

NOVABLAST

NOVAVAC
VACUUM UNITS &
PRE-SEPARATORS



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VACUUM UNIT BL30AV

The unit is composed of a suction module, a bag filter system, and an electrical panel integrated into the suction module. It can be mounted on a wheeled trolley or moved using an overhead crane via lifting eyes fixed to the upper part, or with a forklift.

The machine can operate only when connected to a pre-separator or a hopper equipped with a cyclonic head.



Technical Features

Supply	Electric	Alimentazione V 400 Hz.50
	Ausiliari	V 24 AC
Installed power kW/CV 30/40	Maximum used kW/CV 30/40	
Air flow rate	m ³ 1500	
Maximum vacuum	mm H ₂ O 7000	
Pump	Roots 3 lobes	
Primary filter surface	m ² 10	
Filter bag material	Polyester	g/m ² 550
Safety Cartridge Filter Surface Area	m ² 10	
Cooling Inlet Safety Cartridge Surface Area (Lobe Pump)	m ² 1	
Washing clearing type	Reverse flow	
Filter Cleaning Control Compressor	kW 0,55	16
Dehumidified and Oil-Free Compressed Air Consumption	l/h 50	
Required Client Air Circuit Pressure	Not required, compressor integrated into the machine	
∅ pipes to be used	mm 100-80-70	
Noice Level	< dBA 85	

**Suction Unit:**

The cabin is made of reinforced, welded steel walls designed to withstand vacuum pressure. The interior is fully lined with sound-absorbing material to significantly reduce noise. Side openings allow access to internal components:

- Roots pump with Robuschi air/air cooling system
- Motor Electric 30 kw
- Mechanical vacuum regulation valve
- Pneumatic atmospheric relief valve
- Safety filter
- Air exhaust silencers
- Temperature probe on pump exhaust air
- Maximum level probe in the filter chambre
- Electrical panel
- Compressor for reverse air filter cleaning system

Operation:

The mixture of air and fine dust, drawn from the pre-separator, enters the lower part of the filter chamber where the heavier dust particles settle at the bottom. The lighter dust is carried by the airflow to the polyester filter bags (550 g/m²), where it is retained. Inspection and maintenance operations are simple, as the filter bags can be removed from the top of the machine. Filter sleeve cleaning is performed by a reverse air pulse system. The cleaning cycle is activated every 10 minutes and is controlled by a programmable system. The compressed air required for the operation of the reverse-cleaning valves is supplied by a compressor integrated into the machine.

Safety Filters:

The safety filter consists of a cartridge with a filtering surface of 10 m². It is installed upstream of the Roots pump to prevent foreign objects or particles from entering the pump lobes and causing damage. A second safety cartridge filter with a 1 m² filtering surface is located at the air intake of the pump's cooling system (AV version only).

Dust Collection Compartment:

Below the bag filter is a compartment for collecting fine dust that comes from the pre-separator and was not retained by its cyclonic head. The compartment is equipped with a maximum level probe that stops the machine and signals an alarm when triggered. When the lower door of the filter area is opened, the dust collection compartment is mechanically isolated from the vacuum zone. The machine can then be restarted, even with the compartment open, to vacuum the retained fines and return them to the pre-separator.

Electrical Panel:

The electrical panel is CE-compliant with IP 54 mechanical protection and includes the following components:

- Control buttons
- Indicator lights
- Safety devices: maximum temperature of pump exhaust air, pressure switch for filter cleaning air circuit, maximum level probe for fine dust compartment, maximum level probe for pre-separator, thermal and magnetothermal protection for electric motors.



VACUUM UNIT BL45AV

The unit consists of a suction module, a system with bag filters, and the electrical panel integrated into the suction module. It can be placed on a rubberized trolley or moved with an overhead crane using lifting eyes that can be fixed to the top, or with a fork lift truck.

The machine can only operate when connected to a preseparator or hopper equipped with a cyclone head.



Technical Features

Supply	Electric	V 400	Hz 50
Installed power kW/CV 75/100	kW/CV 45/60		
Air flow rate	m ³ 2100		
Maximum vacuum pump	mm H ₂ O 7000		
Pump	Roots 3 lobes		
Primary filter surface	m ² 20		
Filter sleeves material	polyester	g/m ² 550	
Safety cartridge surface	m ² 10		
Safety cartridge surface (cooling port for rotary lobe pump)	m ² 1		
Filter sleeves material	Reverse flow		
Filter sleeves material	kW 0,55	l 6	
Compressed air consumption (dehumidified and deoiled)	l/h 50		
Air circuit pressure required	Not required. On board compressor		
∅ pipes to be used	mm 125-100-80		
Noise level	< dBA 85		

Suction Unit:

The cabin is made of reinforced, welded steel walls designed to withstand vacuum pressure. The interior is fully lined with sound-absorbing material to significantly reduce noise. Side openings allow access to internal components:

- Roots pump with Robuschi air/air cooling system
- Motor Electric 30 kw
- Mechanical vacuum regulation valve
- Pneumatic atmospheric relief valve
- Safety filter
- Air exhaust silencers
- Temperature probe on pump exhaust air
- Maximum level probe in the filter chambre
- Electrical panel
- Compressor for reverse air filter cleaning system

Operation:

The mixture of air and fine dust, drawn from the pre-separator, enters the lower part of the filter chamber where the heavier dust particles settle at the bottom. The lighter dust is carried by the airflow to the polyester filter bags (550 g/m²), where it is retained.

Inspection and maintenance operations are simple, as the filter bags can be removed from the top of the machine. Filter sleeve cleaning is performed by a reverse air pulse system. The cleaning cycle is activated every 10 minutes and is controlled by a programmable system. The compressed air required for the operation of the reverse-cleaning valves is supplied by a compressor integrated into the machine.

Safety Filters:

The safety filter consists of a cartridge with a filtering surface of 10 m². It is installed upstream of the Roots pump to prevent foreign objects or particles from entering the pump lobes and causing damage. A second safety cartridge filter with a 1 m² filtering surface is located at the air intake of the pump's cooling system (AV version only).

Dust Collection Compartment:

Below the bag filter is a compartment for collecting fine dust that comes from the pre-separator and was not retained by its cyclonic head. The compartment is equipped with a maximum level probe that stops the machine and signals an alarm when triggered.

When the lower door of the filter area is opened, the dust collection compartment is mechanically isolated from the vacuum zone. The machine can then be restarted, even with the compartment open, to vacuum the retained fines and return them to the pre-separator.

Electrical Panel:

The electrical panel is CE-compliant with IP 54 mechanical protection and includes the following components:

- Control buttons
- Indicator lights
- Safety devices: maximum temperature of pump exhaust air, pressure switch for filter cleaning air

circuit, maximum level probe for fine dust compartment, maximum level probe for pre-separator, thermal and magnetothermal protection for electric motors.



VACUUM UNIT BL55AV

Mobile Diesel Suction Unit that can be moved via an overhead crane, forklift, or placed on a rubberized trolley.
The unit consists of a suction system, a system with bag filters, and an electrical panel integrated into the suction module.
This type of unit operates only when connected to a preseparator with a cyclone head.



Technical Features

	Diesel	Tank: liters 50
	<input type="checkbox"/>	V 24 DC
Diesel engine power	kW/CV 55/75	
Airflow rate	m ³ 2.400	
Maximum pum vacuum	mm H ₂ O 8500	
Maximum vacuum	mm H ₂ O 7000	
Pump	Roots, 3 lobes	
Primary filter surface area	20 m ²	
Safety filter surface area	m ² 10	
Pump cooling filter surface area	m ² 1	
Filter cleaning system	Reverse Flow System	Time Controlled
Dust compartment volume	500 Lt.	
∅ pipes to be used	mm 100-80	
Noice Level	< dBA 85	

Suction Group:

The cabin is constructed with reinforced electrowelded steel walls to withstand vacuum pressure. The interior is fully lined with sound-absorbing material to significantly reduce noise levels. Lateral

openings allow access to the internal components:

- Roots lobes pump with an air/air cooling system
- Large cooling port for the vacuum turbine, complete with a safety cartridge.
- water-cooled diesel engine, with direct transmission to the turbine via a floating coupling
- fuel tank with a capacity suitable for continuous operation for one full day.
- Mechanical vacuum regulation valve, atmospheric valve
- Safety filter
- Star-delta starter
- Air exhaust silencer
- Temperature probe on the exhaust air of the turbine
- Maximum level probe in the filter chamber
- Electrical panel
- Compressor for controlling filter cleaning

Operation:

The mixture of air and dust, sucked in from the preseparator, enters the lower part of the filter chamber where heavy dust settles at the bottom. Lighter dust particles are transported by air to the polyester filter bags (550 g/m²), where they are retained. The filter bags are double-layered. Inside each bag, there is a pair of springs with different diameters that keep the bag taut and optimize airflow. Inspection and maintenance are made easier since the bags can be removed from the upper part of the machine. Using a bag filter provides a larger filtration surface and consequently lower air speed.

The cleaning of the filter bags occurs via a counter-flow of air. The cleaning cycle is activated every 10 minutes and is controlled by a programmable system. The compressed air required to operate the cleaning valves is supplied by an integrated compressor.

The dust collection container beneath the filter bags has a capacity of 500 liters, and a level probe halts the machine when the container is full.

Safety Filters:

To prevent foreign objects from damaging the Roots pump lobes, a safety filter cartridge with an area of 10 m² is installed upstream of the suction unit. There is also a secondary safety filter with a total filtration surface of 1 m² installed upstream of the Roots pump to prevent particles from entering the pump lobes and causing damage.

**THESE MACHINES ALWAYS NEED TO BE COUPLED
WITH A PRE-SEPARATOR**



PRESEPARATOR PR-F

The PR-F is used in aspiration-filtering unit. It has a removable cyclone head, a facilitate material flow, and to the aspiration-filtering via a forklift truck or an its upper lifting hooks. It is position it as close as possible be vacuumed in order to achieve performance and minimize discharge of the vacuumed a lower discharge hatch with safety lock. A mechanical for the hatch allows it to be closed is placed on the ground.



combination with a Univac is equipped with a 45° inclined hopper to a level probe to connect unit. The PR-F is portable overhead crane attached to recommended to to the materials to maximum friction in the pipes. The material occurs through manual control and a re-engagement system when the PR-F

Technical Features	Description
Volume	m ³ 1
Discharge system	Lower Hatch ø mm 400
Reinforced cyclonehead	mm 3 (internal thickness) + 4 (external reinforcement)
Material inlet flange	ø mm 100
Connection flange for machine fitting	ø mm 125

- Cylindrical preseparator with a useful volume of m³ xxx.
- Cyclone for material separation during aspiration, with an efficiency rate of 95% to 99% of the vacuumed material.
- Internal level probe in the container with a connection port for the cable to connect to the machine.
- Bottom discharge system with manual control.
- Upper lifting hooks for transport using an overhead crane or hoist.
- Lower pockets for transport with a forklift.
- A system of inlet and outlet flange connections on the cyclone head allows for the attachment of various diameters of connections and fittings, depending on the power of the vacuum unit the preseparator is connected to.



PRESEPARATOR PR-V 1 GS

PR-V works in combination with a Univac suction-filtration system. Thanks to the support with sliding legs, the PR-V-GS can discharge directly into a Big Bag. It is equipped with a removable cyclonic head, an inclined hopper to facilitate material flow, and a level probe to connect to the suction-filtration system. PR-V is portable via a forklift or with an overhead crane using its upper lifting lugs. It is recommended to position it as close as possible to the materials to be suctioned in order to achieve maximum performance and reduce friction in the pipes. The discharge of the collected material is done through a manually operated butterfly valve.



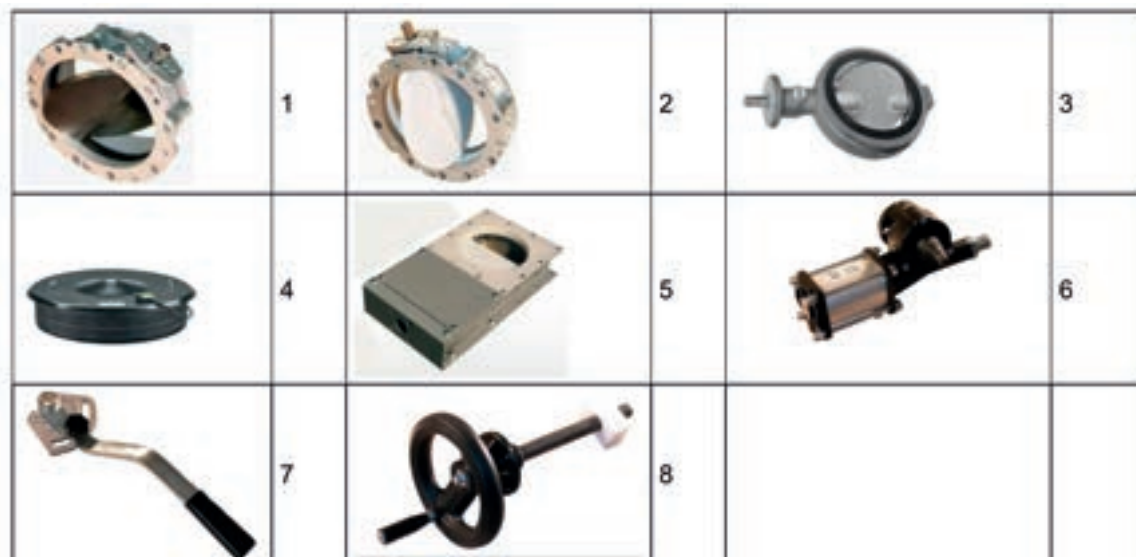
Technical Features	Description
Discharge system	Butterfly valve ø mm 250
Reinforced cyclonic head	mm 3 (internal thickness) + 4 (external reinforcement)
Material inlet flange	ø mm 100
Connection flange to the machine	ø mm 125
Discharge cono angle	45°

Description:

- Cylindrical pre-separator with a useful volume of XXX m³
- Material separation cyclone with an efficiency of 95% to 99% of the collected material
- Internal level probe inside the container with a connection socket for cable to the machine
- Bottom discharge system via a manually operated butterfly valve
- Upper lifting lugs for transport with an overhead crane or hoist
- Lower pockets for transport with a forklift
- Thanks to a metal support with sliding legs (GS), the pre-separator can discharge directly into a BIG-BAG.
- Through a system of flange connections at the inlet and outlet of the cyclonic head, various diameters of connections and fittings can be used depending on the suction power of the system to which the pre-separator is connected.



VALVES AND ACTUATOR



Part No.	Qty	Description	
AC.002.0064	1	Butterfly valve DN 150 1 flange	N. 1
AC.002.0066	1	Butterfly valve DN 250 1 flange	N. 1
AC.002.0068	1	Butterfly valve DN 300 1 flange	N. 1
AC.002.0065	2	Butterfly valve DN 150 2 flange	N. 1
AC.002.0067	2	Butterfly valve DN 250 2 flange	N. 1
AC.002.0069	2	Butterfly valve DN 300 2 flange	N. 1
AC.002.0235	3	Butterfly valve DN 250 without flanges	N. 1
AC.002.0819	3	Butterfly valve DN 300 without flanges	N. 1
AC.002.1038	4	Explosion relief valve EVN 3.0	N. 1
		For explosive dust (e.g., coal). The tank structure is reinforced to withstand overpressures, which the valves limit to 0.5 bar. In the event of an explosion, the valves respond within 0.23 seconds. The flame absorption system protects operators and the surrounding area. The safety distance for operators is 1.5 m.	
AC.002.0710	5	Circular slide valve DN 300	N. 1
AC.002.0061	6	Rotating pneumatic actuator DN 100	N. 1
AC.002.0060	7	Manual lever actuator	N. 1
AC.002.0998	8	Hand wheel actuator for slide valve DN300	N. 1



CONTINUOUS DISCHARGE VALVE DN250

Code	Description	Quantity
SCVF.25.001	<p>Mounted of the bottom part of the hopper or pre-separator for a non stop working of the unit machine and for discharging in a continuous cycle keeping the suction unit under pressure.</p> <p>The compressor air must be dry, clean and a pressure of 5÷7 bar must be guarantee. It is composed of:</p> <ul style="list-style-type: none">· N. 2 butterfly valves DN 250.· N. 2 actuators pneumatic double effects widely proportioned· N. 2 electro-valves for pneumatic actuators operating· N. 1 intermediate "buffer" body for the connection of the two valves· N. 1 compressed air regulator with condense discharge complete with pneumatic connections· N. 1 Programmable Discharging Counter· N. 1 Auxiliary electric control board V 24 or electro valves composed of discharge sequence, knife switch, control lamps, timer for the regulation of the operating cycles and discharging counter.	1

