

# VACUUM GENERATORS **3**

3

PNEUMAX GREEN LINE: TECHNOLOGY & INNOVATION



[www.pneumaxspa.com](http://www.pneumaxspa.com)

**General details**

Vacuum generators of the pneumatic type operate on the Venturi principle: one or more nozzles are fed by compressed air, generating a jet of air that drags (in contact with the environment) the surrounding air and then evacuates. This "dragging" creates a depression which results in generation of a vacuum. The big advantage of pneumatic pumps is that they can operate only when the suction cups connected to them require vacuum.

**Advantages:**

- 1) Consumption of air (and therefore power) limited to moments of use.
- 2) Installation directly proximate to the suction cups (simplification of layout / savings).
- 3) Short response times and high capacity.
- 4) Flow rates for any requirement.
- 5) No limit to applications.
- 6) Compactness / lightness / reliability / little or no wear.

**Types:**

In terms of dimensions, functions and operation, we can categorise generators as one of two major types:

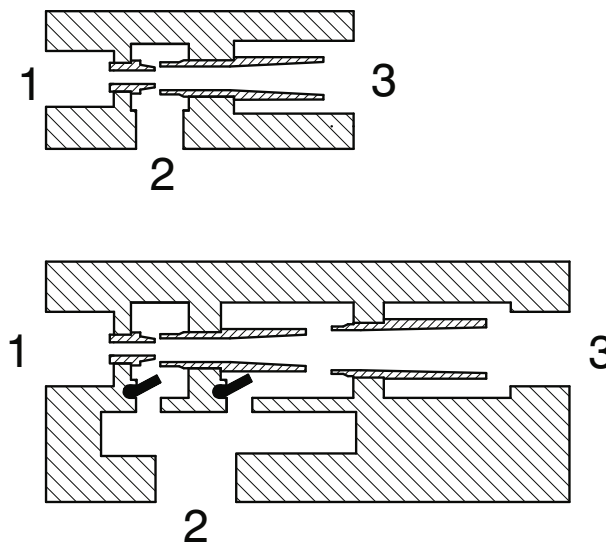
- 1) Single stage, compact and/or miniaturised, with pneumatic or electropneumatic control, for direct-contact installation with suction cup holders and suction cups.
- 2) Multistage with or without integrated functions, with pneumatic or electropneumatic control, for de-localised assembly and for controlling groups of suction cups.

**Range:**

The **PNEUMAX** range consists of single-stage and multistage equipment of various sizes and types; the single-stage generators use the Venturi effect in a single medium/high throughput nozzle and promptly generate vacuum, flow rate and suction values that are suitable for medium/light applications. Multistage generators having more than one nozzle (ejectors) in a line, using the kinetic energy that this layout generates to ensure, based on the flow rate, limited consumption of energy and attainment of a vacuum level equal to 90%, with various suction capabilities.

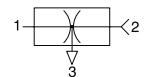
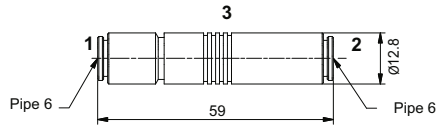
Single-stage generators, very fast in switching pressure/vacuum, can also be equipped with a quick-release system for highly cyclical applications. Multistage generators can often be accessorised with integrated management and control functions, such as for example electropneumatic control for power supply and power shut-off, quick-release blowing, a regulator to measure this release, and a vacuum switch to control the degree of vacuum generated. These latter generators can be installed as modules as well, creating actual stand-alone modules for decentralised vacuum generation and management for controlling more than one gripping element.

**Multistage section**



Single stage vacuum generator T06

Ordering code  
**19T06.S.05.HV.C0**

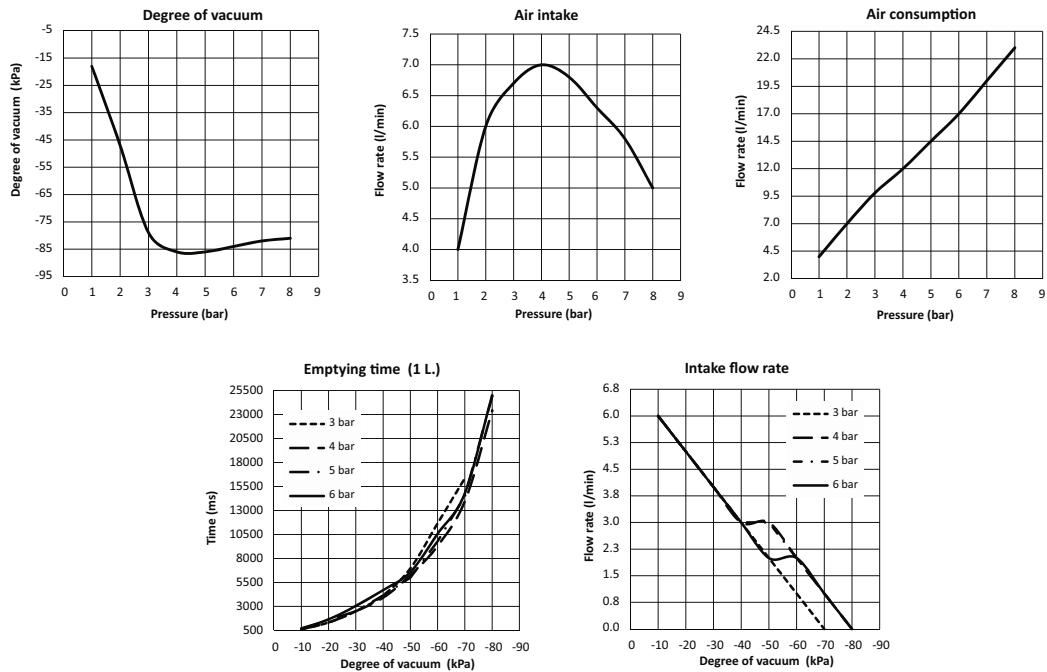


Single stage generators, with operation based on the Venturi principle; their main feature is the presence of feed pressure and connection for the vacuum, on the same axis. This makes it possible to connect the suction cups directly to the generator or through the suction cup holder, so therefore still on the same axis with obvious advantages in terms of system layout and simplicity. The outlet connection has a female thread G 1/8", or on circumference of the T06.

Performance characteristics

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	47	86	84
- Intake flow rate (l/min)	6	7	6
- Air consumption (l/min)	7	12	17

Characteristic curves

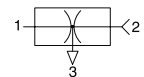
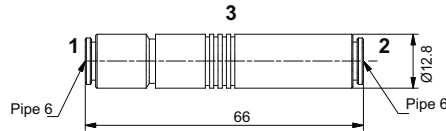


Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	7

Single stage vacuum generator T06

Ordering code  
**19T06.S.07.HV.C0**



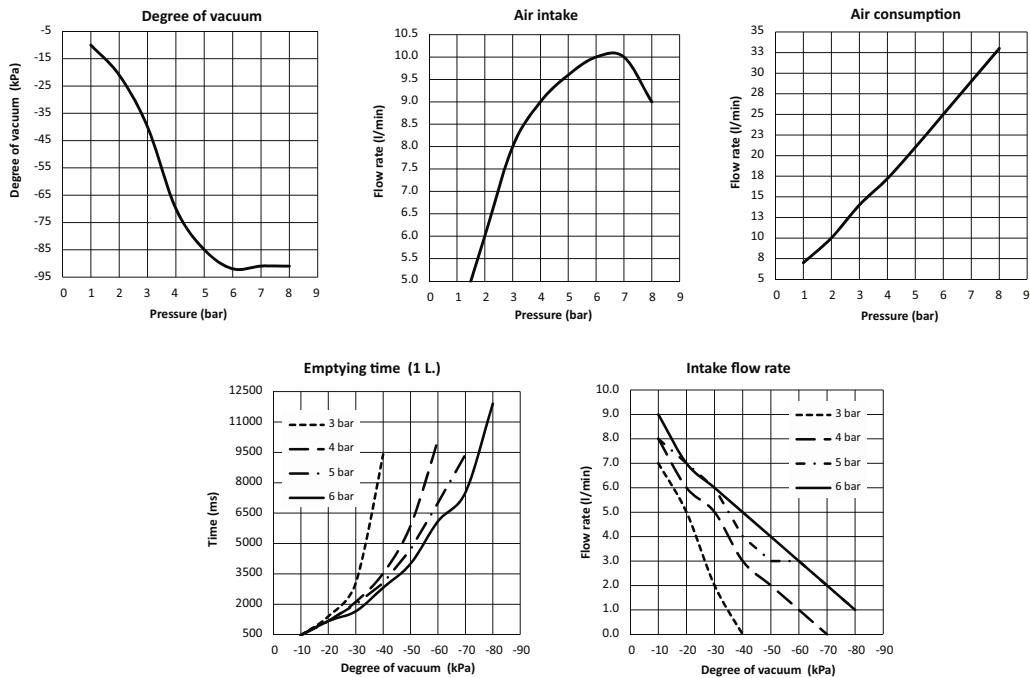
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Performance characteristics

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	21	70	92
- Intake flow rate (l/min)	6	9	10
- Air consumption (l/min)	10	17	25

3

Characteristic curves



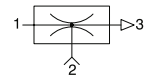
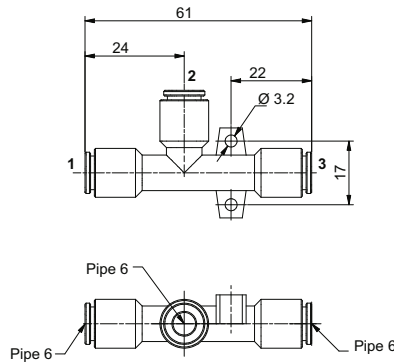
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	8

Single stage vacuum generator T06

Ordering code

19T06.S.07.HV.ZZ

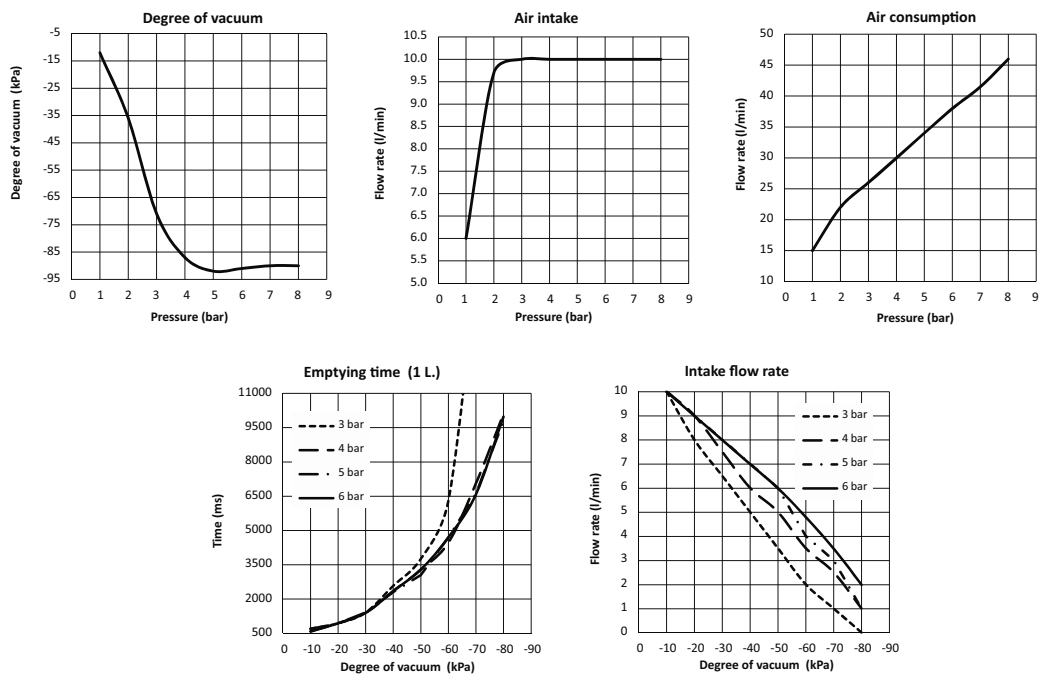


Single-stage generators, robust and reliable, with compact dimensions and suitable for applications that need the required degree of vacuum to be reached quickly with limited air flows. Operating on the Venturi principle, they have the vacuum connection orthogonal to the axis of supply and outlet. They can be connected directly to the suction cups and/or suction cup holder and can be applied in any position.

Performance characteristics

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	36	87	91
- Intake flow rate (l/min)	10	10	10
- Air consumption (l/min)	22	30	38

Characteristic curves



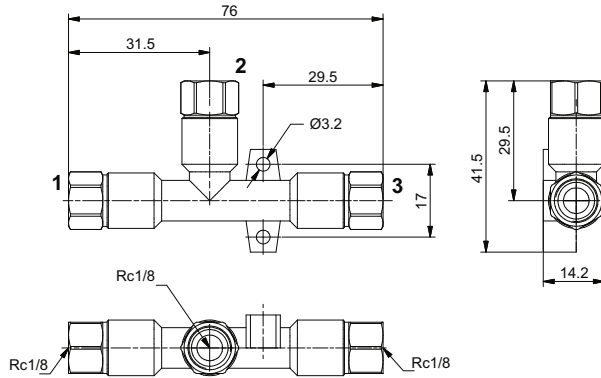
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	12

Single stage vacuum generator T18

Ordering code

19T18.S.07.HV.VV

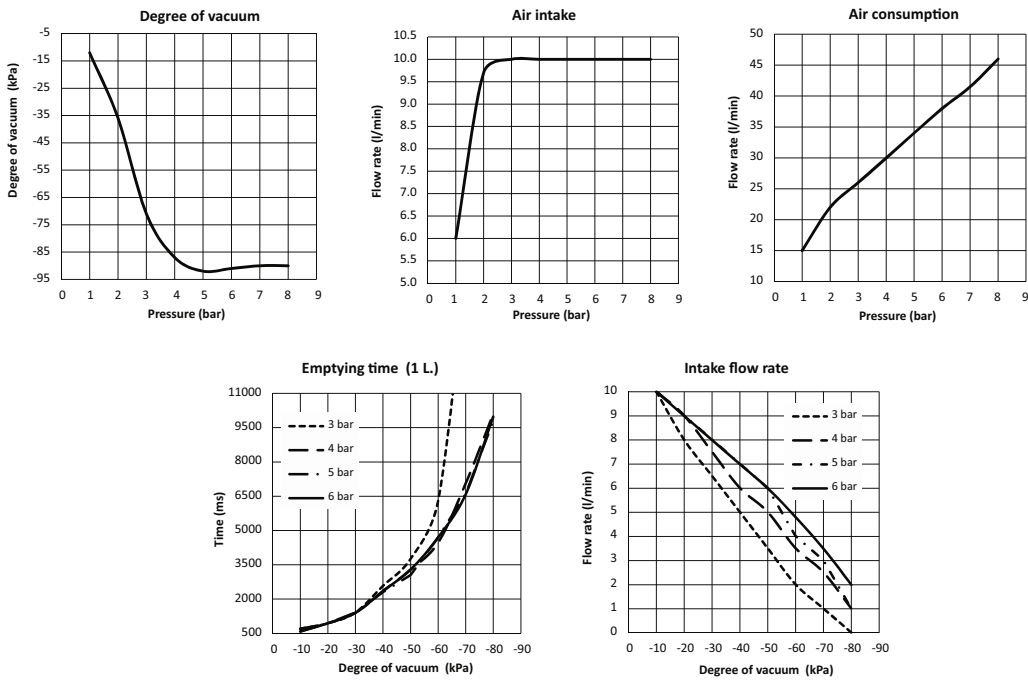


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Performance characteristics

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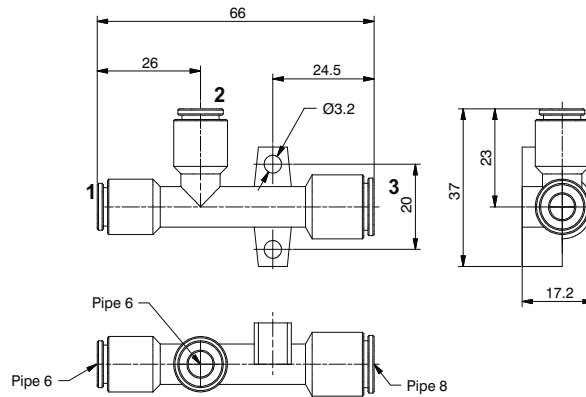
Characteristic curves



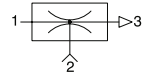
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	36

Single stage vacuum generator T06



Ordering code  
**19T06.S.10.HV.ZY**

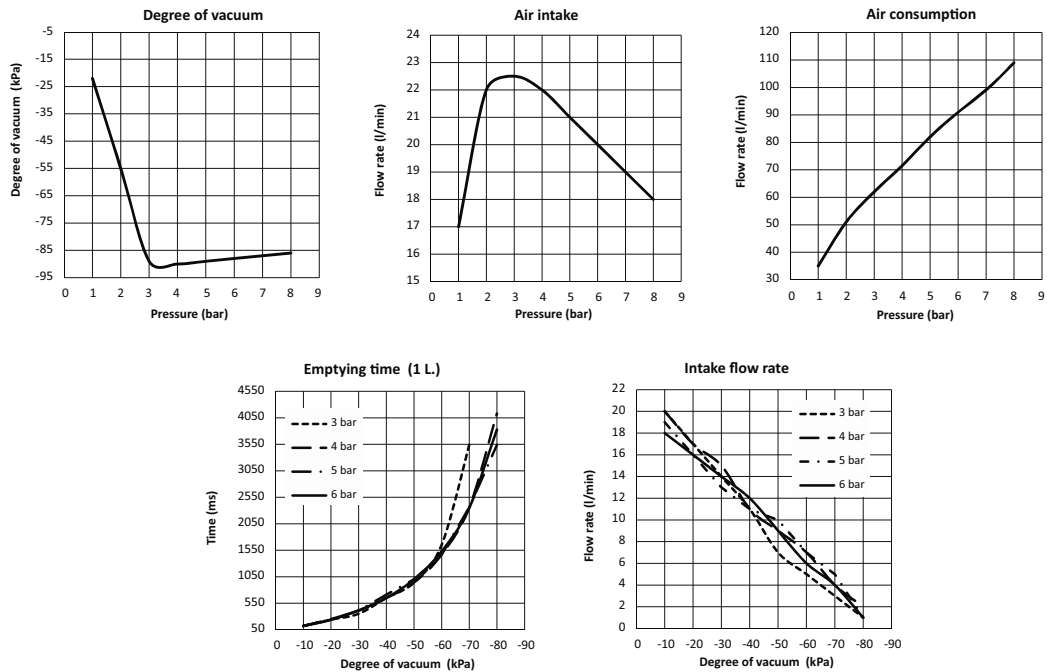


Single-stage generators, robust and reliable, with compact dimensions and suitable for applications which need the required degree of vacuum to be reached quickly with limited air flows. Operating on the Venturi principle, they have the vacuum connection, orthogonal to the axis of supply and outlet. They can be connected directly to the suction cups and/or suction cup holder and applied in any position.

Performance characteristics

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	55	90	88
- Intake flow rate (l/min)	22	22	20
- Air consumption (l/min)	51	72	91

Characteristic curves



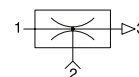
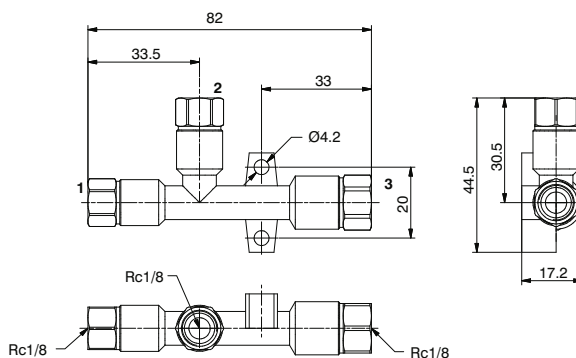
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	15

Single stage vacuum generator T18

Ordering code

19T18.S.10.HV.VV

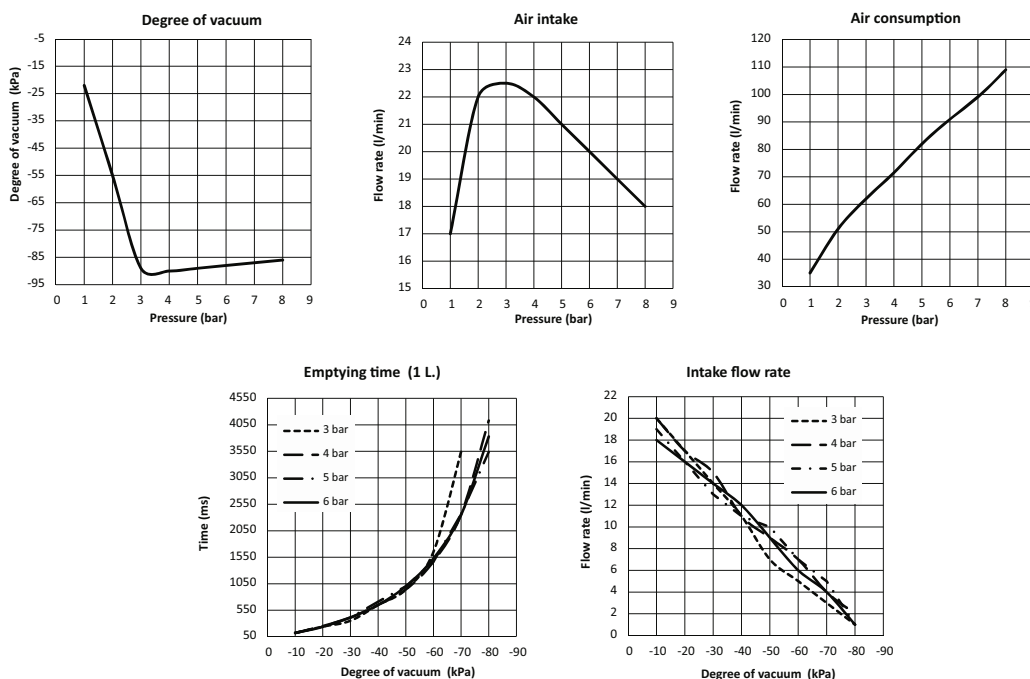


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- Degree of Vacuum (-kPa)	55	90	88
- Intake flow rate (l/min)	22	22	20
- Air consumption (l/min)	51	72	91

Characteristic curves

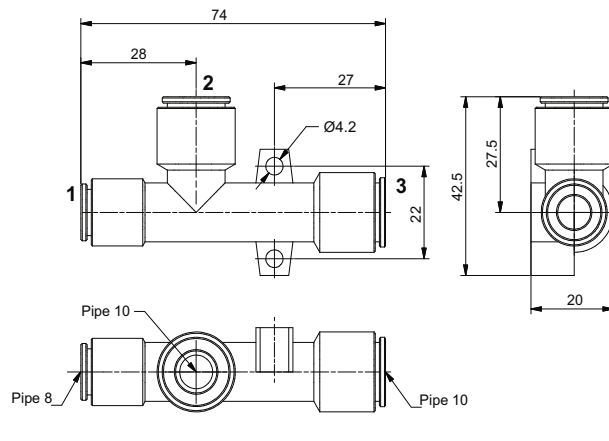


Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	46



Single stage vacuum generator T10



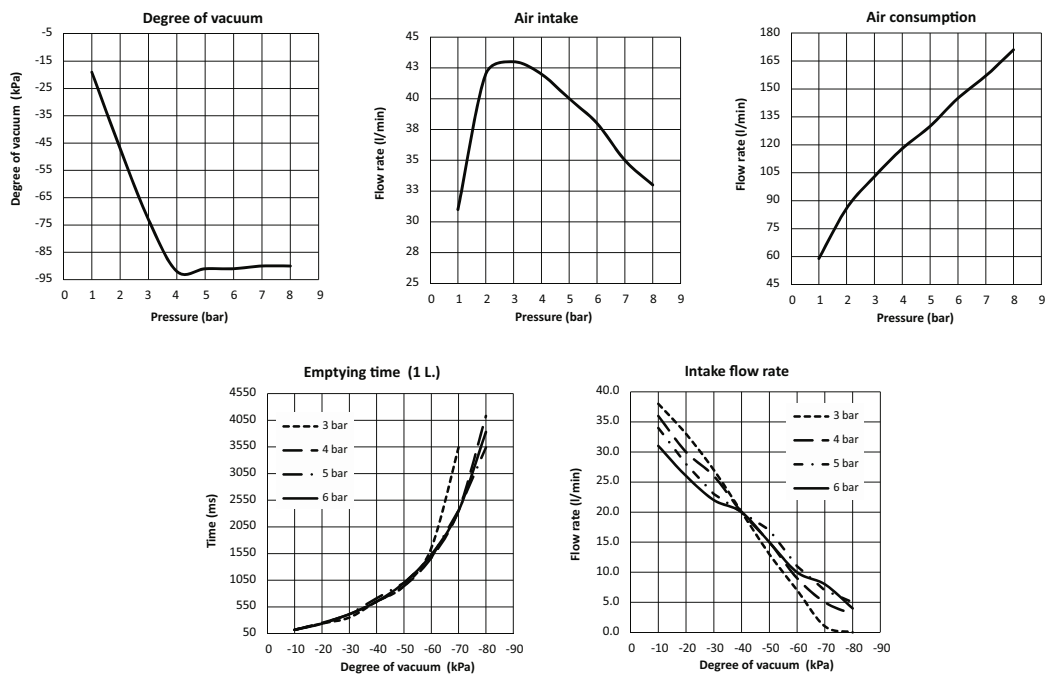
Ordering code  
**19T10.S.13.HV.XX**

Single-stage generators, robust and reliable, with compact dimensions and suitable for applications which need the required degree of vacuum to be reached quickly with limited air flows. Operating on the Venturi principle, they have the vacuum connection, orthogonal to the axis of supply and outlet. They can be connected directly to the suction cups and/or suction cup holder and applied in any position.

Performance characteristics

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	47	92	91
- Intake flow rate (l/min)	42	42	38
- Air consumption (l/min)	86	118	145

Characteristic curves



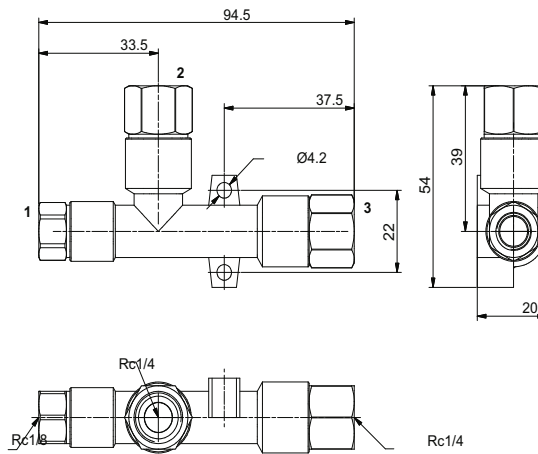
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	25

Single stage vacuum generator T14

Ordering code

19T14.S.15.HV.UU

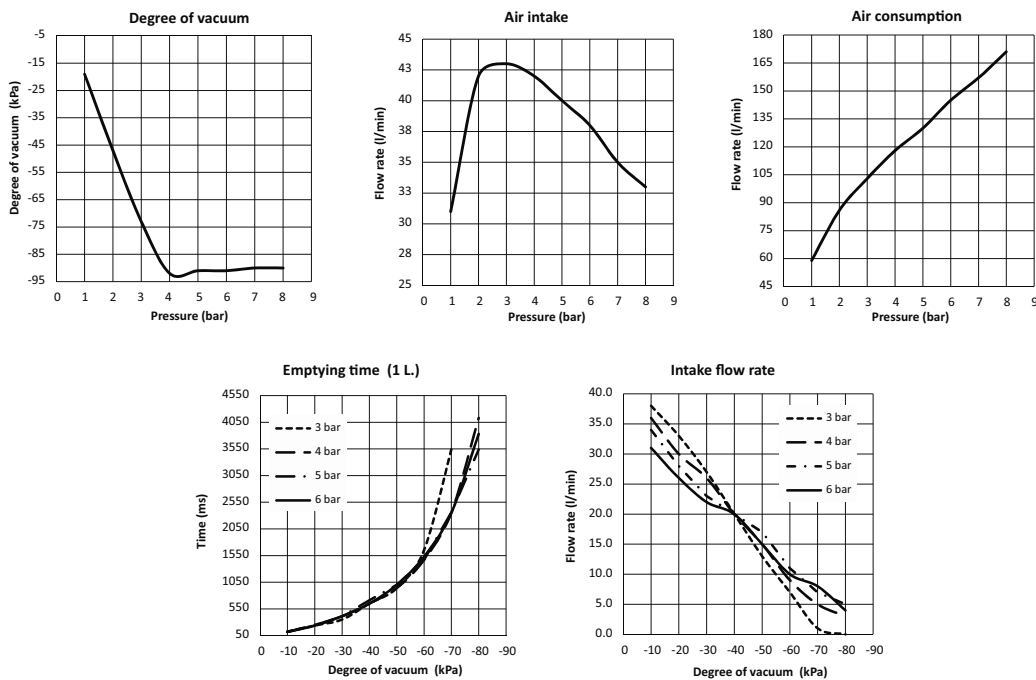


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- Intake flow rate (l/min)	42	42	38
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Characteristic curves



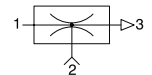
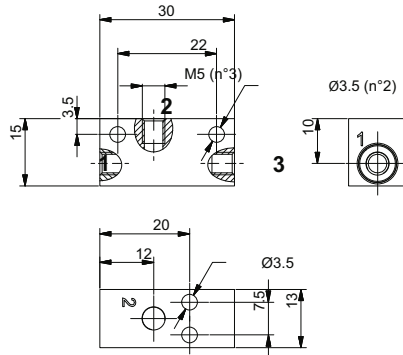
Technical features

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	86

**Generatore di Vacuum monostadio M5**

Ordering code

**19M05.S.05.SS.00**

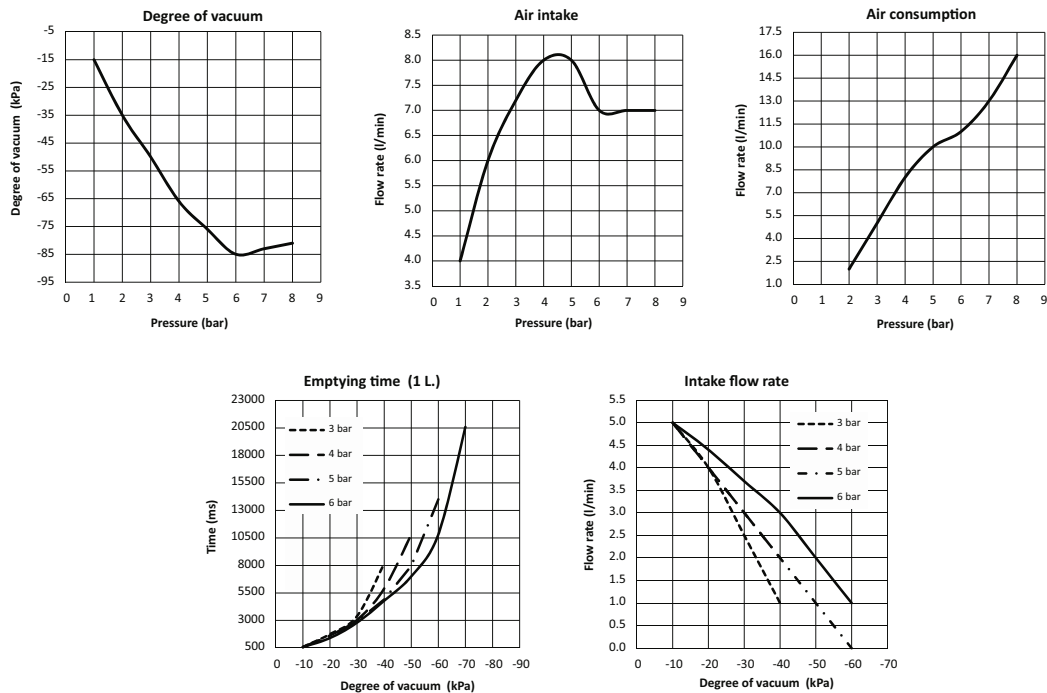


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**Performance characteristics**

- Supply pressure (bar)	2	4	6
- Degree of Vacuum (-kPa)	35	66	85
- Intake flow rate (l/min)	6	8	7
- Air consumption (l/min)	2	8	11

Characteristic curves



**Technical features**

Fluid	Unlubricated filtered air
Pressure (bar)	1 ÷ 8
Temperature (°C)	-10 ÷ +80
Weight (g)	15