

SPECIAL PRODUCTS



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DEGASIFIERS

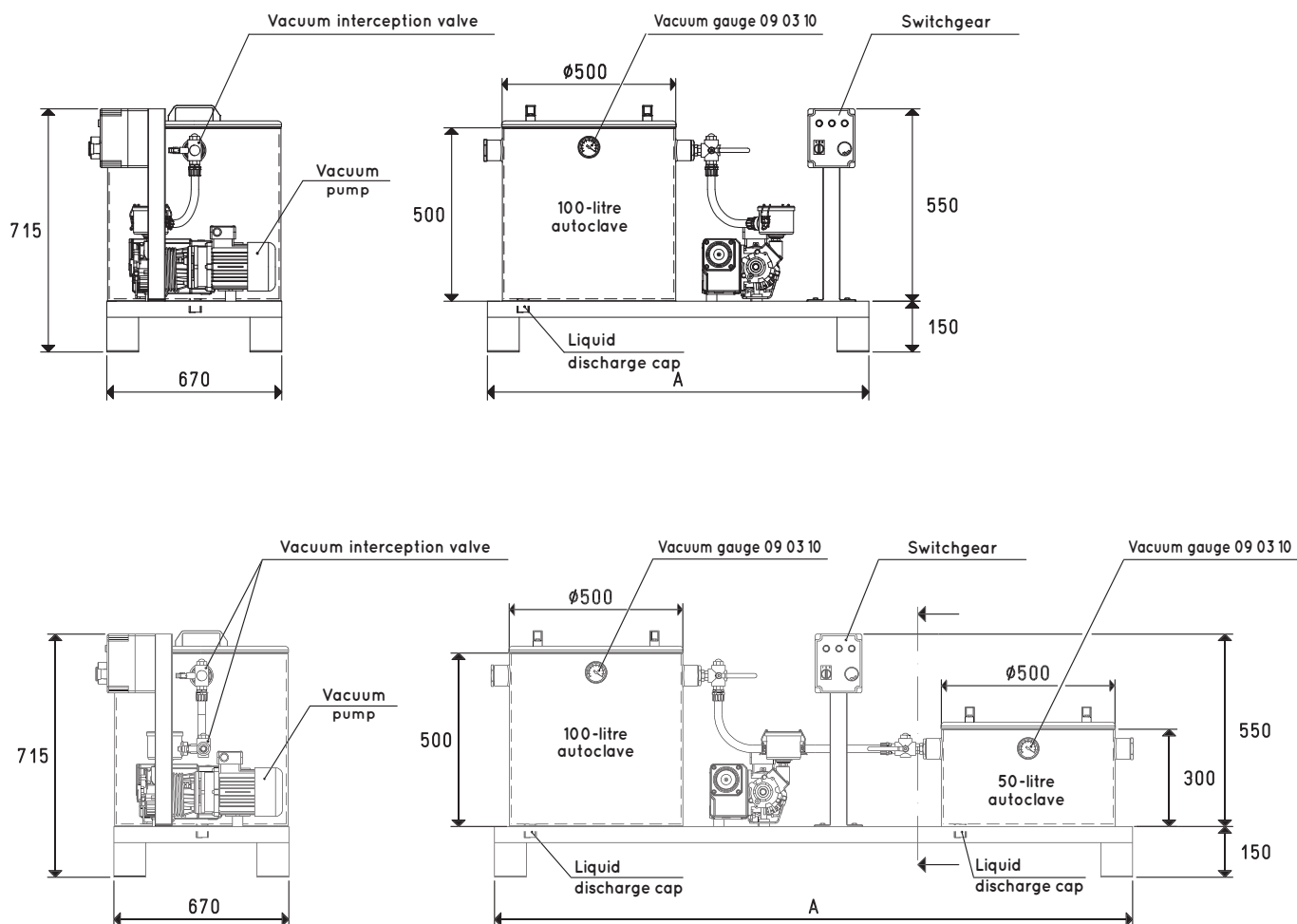
The function of degasifiers is to suck the air bubbles that remain in the synthetic resin or composite material mixes and in silicon or similar compounds during their preparation. The presence of bubbles, in fact causes a drastic reduction of their technical features and negatively affects their appearance.

Degasifiers are composed of:

- One or two welded sheet steel autoclaves, featuring a perfect vacuum seal, equipped with transparent methacrylate lids that can be manually removed.
- An oil-bath rotating vane pump for high vacuum.
- One or two vacuum switches for a direct reading of the level of vacuum in the autoclave.
- One or two three-way manual valves for vacuum interception.
- A switchgear enclosed in a special protective casing.
- A profiled steel frame for assembling all the components.

Inside the autoclave, the degasifiers can reach a final level of vacuum equal to 99.5 %. With small modifications and with the aid of insulating or waterproofing resins these degasifiers can be used for vacuum-impregnating windings for electric motors, transformers, electric coils, etc.

Upon request they can also be supplied in different versions.



Item	Autoclaves Litres	Pump mod.	Motor performance Volt	Motor power Kw	Switchgear item	A	Weight Kg
DR 100 01	100	RVP 21	3 ~ 230/400-50Hz	0.75	DR 100 90	1100	62.0
DR 100 02	100	RVP 40	3 ~ 230/400-50Hz	1.10	DR 100 90	1100	85.5
D2R 150 01	100+50	RVP 21	3 ~ 230/400-50Hz	0.75	DR 100 90	1600	82.0
D2R 150 02	100+50	RVP 40	3 ~ 230/400-50Hz	1.10	DR 100 90	1600	105.5

NOTE: The vacuum gauges installed can be supplied with an Accredia calibration certificate.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



MOBILE SYSTEM FOR RESIN VACUUM INFUSION

This system has been designed for allowing resin vacuum infusion moulding and composite fibre vacuum forming.

The system is composed of:

- A welded sheet steel autoclave featuring a perfect vacuum seal, equipped with a transparent methacrylate lid that can be manually removed.
- An oil-bath rotating vane pump for high vacuum.
- A reducer for adjusting the required level of vacuum.
- A vacuum gauge, for a direct reading of the level of vacuum in the autoclave.
- A three-way manual valve for pump vacuum interception and for restoring the atmospheric pressure inside the autoclave.
- A two-way valve for vacuum interception at the application.
- Switchgear enclosed in a special casing.
- A profiled steel frame for assembling all the components mounted on wheels.
- A handle to move and place it.

Resin vacuum infusion moulding is carried out connecting the connector controlled by the two-way manual valve to the mould.

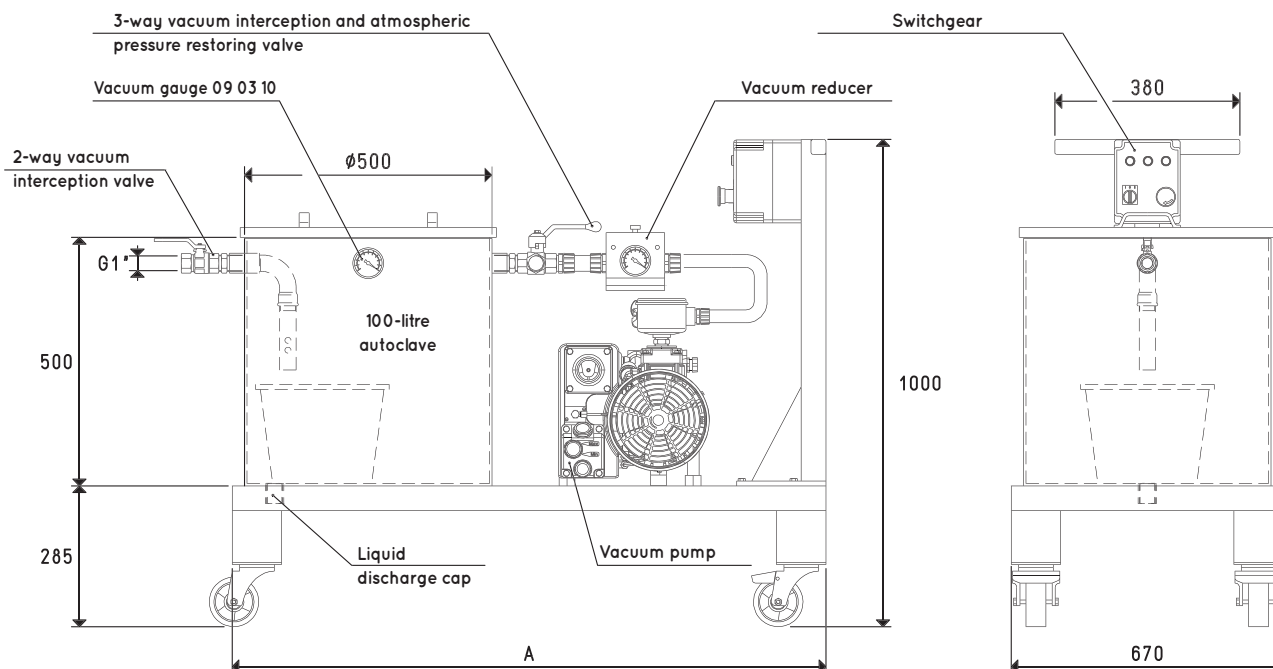
The resin inside its container is sucked via the vacuum inside the mould, until it's totally full. The resin in excess is collected in the autoclave.

The same connector can be connected to the vacuum press bag for forming composite fibres.

The installed vacuum pumps can reach a maximum level of vacuum of 99.5% inside the autoclave. Therefore, this device can also be used as a degasifier.

The vacuum reducer allows adjusting the level of vacuum within a minimum value of 20% a maximum value of 99.5%.

Upon request they can also be supplied in different versions.



Item	Autoclave Litres	Pump mod.	Motor performance Volt	Motor power Kw	Switchgear item	A	Weight Kg
DR 100 M 01	100	RVP 21	3 ~ 230/400-50Hz	0.75	DR 100 90	1100	64.0
DR 100 M 02	100	RVP 40	3 ~ 230/400-50Hz	1.10	DR 100 90	1100	87.5

NOTE: The vacuum gauges installed can be supplied with an Accredia calibration certificate.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

ELECTRICAL EQUIPMENT FOR VACUUM TESTS

These devices have been created for testing the weldings and, therefore, the sealing of cellophane or PVC wrappings for food products.

In fact, the wrapping placed inside a bell jar tends to inflate because of the pressure differential created between the air at atmospheric pressure contained inside and the vacuum created inside the bell jar. The higher the level of vacuum reached in the bell jar and the greater the thrust that the air contained in the wrapping will exert on the walls and, therefore, on the weldings.

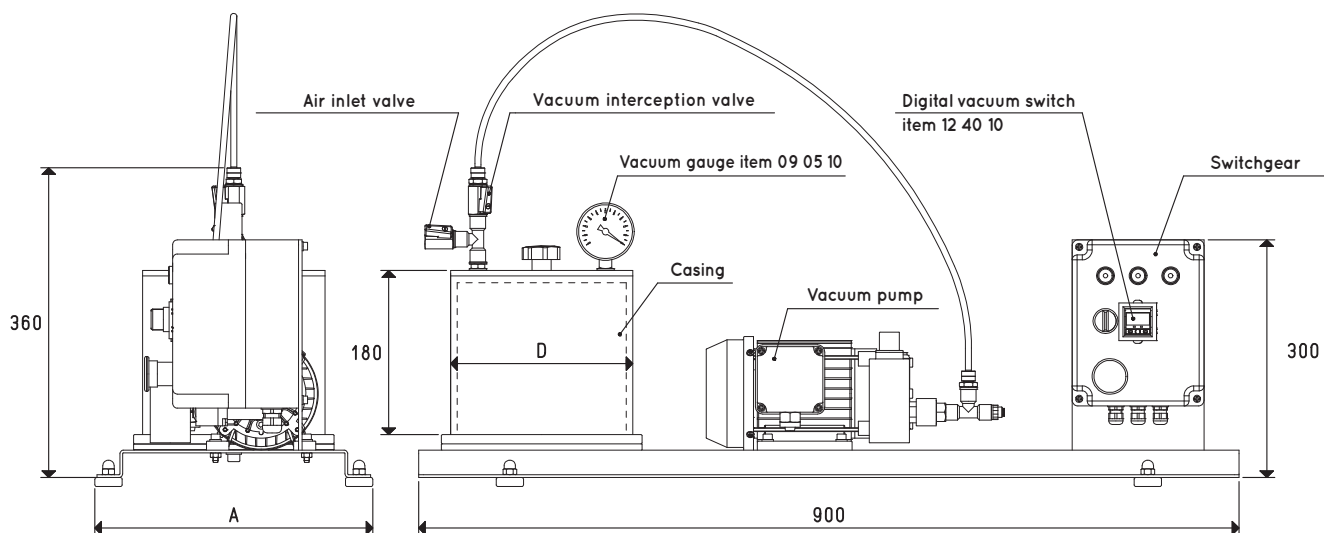
The devices for vacuum tests are composed of:

- A mobile transparent Plexiglass bell jar.
- A support surface with seal.
- A dry rotating vane vacuum pump.
- Two 2-way manual valves for vacuum interception.
- A vacuum gauge for a direct reading of the level of vacuum and the atmospheric air in the bell jar at the end of the cycle.
- A switchgear enclosed in a special protective casing with a digital vacuum switch to adjust the level of vacuum in the bell jar.
- A bent sheet steel frame with anti-vibration feet for assembling all the components described above.

The level of vacuum that can be reached inside the bell jar depends on the pump installed.

The test values are adjustable and can be automatically repeated

Available in other versions upon request.



Item	Bell jar Litres	Pump mod.	Motor performance Volt	Motor power Kw	Switchgear item	A	D Ø	Weight Kg
ATS 05	5.5	VTS 4M	1 ~ 230-50Hz	0.18	DO 06 95 V	300	200	21.5
ATS 20	21.5	VTS 10M	1 ~ 230-50Hz	0.37	DO 06 95 V	500	400	29.5

NOTE: The vacuum gauges installed can be supplied with an Accredia calibration certificate.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



EQUIPMENT FOR VACUUM TESTS

The function of these devices is to test the welding sealing in flow-pack, cellophane or food product wrappings.

They are composed of:

- A transparent Plexiglass cylindrical container into which the water is poured and the vacuum is created.
- A mobile transparent Plexiglass lid with, on its lower part, a perforated disc fixed via a pin which is for keeping the flow-pack wrapping submerged in the water, in the container and on its upper part, the instruments for managing and controlling the vacuum.
- A multiple ejector multi-stage vacuum generator.
- A check valve located on the generator suction inlet to prevent the air from returning into the container when the generator is not in operation.
- A sleeve valve for compressed air interception.
- A supply compressed air reducer equipped with pressure gauge.
- A 2-way manual valve for restoring the atmospheric pressure inside the container.

The wrapping submerged in the water in the container tends to inflate because of the pressure differential produced between the air at atmospheric pressure on its inside and the vacuum created in the container.

The higher the level of vacuum reached in the bell jar and the greater the thrust that the air contained in the wrapping will exert on the walls and, therefore, on the weldings.

Any air leak from the wrapping due to a defecting welding is proved by bubbles that indicate the exact point of the welding that's leaking.

The level of vacuum that can be reached inside the bell jar depends on the pump installed.

The test values are adjustable and can be automatically repeated.

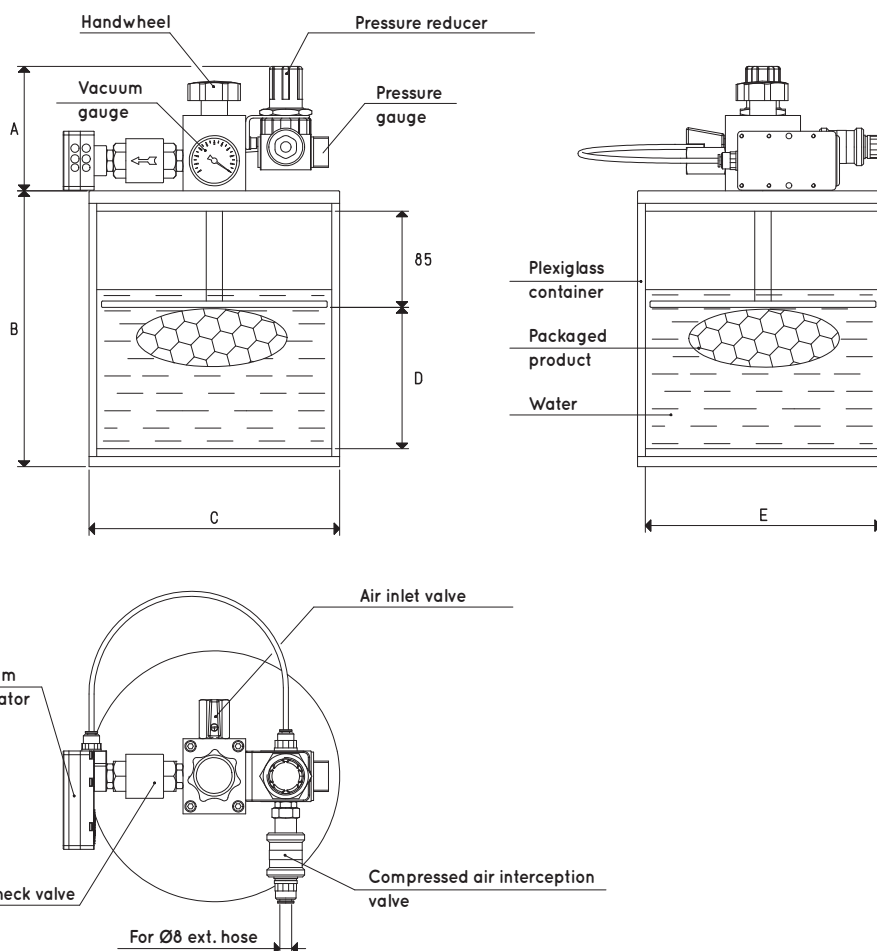
Available in other versions upon request.

Technical features

Operating pressure: from 0.5 to 1000 absolute mbar

Fluid temperature: from -5 to +50°C

Level of filtration: 60 µ



Item	Container Litres	A	B	C Ø	D	E Ø	Generator item	Vacuum gauge item	Weight Kg
ATP 02	6.0	100	220	200	100	190	M10	09 03 15	5.0
ATP 03	26.0	100	250	457	130	433	M14	09 03 15	18.0
ATP 04	56.0	100	450	457	316	433	M18	09 03 15	25.0

NOTE: Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

The vacuum gauges installed can be supplied with an Accredia calibration certificate.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

11.05



SUCTION UNITS WITH SYPHON FILTER GA FS 20 ES - GA FS 30 ES

These suction units with syphon filters share the same features and functions as the previous ones; their distinctive features are their size and the type of generator installed. Their functions are also the same.

These devices are composed of:

- A standard syphon filter described in Chapter 5.
- A compressed air-operated multi-stage vacuum generator with a built-in energy-saving system ES.
- A vacuum gauge for a direct reading of the level of vacuum in the container.
- A shut off valve to intercept compressed air

The level of vacuum, preset with the vacuum switch, is automatically maintained in the Plexiglass container. Like the previous ones, these suction units with syphon filter are also suited for vacuum cup clamping systems for gripping glass, marble, granite, light alloys and in all those cases with a considerable presence of refrigerating liquids.

They are also recommended for suctioning creamy or muddy substances which can be difficult to handle with traditional pumps.

These suction assemblies are fed by compressed air at a pressure of 4-6 bar only.

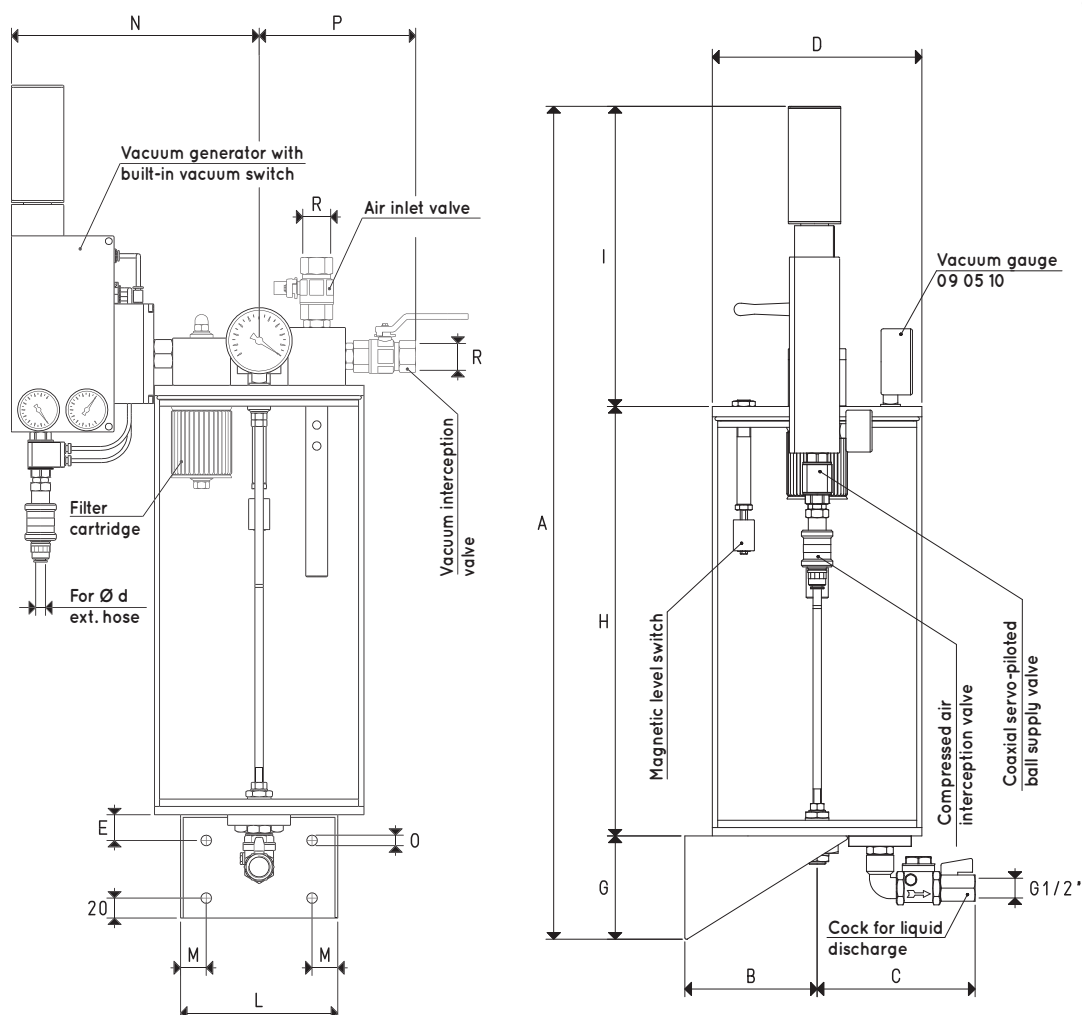
Available in other versions upon request.

Technical features

Operating pressure: from 0.5 to 1000 absolute mbar

Fluid temperature: from -5 to +50°C

Level of filtration: 60 µ



Item	A	B	C	d	D	E	G	H	I	L	M	N	O	P	R	Generator of vacuum item	Flow rate L	Weight Kg
GA FS 20 ES	800	130	175	8	200	25	100	410	290	150	25	240	10	145	G1/2"	PVP 25 MDX ES	10.5	9.5
GA FS 25 ES	900	150	195	8	240	25	100	510	290	170	30	270	11	180	G3/4"	PVP 50 MDX ES	19.5	12.0
GA FS 30 ES	1060	190	225	12	300	30	120	610	330	200	40	310	11	220	G1"	PVP 75 MDX ES	38.0	22.0

NOTE: Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

SAFETY SUCTION UNITS WITH SYPHON FILTER

These units have the same functions as the previous ones, but they differ in their automation and composition. In fact, these devices are composed of:

- A standard syphon filter described in Chapter 5.
- Two compressed air-operated multi-stage vacuum generators with a built-in energy-saving system ES.
- A vacuum gauge for a direct reading of the level of vacuum in the container.
- Two sleeve valves for compressed air interception.

These safety suction units normally provide for the operation of one vacuum generator with subsequent automatic insertion of the other one for higher consumptions and when, for whatever reason, the plant level of vacuum goes below the preset minimum value. All this also guarantees continuous operation even in presence of a vacuum generator breakdown.

The level of vacuum, preset with the vacuum switch, is automatically maintained in the Plexiglass container. These suction units with syphon filter are suited for vacuum cup clamping systems for gripping glass, marble, granite, light alloys and in all those cases with a considerable presence of refrigerating liquids and an effective need to ensure the presence of vacuum throughout the entire production cycle.

They are also recommended for suctioning creamy or muddy substances which can be difficult to handle with traditional pumps.

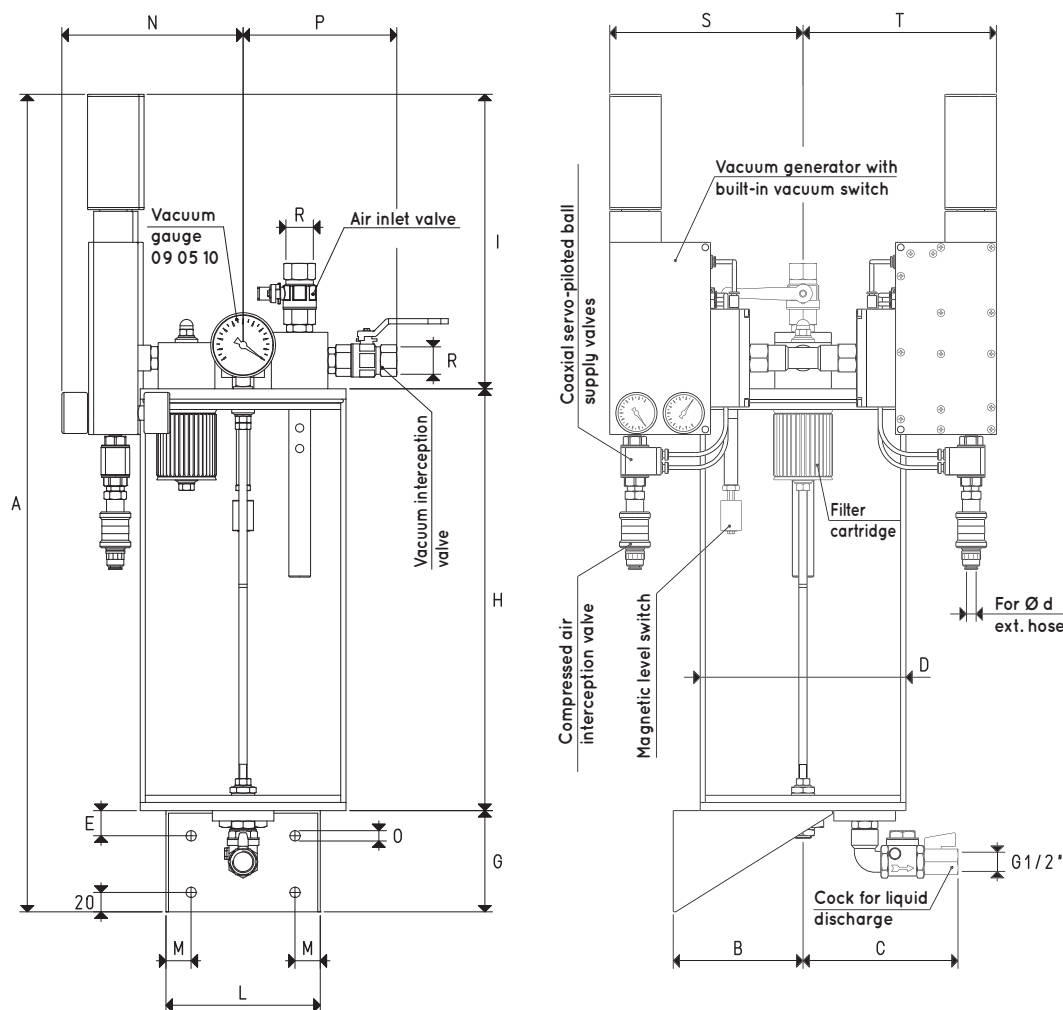
These suction assemblies are fed by compressed air at a pressure of 4-6 bar only. Available in other versions upon request.

Technical features

Operating pressure: from 0.5 to 1000 absolute mbar

Fluid temperature: from -5 to +50°C

Level of filtration: 60 µ



Item	A	B	C	d	D	E	G	H	I	L	M	N	O	P	R	S	T	2 Generators of vacuum item	Flow rate L	Weight Kg
				Ø	Ø								Ø		Ø					
GAS FS 20 ES	800	130	175	8	200	25	100	410	290	150	25	175	10	145	G1/2"	188	188	PVP 25 MDX ES	10.5	11.5
GAS FS 25 ES	900	150	195	8	240	25	100	510	290	170	30	175	11	180	G3/4"	188	188	PVP 50 MDX ES	19.5	14.0
GAS FS 30 ES	1060	190	225	12	300	30	120	610	330	200	40	190	11	220	G1"	201	201	PVP 75 MDX ES	38.0	24.0

NOTE: Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$



LIQUID-SUCKING PUMP SETS

These pump sets are for sucking liquids and collect them inside their tanks. The maximum level difference that can be exceeded is approximately 9 metres.

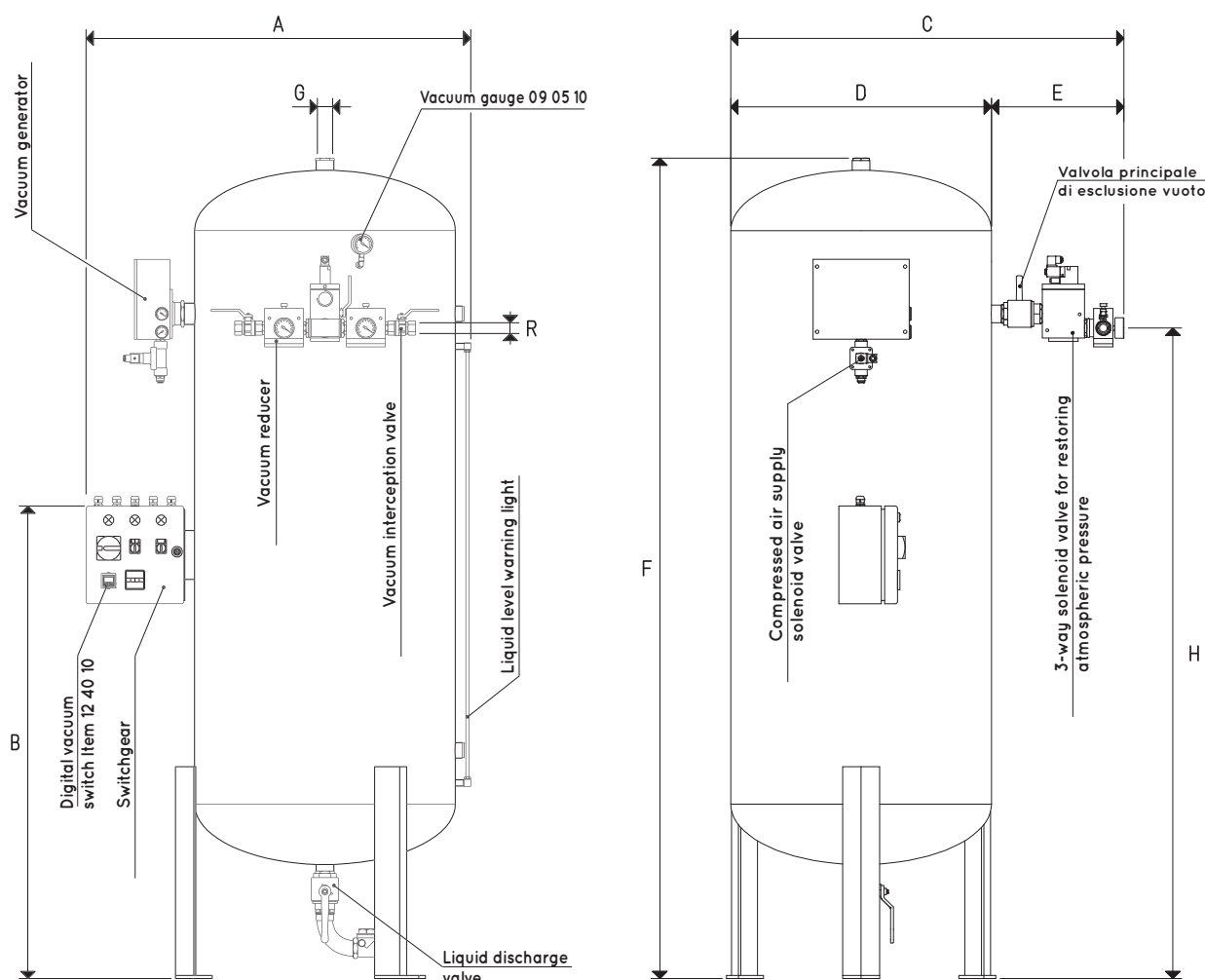
They are composed of:

- A welded sheet steel large-capacity tank
- A compressed air-fed multi-stage vacuum generator
- A digital vacuum switch for adjusting the level of vacuum within which to operate
- A vacuum gauge for a direct reading of the level of vacuum in the tank
- A liquid level visible warning light
- Two magnetic switches for minimum and maximum liquid level
- One three-way vacuum solenoid valve for resetting the atmospheric pressure in the tank, with consequent automatic discharge of the accumulated liquid
- Two vacuum reducers for level of vacuum adjustment at the application
- Three manual valves for vacuum interception
- A switchgear enclosed in a special protective casing for manual or automatic operation selection

Liquid-sucking pump sets are normally used for extracting the water contained in washing machine and dishwasher filters that cannot be automatically drained after their commissioning.

They are also recommended for transferring dense liquids and creamy or muddy substances.

Available in other versions upon request.



Item	Flow rate L	A	B	C	D	E	F	G	H	R	Generator of vacuum item	Electrical switchgear	Spare part voltage Volt	Weight Kg
DVL 150	150	780	900	700	400	300	1600	G1"	1220	G3/8"	PVP 75 MDXR	DVL 150 90V	1 ~ 230-50Hz	63
DVL 300	300	880	1150	800	500	300	1890	G2"	1470	G3/8"	PVP 140 MR	DVL 150 90V	1 ~ 230-50Hz	75
DVL 500	500	980	1450	1000	600	400	2220	G2"	1800	G1/2"	PVP 250 MR	DVL 150 90V	1 ~ 230-50Hz	165
DVL 1000	1000	1180	1450	1200	800	400	2480	G3"	2000	G1"	PVP 300 MDR	DVL 150 90V	1 ~ 230-50Hz	214

NOTE: Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

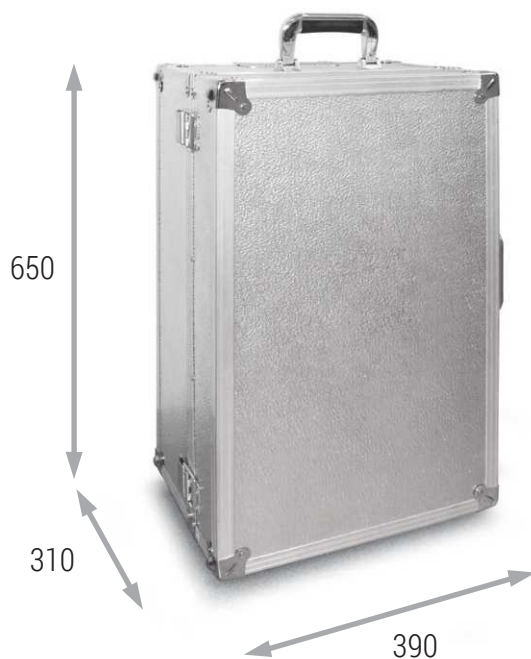
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity) inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

VACUUM TRAINING BOX - VTBOX01

A suitcase containing a sample of our most important products, guaranteeing an informative overview on the vacuum technology intended for industrial automation. It is an excellent educational, training and information tool. An easily transportable trolley shaped case.

Technical features

VTBOX01 weight: 26 kg



VTBOX01





SAMPLES AND EQUIPMENT FOR DEMONSTRATION USE

TEST BENCH AND TESTS FOR THE SELECTION OF VACUUM CUPS- BT01

The device, equipped with 6 vacuum and 2 pneumatic sockets, lets users carry out vacuum or Bernoulli suction cups tests on the objects to be gripped or moved, to aid in correctly choosing gripping cups. This is a useful tool to have at trade show exhibitions, in a showroom or in a test room, for gripping or handling demonstrations or for technical personnel training dedicated to vacuum technology. The device is already equipped with its own vacuum generator and only needs to be connected to compressed air and to the electrical power line.

Contact our technical department for further information.

Technical features

Electrical power: Single-phase V230 \pm 10% 50/60 Hz

Electric power: 1.5 kw

Compressed air consumption: 390 L/min 2bar

BT01 weight: 115 kg

Flight case 01 weight: 200 kg

Total weight: 315 kg



DEMONSTRATION UNIT FOR THE HANDLING OF POWDERS AND GRANULATED PRODUCTS WITH FLOW GENERATORS CX - CONVY01

The special shape of the flow generators with which this unit is supplied and their straight-flow working principle allow for the suctioning and handling of various nature products without interference.

As previously described, this device is also specially recommended for exhibitions at trade shows, showrooms or test rooms, for practical demonstrations on the handling and transfer of powders, granulated products, sawdust, grains, metal shavings, liquid or dry food products, etc. Requires connection to compressed air and to the electrical power line.

Technical features

Electrical power: Single-phase V230 \pm 10% 50/60 Hz

Electric power: 0.5 kw

Compressed air consumption: 390 L/min 2bar

CONVY01 weight: 90 kg

Flight case 01 weight: 200 kg

Total weight: 290 kg





SAMPLES AND EQUIPMENT FOR DEMONSTRATION USE

EQUIPPED ROBOT FOR GRIPPING AND HANDLING OBJECTS WITH SPECIAL VACUUM CUPS AND GRIPPERS - VACBOT

The system we offer is composed of a robot fixed to a work surface, programmable by means of a special keyboard, servo-assisted by a mini-compressor with a vacuum pump and a compressor, enclosed in a sturdy metal cabinet on wheels.

The robot can be configured and equipped in various ways, for gripping with vacuum cups or small Octopus surfaces, with repetitive gripping programs to better render the idea of its multiple gripping capabilities of different objects with different shapes.

This device is ideal for trade fairs or showrooms, since seeing it work highlights the full potential of its use in the automation and handling sector in general, with the help of vacuums.

Only needs to be connected to the electrical power line.

Technical features

Electrical power: Single-phase V230 \pm 10% 50/60 Hz

Electric power: 3.5 kw

VACBOT weight: 475 kg

Flight case 02 weight: 275 kg

Total weight: 750 kg

