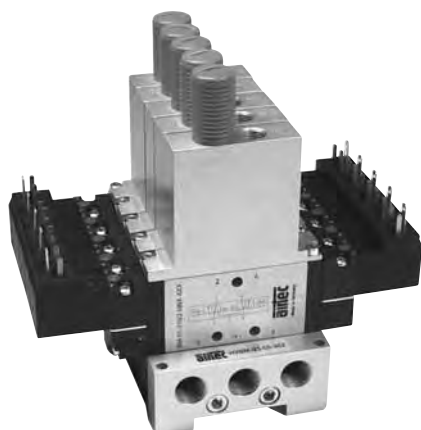




**AIRTEC
classic ejectors**
Page 10.001

**AIRTEC
column ejectors**
Vacuum generators with 1,
4, 6 and 8 independent
vacuum circuits.

Series
HV and HF
Page 10.010
MI and MIF
Page 10.015



Series HVBM
Central ejectors
according to the Venturi
principle, incl. solenoid
pilot valves for mounting
on RF manifold system.
Page 10.020

**AIRTEC
central ejectors**
Vacuum generators
available with
– Blow off function
– Air saving circuit
– Integrated vacuum
switches
– Control valves
Page 10.030



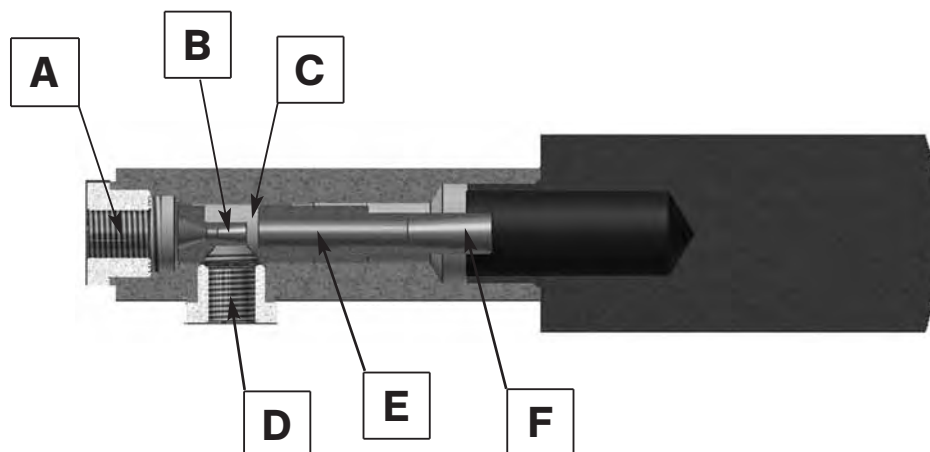
Vacuum switches
Page 10.040

**Accessories for
vacuum technology**
Page 10.041



AIRTEC Classic ejectors

HV-... and HF-...



Function

AIRTEC Classic ejectors work according to the Venturi principle. Air compressed between 4 and 6 bar, which is as dirt and oil free as possible, flows through the Venturi nozzle (B) via the compressed air supply (A); this is protected against large particles of dirt by a protective filter.

As a result of the flow cross-section in the nozzle being narrowed considerably, the flow velocity increases to the supersonic level.

In the mixing chamber (C), the quick-moving air jet hits the atmospheric air of the vacuum line (D) and whisks this along into the up-take nozzle (E), also known as a diffuser.

In this process, the required negative pressure is creating vacuum. A protective filter in the vacuum connection (D) prevents large particles of dirt getting into the vacuum area, thus preventing malfunctions in the mixing chamber (C), which can lead to the vacuum failing to be generated.

The granular silencer in the exhaust air outlet (F) reduces the noise of the exhaust air flow and allows the fine dirt from the vacuum area to pass without resistance. With the protective filters in (A) and (D) a longer service cycle is achieved.

By installing a blow off valve in the exhaust air outlet (F), the vacuum can be dispelled very quickly. It frees the work piece from the suction cup or ventilates the container and simultaneously blows the dirt from the protective filter.

Design

HV Classic ejectors.

Vacuum generator according to the Venturi Principle: high vacuum performance with low compressed air consumption.

HF Classic ejectors.

Anodised aluminium body, hexagon-shape; compact and robust construction.

Quick and easy assembly with direct or indirect mounting at the place of installation.

Vacuum generator according to the Venturi Principle: higher vacuum performance compared to HV-133/333/533 with the same low compressed air consumption. Connections 1 and 2 are fitted with removable protective filters to protect the ejector from debris.

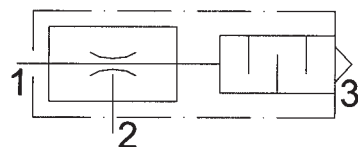
The ejector is supplied complete with the silencer.

Applications

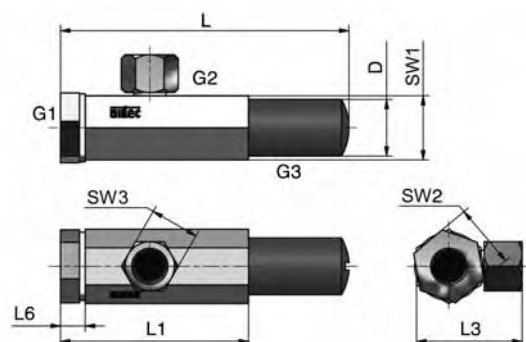
- Handling- and mounting application
- Transport- and conveyer systems
- Metal- and wood working industry
- Automobile industry
- Pharmaceutical- and food industry
- Packaging industry
- Manipulators
- Robotics

Dimensions for series

HV-..., HF-...

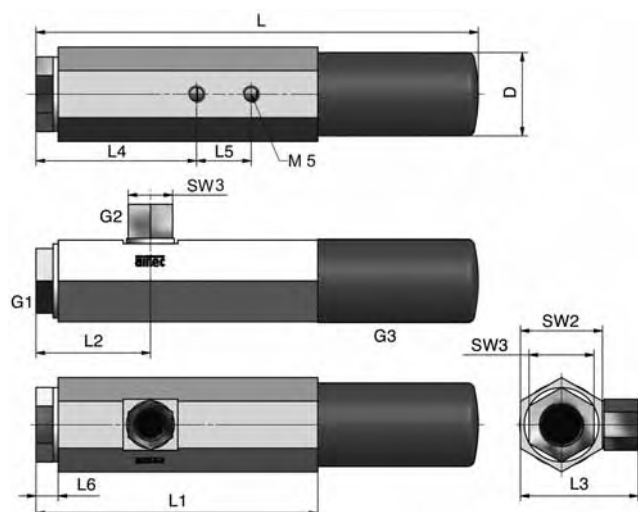


HV-33



Order number	nozzle diameters Ø mm	Weight g
HV-33	0.7	52
HV-63	1.1	131
HV-93	1.3	131
HV-133	1.7	242
HV-333	2.5	368
HV-533	3.0	385
HF-133	1.7	242
HF-333	2.5	368
HF-533	3.0	385

HV-63, HV-93, HV-133, HV-333, HV-533, HF-133, HF-333, HF-533



Order number	L	L1	L2	L3	L4	L5	L6	SW1	SW2	SW3	G1	G2	G3	D Ø
HV-33	76	49.5	23.5	27.8	–	–	6.5	17	17	13	G 1/8	G 1/8	G 1/8	15
HV-63	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G 1/4	G 1/8	G 3/8	24.5
HV-93	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G 1/4	G 1/8	G 3/8	24.5
HV-133	140	93	35	38	55	20	7	32	24	19	G 1/4	G 1/4	G 1/2	24.5
HV-333	207	110	35	38.1	52	29	7	32	24	19	G 1/4	G 1/4	G 3/4	48
HV-533	207	110	35	38.1	52	29	7	32	24	19	G 1/4	G 1/4	G 3/4	48
HF-133	140	93	35	38	55	20	7	32	24	19	G 1/4	G 1/4	G 1/2	24.5
HF-333	207	110	35	38.1	52	29	7	32	24	19	G 1/4	G 1/4	G 3/4	48
HF-533	207	110	35	38.1	52	29	7	32	24	19	G 1/4	G 1/4	G 3/4	48

Mounting holes = M5

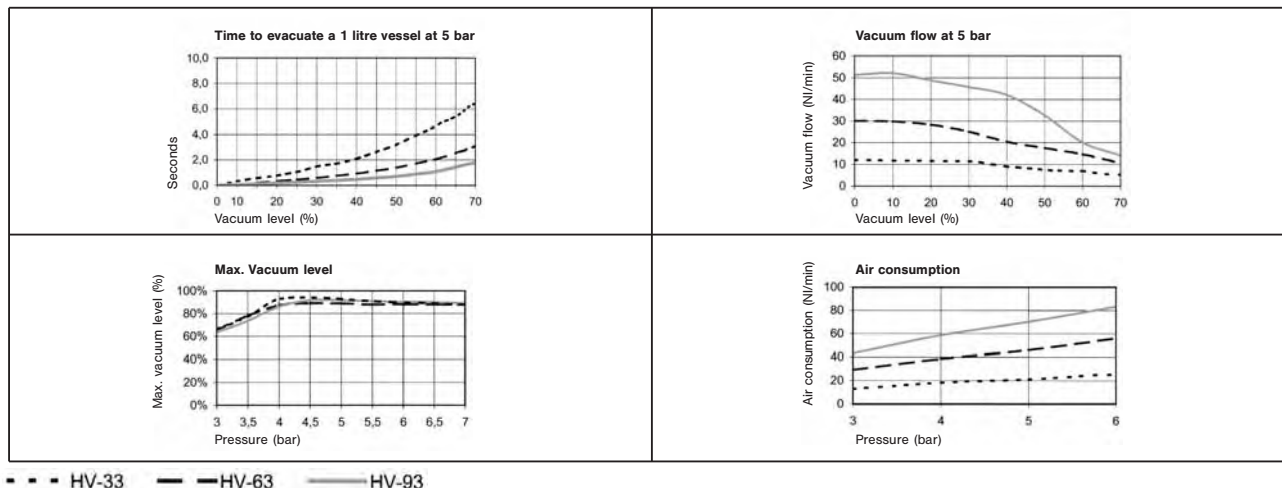
The measured values refer to a 5 bar (72.5 psi) pressure supply.

AIRTEC Classic ejectors up to 90 % vacuum

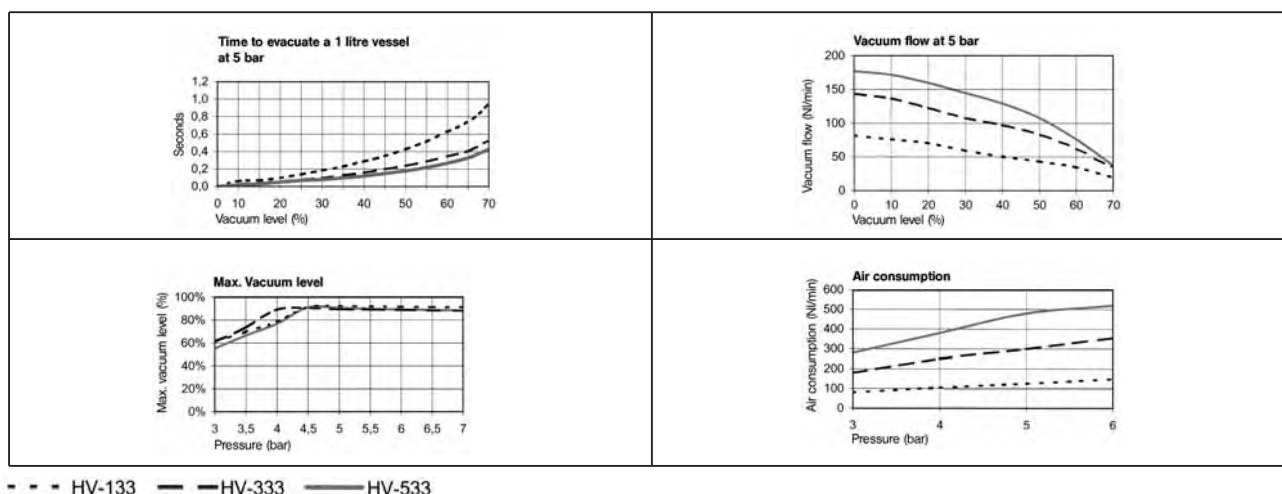


Technical data for series

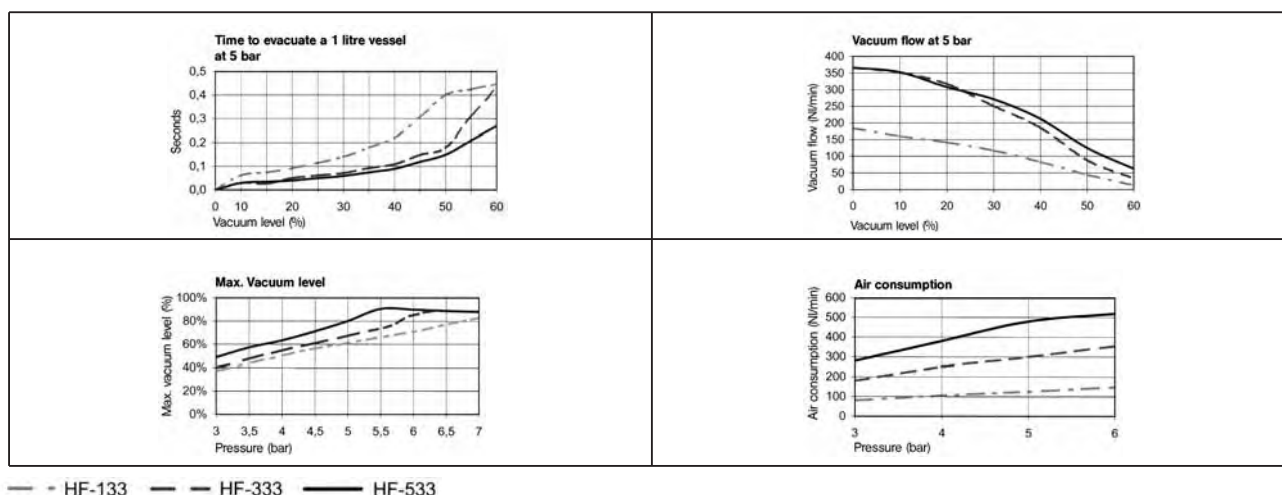
HV-33, HV-63, HV-93



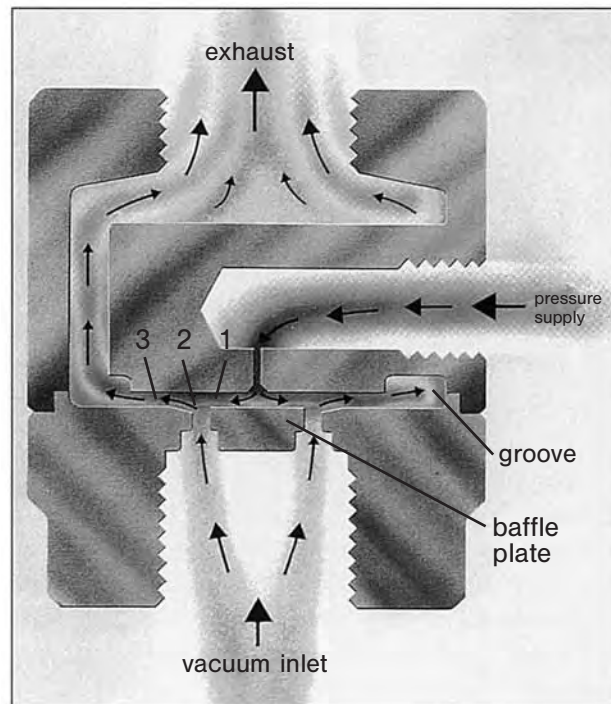
HV-133, HV-333, HV-533



HF-133, HF-333, HF-533



HV-... / HF-... / MI-... / MIF-...



The concept

The column ejector gets its name from its cylindrical geometry. The pressure supply is introduced radially on the ejector body and routed internally into the center of the ejector. The air flow is directed downwards through an orifice to a baffle plate and is accelerated radially in all directions until the desired sub- or supersonic speed is obtained at the point of ejection 1. At this point the air expands and vacuum is created (Venturi principle). At point 2, the accelerated air flow is mixed with the drawn air. At point 3, the air speed is reduced and flows directly upward through a silencer to atmosphere. Several vacuum ports are positioned around the outer diameter into point 2, to connect several vacuum cups on one ejector.

The vacuum is maintained on all ports, even in cases where one or several cups draws to atmospheric pressure. Additional valves or pressure control are not required. This increases operating safety while reducing start-up costs.

The new body design makes the ejector highly efficient. In vacuum ranges above 40 %, the column ejector achieves a performance, at equal air consumption, that can only be matched by multistage vacuum ejectors. The compact form, along with its lightweight design, provides for new application possibilities in the area of vacuum technology.

Applications

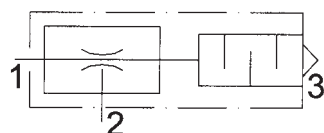
- Handling- and mounting application
- Transport- and conveyer systems
- Metal- and wood working industry
- Automobile industry
- Pharmaceutical- and food industry
- Packaging industry
- Manipulators
- Robotics

High vacuum ejectors with one vacuum connection up to 85 % vacuum



Technical data and dimensions for series

HV-..., HF-...



Design and function

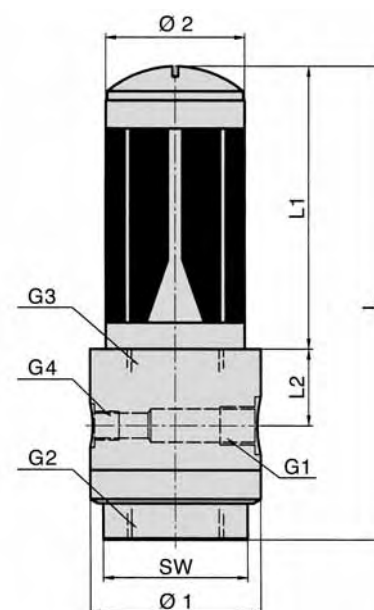
The **HV and HF series** are based on the Venturi principle. The units have one air supply port (lateral), one exhaust port on top and one vacuum port (bottom). One additional lateral port for possible gauge mounting is plugged.

The **HV series** is optimized for vacuum levels up to 85% at low air consumption. The unit is mainly used for quick automation processes.

The **HF series** provides a high air flow and is used for the handling of porous parts like styrofoam, chipboard, cardboard etc

The unit is supplied complete with an: Acetal-resin silencer with self-cleaning granulate filling which is mounted on the exhaust port. The model HF-1150 and HF-1500 is equipped with a sintered bronze silencer.

Additional accessories please see page 10.042.



Order number	L	L1	L2	Ø1	Ø2	SW	G1	G2	G3	G4	Weight kg
HV-80	109	47	25	48	24,5	40	G 1/4	G 1/2	G 1/2	G 1/8	0.300 (0.661 lb.)
HV-150	109	47	25	48	24,5	40	G 1/4	G 1/2	G 1/2	G 1/8	0.300 (0.661 lb.)
HV-300	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HV-600	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HF-100	109	47	25	48	24,5	40	G 1/4	G 1/2	G 1/2	G 1/8	0.240 (0.529 lb.)
HF-200	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HF-300	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HF-450	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HF-600	163	97	28	59	48	50	G 1/4	G 1	G 1	G 1/8	0.400 (0.882 lb.)
HF-1150	180	90	38	88	64	69	G 3/8	G 1 1/2	G 2	G 1/8	0.900 (1.984 lbs.)
HF-1500	180	90	38	88	64	69	G 3/8	G 1 1/2	G 2	G 1/8	0.900 (1.984 lbs.)

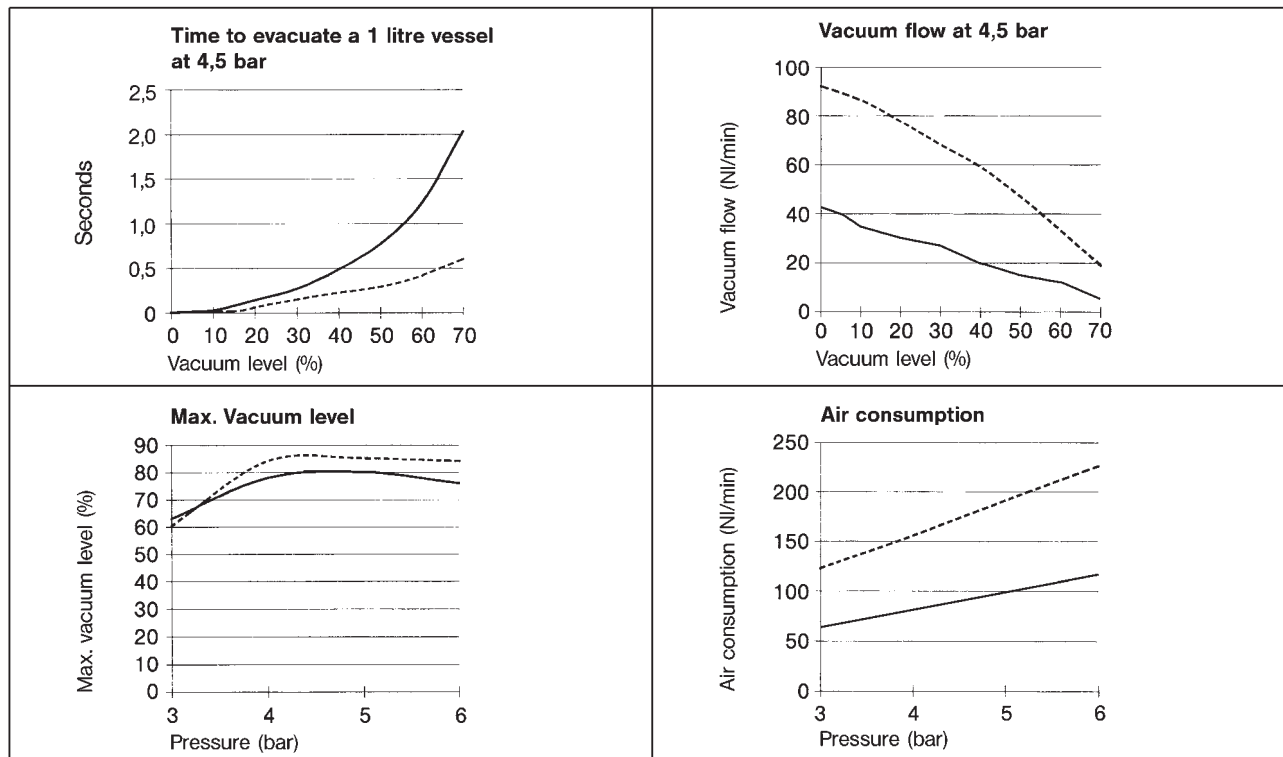
The measured values refer to a 5 bar (72.5 psi) pressure supply.

High vacuum ejectors with one vacuum connection up to 85 % vacuum



Technical data for series

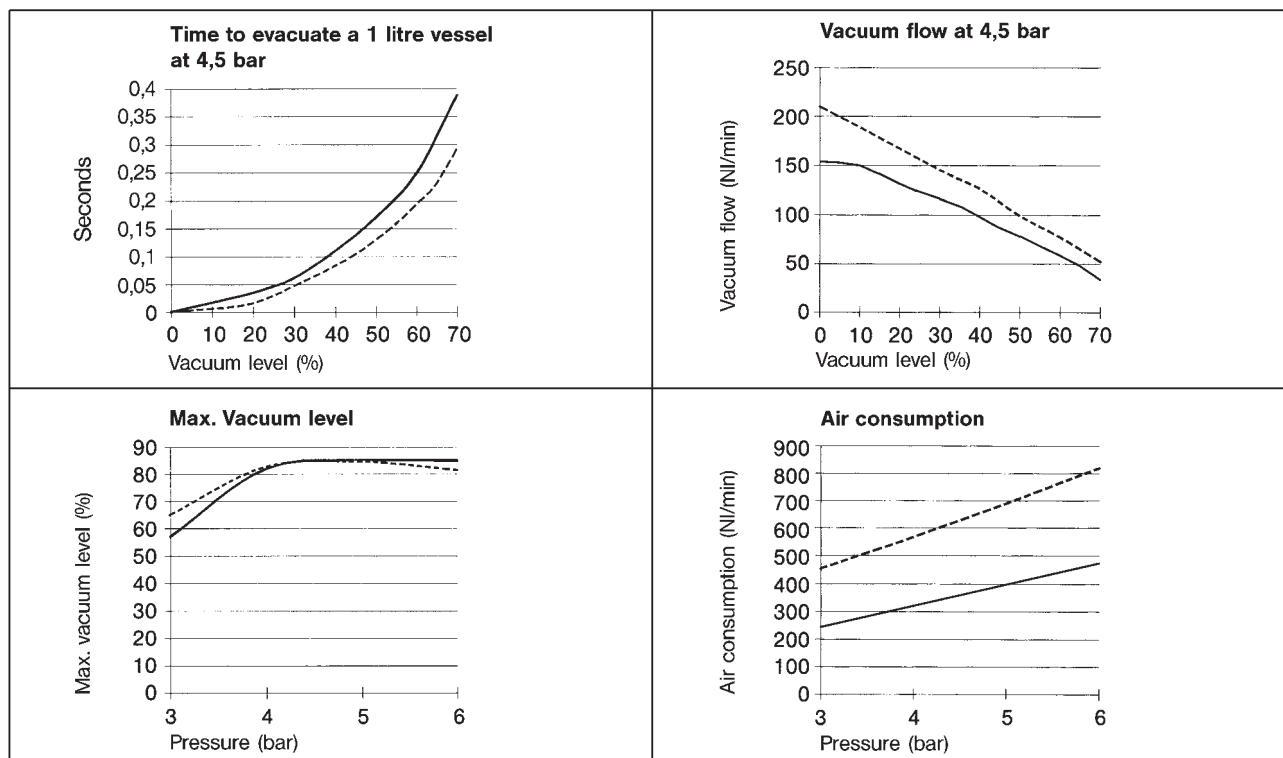
HV-80, HV-150



Vacuum ejectors HV-80 —————

Vacuum ejectors HV-150 - - - - -

HV-300, HV-600



Vacuum ejectors HV-300 —————

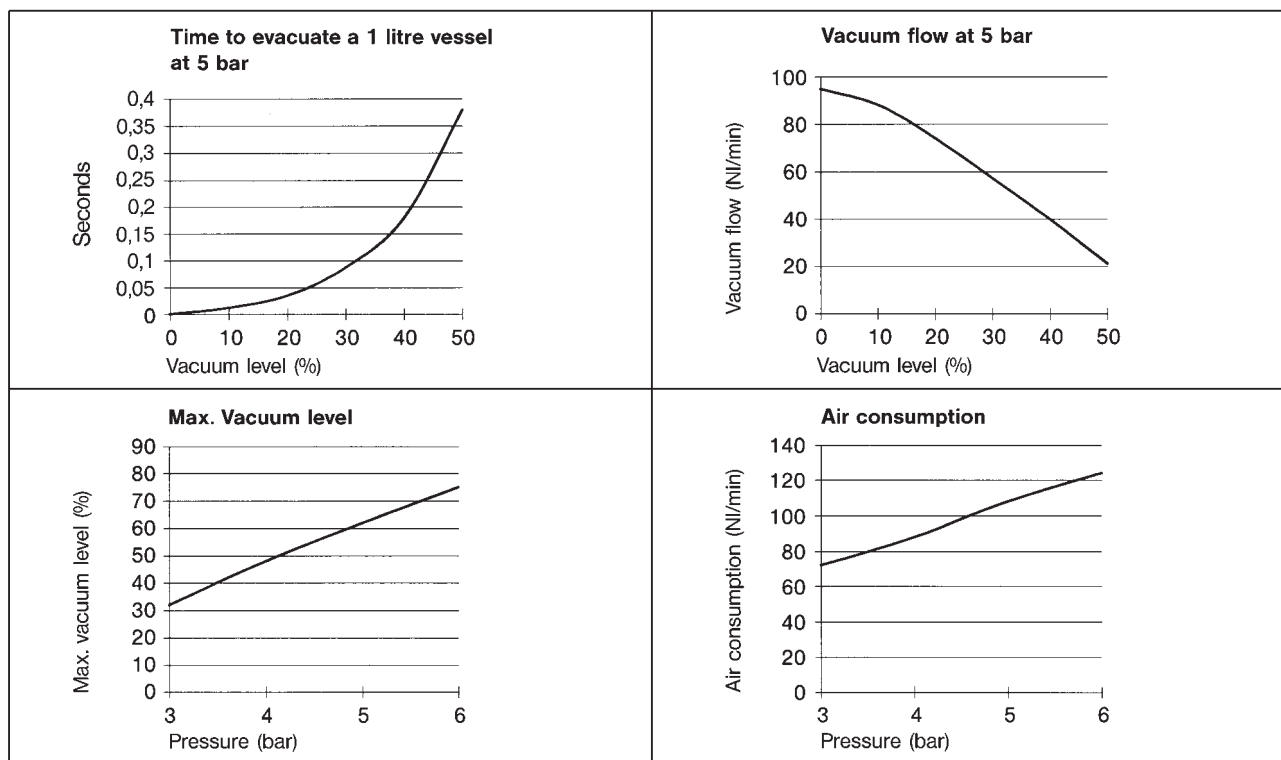
Vacuum ejectors HV-600 - - - - -

High vacuum ejectors with one vacuum connection up to 85 % vacuum



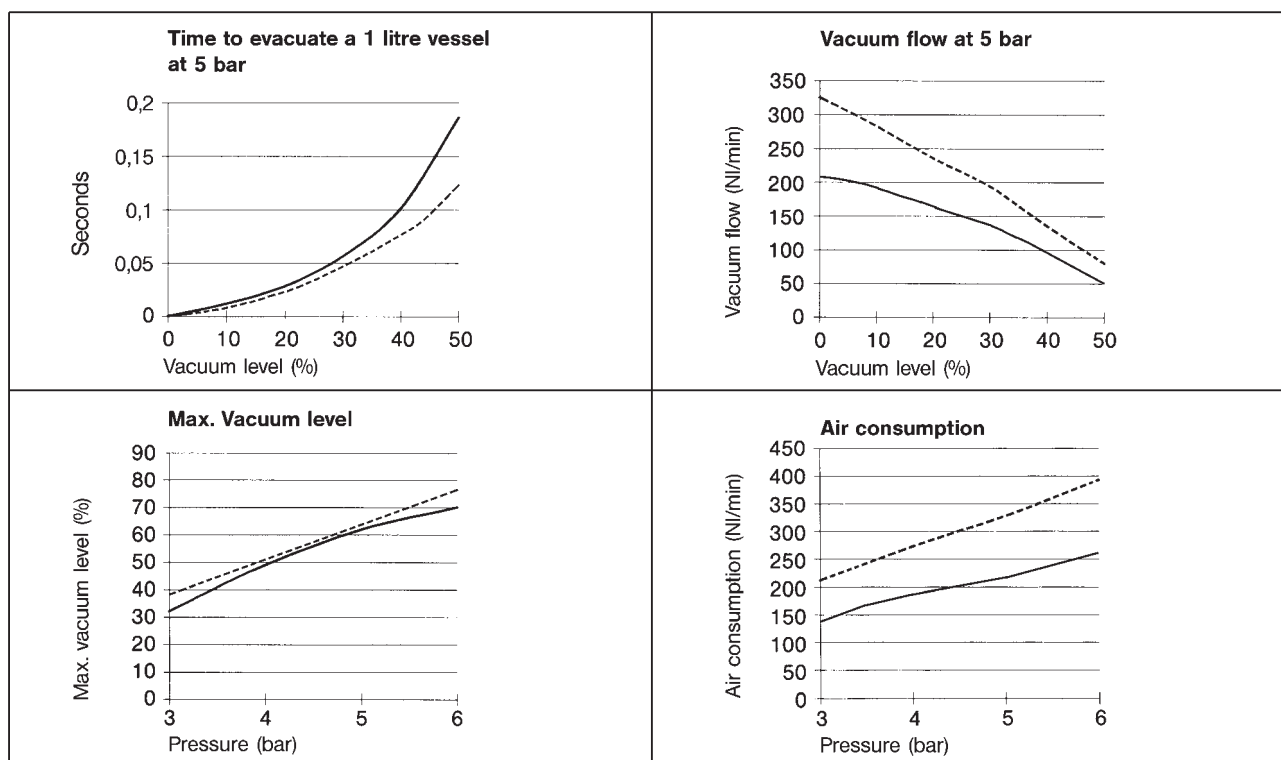
Technical data for series

HF-100



Vacuum ejector HF-100

HF-200, HF-300



Vacuum ejectors HF-200

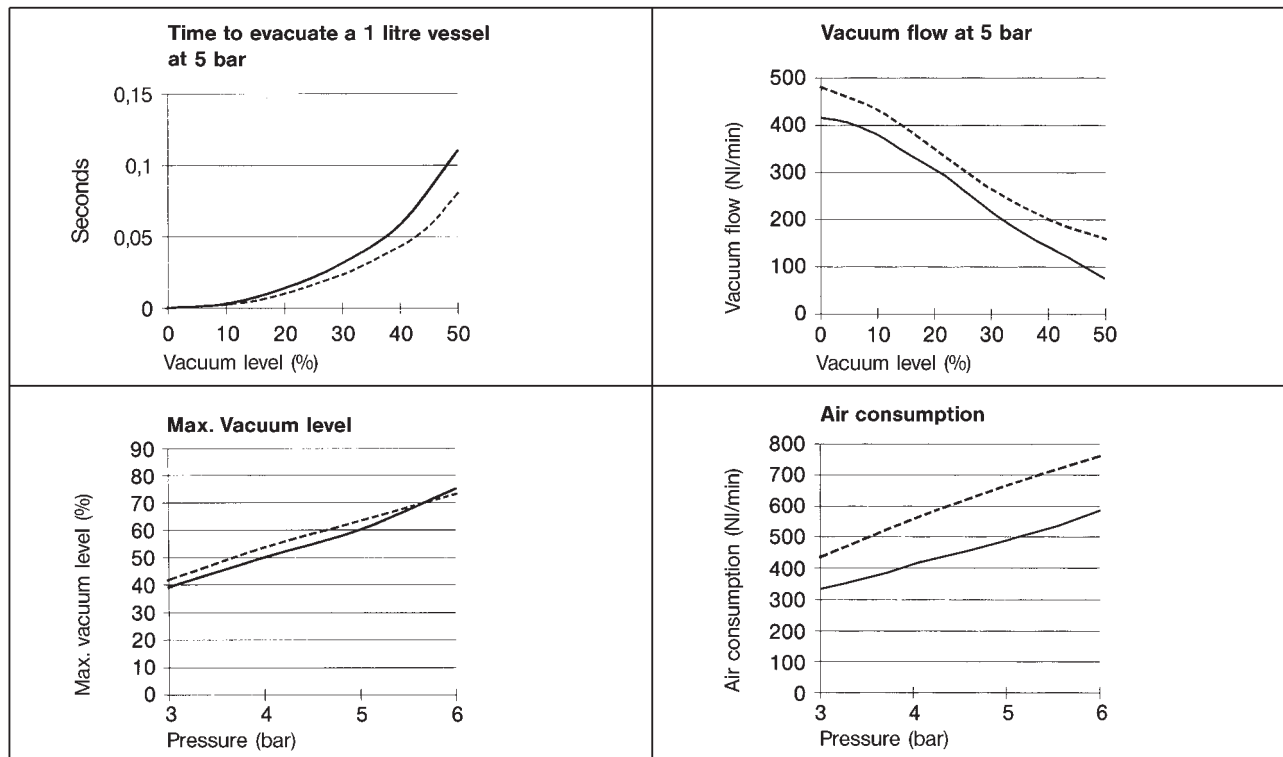
Vacuum ejectors HF-300

High vacuum ejectors with one vacuum connection up to 85 % vacuum



Technical data for series

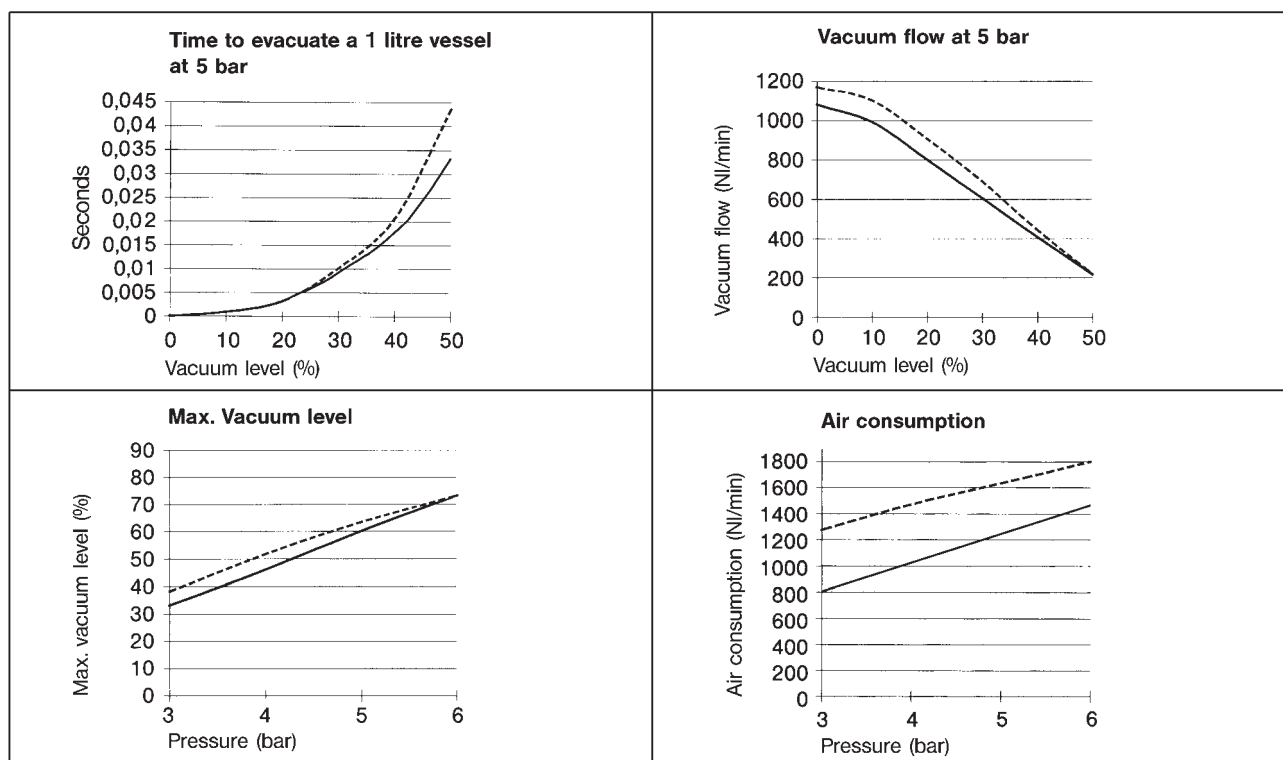
HF-450, HF-600



Vacuum ejectors HF-450 —————

Vacuum ejectors HF-600 - - - - -

HF-1150, HF-1500



Vacuum ejectors HF-1150 —————

Vacuum ejectors HF-1500 - - - - -

Multi-inlet ejectors

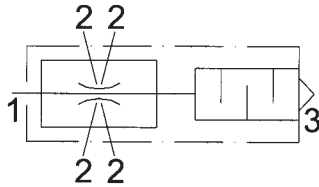
4 – 8 vacuum connections

up to 82 % vacuum



Technical data and dimensions for series

MI-..., MIF-...



Design and function

The MI and MIF series are based on the Venturi principle. The units have one air supply port (lateral, upper part). One additional lateral port for possible gauge mounting is plugged.

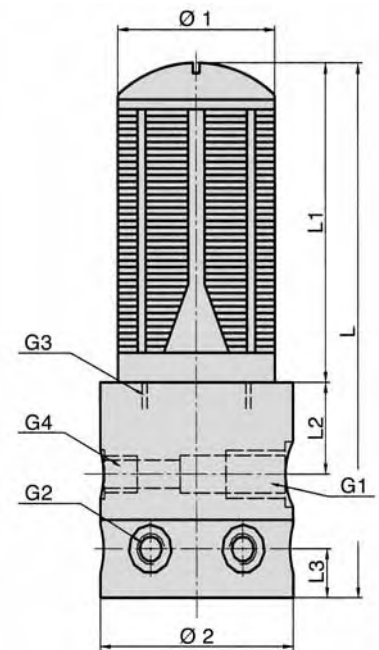
The unit is available with 4, 6 or 8 vacuum ports which are located on the lower body part (lateral).

The MI series is optimized for vacuum levels up to 85% at low air consumption. The unit is mainly used for quick automation processes.

The MIF series provides a high air flow and is used for the handling of porous parts like styrofoam, chipboard, cardboard etc

The unit is supplied complete with an: Acetal-resin silencer with self-cleaning granulate filling which is mounted on the exhaust port.

Additional accessories please see page 10.042.



Order number	L	L1	L2	L3	Ø1	Ø2	G1	G2	G3	G4	circuit points	Weight kg
MI-4/20	109	47	25	15	24,5	48	G 1/4	G 1/8	G 1/2	G 1/8	4	0.300 (0.661 lb.)
MI-4/40	109	47	25	15	24,5	48	G 1/4	G 1/8	G 1/2	G 1/8	4	0.300 (0.661 lb.)
MI-6/30	109	47	25	15	24,5	48	G 1/4	G 1/8	G 1/2	G 1/8	6	0.300 (0.661 lb.)
MI-6/55	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	6	0.400 (0.882 lb.)
MI-8/40	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	8	0.400 (0.882 lb.)
MIF-4/25	109	47	25	15	24,5	48	G 1/4	G 1/8	G 1/2	G 1/8	4	0.240 (0.529 lb.)
MIF-4/60	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	4	0.370 (0.816 lb.)
MIF-4/80	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	4	0.370 (0.816 lb.)
MIF-6/40	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	6	0.370 (0.816 lb.)
MIF-6/55	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	6	0.370 (0.816 lb.)
MIF-8/30	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	8	0.370 (0.816 lb.)
MIF-8/40	163	97	28	15	48	59	G 1/4	G 1/8	G 1	G 1/8	8	0.370 (0.816 lb.)

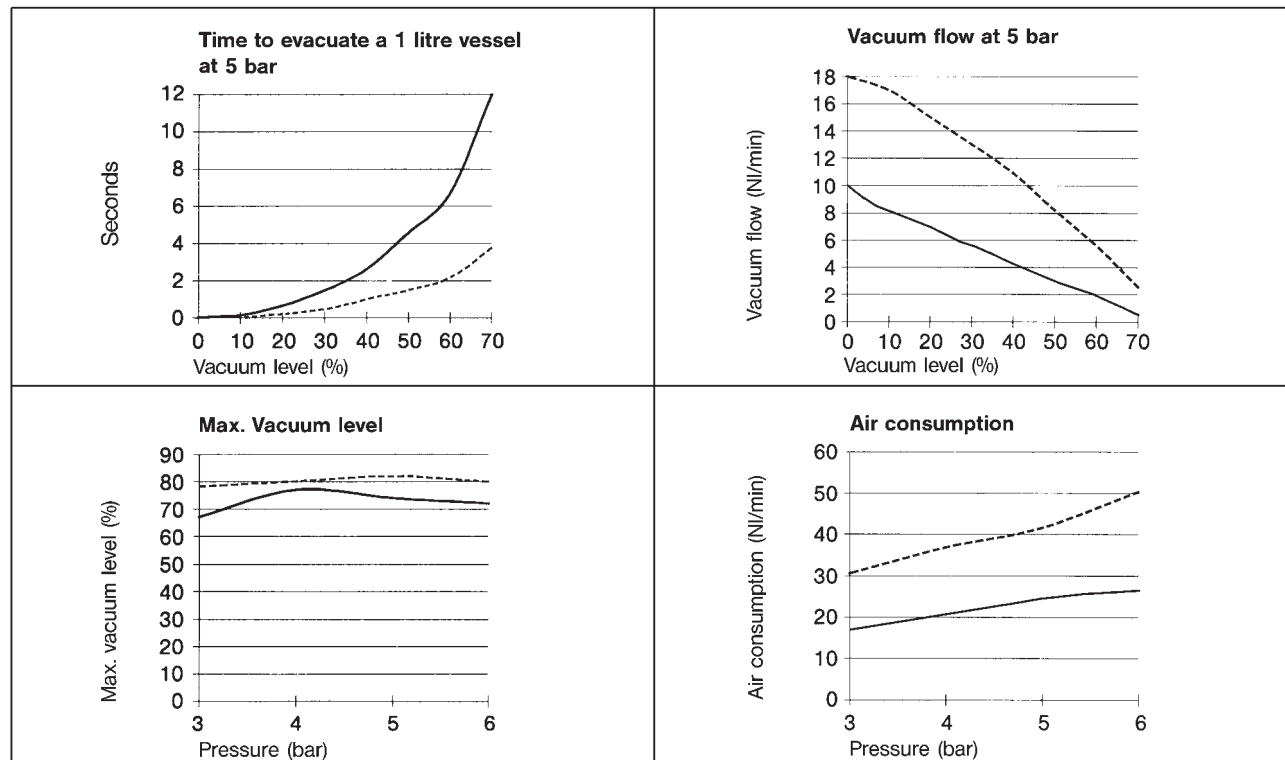
The measured values refer to a 5 bar (72.5 psi) pressure supply.

Multi-inlet ejectors 4 – 8 vacuum connections up to 82 % vacuum



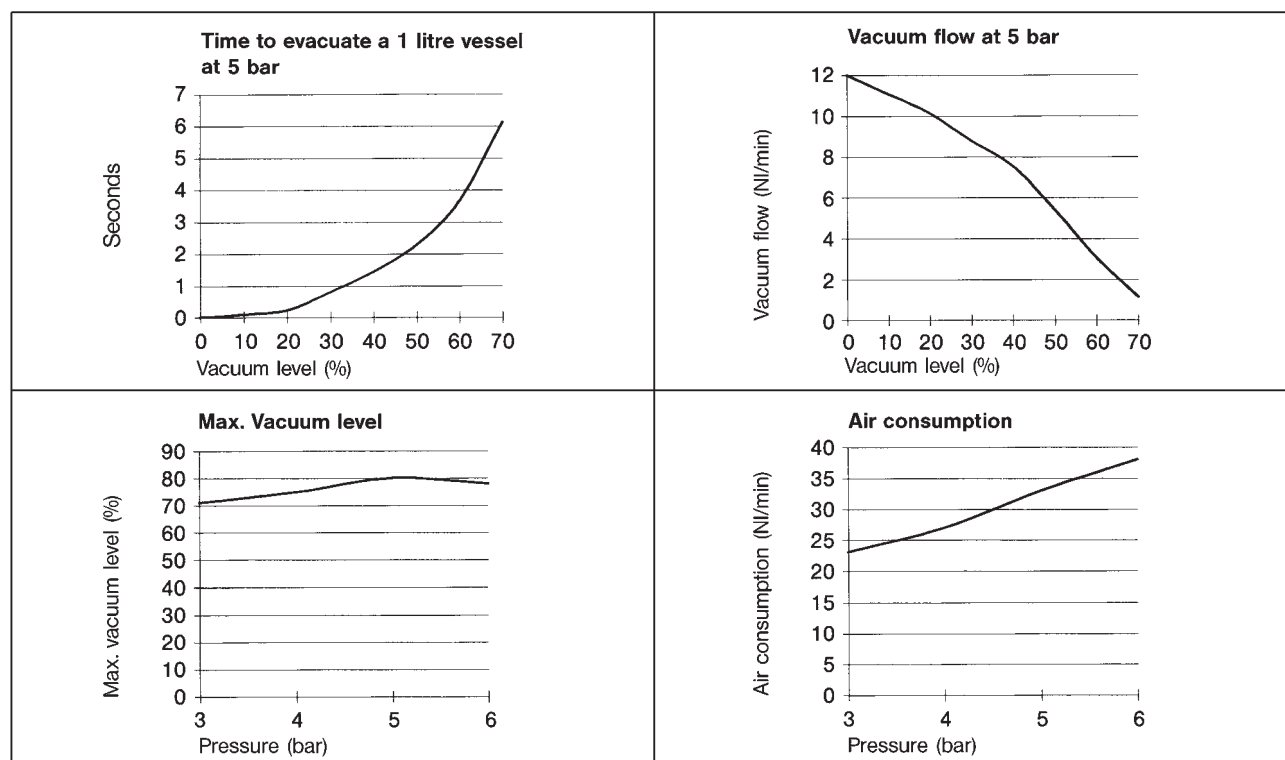
Technical data for series

MI-4/20, MI-4/40 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MI-4/20 ————— Vacuum ejectors MI-4-40 - - - - -

MI-6/30 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MI-6/30 —————

Multi-inlet ejectors

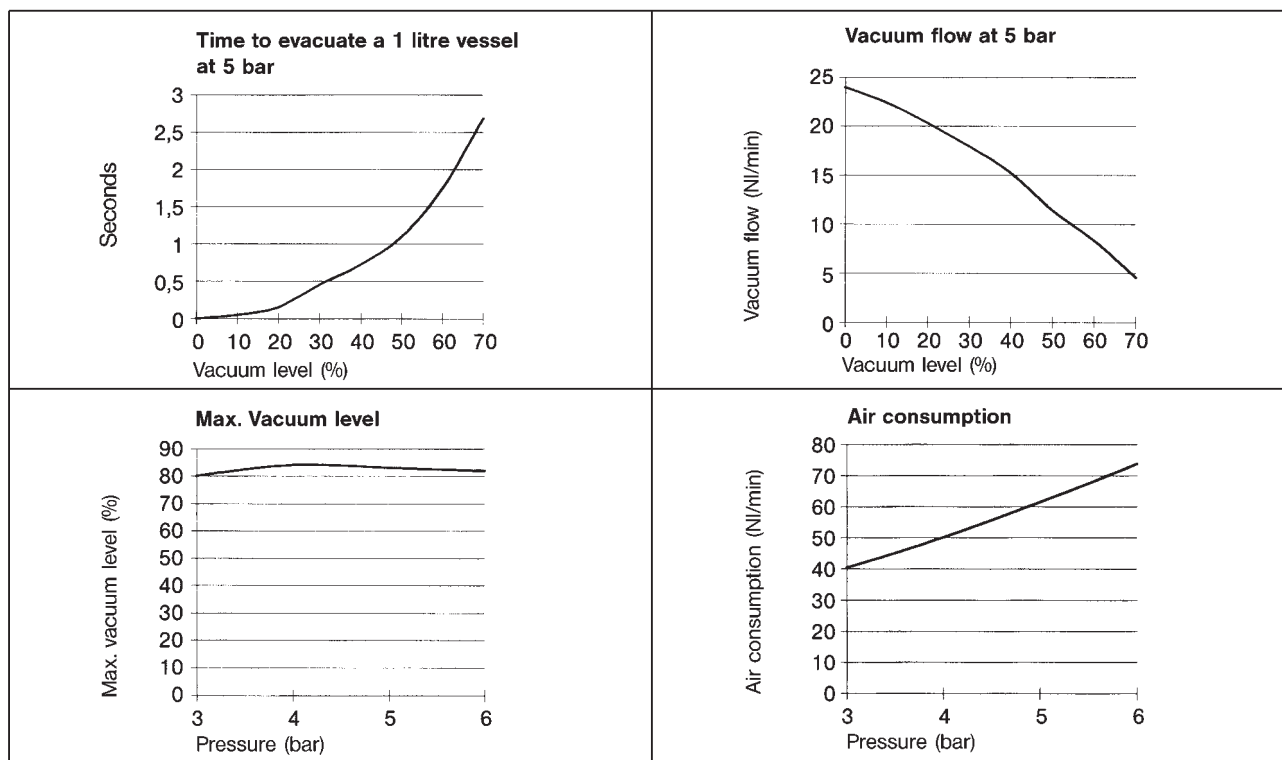
4 – 8 vacuum connections

up to 82 % vacuum



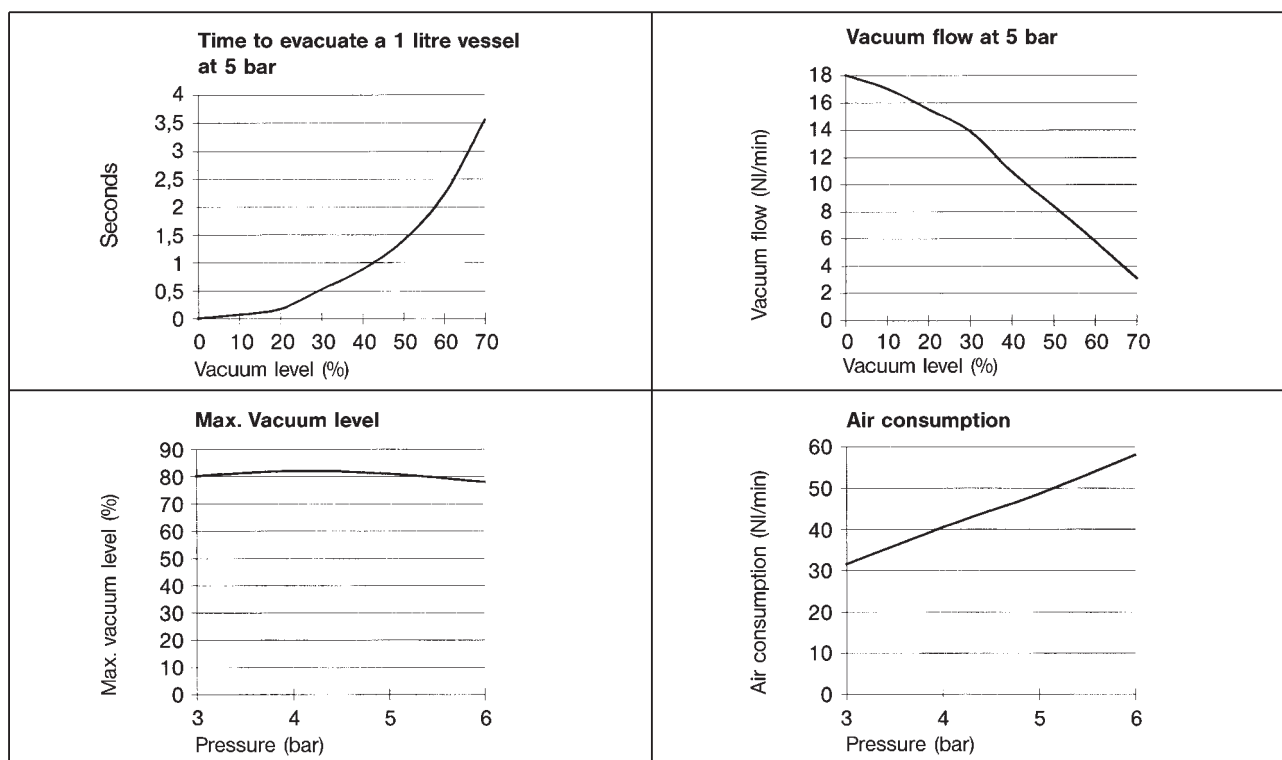
Technical data for series

MI-6/55 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MI-6/55

MI-8/40 *The ratings refer to the individual vacuum connection.*



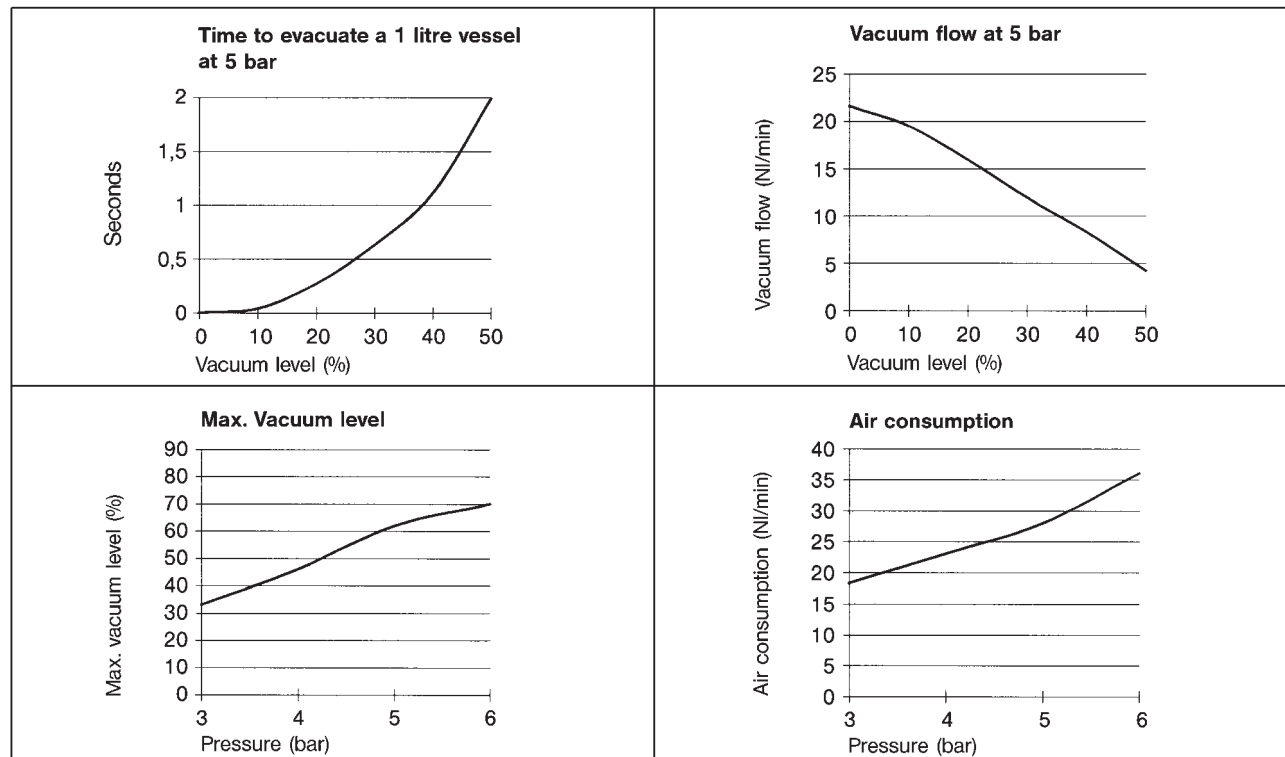
Vacuum ejectors MI-8/40

Multi-inlet ejectors 4 – 8 vacuum connections up to 82 % vacuum



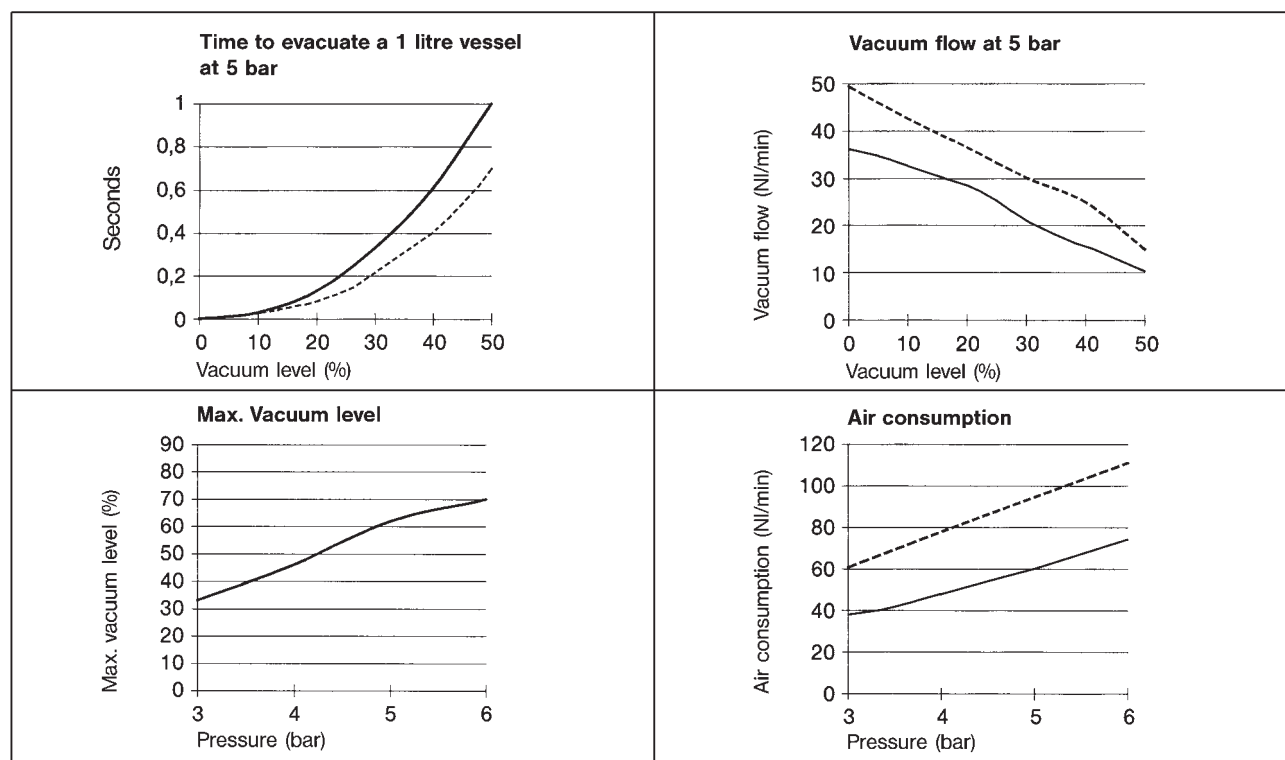
Technical data for series

MIF-4/25 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MIF-4/25 _____

MIF-4/60, MIF-4/80 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MIF-4/60 _____

Vacuum ejectors MIF-4/80 - - - - -

Multi-inlet ejectors

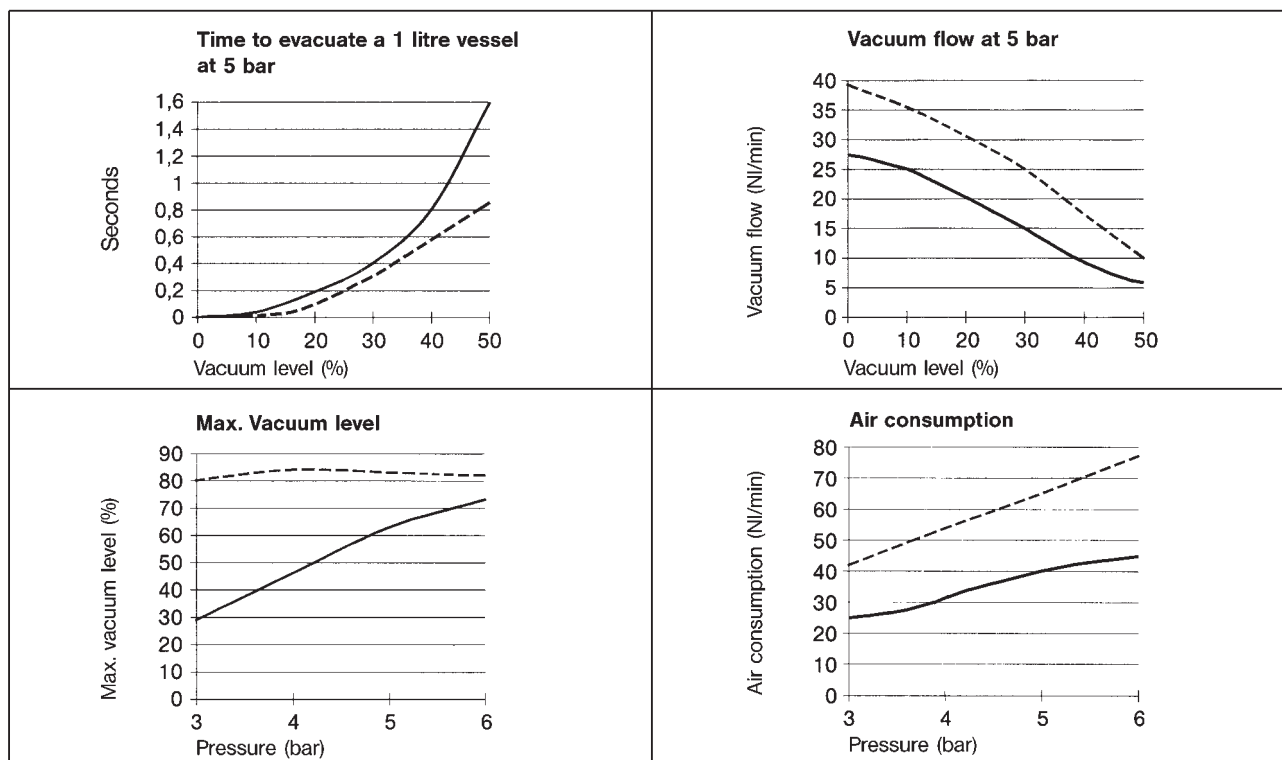
4 – 8 vacuum connections

up to 82 % vacuum



Technical data for series

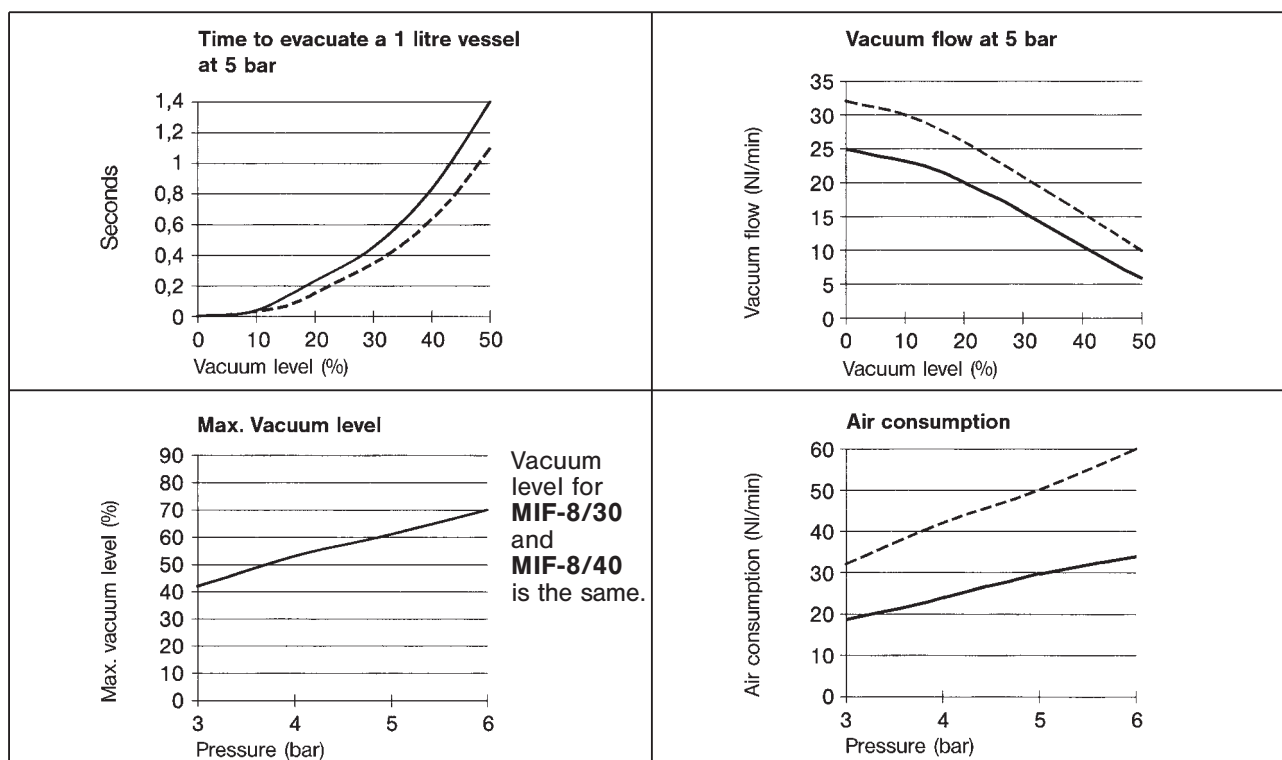
MIF-6/40, MIF-6/55 *The ratings refer to the individual vacuum connection.*



Vacuum ejectors MIF-6/40 —————

Vacuum ejectors MIF-6/55 - - - - -

MIF-8/30, MIF-8/40 *The ratings refer to the individual vacuum connection.*

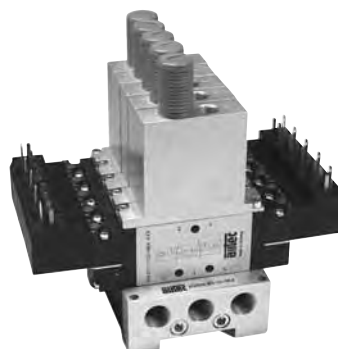


Vacuum ejectors MIF-8/30 —————

Vacuum ejectors MIF-8/40 - - - - -

Technical data for series

HVBM



Order code

HVBM-33-05-162

Series

HVBM = Standard

Flow

33 = 33 NI/min

63 = 63 NI/min

93 = 93 NI/min

**Number of
stations**

02, 03, 04, 05², 06²,

SA³, SF³

Coil options

Standard voltage	Plug socket upward¹⁾	Plug socket downward¹⁾
12 V DC, 1 W	161	131
24 V DC, 1 W	162	132
24 V AC, 3 VA	152	122
115 V AC, 3 VA	156	126
230 V AC, 3 VA	157	127

¹⁾ The solenoid can be supplied with plug socket connection and manual override on the same side as ports 2 and 4 or on the same side as ports 1, 3 and 5.

When the valve is requested without the plug socket, the first digit of the order code for standard coils must be changed from 1 to 4.

Information about the valves please see page 4.097.

²⁾ Please note, that the blow off function is only possible for a max. of 4 units at the same time if the full vacuum level has to be maintained.

³⁾ SA = Element with pilot valve for single use.

SF = Element with pilot valve type BM-01-310/2-HN for mounting on manifold RF-01 (more valve information see page 4.090).

Design and function

The central ejector is based on the Venturi principle. It is mounted on a RF- manifold system. A double 3/2-way pilot valve, type BM-01-310/2-HN, provides the control of the vacuum and blow off port.

The unit is available as single ejector and can be extended up to 6 stations. 3 different flow sizes are available.

Scope of delivery: Acetal-resin silence with self-cleaning granulate filling.

Order number Please complete according to order code.	HVBM-33	HVBM-63	HVBM-93
Pneumatic connection	G 1/8 air supply and exhaust for single ejectors G 1/4 air supply and exhaust for manifold mounting G 1/8 for vacuum port		
Electrical connection	Plug C according to DIN EN 175301-803		
Vacuum level (at 4.5 bar)	87 %	89 %	92 %
Air consumption (vacuum 4.5 bar)	21 NI/min (0.0213 Cv)	47 NI/min (0.0478 Cv)	73,4 NI/min (0.0745 Cv)
Air consumption (blow off at 4.5 bar)	79 NI/min (0.0802 Cv)	65 NI/min (0.0661 Cv)	90,9 NI/min (0.0924 Cv)
Max. vacuum flow	13 NI/min (0.0132 Cv)	33 NI/min (0.0335 Cv)	48,3 NI/min (0.0491 Cv)
Pressure range	4 ... 6 bar (58 ... 87 psi)		
Temperature range	0 °C ... + 50 °C (+ 32 °F ... +122 °F)		
Mounting	Single mounting, Mounting on manifold with 4 x M5 or on DIN-rail		
Materials	Body: Al, brass and PA-GF; Inner parts: Al, stainless steel, brass, POM; Seals: PU, NBR		
Degree of protection	IP 65 according to EN 60529		
Weight	Single ejector: 0,3 kg Mounting element: 0,07 kg + N x 0,04 kg (N = number of ejectors)		

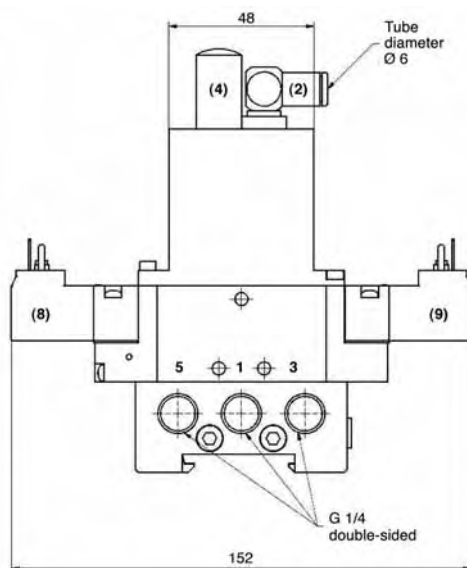
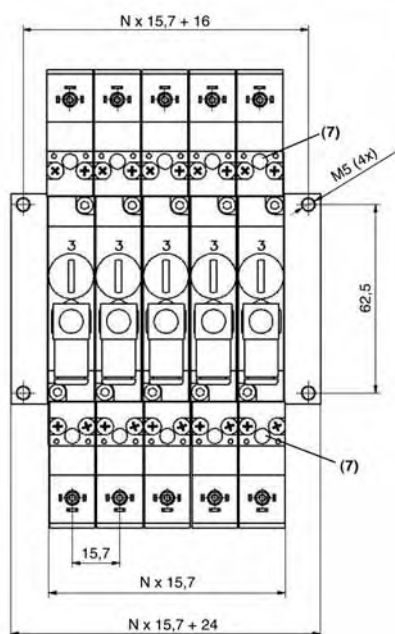
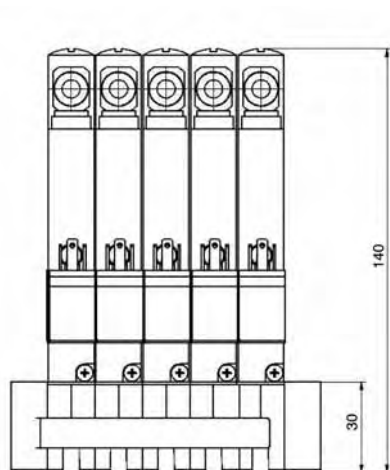
Central ejectors up to 90 % vacuum



Dimensions for series

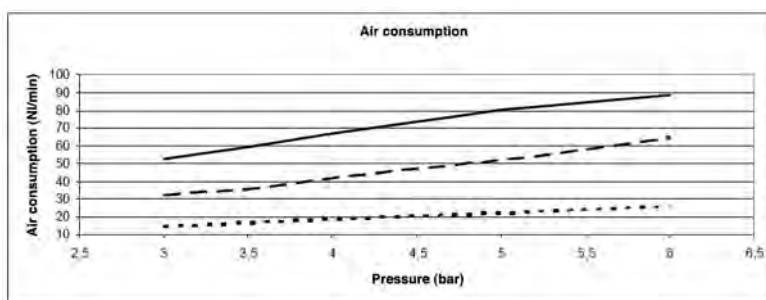
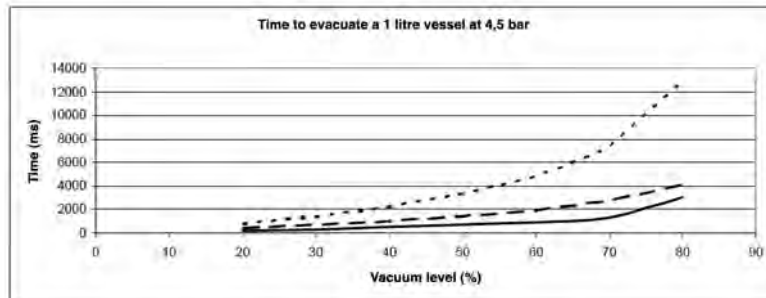
HVBM

HVBM-33, HVBM-63, HVBM-93



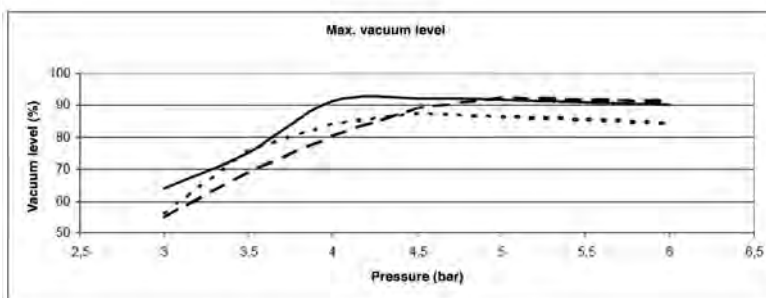
- 1 = pressure inlet
- (2) = vacuum outlets
- 3, 5 = exhausts
- (4) = exhaust ejector
- (7) = manual override
- (8) = solenoid for blow off
- (9) = solenoid for vacuum

N = number of ejectors (2 ... 9)



Graph of size:

— 93 - - - 63 33



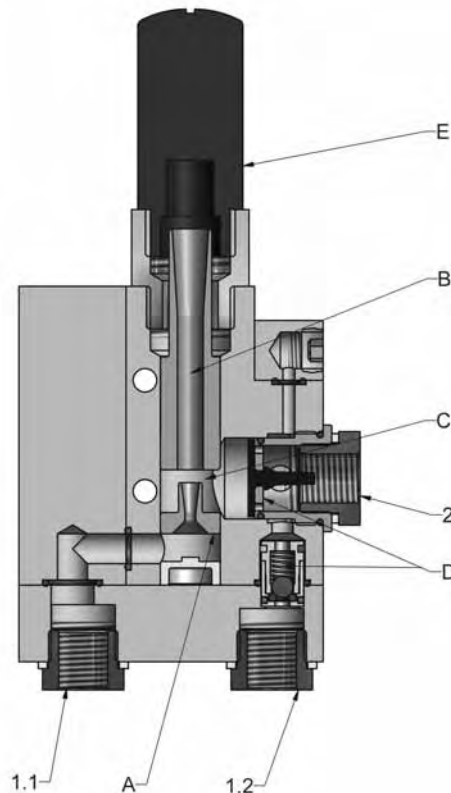
Series

HV-P, -PVP, -PSU, -PSUVP

Mechanical-pneumatical air saving device

● System description of a central ejector

- 1.1 = Compressed air sucked in
- 1.2 = Compressed air blow off
- 2 = Vacuum connection
- A = Venturi nozzle
- B = Diffuser
- C = Mixing chamber
- D = Check valves
- E = Silencer



Their function

The AIRTEC central ejectors function according to the Venturi principle. Compressed air with 4 to 6 bar flows through a protective filter in the compressed air supply port (1.1) into the ejector creating a vacuum in the mixing chamber (C). The vacuum line is evacuated via connection (2) and another protective filter.

A check valve (D) between the mixing chamber (C) and connection (2) as well as in connection (1.2) seal off the vacuum system to the atmosphere so that in the event of the compressed air supply being interrupted in an airtight vacuum system, the vacuum remains unaffected.

To this end, the **production series HV-SA** with flange-mounted electronic vacuum switches has a

parts control or an electronically controlled saver circuit with parts control.

With an integrated mechanical-pneumatic vacuum regulator, the **production series HV-P** is able to carry out an automatic saving function. Electronic vacuum switches also enable a parts control.

An air blast in connection (1.2), which also has a protective filter fitted against the infiltration of dirt, quickly relieves the vacuum and in the process, also cleans the protective filter in (2).

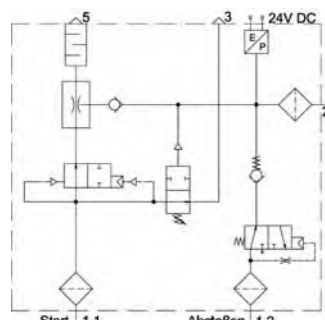
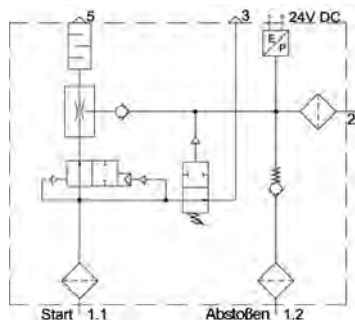
All ejector models can also be delivered with integrated solenoid valves, in the form of a compact unit.

A fully pneumatic ejector control system with a pneumatic vacuum switch is possible on request.

Technical data for series

HV-P, -PVP, -PSU, -PSUVP

Mechanical-pneumatical air saving device



Order code

HV-P-150

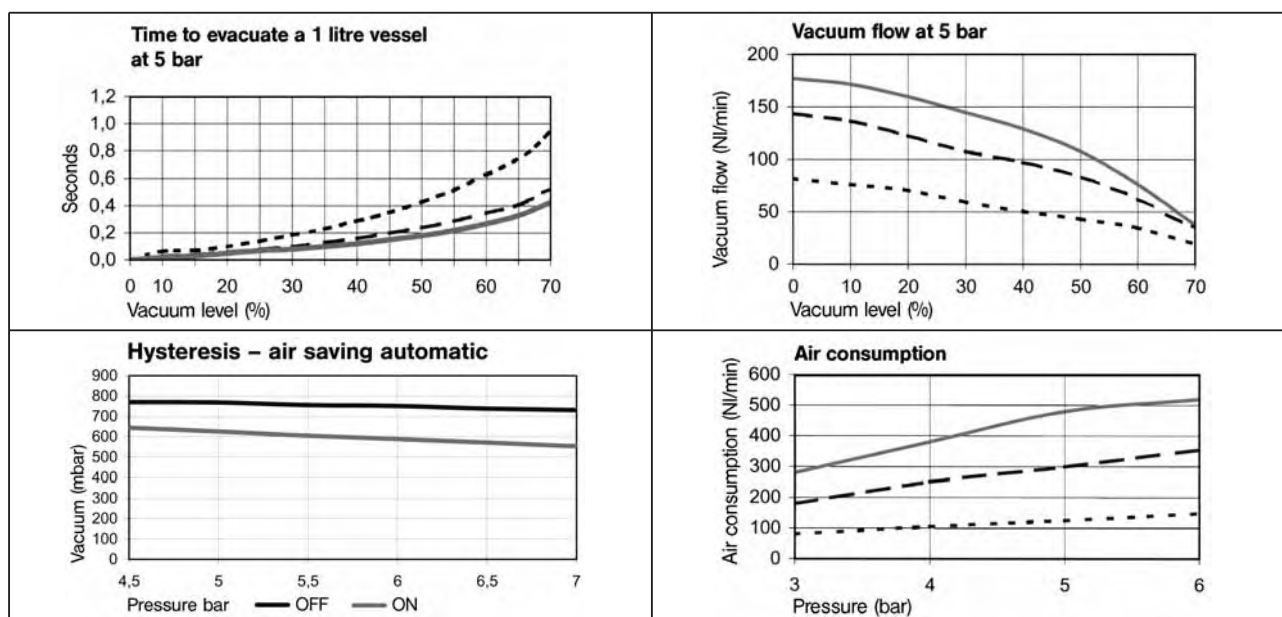
Series

Functions

- P = Vacuum, air-saving automatic function and blow off, without vacuum switch
- PVP = Vacuum, air-saving automatic and blow off function with additional control system for the air saving device and parts control
- PSU = Vacuum, air-saving automatic function, blow off interruption 0.3 s, without vacuum switch
- PSUVP = Vacuum, air-saving automatic function, blow off interruption 0.3 s, with adjustable vacuum sensor for parts control and air saving device

Air consumption

- 150 = 150 NI/min (0.152 Cv)
- 300 = 300 NI/min (0.305 Cv)
- 500 = 500 NI/min (0.508 Cv)



Max. vacuum level HV-P-150 see HV-133 (Page 10.003)
Max. vacuum level HV-P-300 see HV-333 (Page 10.003)
Max. vacuum level HV-P-500 see HV-533 (Page 10.003)

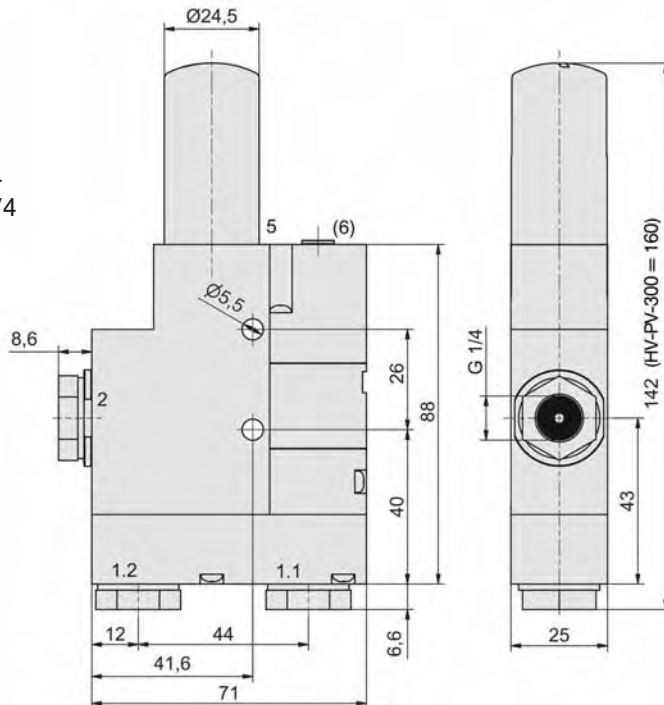
Dimensions for series

HV-P-150, HV-P-300

- 1.1 = pressure supply port, ejector, G 1/4
 1.2 = pressure supply port, blow off, G 1/4
 2 = working line, vacuum, G 1/4
 5 = silencer, G 1/2
 (6) = regulating screw for vacuum level

Weight: HV-P-150 = 0,475 kg
 HV-P-300 = 0,515 kg

Size of orifice: HV-...-150 = \varnothing 1,6 mm
 HV-...-300 = \varnothing 2,5 mm
 Noise level at 4 bar = 83 db

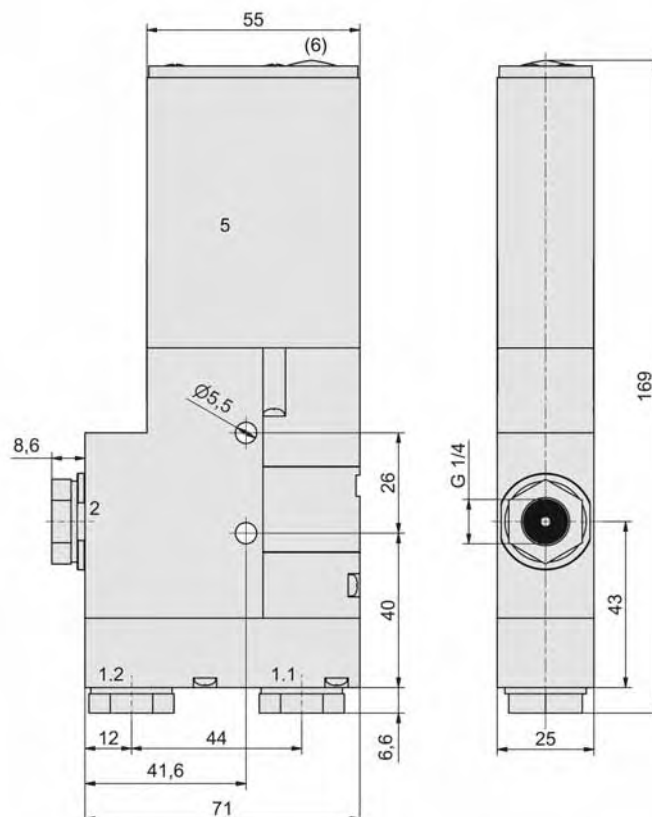


HV-P...-500

- 1.1 = pressure supply port, ejector, G 1/4
 1.2 = pressure supply port, blow off, G 1/4
 2 = working line, vacuum, G 1/4
 5 = silencer
 (6) = regulating screw for vacuum level

Weight: HV-P-500 = 0,506 kg

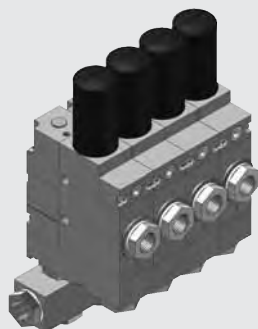
Size of orifice HV-...-500 = \varnothing 3 mm
 Noise level at 4 bar = 80 db



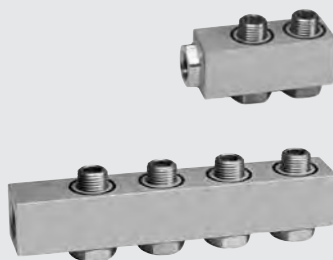
Accessoires for series

HV-P

P-manifolds



If requested, P-manifolds can be delivered complete with pre-mounted central ejectors.



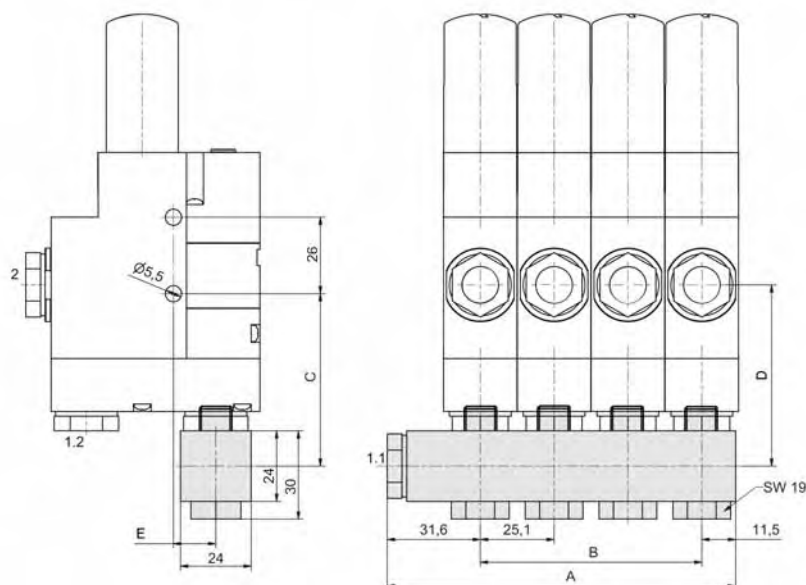
Manifold with hollow bolts and O-rings.
Available from 2 to 6 stations
RHV-141/n



Hollow bolt with O-ring
H-143

Dimensions for P-manifold

RHV-141



RHV-141/n

P-manifold with hollow bolts and O-rings.

Suitable for the mounting of central ejectors from the HV production series.

Installation is also possible at connection 1.2 (blow off).

Material: Al (anodized), O-rings: NBR, hollow bolts: brass.

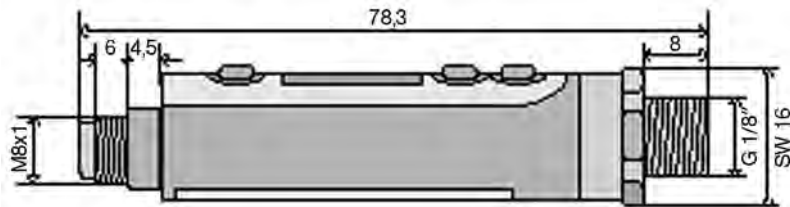
Order number	assembled with series	A	B	C	D	E
RHV-141/2	HV-P...	68.2	25.1	58.6	61.6	14.4
	HV-PSU...			80.6	83.6	14.4
RHV-141/3	HV-PA...	93.3	50.2	58.6	61.6	14.4
	HV-PSU...			80.6	83.6	14.4
RHV-141/4	HV-P...	118.4	75.3	58.6	61.6	14.4
	HV-PSU...			80.6	83.6	14.4
RHV-141/5	HV-P...	143.5	100.4	58.6	61.6	14.4
	HV-PSU...			80.6	83.6	14.4
RHV-141/6	HV-P...	168.6	125.5	58.6	61.6	14.4
	HV-PSU...			80.6	83.6	14.4

Electronic vacuum switch

Technical data for series

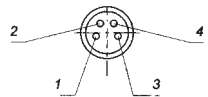
18-HVS-PE-503

Dimensions

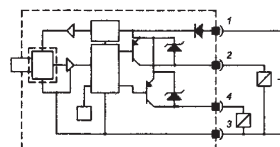


Connection allocation

Connections	PIN connection
Supply +	1
Supply -	3
Adjustable output 1	4
Adjustable output 2	2



Connection circuit diagram



For connection cables, see accessories, page 10.041.

Design and function

These calibrated and temperature-compensated sensors deliver extremely accurate measurements. There are two programmable switchpoints ready to be processed.

The switching points and the hystereses are adjustable.

The "adjustable output" functions are distinguished by a red and a green LED.

The sensors are user friendly and can be easily re-configured for special applications.

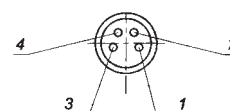
Order number	18-HVS-PE-503
Nominal pressure	0 to - 1 bar (0 to - 14.5 psi)
Over pressure safety	5 bar (72.5 psi)
Measuring medium	Dry, oil-free air, non-aggressive gases, compatible with polycarbonate
Connection (measuring medium)	G 1/8" AG and M5 (10/32 UNF) IG
Working temperature	0 °C ... + 50 °C (32 °F ... 122 °F)
Storage temperature	- 20 °C ... + 85 °C (- 4 °F ... + 185 °F)
Electrical connection	4-pin round plug M8 x 1
Operating voltage	10.8 to 30 VDC, reverse polarity protection
Display/error code	3-digit 7-segment LED
Display accuracy	0.01 bar; 5 mm Hg; 0.2 in Hg; 1 kPa
Reaction time	< 2.5 ms
Repetitive accuracy	± 0.2 % of measuring range
Switching frequency	200 Hz
2 switch outputs re-programmable	Optionally adjustable N.O. or N.C.; max. 125 mA 30 V with current limitation, switching point indicator with LED
Circuit	PNP
Mode	Hysteresis: 0 up to 100 % Comparative: 2 limit values adjustable in the measuring range
Degree of protection	IP 65
Intrinsic current consumption	< 55 mA in programming mode, ≤ 35 mA in operation
Material	Body: ABS-PC; connection (measuring medium): brass, nickel-plated
Weight	approx. 25 g (0.055 lb.)
Assembly position	Any; display freely rotatable 360°
EMC	Complies with EN 50081-1/50082-2

Connection cables

for all vacuum and pressure switches



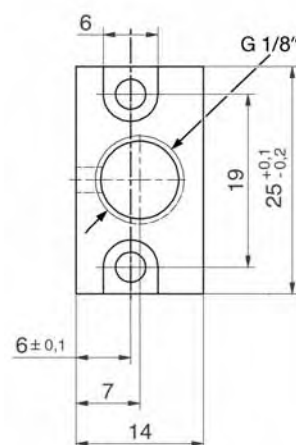
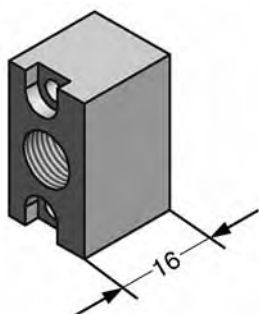
Order number	
28-HV-102	Cable length 2 m, cable socket M 8x1, straight 4-pin
28-HV-105	Cable length 5 m, cable socket M 8x1, straight 4-pin
28-HV-112	Cable length 2 m, cable socket M 8x1, angled 4-pin
28-HV-115	Cable length 5 m, cable socket M 8x1, angled 4-pin



1 = brown
2 = white
3 = blue
4 = black

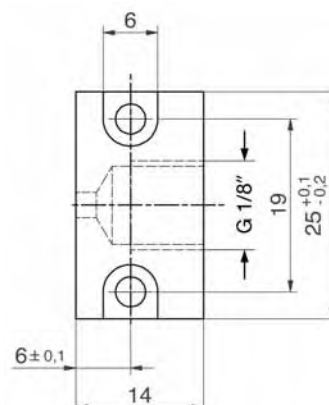
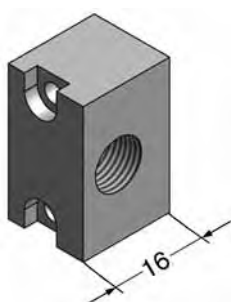
Adapter for the vacuum switch of the HV-SA/P ejector series

03-1719-41



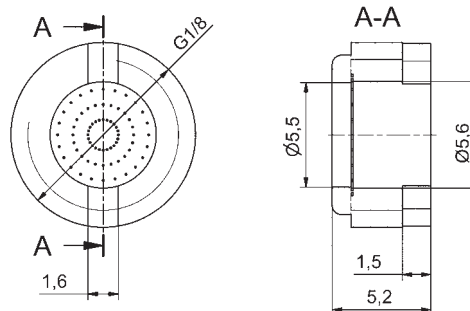
Adapter for the vacuum switch of the HV-SAVP/PV ejector series

03-HV-18



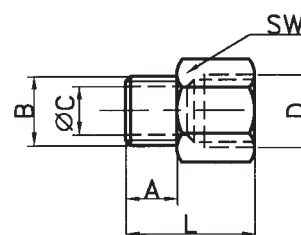
Dimensions for

43-260-18



Protective filter

43-273

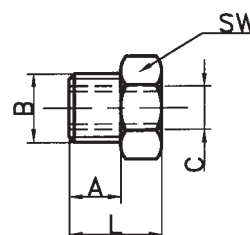


Material: nickel-plated brass

Order number	A	B	C	D	SW	L
43-273-M5-18-01	4	M5	2	G 1/8	13	14
43-273-18-18-01	6	G 1/8	5	G 1/8	13	16
43-273-18-14-01	6	G 1/8	5	G 1/4	17	19
43-273-14-14-01	8	G 1/4	7	G 1/4	17	21
43-273-14-38-01	8	G 1/4	7	G 3/8	19	22
43-273-38-38-01	9	G 3/8	10	G 3/8	19	23

Protective filter

43-274



Material: nickel-plated brass

Order number	A	B	C	SW	L
43-274-14-18-01	8	G 1/4	G 1/8	17	13
43-274-38-18-01	9	G 3/8	G 1/8	19	14
43-274-38-14-01	9	G 3/8	G 1/4	19	14
43-274-12-14-01	10	G 1/2	G 1/4	24*	15,5
43-274-12-38-01	10	G 1/2	G 3/8	24*	15,5
43-274-34-12-01	12	G 3/4	G 1/2	30	17
43-274-10-12-01	13	G 1	G 1/2	36	19
43-274-10-34-01	13	G 1	G 3/4	35	20

* SW 24 = octagon

Additional protective filter on request.

Silencer series 40-90-... see page 11.121.

Brackets for classic and column ejectors with Ø 48 mm see page 8.086.

Brackets for column ejectors with Ø 59 mm see page 11.062.

Blow off valves see page 7.161.