

# Vacuum ejector with mounted filter

## CVF CONVUM



- Mounted filter

Compact design, piping to the filter is unnecessary

- Solenoid valve option available

With/without solenoid valve can be selected

### How to order

CVF - **2** - **05** **H** **S** **AB** **24** **B** **L** **N**

| ① Solenoid option |               |
|-------------------|---------------|
| 1                 | Without valve |
| 2                 | With valve    |

| ② Nozzle size |      |
|---------------|------|
| 5             | φ0.5 |
| 10            | φ1.0 |

| ③ Max. vacuum pressure (kPa) |       |
|------------------------------|-------|
| H                            | -86.6 |
| L                            | -53.3 |

| ④ Supply pressure (MPa) |      |
|-------------------------|------|
| S                       | 0.5  |
| R                       | 0.35 |

| ⑤ Pressure sensor |             |          |         |               |               |
|-------------------|-------------|----------|---------|---------------|---------------|
|                   | Sensor type | Pressure | Display | Switch output | Analog output |
| AB                | MVS-030AB   | Vacuum   | LED     | NPN1 point    | Without       |
| ABP               | MVS-030AB   | Vacuum   | LED     | PNP1 point    | Without       |
| 35G               | MVS-035G    | Vacuum   | LED     | NPN1 point    | DC1 ~ 5V      |
| Blank             | Without     | -        | -       | -             | -             |

| ⑥ Solenoid valve voltage |        |
|--------------------------|--------|
| 24                       | DC24V  |
| 100                      | AC100V |
| 200                      | AC200V |
| Blank                    | CVF-1  |

| ⑦ Supply air valve function |                       |
|-----------------------------|-----------------------|
| A                           | N.O (Normally open)   |
| B                           | N.C (Normally closed) |
| Blank                       | CVF-1                 |

| ⑧ Solenoid valve connection |                                  |
|-----------------------------|----------------------------------|
| L                           | Connector type with surge killer |
| Blank                       | CVF-1                            |

| ⑨ Port thread |           |
|---------------|-----------|
| N             | NPT       |
| G             | G (BSPP)  |
| Blank         | Rc (BSPT) |

Note: ②③④ applicable models

| ②  | ③ | ④ |   |
|----|---|---|---|
|    |   | S | R |
| 05 | H | ○ | x |
|    | L | ○ | x |
| 10 | H | ○ | ○ |
|    | L | ○ | x |

### Maintenance parts

- Solenoid valve  
(with gasket and mounting screws)

CVF - 2 - **24** **L**

| ① Solenoid valve voltage |        |
|--------------------------|--------|
| 24                       | DC24V  |
| 100                      | AC100V |
| 200                      | AC200V |

| ② Solenoid valve connection |                                  |
|-----------------------------|----------------------------------|
| L                           | Connector type with surge killer |

- Filter

CVF - **E**

|   |              |
|---|--------------|
| E | Element      |
| F | Case, O-ring |

- Pressure sensor

**MVS-030AB-CVF**  
**MVS-030ABP-CVF**  
**MVS-035G-CVF**

Note) Please check P349 for details

- Switch plug (with O-ring and mounting screws)

This plug is used when there is no sensor mounted on CVF

**CVF-Z**

- Silencer (common to CVF-05 and CVF-10)

**MSS-01**

### Specifications

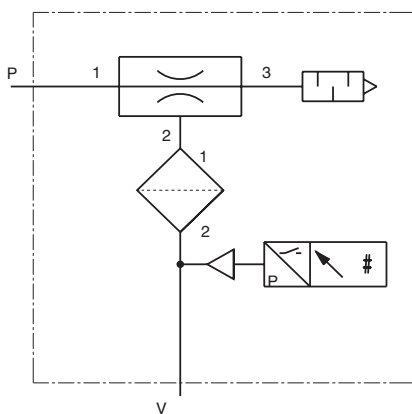
| Description               | Unit        | CVF-05                                 |     | CVF-10 |             |      |
|---------------------------|-------------|--|-----|--------|-------------|------|
|                           |             | HS                                     | LS  | HS     | LS          | HR   |
| Fluid                     |             | Non-lubricated air / non-corrosive gas |     |        |             |      |
| Ambiant temperature       | °C          | 0 ~ 60 (without freezing)              |     |        |             |      |
| Operating pressure range  | MPa         | 0.2 ~ 0.6                              |     |        |             |      |
| Nozzle size               | φmm         | 0.5                                    |     | 1.0    |             |      |
| Nominal pressure          | MPa         | 0.5                                    |     | 0.5    |             | 0.35 |
| Vacuum (air) flow         | ℓ/min (ANR) | 5.5                                    | 11  | 27     | 38          | 25   |
| Max. vacuum pressure      | kPa         | -87                                    | -57 | -90    | -57         | -88  |
| Air consumption           | ℓ/min (ANR) | 13                                     |     | 44     |             |      |
| Filter element filtration | μm          | 5                                      |     |        |             |      |
| Mass (without sensor)     | g           | CVF-1 : 145                            |     |        | CVF-2 : 260 |      |

### Solenoid valve specifications (CVF-2)

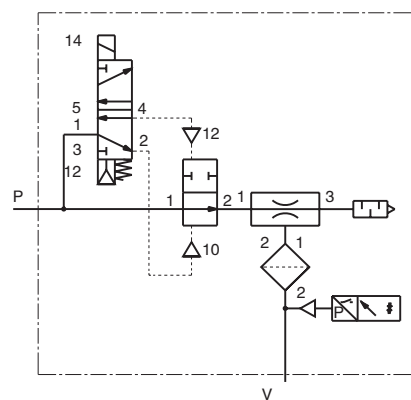
| Item                        | Unit |                      |         |      |
|-----------------------------|------|----------------------|---------|------|
| Operating voltage           | V    | AC100                | AC200   | DC24 |
| Allowable voltage tolerance | %    | ± 10                 |         |      |
| Frequency                   | Hz   | 50/60                |         | -    |
| Power consumption           | W    | 1.8/1.4              | 2.1/1.6 | 1.8  |
| Grade of insulation         |      | B class              |         |      |
| Manual override operation   |      | Non-lock push button |         |      |

### Symbol

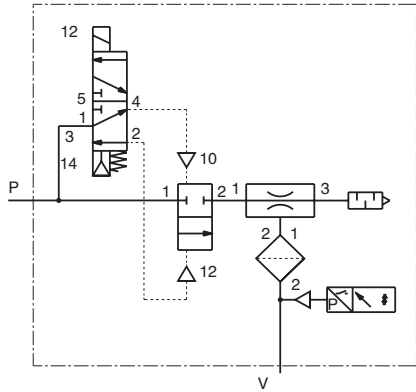
CVF-1 with vacuum sensor



CVF-2 with vacuum sensor  
Normally open

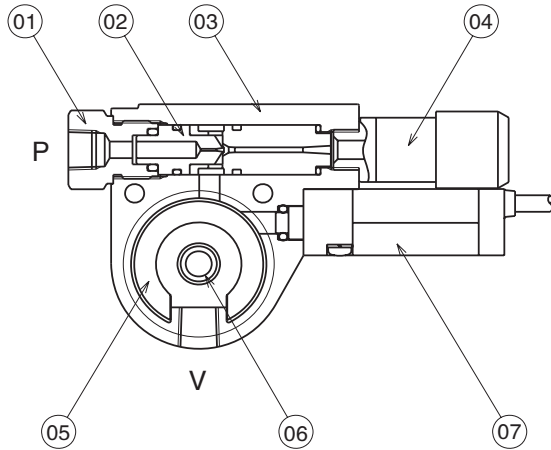


CVF-2 with vacuum sensor Normally closed



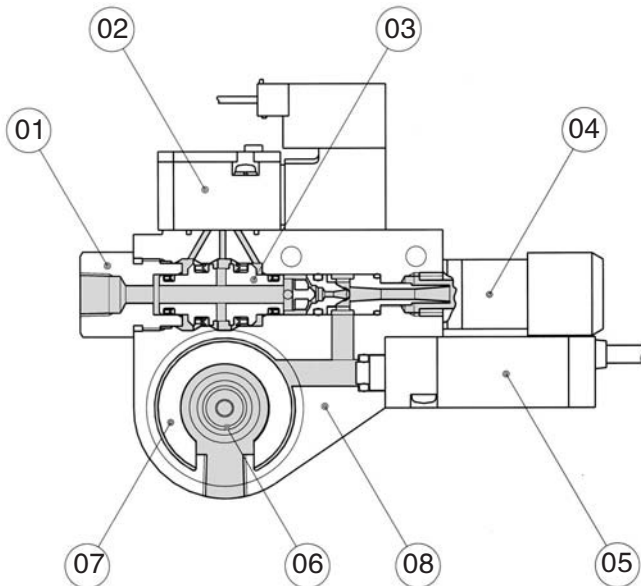
CVF - 2 - ※※※AB※B※

## Construction (CVF-1)



| Parts | Part name                | Material              |
|-------|--------------------------|-----------------------|
| 1     | Air supply port assembly | Brass, NBR            |
| 2     | Nozzle                   | Brass, aluminium, NBR |
| 3     | Body                     | Aluminium die cast    |
| 4     | Silencer                 | POM, felt             |
| 5     | Filter element           | PVF                   |
| 6     | Filter assembly          | PC, NBR               |
| 7     | Pressure sensor          | -                     |

## Construction (CVF-2)

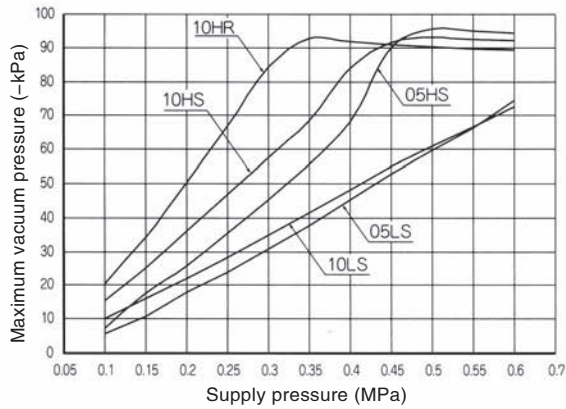


| Parts | Part name                | Material              |
|-------|--------------------------|-----------------------|
| 1     | Air supply port assembly | Brass, NBR            |
| 2     | Solenoid valve           | -                     |
| 3     | Nozzle                   | Brass, aluminium, NBR |
| 4     | Silencer                 | POM, felt             |
| 5     | Pressure sensor          | -                     |
| 6     | Filter assembly          | PC, NBR               |
| 7     | Filter element           | PVF                   |
| 8     | Body                     | Aluminium die cast    |

Performance charts

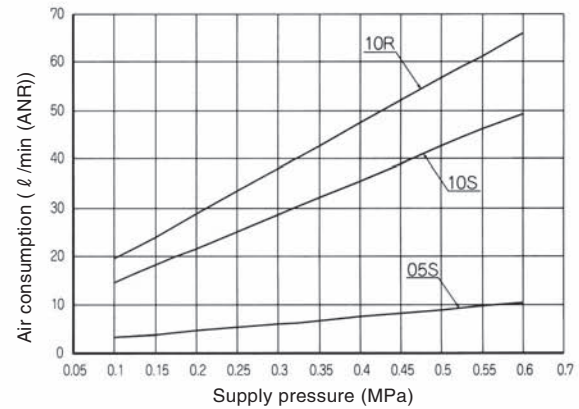
— Maximum vacuum pressure characteristic —

● CVF-05, 10



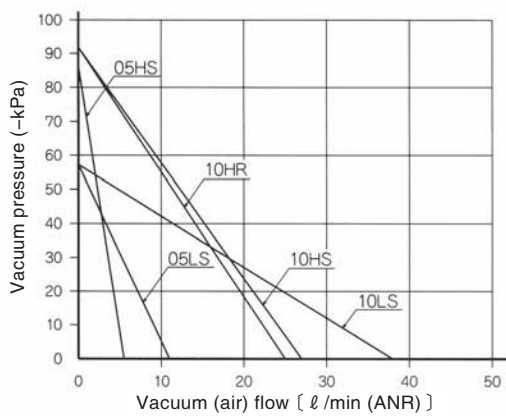
— Air consumption characteristics —

● CVF-05, 10



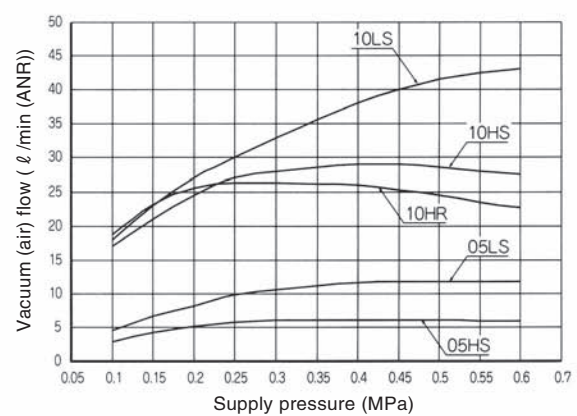
— Vacuum (air) flow - vacuum pressure characteristic —

● CVF-05, 10



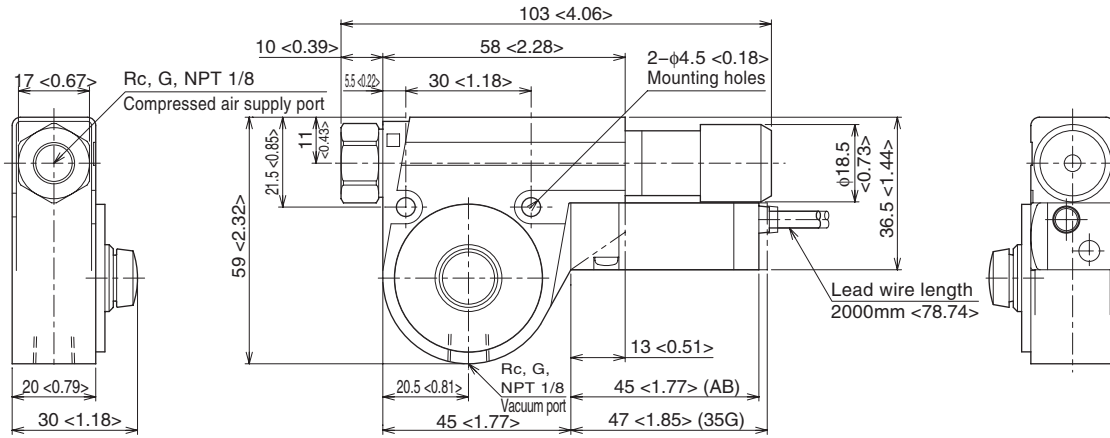
— Maximum vacuum (air) flow characteristic —

● CVF-05, 10



## Dimensions (CVF-1)

Unit : mm <inch>



## Dimensions (CVF-2)

Unit : mm <inch>

