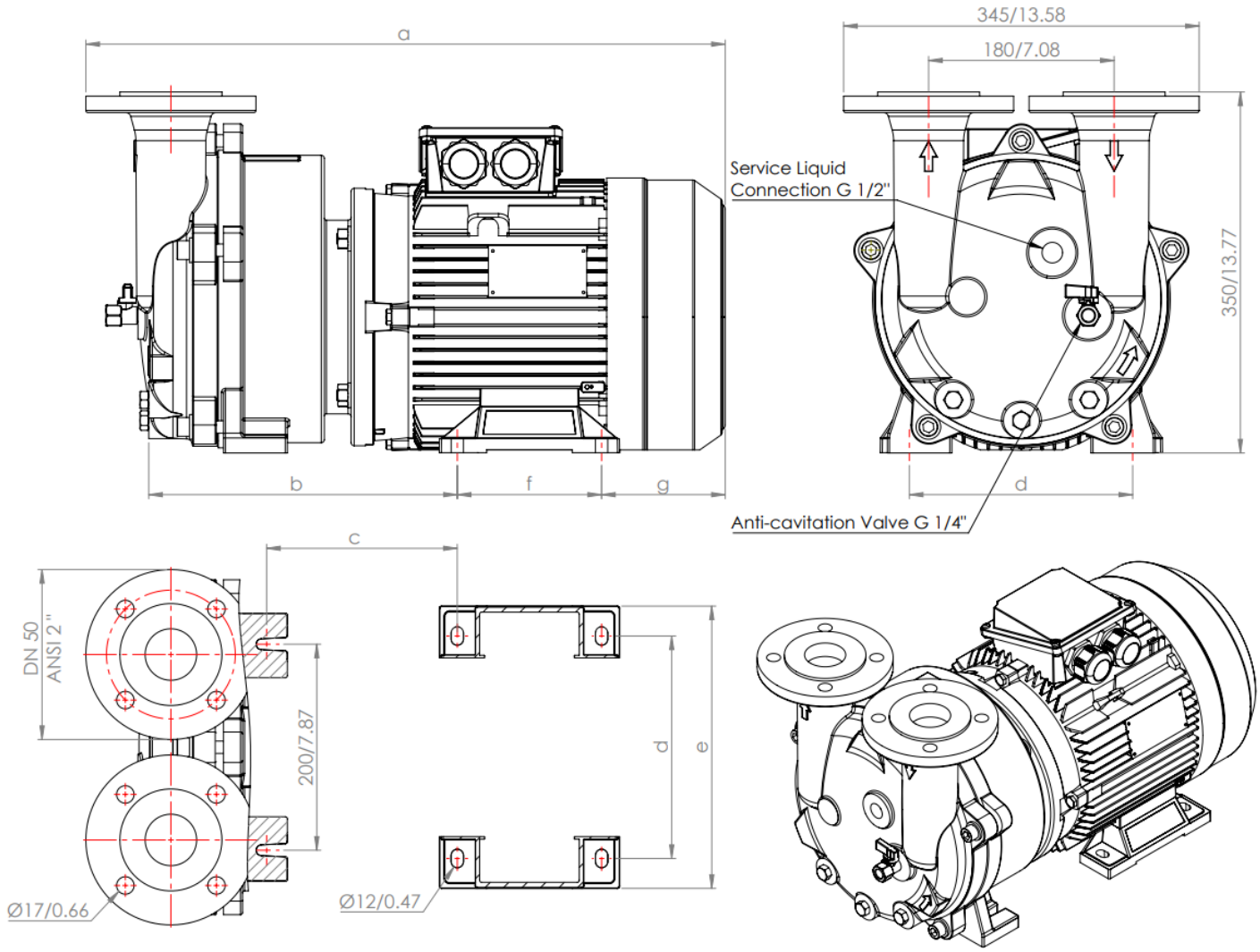
ADDITIONAL NOTE

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.
A standard mechanical seal ensures tightness.
It must be driven directly with the electric motor instead of using a coupling.

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	mm²/sec
Noise level (at 80 mbar vacuum)	70 ±3	dB A
Highest density of service water	1200	kg/m³
Highest heat exchanger flow resistance	0,2	bar

OVERALL DIMENSIONS

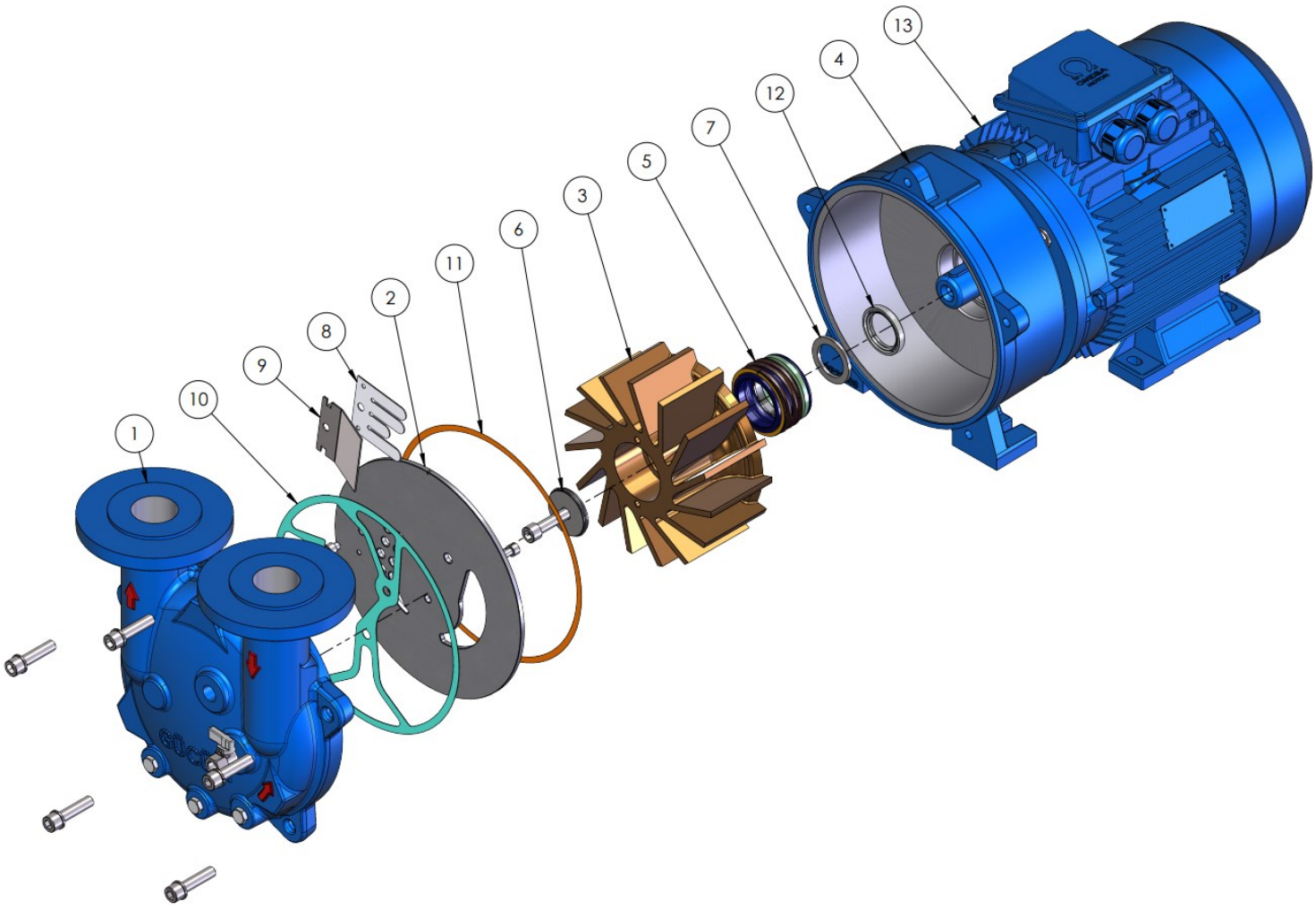


MODEL	50 Hz.	a	b	c	d	e	f	g	Weight
		mm / inch							kg / lbs
GMVP 230/090		620 / 24.4	300 / 11.8	185 / 7.3	216 / 8.5	274 / 10.8	140 / 5.5	128 / 5	91 / 200
GMVP 230/120		650 / 25.6	330 / 13	216 / 8.5	216 / 8.5	274 / 10.8	140 / 5.5	128 / 5	98 / 216

MODEL	60 Hz.	a	b	c	d	e	f	g	Weight
		mm / inch							kg / lbs
GMVP 230/090		660 / 26	300 / 11.8	185/7.3	216 / 8.5	274 / 10.8	178/7	130 / 5.1	102 / 225
GMVP 230/120		690 / 27.2	330 / 13	216 / 8.5	216 / 8.5	274 / 10.8	178/7	130 / 5.1	109 / 240

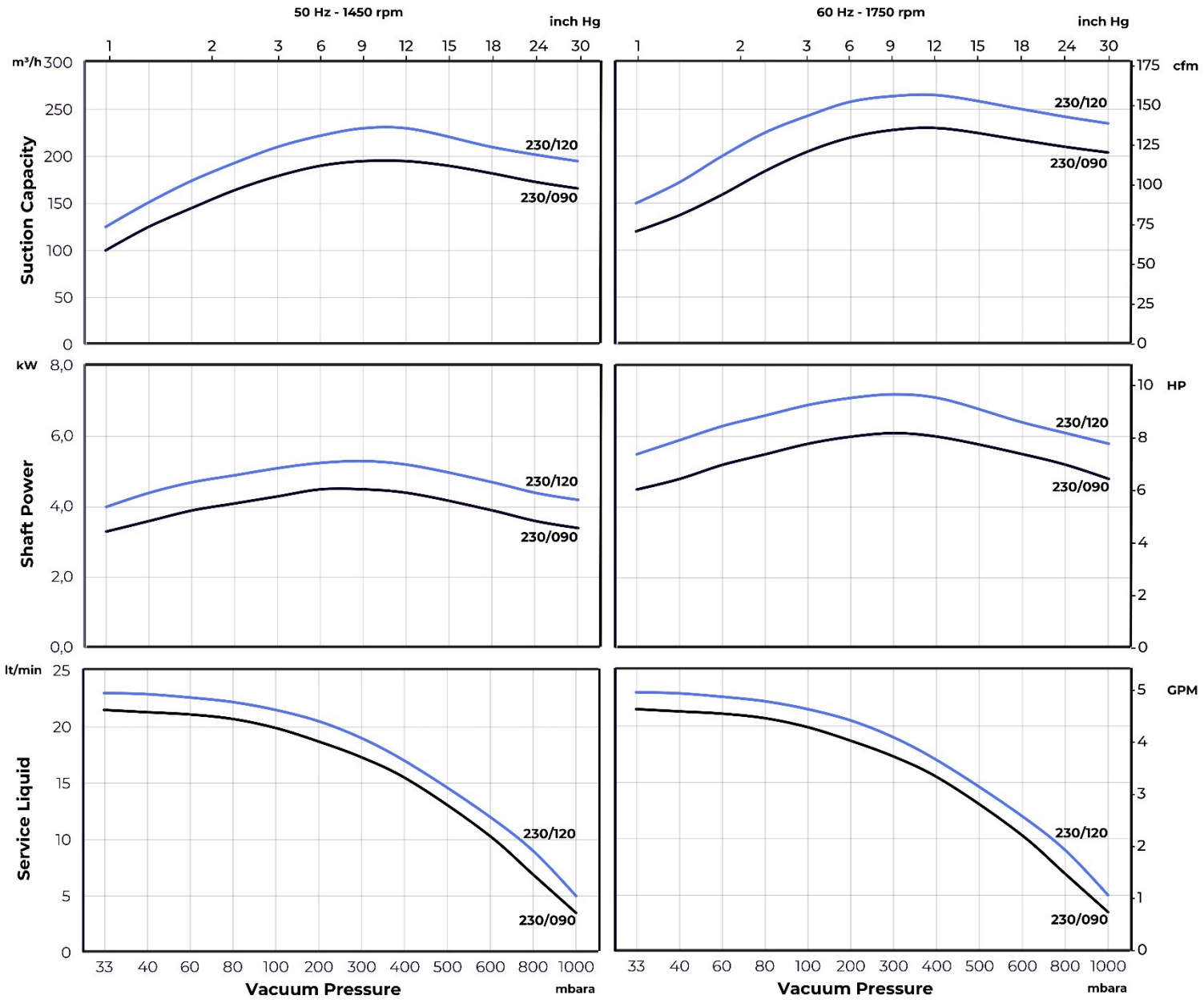
Motor Specifications								
	50 Hz	60 Hz	50 Hz			60 Hz		
Type	Frame Size – Flange Type		rpm	kW	HP	rpm	kW	HP
GMVP 230/090	132S – B34	132M – B34	1450	5.5	7.5	1750	7.5	10
GMVP 230/120	132S – B34	132M – B34	1450	5.5	7.5	1750	7.5	10

EXPLODED VIEW AND PART LIST



PART LIST	Cast Iron	Nodular Cast Iron	AISI 420	AISI 304	AISI 316	Bronze	St-37	Qty.
1. Suction & Discharge Casing	✓			✓	✓			1
2. Plate				✓	✓			1
3. Impeller				✓	✓	✓		1
4. Body		✓		✓	✓			1
5. Mechanical Seal	MG1 – Ø55 – G6 / SiC – Carbon – Viton							1
6. Impeller Cover				✓	✓			1
7. Impeller Washer				✓	✓			1
8. Valve	PTFE							1
9. Valve Cover				✓	✓			1
10. Casing Gasket	Klingrite							1
11. Body Gasket	Paper							1
12. Oil Seal	Rubber							1
13. Electrical Motor	Aluminum Frame							1

CHARACTERISTIC CURVES



Suction Capacity		
Type	**50 Hz**	**60 Hz**
GMVP 230/090	100 – 195 m³/h / 60 – 115 cfm	120 – 230 m³/h / 70 – 135 cfm
GMVP 230/120	125 – 230 m³/h / 74 – 135 cfm	150 – 265 m³/h / 88 – 156 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.

LIQUID RING VACUUM PUMPS

Monoblock GMVP 270/110 - GMVP 270/155

Pressure Range : 33 - 1013 mbar
Suction Capacity : 110 - 382 m^3/h

GÜCÜM Single 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.

GÜCÜM Single Stage Liquid Ring Vacuum Pumps have the below features:

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

Service Liquid

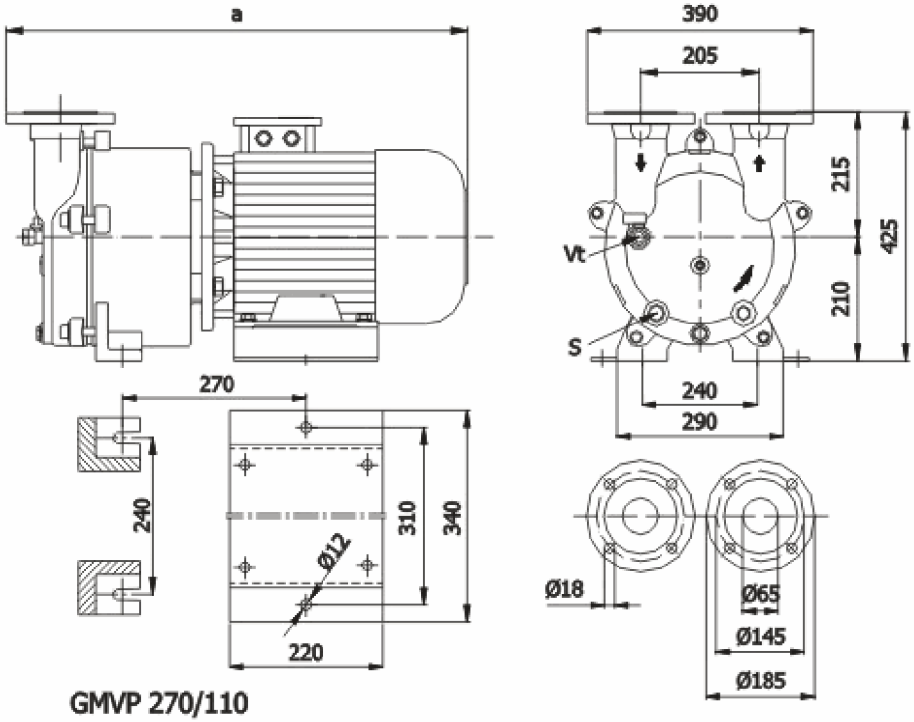
During pump working, service liquid must be supplied to replenish the liquid ring and to cool the pump (generally water is used). The exhausted liquid could be used again after seperating the gas inside of it.

The direction of the rotation is clockwise, when looking from the motor on the pump.

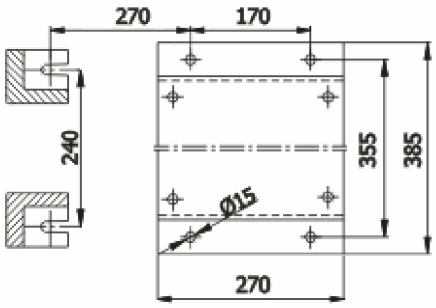
TECHNICAL PROPERTIES

Properties	Unit	GMVP 270/110	GMVP 270/155
Motor Power	kW	7,5	11
Motor Speed	rpm	1450	
Max. Service liquid flow	lt/min	23	25
Max. Admissible pressure difference	bar	1,1	
Max. Gas temperature	°C	100	
Max.Service liquid temperature	°C	70	
Max. Service liquid viscosity	mm^2/s	4	
Sound pressure level (at 80 mbar suc. pressure)	dB A	72 ±3	
Max. Service liquid density	kg/m^3	1200	
Max. Flow resistance of the heat exchanger	bar	0,2	

OVERALL DIMENSIONS



GMVP 270/110



GMVP 270/155

MODEL	a	Weight kg
GMVP 270/110	720	132
GMVP 270/155	840	193

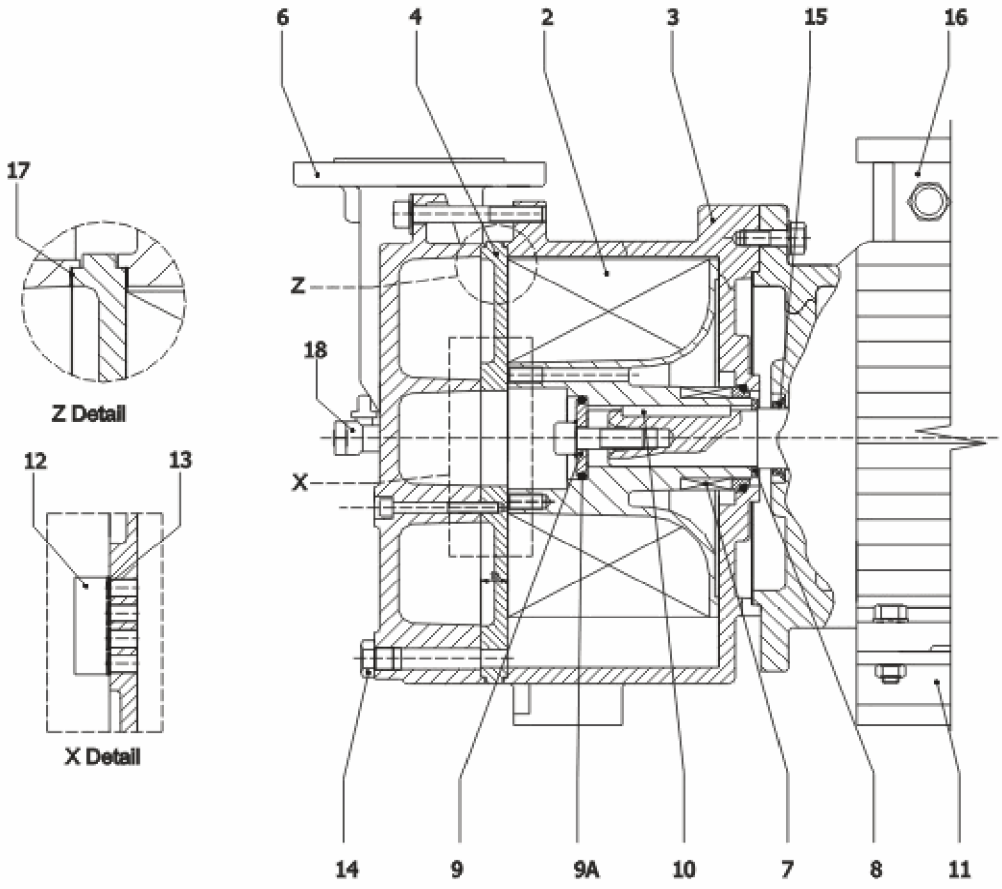
S: Service liquid Inlet G 3/4"
Vt: Anti-cavitation Valve G 1/2"

MATERIALS

Part Name	Standard Construction	Stainless Steel Construction
Suction&Discharge Casing	GG 25 Cast Iron	AISI 304-AISI 316 St. Steel
Plate	AISI 304 St. Steel	AISI 304-AISI 316 St. Steel
Body	GGG 40 Sph. Cast Iron	AISI 304-AISI 316 St. Steel
Impeller	G Cu Sn 9 Bronze	AISI 304-AISI 316 St. Steel
Mechanical Seal	Si. Carbide/ Carbon/Viton	Cr Ni Mo Steel/Carbon/Viton
Valve	PTFE	PTFE

SECTIONAL DRAWING AND PART LIST

GMVP 270/110 - GMVP 270/155



No	Part Name
2	Impeller
3	Body
4	Plate
6	Suction&Discharge Casing
7	Mechanical Seal
8	Impeller Spacer
9	Impeller Cover
9A	O-ring
10	Key
11	Baseplate
12	Valve Cover
13	Valve
14	Plug
15	Gasket
16	Electric Motor
17	Paper Gasket
18	Anti-cavitation Valve

CHARACTERISTIC CURVES

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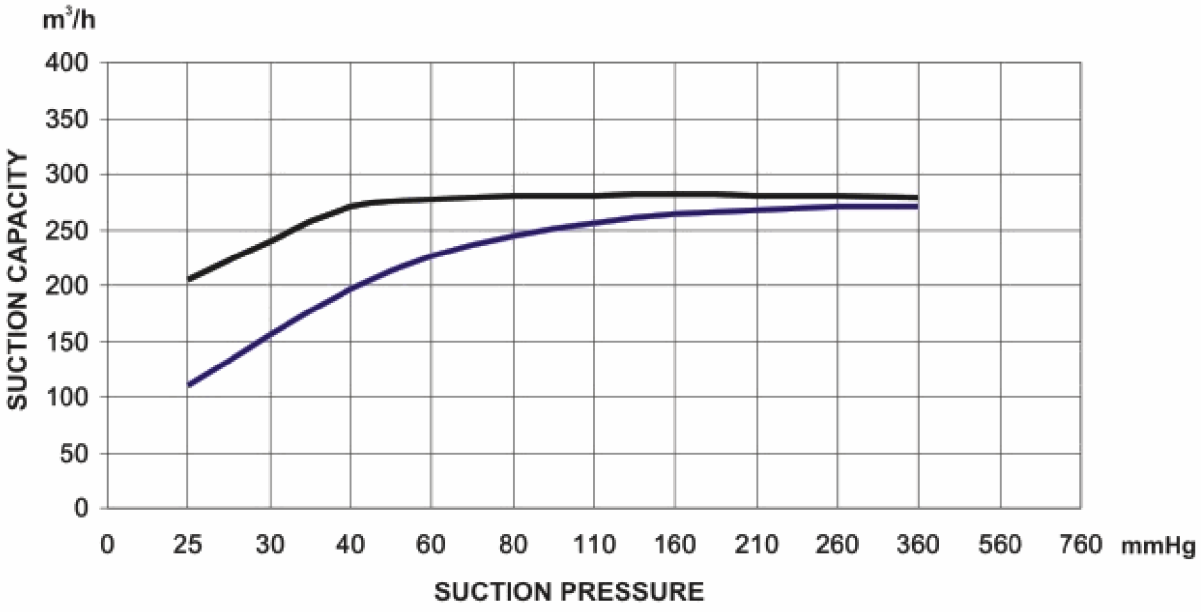
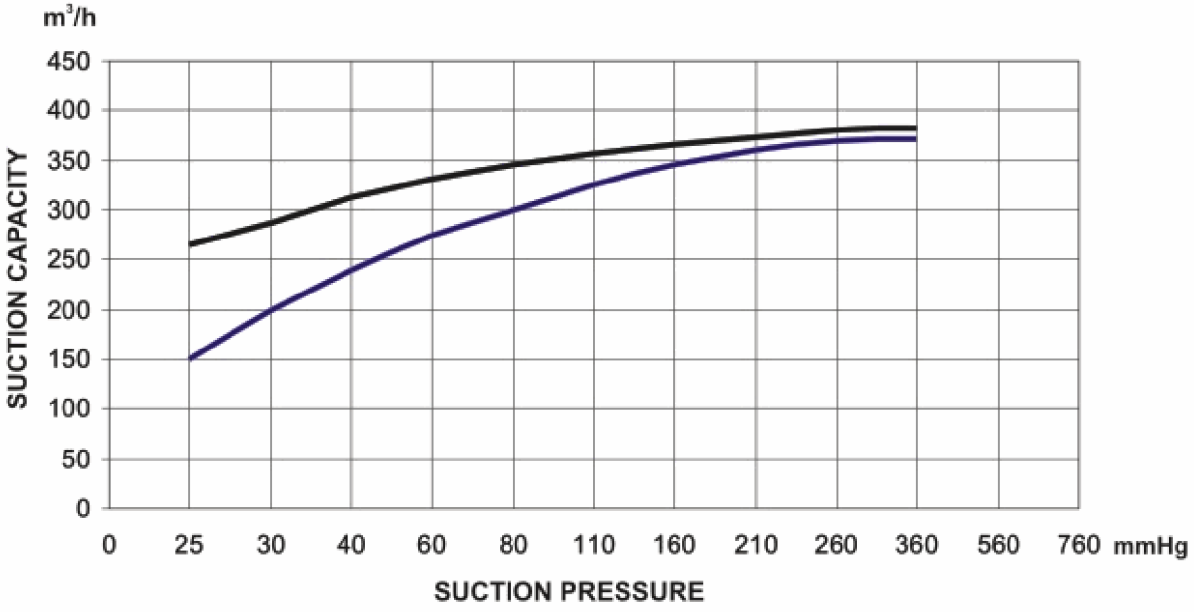
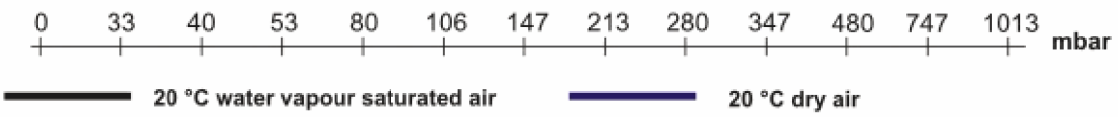


GMVP 270/155





20 °C water vapour saturated air

20 °C dry air

The capacities shown at the graph are for 760 mmHg athmosphere pressure and service liquid temperature 15 °C .
Tolerance of the curves are 10% .