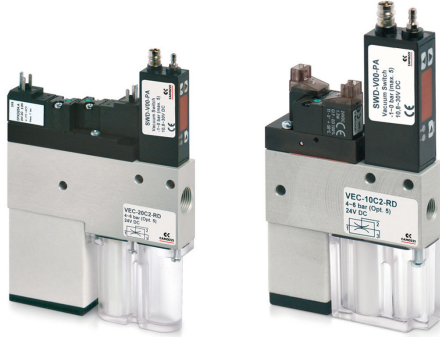


# COMPACT EJECTORS

## SERIES VEC

Vacuum generators with integrated valves and monitoring system.

Possibility to command suction and blow-off individually without using external valves.



- Wide range of nozzle sizes, covering a great number of applications
- Modularity for easy installation
- Available with automatic air saving system (optional) for reduced operations costs
- Easy monitoring of the vacuum level through integrated vacuum switch (available with or without digital display)

Vacuum generators with integrated suction and blow-off valves, as well as a monitoring system (vacuum switch).

Series VEC compact ejectors allow to control suction and blow-off individually without using external valves.

Versions with integrated air saving functions are available on request. These ejectors are particularly suitable for use in automatic handling systems.

### GENERAL DATA

|                    |   |
|--------------------|---|
| <b>Description</b> | <ul style="list-style-type: none"> <li>- body in anodized aluminium</li> <li>- valve function for the suction available in normally open (NO) or normally closed (NC) version</li> <li>- blow-off valve (NC), integrated silencer and non-return valve</li> </ul> |
| <b>Options</b>     | <ul style="list-style-type: none"> <li>- mechanic/electronic vacuum switch</li> <li>- automatic air-saving system</li> <li>- mounting fitting plate for the battery mounting</li> </ul>   |

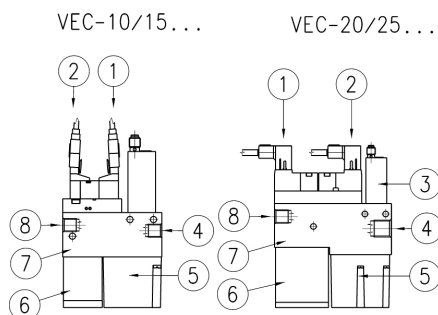
**COMPACT EJECTORS**  
**SERIES VEC - CODING EXAMPLE**
**CODING EXAMPLE**

|            |          |           |          |          |          |           |
|------------|----------|-----------|----------|----------|----------|-----------|
| <b>VEC</b> | <b>-</b> | <b>10</b> | <b>C</b> | <b>2</b> | <b>-</b> | <b>RD</b> |
|------------|----------|-----------|----------|----------|----------|-----------|

|            |  |
|------------|--|
| <b>VEC</b> | SERIES<br>VEC = Vacuum ejector   |
| <b>10</b>  | NOZZLE DIAMETER (mm)<br>10 = 1,0 mm<br>15 = 1,5 mm<br>20 = 2,0 mm<br>25 = 2,5 mm   |
| <b>C</b>   | VALVE FUNCTION<br>C = NC (suction OFF when not activated)<br>A = NO (suction ON when not activated)  |
| <b>2</b>   | VERSION<br>2 = with Blow-off valve   |
| <b>RD</b>  | VERSION<br>* RD = with air saving system and digital vacuum switch (with display). It is supplied complete with connectors and cables.<br>* RE = with air saving system and electronic vacuum switch. It is supplied complete with connectors and cables.<br>VD = without air saving system, digital vacuum switch (with display)<br>VE = without air saving system, with electronic vacuum switch |

\* The air saving circuit, where used, switches the suction signal to "ON" apart from the fact that the ejector is NC or NO; this means that, in order to switch the internal loop back to "OFF", it is necessary to activate the signal on the coil controlling it (green cable).

VACUUM TECHNOLOGY

**5**
**Technical data**

**EJECTOR SYSTEM:**

- |                    |                          |
|--------------------|--------------------------|
| 1 = Suction valve  | 5 = Filter               |
| 2 = Blow-off valve | 6 = Silencer             |
| 3 = Vacuum switch  | 7 = Body                 |
| 4 = Vacuum inlet   | 8 = Compressed air inlet |

| Mod.   | Nozzle Ø (mm) | Degree of evacuation (%) | Suction rate max. (l/min) | Suction rate max. (m³/h) | Air consumption (l/min) | Air consumption (m³/h) | Air cons. blow-off (l/min) | Noise level workp. gripped [db(A)] | Noise level free [db(A)] | Optimum working pressure (bar) | Weight (kg) | Temperature range |
|--------|---------------|--------------------------|---------------------------|--------------------------|-------------------------|------------------------|----------------------------|------------------------------------|--------------------------|--------------------------------|-------------|-------------------|
| VEC-10 | 1             | 85                       | 37                        | 2,2                      | 53                      | 3,2                    | 200                        | 66                                 | 68                       | 5                              | 0,275       | 0 / 45°C          |
| VEC-15 | 1,5           | 85                       | 65                        | 3,9                      | 117                     | 7                      | 200                        | 68                                 | 68                       | 5                              | 0,275       | 0 / 45°C          |
| VEC-20 | 2             | 85                       | 116                       | 7                        | 190                     | 11,4                   | 200                        | 76                                 | 78                       | 5 - 6                          | 0,465       | 0 / 45°C          |
| VEC-25 | 2,5           | 85                       | 161                       | 9,7                      | 310                     | 18,6                   | 200                        | 72                                 | 82                       | 5 - 6                          | 0,465       | 0 / 45°C          |

## Air-saving system

When gripping an object, the ejector remains active until a preset vacuum value is reached. Once reached the preset vacuum value, the ejector is shut OFF. If the vacuum level drops below the preset limit value, the ejector is re-activated by the electronic control circuit until the preset vacuum value is reached again.

The air saving circuit, where used, switches the suction signal to "ON" apart from the fact that the ejector is NC or NO; this means that, in order to switch the internal loop back to "OFF", it is necessary to activate the signal on the coil controlling it (green cable).

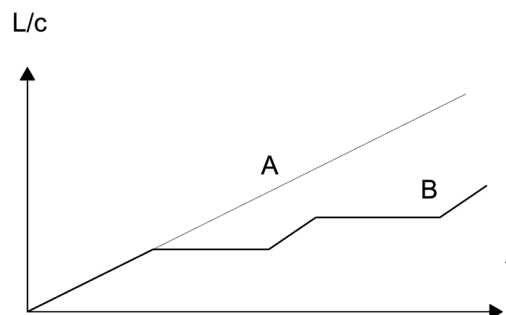


| Mod.        |                             |
|-------------|-----------------------------|
| VEC-10/15-A | A = Version Normally Open   |
| VEC-10/15-C | C = Version Normally Closed |
| VEC-20/25-A | A = Version Normally Open   |
| VEC-20/25-C | C = Version Normally Closed |

Note: VEC ejectors with air-saving system are delivered complete with connectors and cables.

## Applications example

- \* Evacuation time = time necessary for the ejector to reach a vacuum level of -600 mbar
- \*\* Air consumption l/cycle =  $(105/60) \times 5 (105 / 60) \times 0,05$
- \*\*\* Prod. cycles/day = 8 hours x 3600 s = 28.800/20 s per cycle = 1440 cycles x 2 shifts = 2880 cycles

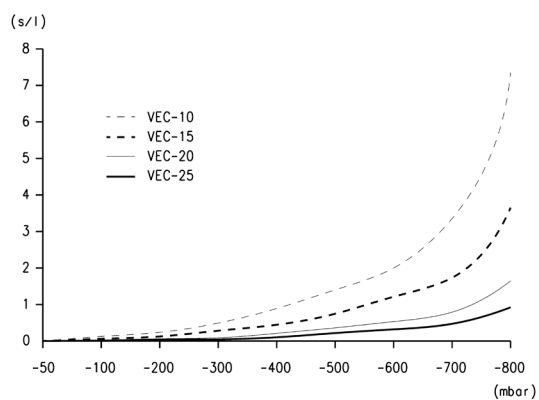
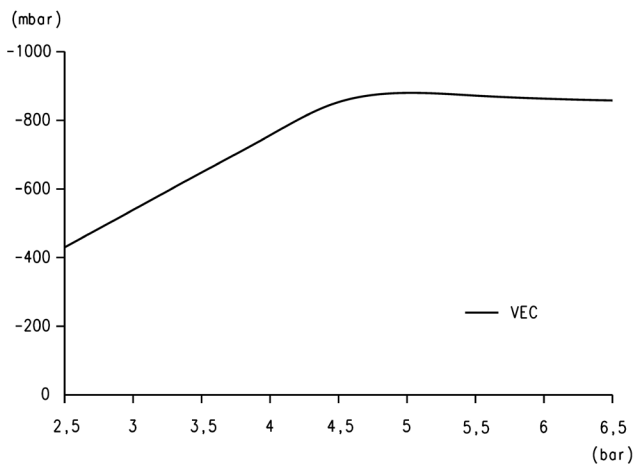


| Operating conditions            | without air-saving "A" | With air-saving "B" |
|---------------------------------|------------------------|---------------------|
| Model                           | VEC-15C2-VE            | VEC-15C2-RE         |
| Air consumption l/min           | 105                    | 105                 |
| Transport time (sec.)           | 5                      | 5                   |
| Evac. time to -600 mbar (sec.)* | 0,05                   | 0,05                |
| Total time vacuum ON (sec.)     | 5                      | 0,05                |
| Air consumption (l/cycle)**     | 8,8                    | 0,087               |
| Cycle time (sec.)               | 20                     | 20                  |
| Prod. cycles/day (2-shifts)***  | 2880                   | 2880                |
| Daily air consumption (l)       | 25.361                 | 250                 |

In this example the air-saving system saves around 99% of the air.

Diagrams VEC

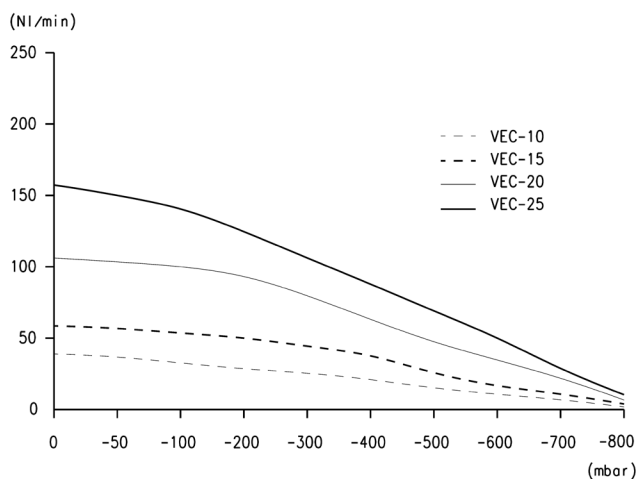
VACUUM TECHNOLOGY



5

Achievable vacuum at different supply pressures

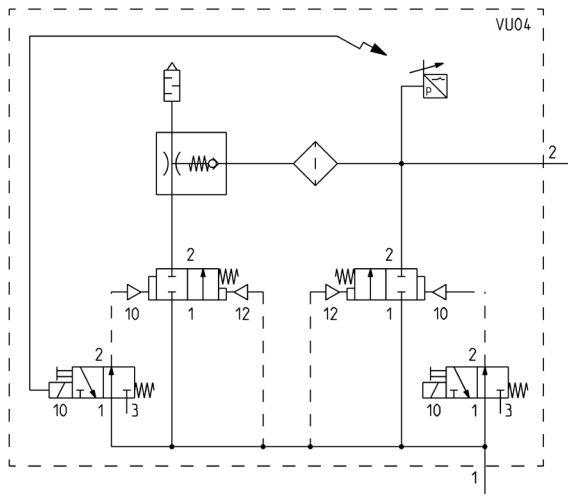
Evacuation time for different vacuum values



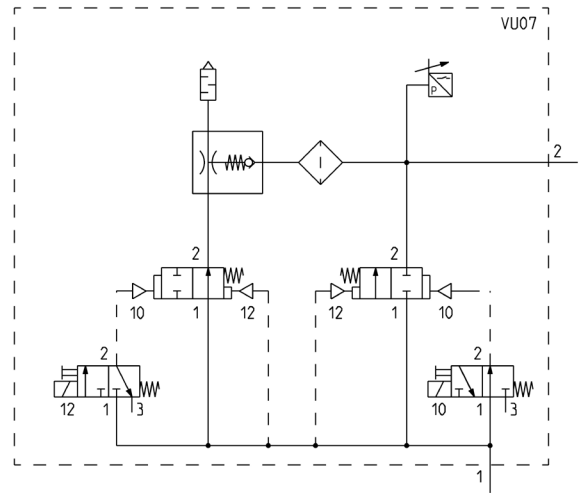
Suction rate for different vacuum values

### Normally Closed valve functions

VEC-..C2-RD - VEC-..C2-RE

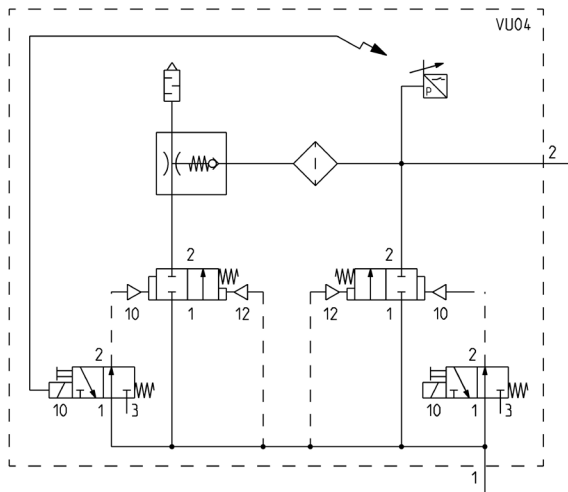


VEC-..C2-VD - VEC-..C2-VE

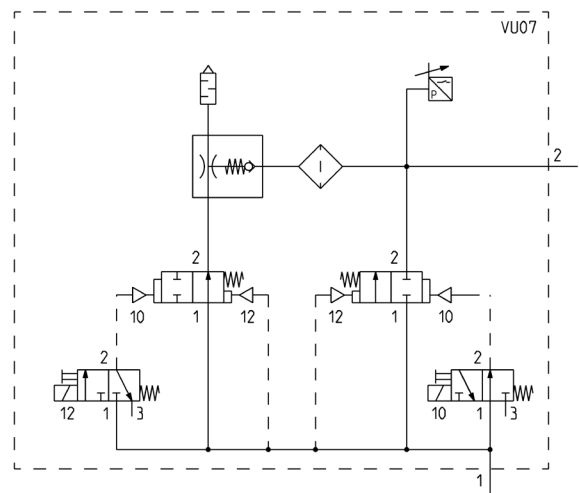


### Normally Open valve functions

VEC-..C2-RD - VEC-..C2-RE



VEC-..C2-VD - VEC-..C2-VE



**Ejectors VEC 10 - 15 - 20 - 25**

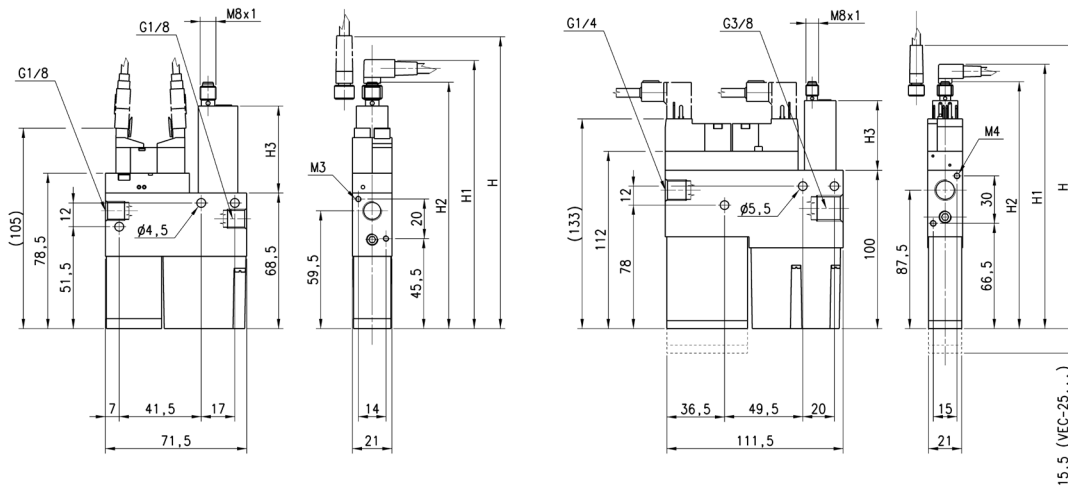
1 digital output and 1 analog output...D = SWD-V00-PA Electronic digital display; 2 digital outputs

...E = SWE-V00-PA Electronic without digital display; 1 digital output and 1 analog output



VEC-10/15...

VEC-20/25...

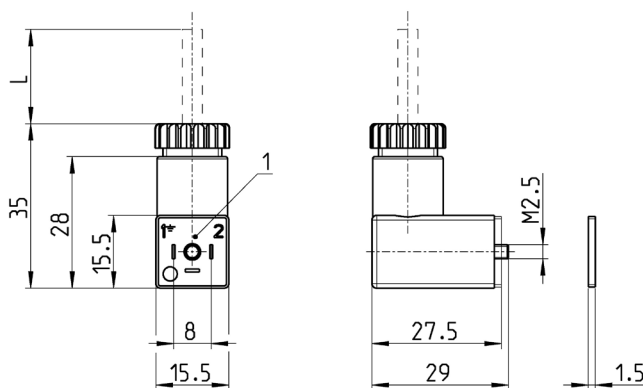


| Mod. [ D ]   | Mod. [ E ]   | R = With air saving | H     | H1    | H2    | H3   |
|--------------|--------------|---------------------|-------|-------|-------|------|
| VEC-10...-RD | VEC-10...-RE | R                   | 162   | 150   | 139   | 58,5 |
| VEC-15...-RD | VEC-15...-RE | R                   | 162   | 150   | 139   | 58,5 |
| VEC-20...-RD | VEC-20...-RE | R                   | 195,5 | 183,5 | 172,5 | 58,5 |
| VEC-25...-RD | VEC-25...-RE | R                   | 195,5 | 183,5 | 172,5 | 58,5 |
| VEC-10...-VD | VEC-10...-VE | -                   | 147,5 | 135,5 | 124,5 | 44   |
| VEC-15...-VD | VEC-15...-VE | -                   | 147,5 | 135,5 | 124,5 | 44   |
| VEC-20...-VD | VEC-20...-VE | -                   | 181   | 169   | 158   | 44   |
| VEC-25...-VD | VEC-25...-VE | -                   | 181   | 169   | 158   | 44   |

**Connectors Mod. 126 industrial std. 8 mm**



For Mod. VEC-20 and VEC-25



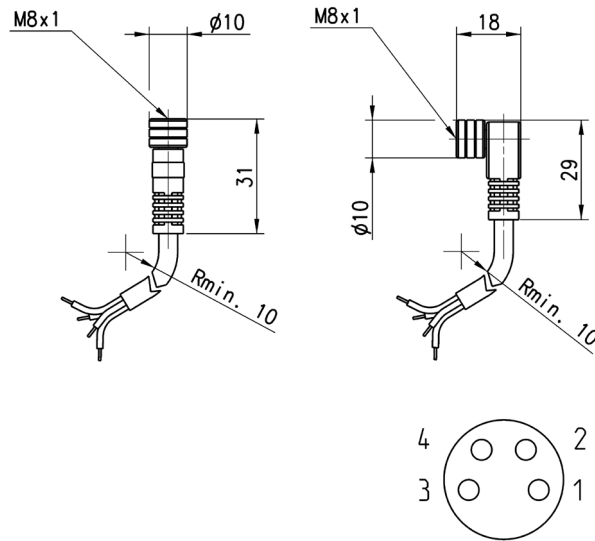
| Mod.      | Description                        | Colour      | Working voltage | Cable length (L) | Cable gland | Tightening torque |
|-----------|------------------------------------|-------------|-----------------|------------------|-------------|-------------------|
| 126-550-1 | moulded cable, without electronics | black       | -               | 1000 mm          | -           | 0.3 Nm            |
| 126-800   | connector, without electronics     | black       | -               | -                | PG7         | 0.3 Nm            |
| 126-701   | connector, varistor + Led          | transparent | 24 VAC/DC       | -                | PG7         | 0.3 Nm            |

1 = 90° adjustable connector

## Circular M8 4-pole connectors, Female



With PU sheathing, non shielded cable.  
Protection class: IP65



| Mod.           | Type of connector | Cable length (m) |
|----------------|-------------------|------------------|
| CS-DF04EG-E200 | straight          | 2                |
| CS-DF04EG-E500 | straight          | 5                |
| CS-DR04EG-E200 | 90°               | 2                |
| CS-DR04EG-E500 | 90°               | 5                |