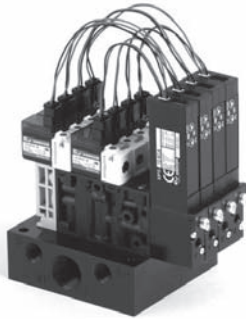


# 10mm width vacuum ejector unit MC42 CONVUM



- Compact type and light weight  
10 mm width body, resin body
- Digital vacuum sensor mountable
- Can be mounted on manifold  
Up to 5 units
- Same dimension with MPV42 switching valve  
Easy replacement of vacuum pump system

CONVUM

## How to order

In case of manifold

MC42 ① S ② 05 ③ H ④ S ⑤ V9 ⑥ 4 ⑦ B ⑧ 3 ⑨ 1 ⑩ 2 ⑪ L ⑫ G

| ① Body type |               |
|-------------|---------------|
| S           | Single unit   |
| M           | Manifold unit |

| ② Nozzle size |       |
|---------------|-------|
| 05            | φ 0.5 |
| 07            | φ 0.7 |

| ③ Maximum vacuum pressure (kPa) |        |
|---------------------------------|--------|
| H                               | -87kPa |

| ④ Supply pressure (MPa) |         |
|-------------------------|---------|
| S                       | 0.5MPa  |
| R                       | 0.38MPa |

Note: ②③④ applicable models

| ②  | ③ | ④ |   |
|----|---|---|---|
|    |   | S | R |
| 05 | H | ○ | ○ |
| 07 | H | ○ | ○ |

| ⑤ Pressure sensor |             |          |         |               |               |                     |
|-------------------|-------------|----------|---------|---------------|---------------|---------------------|
|                   | Sensor type | Pressure | Display | Switch output | Analog output | Input specification |
| V9                | MPS-9       | Vacuum   | Digital | NPN1 point    | DC1 ~ 5V      | Without             |
| V9P               | MPS-9       | Vacuum   | Digital | PNP1 point    | DC1 ~ 5V      | Without             |
| 10                | MPS-10      | Compound | Digital | NPN1 point    | DC1 ~ 5V      | Sink                |
| 10P               | MPS-10      | Compound | Digital | PNP1 point    | DC1 ~ 5V      | Sink                |
| 10PS              | MPS-10      | Compound | Digital | PNP1 point    | DC1 ~ 5V      | Source              |
| ZZ                | Without     | -        | -       | -             | -             | -                   |

| ⑥ Solenoid valve voltage |       |
|--------------------------|-------|
| 4                        | DC24V |

| ⑫ Port thread |              |
|---------------|--------------|
| N             | NPT1/8       |
| G             | G1/8 (BSPP)  |
| Blank         | Rc1/8 (BSPT) |

Note: NPT and G threads are made-to-order.

| ⑪ Position of body |                         |
|--------------------|-------------------------|
| R                  | Placed to the right     |
| L                  | Placed to the left      |
| Blank              | When ⑩ & ⑪ are the same |

Note: Please turn the vacuum port towards your side, the unit body you faced could be either left or right upon chosen.

| ⑩ Number of bodies |         |
|--------------------|---------|
| 1                  | 1 unit  |
| 2                  | 2 units |
| 3                  | 3 units |
| 4                  | 4 units |
| 5                  | 5 units |

| ⑨ Number of block plate |         |
|-------------------------|---------|
| 0                       | none    |
| 1                       | 1 unit  |
| 2                       | 2 units |
| 3                       | 3 units |
| 4                       | 4 units |

| ⑧ Number of manifold units |          |
|----------------------------|----------|
| 1                          | 1 unit ★ |
| 2                          | 2 units  |
| 3                          | 3 units  |
| 4                          | 4 units  |
| 5                          | 5 units  |

Note: 1 is made-to-order, consult with us.

| ⑦ Solenoid valve air passage |                                     |
|------------------------------|-------------------------------------|
| A                            | Normally open (N.O)                 |
| B                            | Normally closed (N.C)               |
| W                            | Self-holding solenoid valve (note1) |

Note1) The energy-saving function of a sensor cannot work if the self-holding valve is selected.

## Maintenance parts

- Solenoid valve (with gasket and mounting screws)

**CKV010-4E**

Note) Refer to P53 for details

- Self-holding solenoid valve (with gasket and mounting screws)

**LV290-4E**

Note) Please check P53 for details.

- Pressure switch (with O ring, setting screws)

|  |
|--|
| MPS-V9-MC4                                     |
| MPS-V9-P-MC4                                   |
| MPS-10-MC4-B (Normally Closed,sink input)      |
| MPS-10-MC4-W (Self-holding,sink input)         |
| MPS-10P-MC4-B (Normally Closed,sink input)     |
| MPS-10P-MC4-B-S (Normally Closed,source input) |
| MPS-10P-MC4-W (Self-holding,sink input)        |
| MPS-10P-MC4-W-S (Self-holding,source input)    |

Note) Please check P349 for details.

- Manifold block plate

**MC4-MM**

- Manifold base

**MC4-M** 1

| Number of manifold units |          |
|--------------------------|----------|
| 1                        | 1 unit ★ |
| 2                        | 2 units  |
| 3                        | 3 units  |
| 4                        | 4 units  |
| 5                        | 5 units  |

Note: With mounting screws and plugs.

Note: 1 is made-to-order.

- Base for unit type

**MC4-SB**

## Specifications

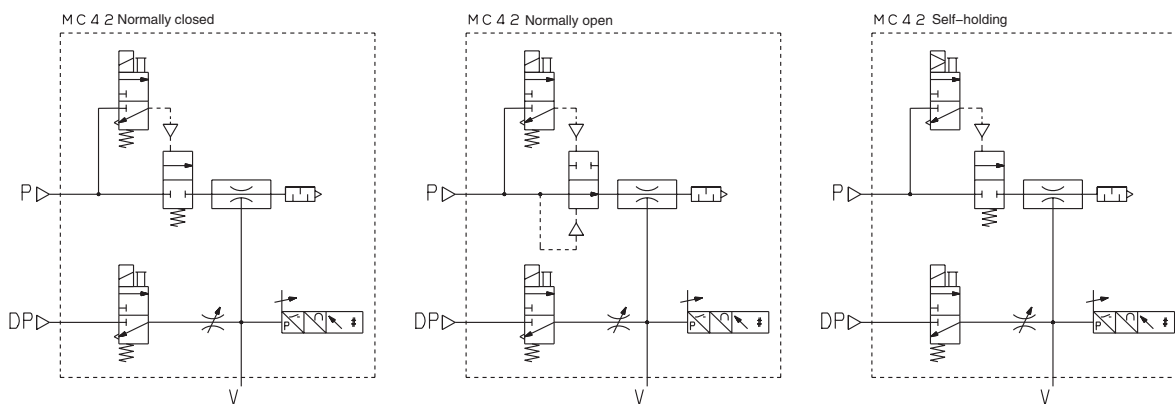
| Description                | Unit           | MC42 □ 05  |      | MC42 □ 07 |      |
|----------------------------|----------------|--|------|-----------|------|
|                            |                | HS   | HR   | HS        | HR   |
| Fluid                      |                | Non-lubricated air / non-corrosive gas                   |      |           |      |
| Ambient temperature        | °C             | 0 ~ 60 (without freezing)                                |      |           |      |
| Operating pressure range   | MPa            | 0.2 ~ 0.55   |      |           |      |
| Blow-off flow              | ℓ /min (ANR)   | 10 (at : 0.5)  |      |           |      |
| Solenoid valve air passage |                | Normally closed (N.C), normally open (N.O), self-holding |      |           |      |
| Nozzle size                | φ mm           | 0.5  |      | 0.7       |      |
| Nominal pressure           | MPa            | 0.5  | 0.38 | 0.5       | 0.38 |
| Vacuum (air) flow          | ℓ /min (ANR)   | 7  | 6    | 11        | 11   |
| Max. vacuum pressure       | kPa            | -85  |      |           |      |
| Air consumption            | ℓ /min (ANR)   | 10   | 11   | 21.5      | 22   |
| Mass                       | without sensor | g  |      |           |      |
|                            |                | 57   |      |           |      |

## Solenoid valve specifications

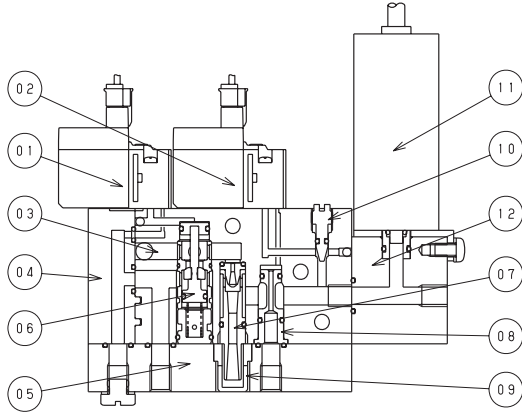
| Description                 | Unit | CKV010-4E                                   | LV290-4E     | Note |
|-----------------------------|------|---|--------------|------|
| Solenoid valve air passage  |      | Normally closed(N.C),<br>Normally open(N.O) | Self-holding |      |
| Operating voltage           | V    | DC24  |              |      |
| Allowable voltage tolerance | %    | ± 10  |              |      |
| Power consumption           | W    | 1   | 1.3 /1.5     |      |
| Grade of insulation         |      | B class                                     |              |      |
| Manual override operation   |      | Non-lock push button                        |              |      |
| Display – Surge killer      |      | LED · diode                                 |              |      |
| Cable                       |      | Lead wire with connector (300mm)            |              |      |

Note) Please check common cautions in regard to CONVUM vacuum ejector "self-holding valve"(P22).

## Symbol



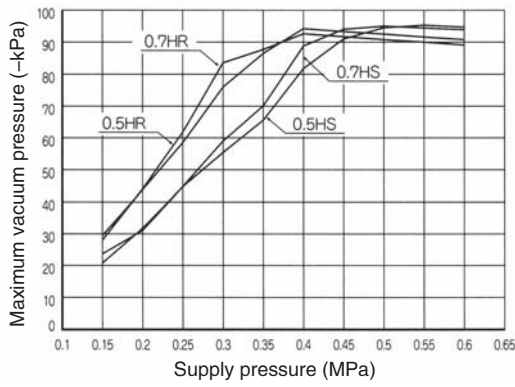
## Construction



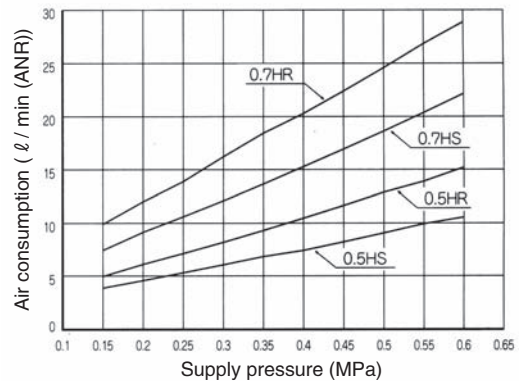
| Parts | Part name       | Material                 |
|-------|-----------------|--------------------------|
| 1     | Solenoid valve  | -                        |
| 2     | Solenoid valve  | -                        |
| 3     | Body            | PA                       |
| 4     | Side plate      | PA                       |
| 5     | Base            | Aluminium                |
| 6     | Poppet valve    | SUS, Aluminium, NBR, FKM |
| 7     | Nozzle kit      | Aluminium, NBR           |
| 8     | Cross adapter   | Aluminium, NBR           |
| 9     | Silencer        | Aluminium                |
| 10    | Blow-off needle | SUS, NBR                 |
| 11    | Pressure sensor | -                        |
| 12    | Sensor base     | Aluminium                |

## Performance charts

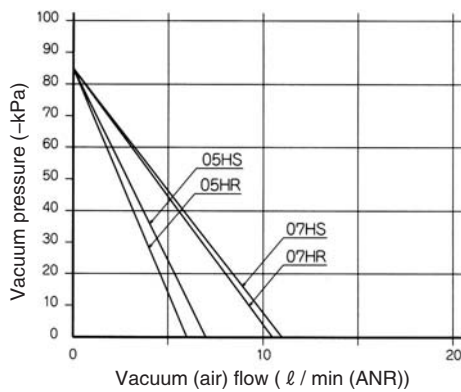
— Maximum vacuum pressure characteristic —



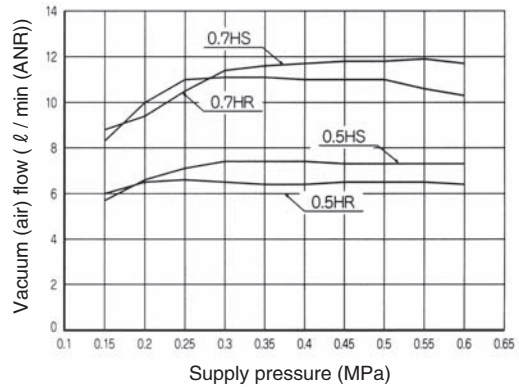
— Air consumption characteristics —



— Vacuum (air) flow - vacuum pressure characteristic —



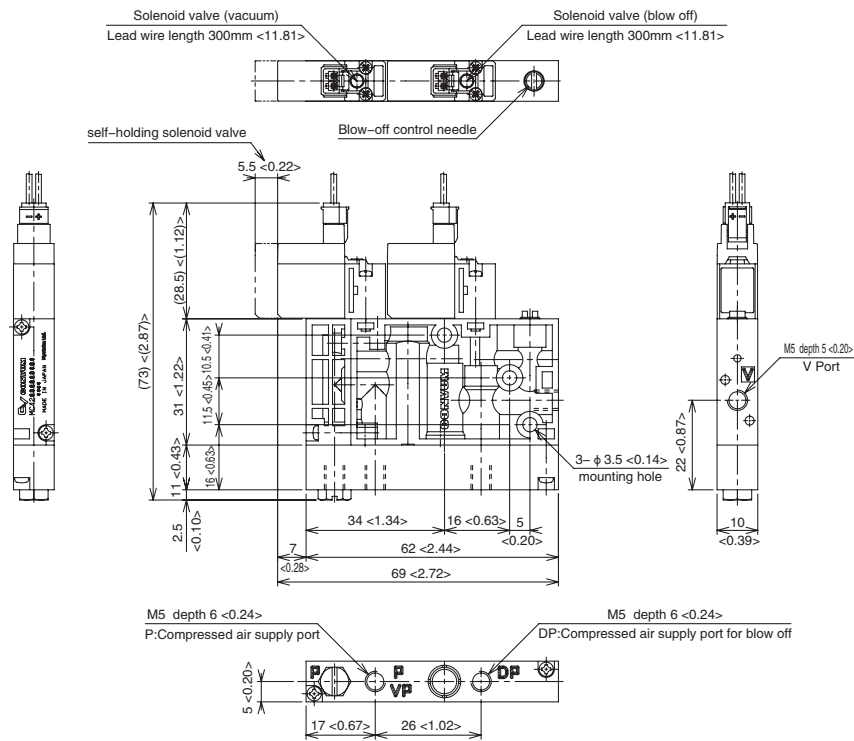
— Maximum vacuum (air) flow characteristic —



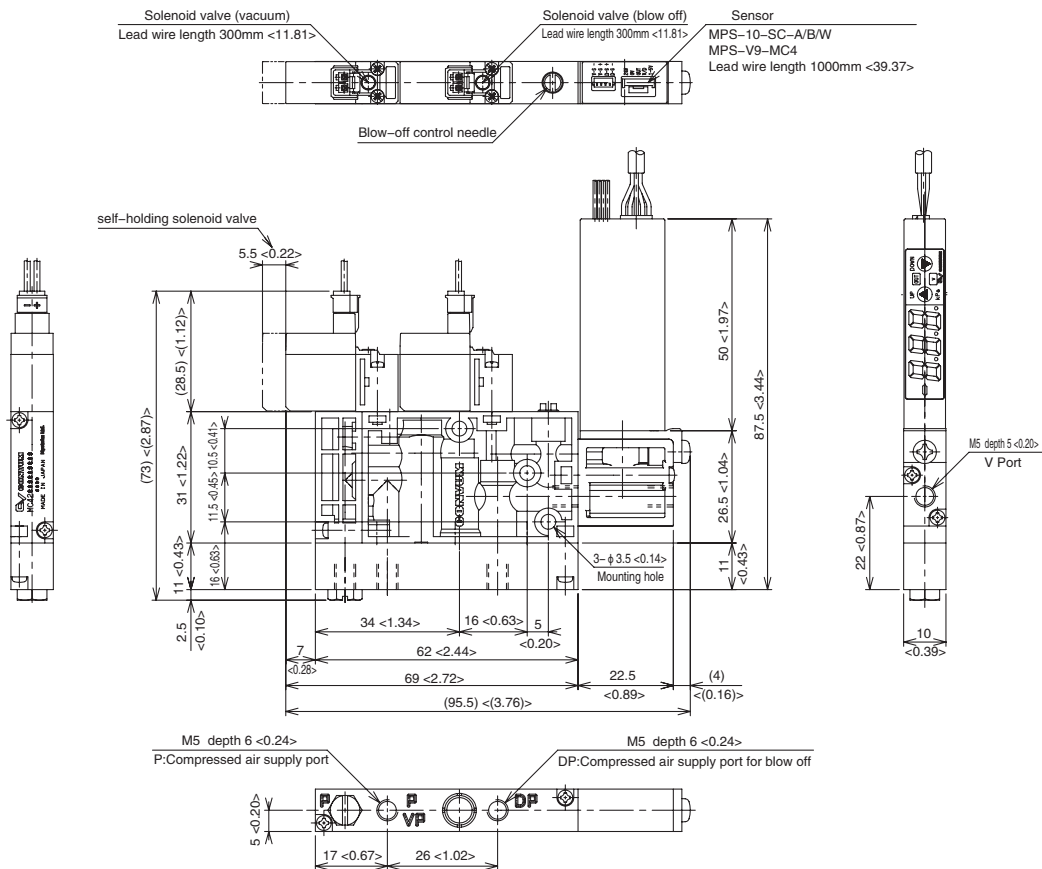
Dimensions

Unit:mm <inch>

Single unit type/without sensor



Single unit type/with sensor

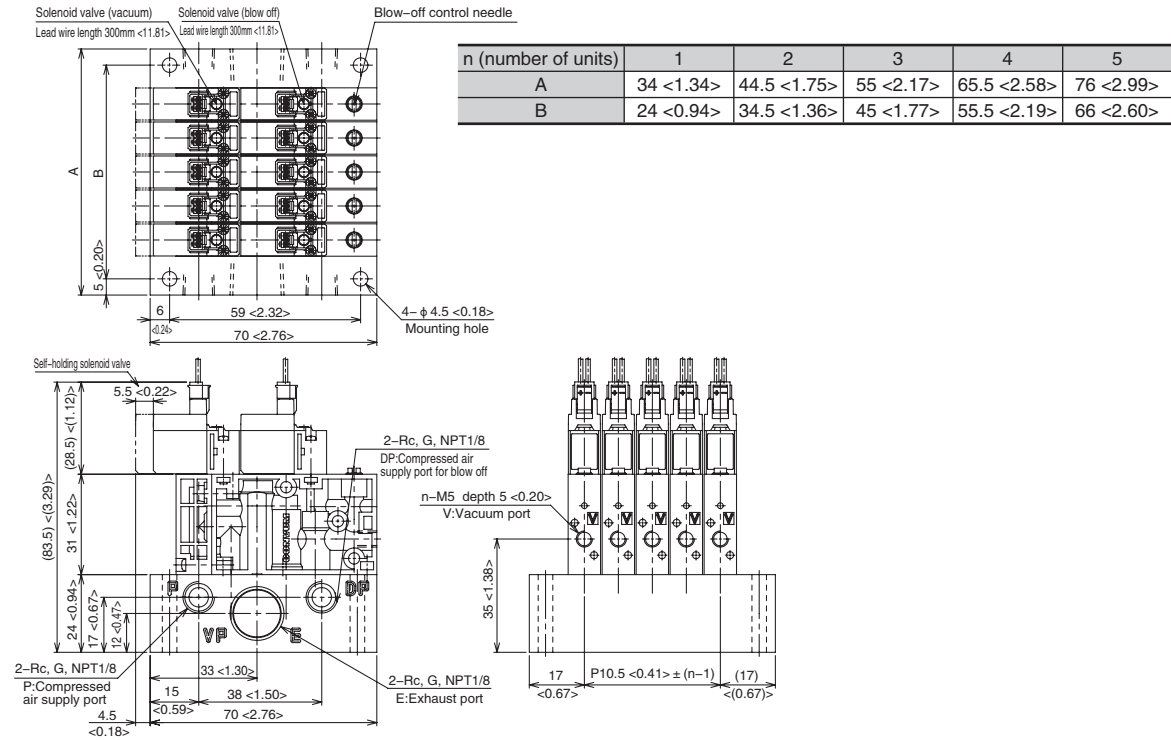


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## Dimensions

Unit:mm <inch>

### Manifold type/without sensor



### Manifold type/with sensor

