SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES AVG - GENERAL DESCRIPTION

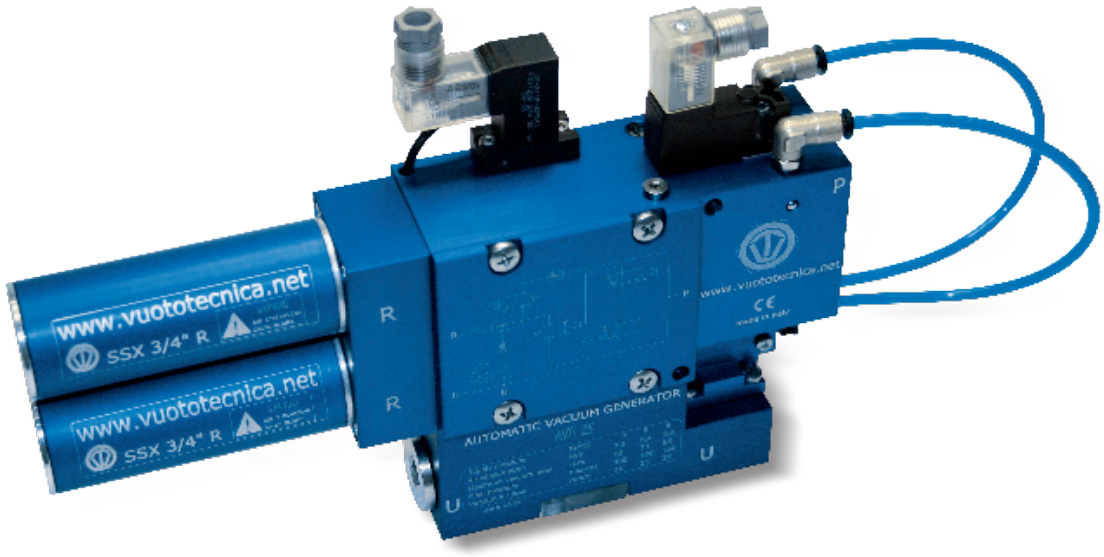
These generators are independent vacuum units capable of driving a vacuum gripping system They have been specially designed for the AUTOMOTIVE sector and they are equipped with single ejectors that, given the same flow rate as the multi-ejector generators, allow for a quicker grip. They are provided as standard with a built-in pneumatic energy-saving device.
They are composed of an anodised aluminium mono-block structure, inside of which are installed the ejectors, the servo-controlled slide valve for the compressed air supply and are contained the vacuum chambers as well as the various connections.
The following are instead installed on the outside:
- A bistable impulse solenoid valve for controlling the slide valve;
- A solenoid valve for blowing the ejected compressed air;
- A flow regulator for dosing the ejected compressed air;
- Two silencers for removing noise from the ejected air;
- An aluminium manifold provided with vacuum connections with built-in:
  - A pneumatic vacuum switch for managing the compressed air supply according to the set level of vacuum (energy saving);
  - A check valve for maintaining the vacuum in case of electricity or compressed air failure;
  - A suction filter, easy to inspect through the transparent polycarbonate lid.

OPERATION

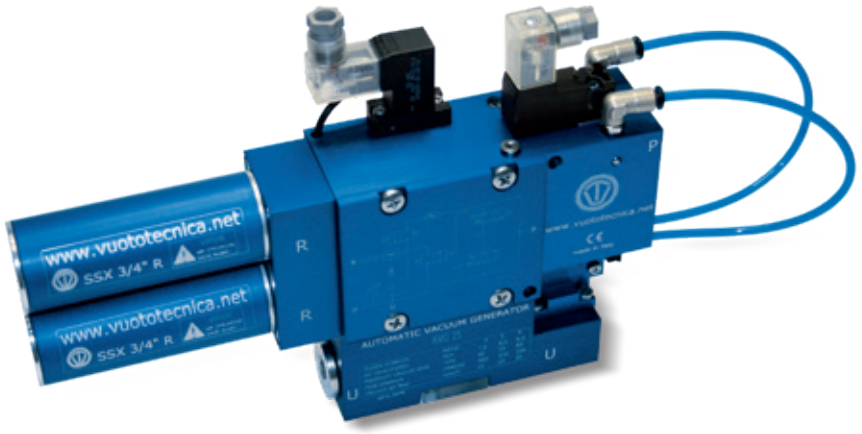
By providing an electric impulse to the two-position solenoid valve, the compressed air supply slide valve will be activated and vacuum will be created at the application. Once the preset maximum value has been reached, the pneumatic vacuum switch acts on the servo-controlled valve and interrupts the compressed air supply, restoring it when the value returns below the minimum value.
Besides maintaining the level of vacuum within preset safety values, this modulation also allows a considerable saving of compressed air and occurs even in the absence of electricity. Once the work cycle is completed, the power supply solenoid valve is deactivated by means of an electrical pulse while, at the same time, the ejection solenoid valve is activated for quick restoration of the atmospheric pressure of use.
AVG vacuum generators are fitted for the installation of a digital vacuum switch. Also these vacuum generators can be installed in any position.

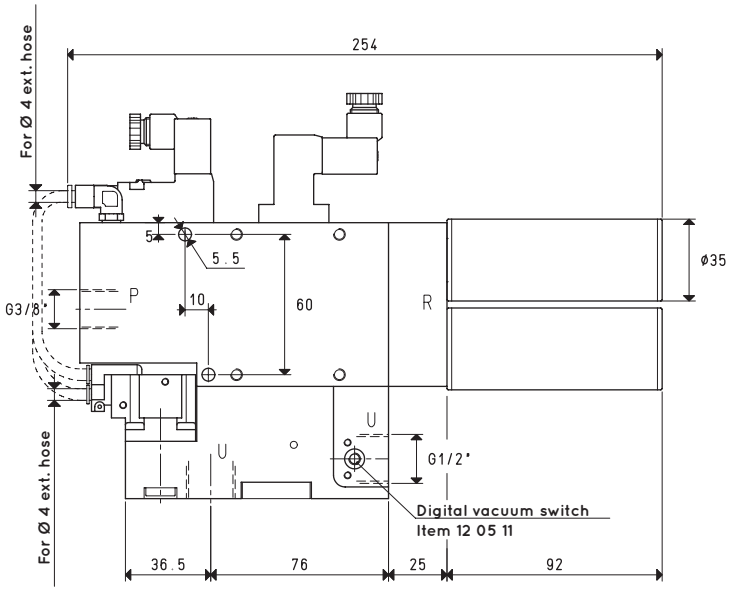
SECTORS OF USE

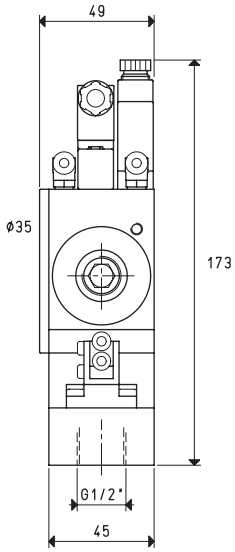
AVG vacuum generators are suitable for suction gripping systems, for the handling of metal sheets, glass, marble, ceramics, plastic, cardboard, wood, etc. and, in particular, for the AUTOMOTIVE sector, where equipment with excellent performance and limited size and weight are increasingly required.

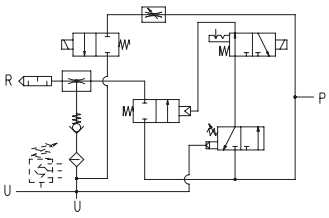


SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS
AVG 18 and AVG 25









P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

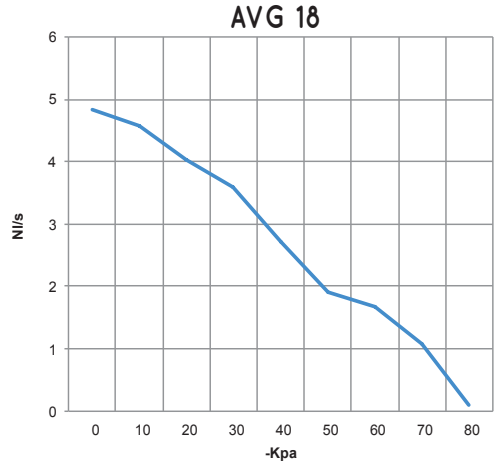
Item		AVG 18			AVG 25		
Intake air flow rate	m^3/h	16.5	17.0	17.4	24.5	25.0	25.2
Maximum level of vacuum	-KPa	60	70	85	60	70	85
Final pressure	mbar abs.	400	300	150	400	300	150
Supply pressure	bar	4	5	6	4	5	6
Optimal supply pressure	bar			6			6
Air consumption	Nl/s	4.3	5.3	6.4	6.5	8.0	9.6
Max quantity of air blown at 6 bar	l/min			140			140
Bistable supply solenoid valve	NO/NC			NO/NC			NO/NC
Electrical absorption	W			1			1
Ejection solenoid valve position	NC			NC			NC
Electrical absorption	W			4			4
Supply voltage	V			24DC			24DC
Degree of protection	IP			65			65
Temperature of use	°C			-10 / +60			-10 / +60
Noise level at optimal supply pressure	dB(A)			63			65
Weight	Kg			1.67			1.67

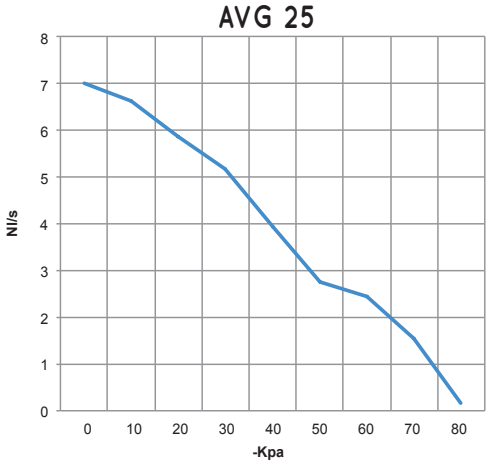
Note: To order a generator with a digital vacuum switch installed, add the letter V to the item code (example: AVG 25 V).

Note: All vacuum values indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.
Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard **ISO 8573-1 class 4**.

3D drawings are available on **vuototecnica.net**

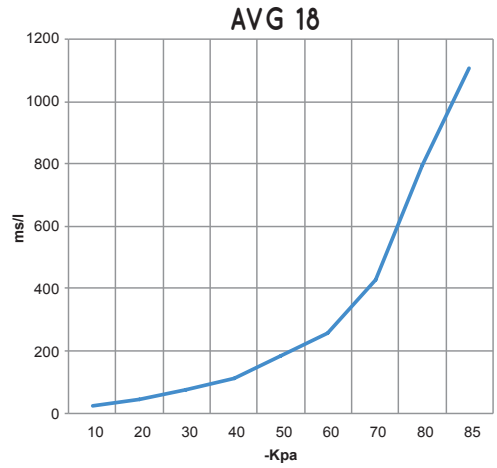
Air flow rate (Nl/s) at different level of vacuum (-KPa) at optimal supply pressure

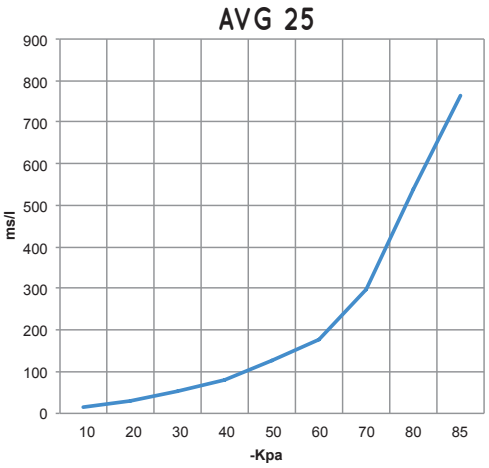




Generator item	Supp. press. bar	Air consumption Nl/s	Air flow rate (Nl/s) at different levels of vacuums (-KPa) at optimal supply pressure									Max vacuum
			0	10	20	30	40	50	60	70	80	-KPa
AVG 18	6.0	6.4	4.83	4.58	4.04	3.58	2.72	1.90	1.68	1.07	0.10	85
AVG 25	6.0	9.6	7.00	6.63	5.86	5.18	3.94	2.76	2.44	1.54	0.15	85

Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure





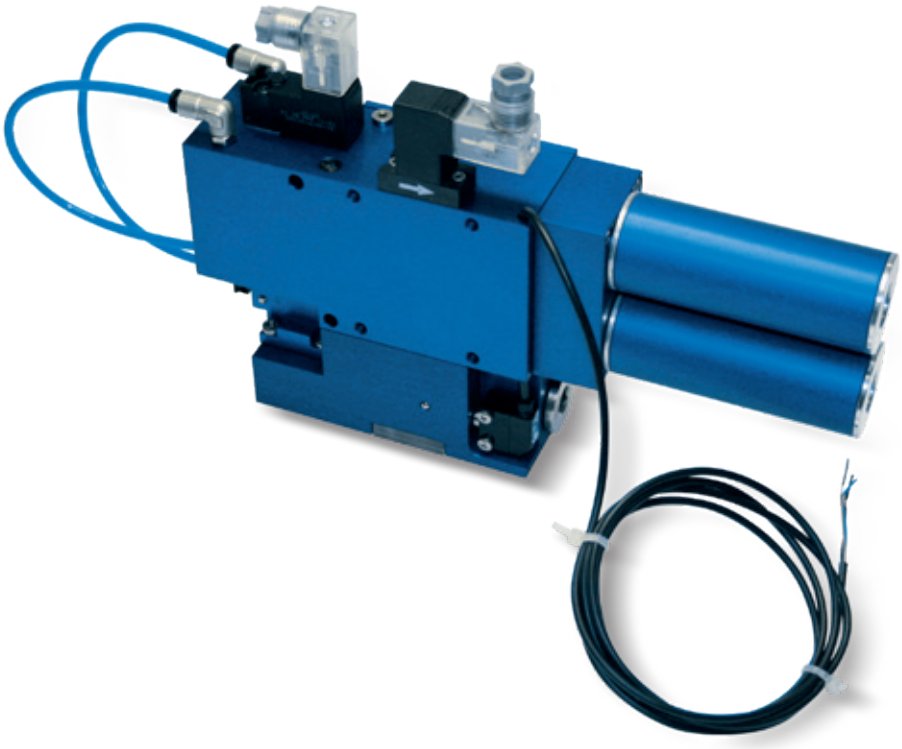
Generator item	Supp. press. bar	Air consumption Nl/s	Evacuation rates (ms/l= s/m³) at different levels of vacuums (-KPa) at optimal supply pressure									Max vacuum
			10	20	30	40	50	60	70	80	85	-KPa
AVG 18	6.0	6.4	22	44	75	115	185	258	430	798	1107	85
AVG 25	6.0	9.6	15	30	52	80	128	178	297	538	764	85

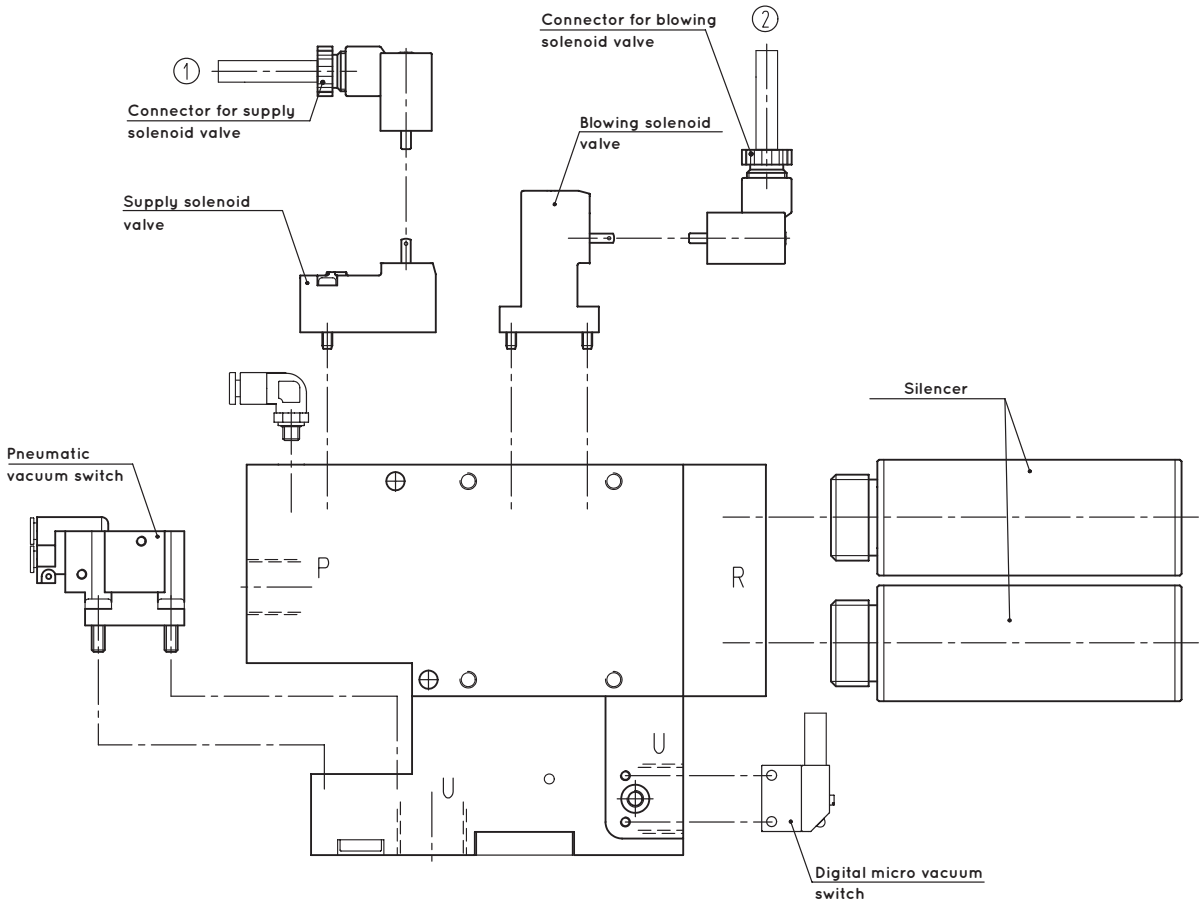
ACCESSORIES AND SPARE PARTS UPON REQUEST

Item		AVG 18	AVG 25
Sealing kit	item	00 KIT AVG 18	00 KIT AVG 25
Exhaust silencers	item	SSX 3/4 R	
Digital micro vacuum switch	item	12 05 11 *	
Bistable supply solenoid valve	item	00 15 297	
NC blowing solenoid valve	item	00 15 175	

* Complete the code indicating the electrical type of the output: P = PNP; N = NPN

3D drawings are available on **vuototecnica.net**





Digital micro vacuum switch

Item	Description
12 05 11 *	Digital micro vacuum switch

* Complete the code indicating the electrical type of the output: P = PNP; N = NPN

Connector

Item	Description
00 15 157	Connector with LED for solenoid valves

M8 3 PIN Connector

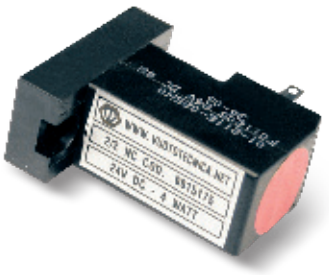
Item	Description
00 07 424	M8 3 PIN Connector with LED for micro solenoid valves

Bistable solenoid valve

Item	Description
00 15 297	Bistable supply solenoid valve

NC solenoid valve

Item	Description
00 15 175	NC blowing solenoid valve



Sealing kit

Item	By generators item
00 KIT AVG 18	AVG 18
00 KIT AVG 25	AVG 25

Silencer

Item	Description
SSX 3/4" R	Exhaust silencer