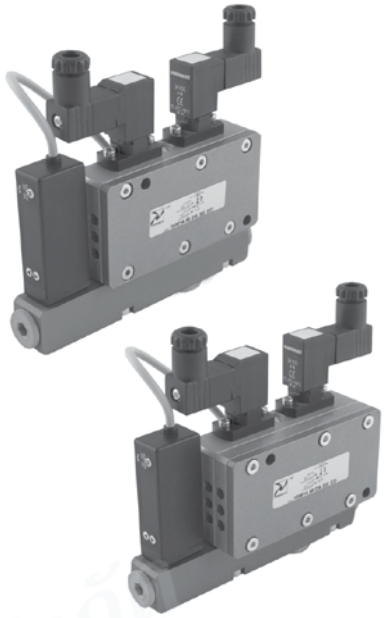
Multifunction vacuum generators

Vacuum units that can control a complete vacuum gripping system.



The range of multifunction vacuum generators are available in two versions, the “SE” & “ME”. The ‘SE’ can be installed as “stand alone” whilst the ‘ME’ version can be assembled with intermediate modules creating a multi position manifold which uses a single compressed air supply. The modular design allows the number of autonomous vacuum units to be increased as a function of requirements. They are constructed from a piece of anodised aluminium, and inside of this, the multiple ejectors are mounted and the vacuum chambers are fashioned, as well as threaded connections for supply.

The outside components are:

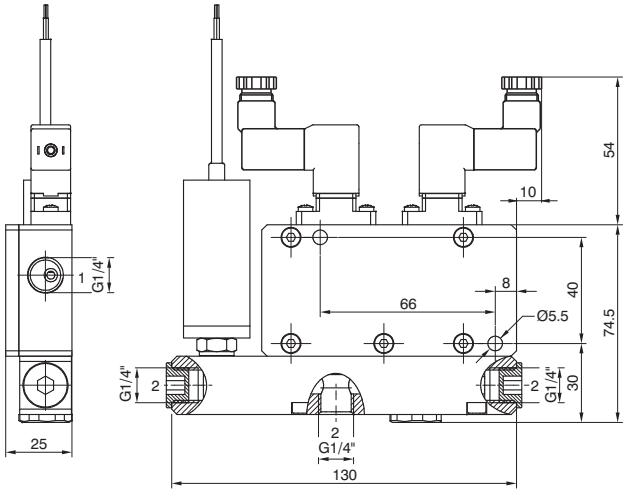
- A solenoid pilot valve for controlling the compressed air being supplied
- A solenoid pilot valve for controlling the compressed air from the bellows
- A vacuum switch with display for controlling and monitoring the system
- A flow regulator with setting screw for regulating the air of the bellows
- An intake manifold made of aluminium for the vacuum connections with the intake filter and check valve integrated inside it, serving to keep vacuum to be used should the electrical power or compressed air stop being supplied.

By activating the supply solenoid pilot valve, the generator creates vacuum that can be used, and when the maximum preset value is reached, the vacuum switch kicks in and, through the control solenoid pilot valve, cuts off the air supply and restores it when the vacuum value drops below the minimum set value.

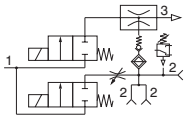
This modulation allows considerable savings of compressed air in addition to keeping the degree of vacuum within safety range.
A second vacuum switch signal, which is separate from the first one and is adjustable, can be used to start up the cycle when the degree of vacuum reached is that needed for the application.
Once the cycle has completed, the supply solenoid pilot valve for air supply to the generator powers down and at the same time the release solenoid pilot valve powers up to quickly restore atmospheric pressure within the circuit.
This series of vacuum generators is suitable for controlling suction cup gripping systems for moving glass panes, marble slabs, ceramic slabs, plastic panels, cardboard boxes, wood panels, etc., and, given their particular shape, they lend themselves to applications in the industrial robotics sector where there is increasing demand for high-performance equipment and autonomous vacuum systems for controlling a greater number of gripping elements while keeping weight low and dimensions compact.

Series 1900

Multifunction vacuum generator



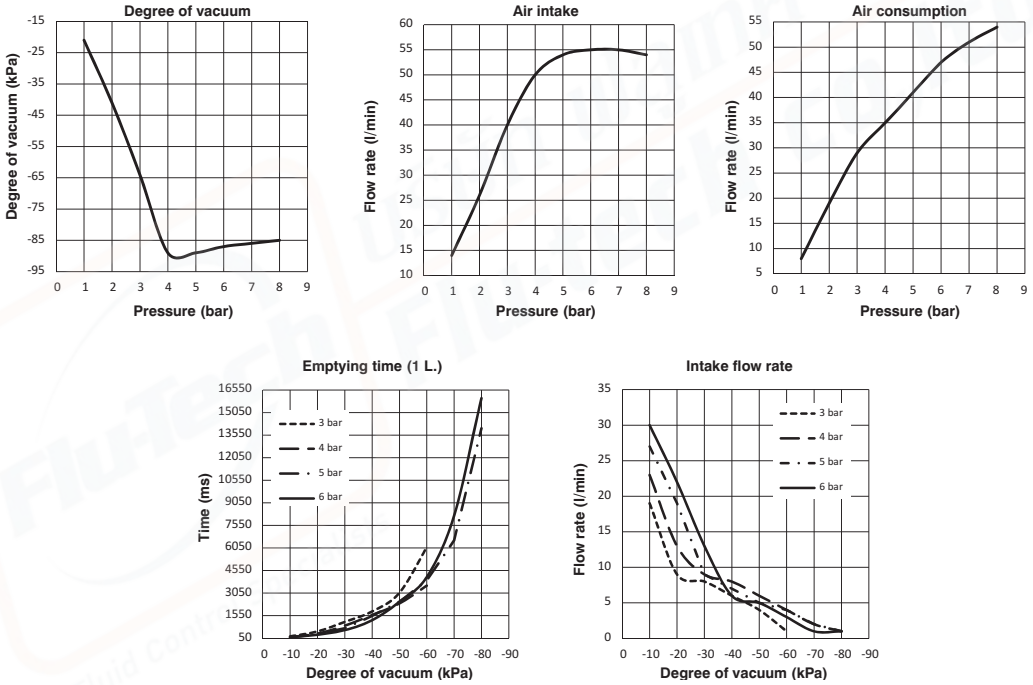
Ordering code		
19M14.M.09.SE.⊙		
⊙	OPTIONS	
	ED =	Solenoid valves + vacuum switch cable 2 Mt.
	EF =	Solenoid valves + vacuum switch cable 30 cm and connector M8
	01 =	Solenoid valve without vacuum switch
	02 =	Vacuum switch without back pressure valve
	04 =	Without vacuum switch and back pressure valve
	05 =	Vacuum switch cable 30 cm and connector M8 without back pressure valve



Operational characteristics			
- Inlet pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	41	89	87
- Intake flow rate (l/min)	26	50	55
- Air consumption (l/min)	19	35	47

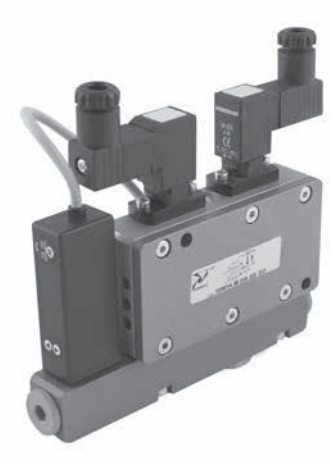
VACUUM GENERATORS

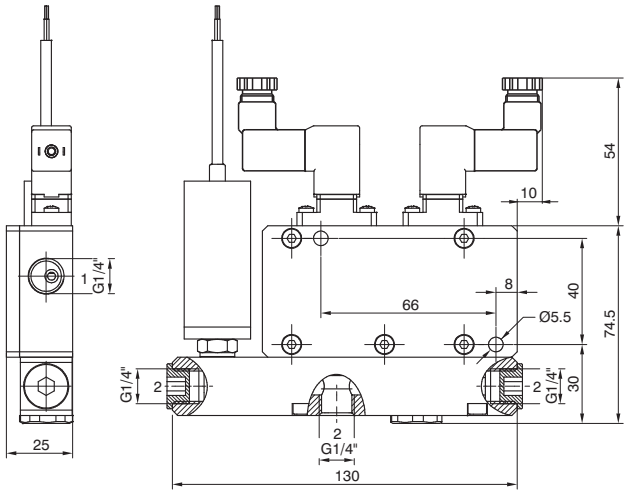
Performance Charts



Technical characteristics	
Fluid	Unlubricated filtered air
Pressure (bar)	0 ... 6
Inlet and release solenoid valve function	N.C.
Power consumption	4 Watt
Supply voltage	24 VDC
Solenoid valve - IP Rating	IP65
Vacuum switch output	2 PNP
Vacuum switch - IP Rating	IP40
Temperature (°C)	-10 ... +60
Weight (gr.)	538

Multifunction vacuum generator





Ordering code		
19M14.M.12.SE.⊙		
⊙	OPTIONS	
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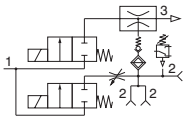
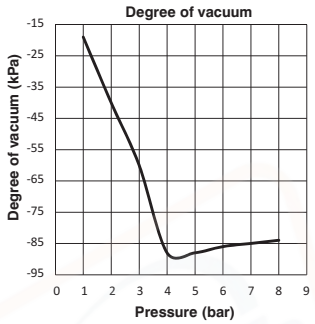
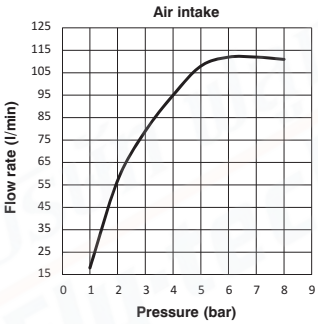
	EF =	Solenoid valves + vacuum switch cable 30 cm and connector M8
	01 =	Solenoid valve without vacuum switch
	02 =	Vacuum switch without back pressure valve
	04 =	Without vacuum switch and back pressure valve
	05 =	Vacuum switch cable 30 cm and connector M8 without back pressure valve

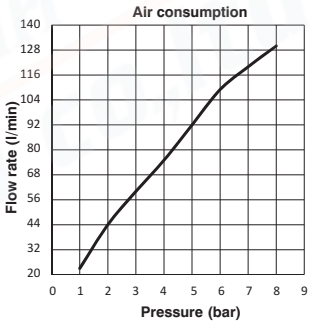


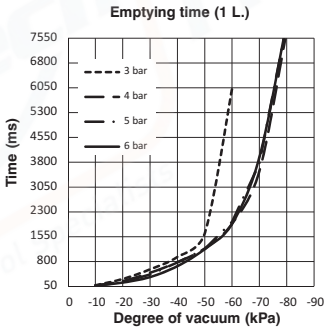
Operational characteristics			
- Inlet pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	40	88	86
- Intake flow rate (l/min)	57	95	112
- Air consumption (l/min)	44	75	109

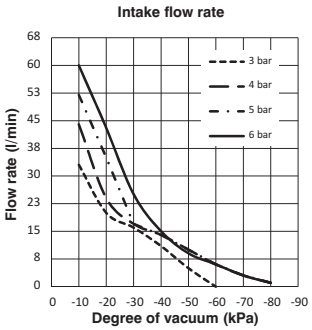
Performance Charts





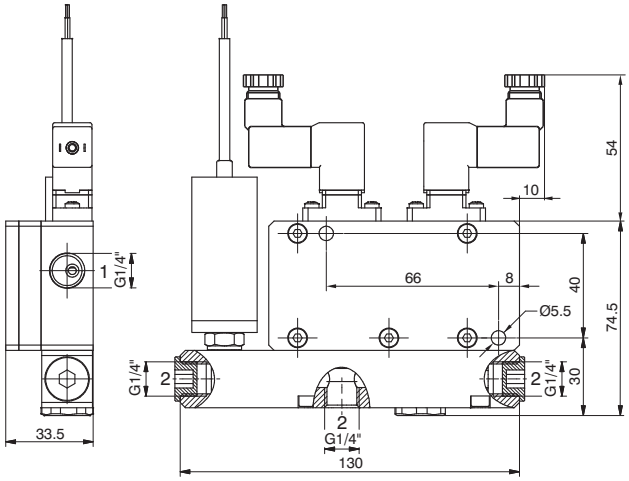




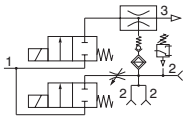


Technical characteristics	
Fluid	Unlubricated filtered air
Pressure (bar)	0 ... 6
Inlet and release solenoid valve function	N.C.
Power consumption	4 Watt
Supply voltage	24 VDC
Solenoid valve - IP Rating	IP65
Vacuum switch output	2 PNP
Vacuum switch - IP Rating	IP40
Temperature (°C)	-10 ... +60
Weight (gr.)	538

Multifunction vacuum generator



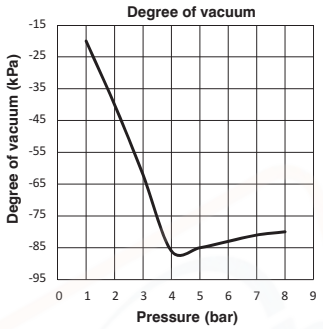
Ordering code		
19M14.M.15.SE.⊙		
⊙	OPTIONS	
	ED =	Solenoid valves + vacuum switch cable 2 Mt.
	EF =	Solenoid valves + vacuum switch cable 30 cm and connector M8
	01 =	Solenoid valve without vacuum switch
	02 =	Vacuum switch without back pressure valve
	04 =	Without vacuum switch and back pressure valve
	05 =	Vacuum switch cable 30 cm and connector M8 without back pressure valve

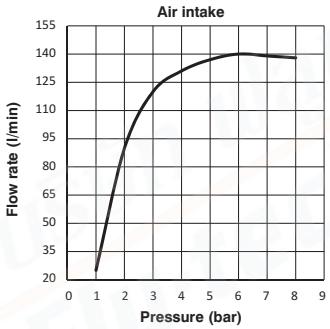


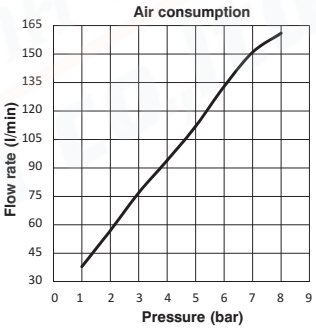
Operational characteristics			
- Inlet pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	40	86	83
- Intake flow rate (l/min)	90	131	140
- Air consumption (l/min)	57	94	133

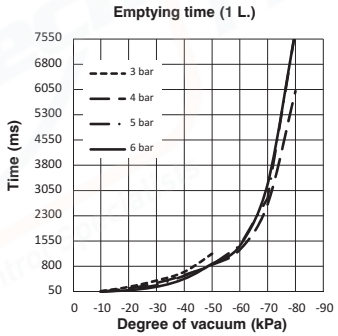
VACUUM GENERATORS

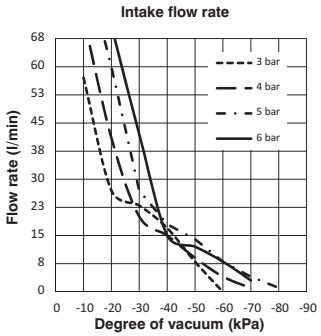
Performance Charts





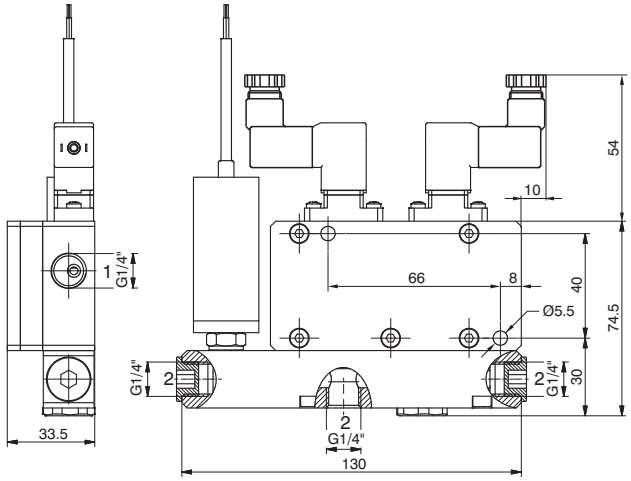




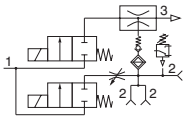


Technical characteristics	
Fluid	Unlubricated filtered air
Pressure (bar)	0 ... 6
Inlet and release solenoid valve function	N.C.
Power consumption	4 Watt
Supply voltage	24 VDC
Solenoid valve - IP Rating	IP65
Vacuum switch output	2 PNP
Vacuum switch - IP Rating	IP40
Temperature (°C)	-10 ... +60
Weight (gr.)	661

Multifunction vacuum generator

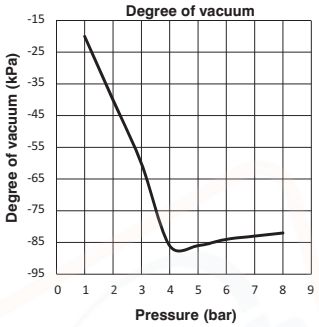


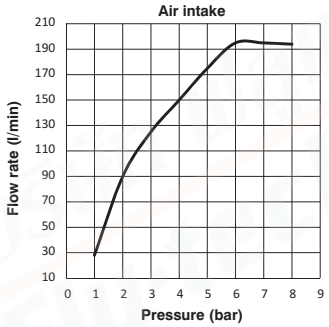
Ordering code		
19M14.M.18.SE.⊙		
⊙	OPTIONS	
	ED =	Solenoid valves + vacuum switch cable 2 Mt.
	EF =	Solenoid valves + vacuum switch cable 30 cm and connector M8
	01 =	Solenoid valve without vacuum switch
	02 =	Vacuum switch without back pressure valve
	04 =	Without vacuum switch and back pressure valve
	05 =	Vacuum switch cable 30 cm and connector M8 without back pressure valve

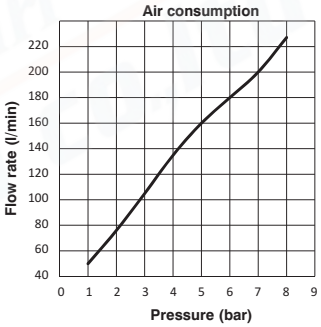


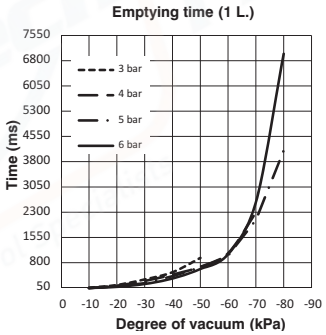
Operational characteristics			
- Inlet pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	40	86	84
- Intake flow rate (l/min)	90	150	195
- Air consumption (l/min)	76	135	180

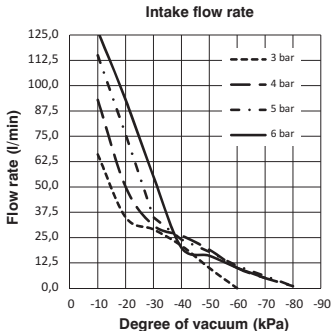
Performance Charts











Technical characteristics	
Fluid	Unlubricated filtered air
Pressure (bar)	0 ... 6
Inlet and release solenoid valve function	N.C.
Power consumption	4 Watt
Supply voltage	24 VDC
Solenoid valve - IP Rating	IP65
Vacuum switch output	2 PNP
Vacuum switch - IP Rating	IP40
Temperature (°C)	-10 ... +60
Weight (gr.)	661