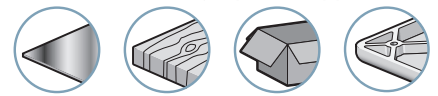


# VR 05, 07, 09

## Heavy-duty In-line Ejectors



Industry-specific applications



The main advantage of the VR series in-line ejectors is that they can be mounted directly on the suction cup, which simplifies plumbing.

By integrating the ejector on the suction cup, we obtain a localized vacuum and, therefore, the possibility of obtaining multiple independent grips, even in the absence of objects.

It is also possible to supply vacuum to two or more suction cups using a G1/8" or G1/4" T-shaped fitting.

### Advantages

- Wide range
- Adaptable to all industries
- Lightweight and compact
- Reduced gripping time
- Direct installation on suction cups
- Excellent mechanical resistance
- Blow-off option
- Extended range of suction flow rates
- No clogging
- Silent operation

### Characteristics

Model	Ø Nozzle	Air consumed (NI/min)	Maximum vacuum (%)	Air drawn in (NI/min)	At air pressure (bar)
VR 05	0.5	12	87	7	5
VR 07	0.7	21	90	14	5
VR 09	0.9	36	90	21	5

Note: All dimensions are in mm

### Evacuation Time in Seconds per Liter

% vacuum	10 %	20 %	30 %	40 %	50 %	60 %	70 %	80 %	85 %
VR05	0.92	1.96	3.18	4.63	6.38	8.79	12.17	18.96	27.39
VR07	0.46	0.98	1.58	2.28	3.13	4.27	5.8	8.55	11.01
VR09	0.31	0.65	1.05	1.52	2.09	2.85	3.87	5.7	7.34

### Specifications

Supply	Non-lubricated filtered air, pressure 2 to 6 bar
Optimum operating pressure	5 bar
Weight	20 g
Material	2017A - Cu Zn
Temperature	0 to 80 °C.

**When ordering, please specify:**  
**Model + Nozzle diameter + Vacuum outlet**  
 e.g.: VR07M6

1: Model	2: Ø Nozzle	3: Vacuum outlet
VR	05	Ø 0.5 mm
	07	Ø 0.7 mm
	09	Ø 0.9 mm
	M6	M6 Female
	M18	G1/8" Male
	M14	G1/4" Male
F18	G1/8" Female	
F14	G1/4" Female	

### Additional Information

#### Mounting on spring systems

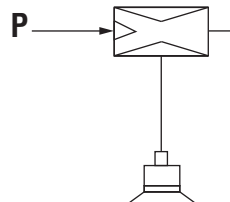
- Spring system, series TS3, available strokes: 10, 30, 50, 70mm, page 4/4.
- TSOP-TSOG series anti-rotation spring system, pages 4/6 and 4/7.
- Ball-joint systems, IMU series, page 4/12.

#### Customized on request

- Alternate material option: stainless steel or plastic, based on specifications.
- Special characteristics such as suction flow rate or vacuum level.
- On request for the F18 model, M5 ancillary vacuum fitting for connection of a vacuum switch.

#### New function

- Silencer option: (ref. SILGV10M5F)
- Vacuum or blow-off switch, on request.



# VR 05, 07, 09

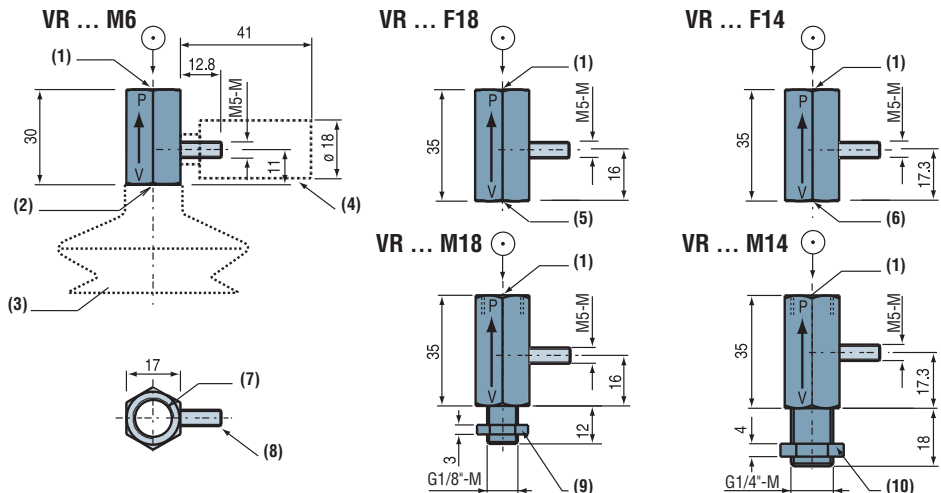
## Heavy-duty In-line Ejectors

### Dimensions and Data Curves



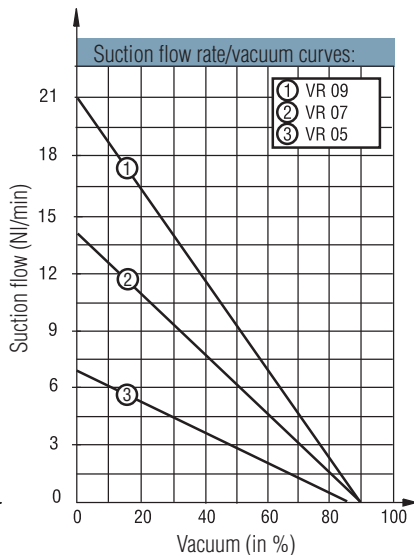
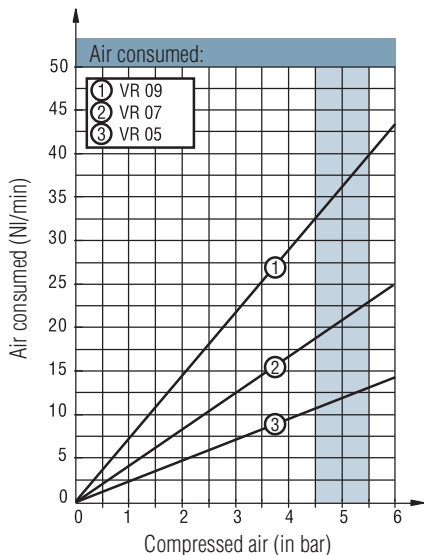
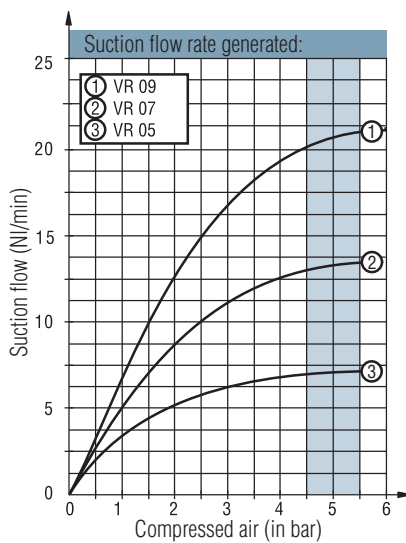
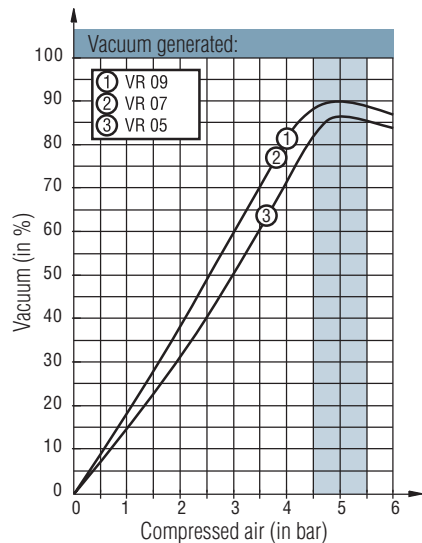
#### Dimensions

- (1) G1/4"-F C.A. inlet, depth 10 mm
- (2) M6-F vacuum outlet, depth 6 mm
- (3) Example of suction cup
- (4) Silencer
- (5) G1/8"-F vacuum outlet, depth 7.5 mm
- (6) G1/4"-F vacuum outlet, depth 10 mm
- (7) Compressed air
- (8) Exhaust
- (9) Hexagonal nut, 14 across flats
- (10) Hexagonal nut, 19 across flats



Note: All dimensions are in mm

#### Data Curves



# VR 10, 12, 14

## Ejector Fittings

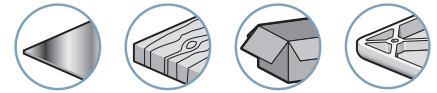


Based on the same principle as the VR 05, 07, 09, the main advantage of the VR 10, 12, 14 series is that they can be mounted directly on larger suction cups due their optimum technical characteristics.

The aluminum design guarantees:

- Excellent mechanical resistance
- Lightweight
- Ideal for miscellaneous gripping.

Industry-specific applications



### Advantages

- Wide range
- Adaptable to all industries
- Lightweight and compact
- Reduced gripping time
- Direct installation on suction cups
- Excellent mechanical resistance
- Blow-off option
- Extended range of suction flow rates
- No clogging
- Silent operation

### Characteristics

Model	Ø nozzle	Air consumed (Nl/min)	Maximum vacuum (%)	Air drawn in (Nl/min)	At air pressure (bar)
VR 10	1	44	90	27	5
VR 12	1.2	67	90	45	5
VR 14	1.4	108	90	64	5

Note: All dimensions are in mm

### Evacuation Time in Seconds per Liter

% vacuum	10 %	20 %	30 %	40 %	50 %	60 %	70 %	80 %	85 %
VR 10	0.24	0.51	0.82	1.18	1.62	2.21	3.01	4.43	5.71
VR 12	0.14	0.3	0.49	0.71	0.97	1.33	1.81	2.66	3.42
VR 14	0.1	0.21	0.34	0.5	0.68	0.93	1.27	1.85	2.44

### Specifications

Supply	Non-lubricated filtered air, pressure 2 to 6 bar
Optimum operating pressure	5 bar
Weight	50 g
Material	2017A - Cu Zn
Temperature	0 to 80 °C.

### Additional Information

#### As standard

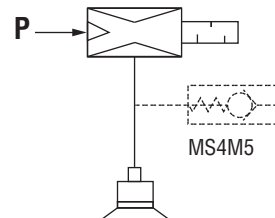
- New functions: vacuum switch or blow-off switch with or without silencer (SILGV 10).

#### Optional

- MS2M5 or MS4M5 blow-off valves with no-return valve on vacuum (see page 11/4).

#### Special

- Coval offers the product best adapted to your needs based on your specifications, and advises you according to your applications (material, shape, special technical characteristics).



6 VR 10, 12, 14



**When ordering, please specify:**  
**Model + Nozzle diameter + Vacuum outlet + Silencer**  
 e.g.: VR12M14S

1: Model	2: Ø Nozzle	3: Vacuum outlet	4: Silencer
VR	10 Ø 1 mm	M14 G1/4" Male	S SILGV 10
	12 Ø 1.2 mm		K SILK 18 C <sup>(1)</sup>
	14 Ø 1.4 mm		

(1) SILK 18 C through-type silencer dimensions, see page 11/11.

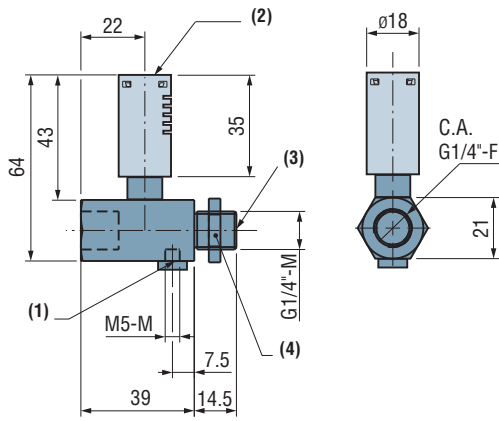
# VR 10, 12, 14

## Ejector Fittings

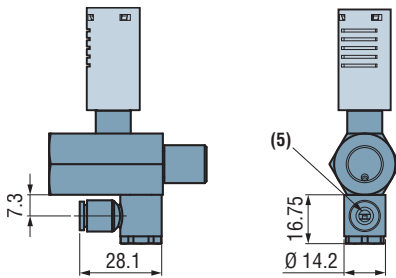
### Dimensions and Data Curves



#### Dimensions

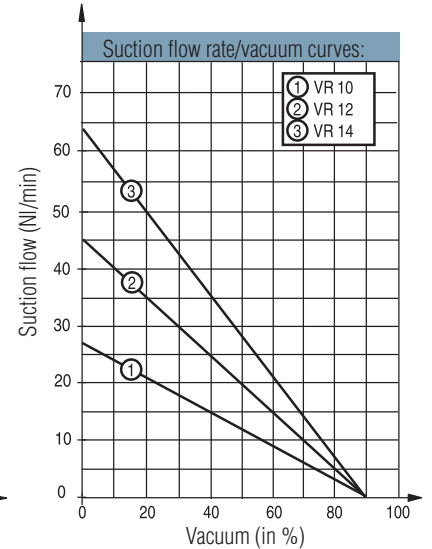
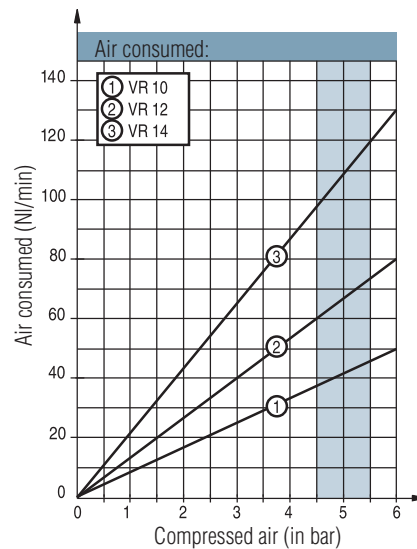
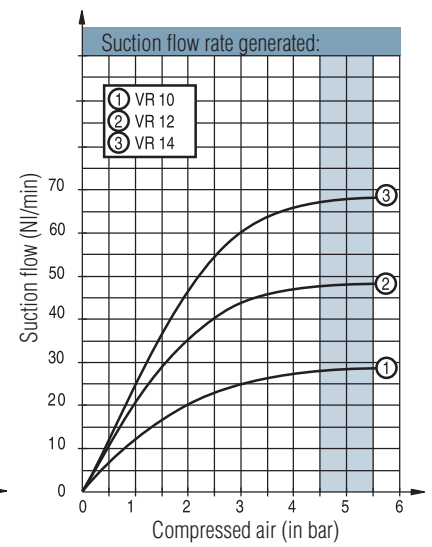
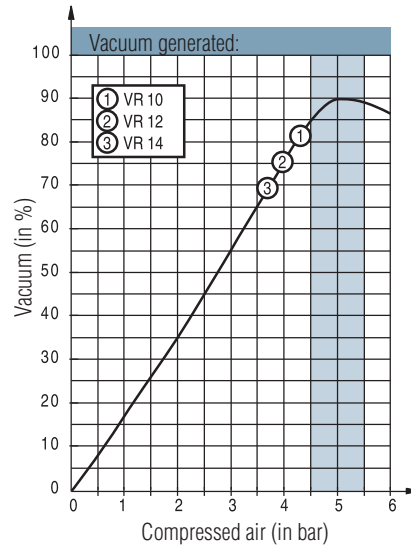


#### VR + MS4M5 version



- (1) Blow-off or vacuum switch
- (2) Silencer
- (3) Vacuum
- (4) Hexagonal nut, 19 across flats
- (5) Push fitting, external  $\varnothing$  6

#### Data Curves



Note: All dimensions are in mm