

## VS - Series

- Max. vacuum level : -93 kPa (-27.46 inHg)
- Max. flow rate : 341 NI/min (12.04 scfm)
- Supply air pressure : 3 ~ 6 bar, max 7 bar  
(43.5~87 psi, max 101.5 psi)
- Air consumption : 97~152 NI/min (3.43~5.37 scfm)
- Supply air type : Dry compressed air
- Working temperature : -20°C to +80°C
- Noise level : 50~60 dBA



### Main advantages

- High operational reliability despite fluctuating.
- Quick response time.
- VMECA Tworfold Silencer<sup>PT</sup> assures low noise levels.
- Easy to distribute vacuum. (Multiple connection alternatives up to 9 ports.)
- Optional Air-Saving(AS)kit available to minimize energy consumption.
- Optional factory installed air control/vacuum release valves and vacuum switch available.
- Easily mountable and interchangeable vacuum cartridge.

## VS 144 - AS - A3 R3 - CL A - S2 N V

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### ① Vacuum Port

- **144** - G1/4" X 4EA
- 146 - G1/4" X 6EA
- 148 - G1/4" X 8EA

### ② Air saving kit (108)

- **AS** - Air saving kit attached

### ③ Voltage of air supply control valve

- A1 - AC110V
- A2 - AC220V
- **A3** - DC24V
- D1\* - AC110V
- D2\* - AC220V
- D3\* - DC24V

\* D.. : Double solenoid valve is available only with 'DN' or 'DL', section ⑤

### ④ Voltage of vacuum release control valve

- R1 - AC110V
- R2 - AC220V
- **R3** - DC24V

### ⑤ Solenoid Terminal

- DN - DIN type without lead wire
- DL - DIN type with lamp without lead wire
- **CL\*** - Connector type with lamp & 0.3 m lead wire
- 2B\* - DIN type with '2 in 1' BUS cable  
(Air control v/v + Vacuum release v/v)
- 3B\* -

\* Can not available with double solenoid valve

※ Remark

CL : Available only with DC24V

3B : Available only with DC24V

Available only with 'S2' or 'S2P', section ⑦

☞ About 'BUS cable' (340, 341)

### ⑥ Vacuum release flow adjust

- No mark - Standard
- **A** - Attached

### ⑦ Vacuum switch

- **S2(P)** - Digital display output 2points, No analog supply M8-4Pin Connector type 0.3m lead wire.

SG2(P) - Digital display output 2 points, No analog supply Grommet type 4-Core 2m lead wire.

SG3(P) - Digital display output 2 points, Analog supply Grommet type 5-Core 2m lead wire.

※ Remark: ① S..(P)

↳ Output type :PNP open collector

② VCM8 42 : M8-4Pin connector wire.  
Only for type S2 or S2(P).

### ⑧ Non-return valve

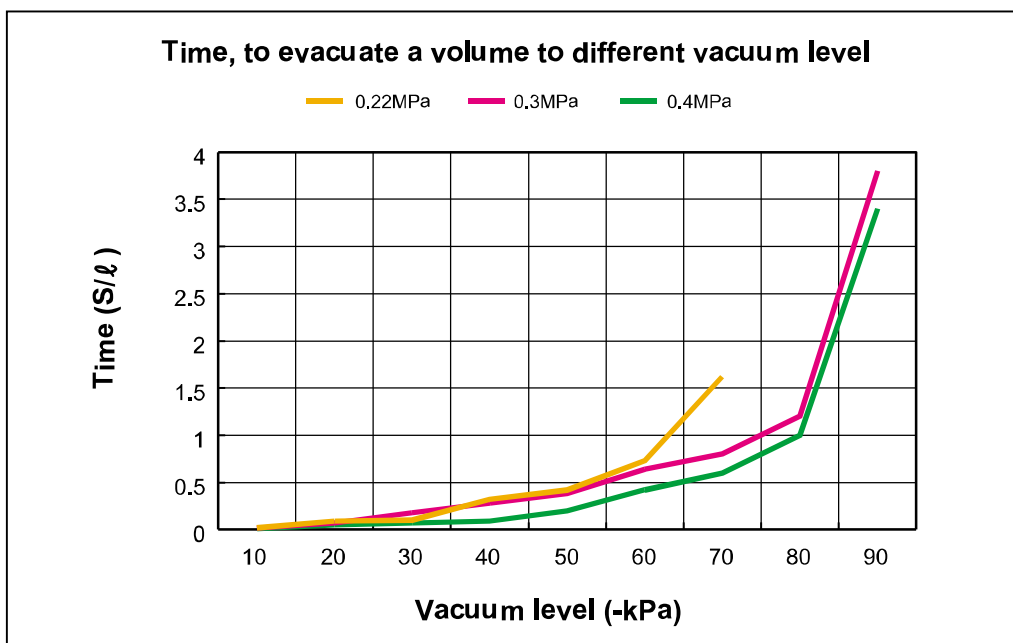
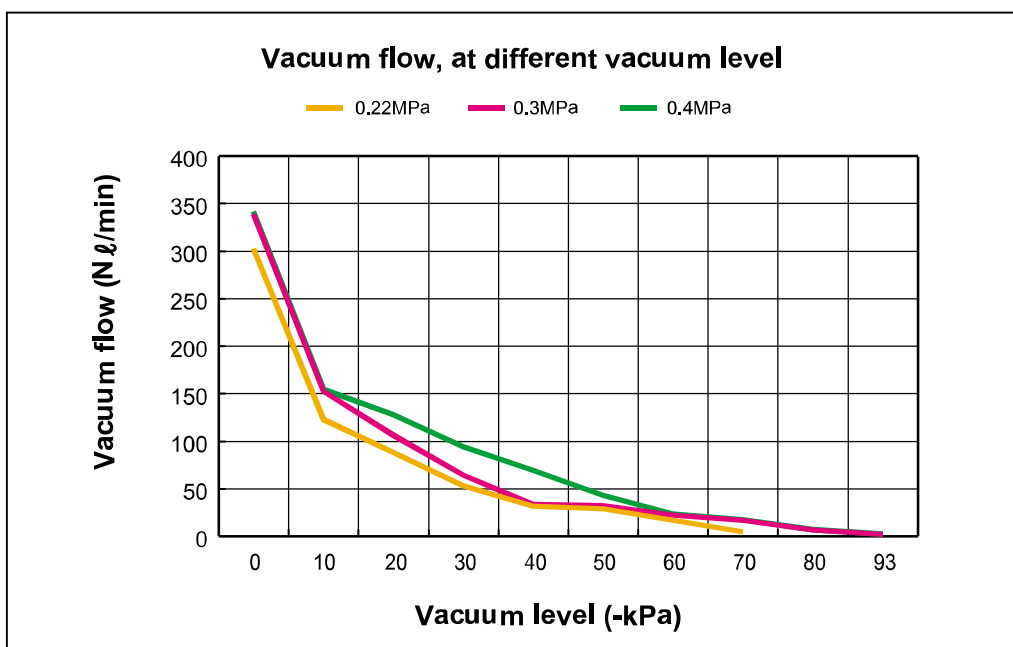
- No mark - Standard
- **N** - Non-return valve.

### ⑨ Sealing

- No mark - Standard
- **V** - Viton®
- E** - EPDM

| Series | MAX. Vacuum (-kPa) | Feed pressure (MPa) | Vacuum flow, NI/min, at different vacuum levels -kPa (-mmHg) |         |          |          |          |          |          |          |          |          |
|--------|--------------------|---------------------|--|---------|----------|----------|----------|----------|----------|----------|----------|----------|
|        |                    |                     | 0 (0)  | 10 (75) | 20 (150) | 30 (225) | 40 (300) | 50 (375) | 60 (450) | 70 (525) | 80 (600) | 90 (675) |
| VS     | 75                 | 0.22                | 302  | 122.5   | 88       | 53       | 31.4     | 28.5     | 16.5     | 4.6      | -        | -        |
|        | 93                 | 0.3                 | 338  | 152     | 106      | 64       | 33       | 32       | 22       | 16.5     | 6.4      | 1.9      |
|        | 93                 | 0.4                 | 341  | 154     | 127.5    | 94       | 69       | 43       | 23.3     | 17.3     | 6.9      | 2.1      |

| Series | Feed pressure (MPa) | Air consumption (NI/min) | Time, s/l, to evacuate a volume to different vacuum levels -kPa (-mmHg) |          |          |          |          |          |          |          |          |
|--------|---------------------|--------------------------|---|----------|----------|----------|----------|----------|----------|----------|----------|
|        |                     |                          | 10 (75)   | 20 (150) | 30 (225) | 40 (300) | 50 (375) | 60 (450) | 70 (525) | 80 (600) | 90 (675) |
| VS     | 0.22                | 97                       | 0.019   | 0.09     | 0.1      | 0.32     | 0.42     | 0.73     | 1.62     | -        | -        |
|        | 0.3                 | 118                      | 0.015   | 0.07     | 0.18     | 0.28     | 0.38     | 0.64     | 0.8      | 12       | 3.8      |
|        | 0.4                 | 152                      | 0.01  | 0.48     | 0.07     | 0.09     | 0.2      | 0.42     | 0.8      | 1        | 3.4      |



## VLS-Series

- Max. vacuum level : -75 kPa (-22.15 inHg)
- Max. flow rate : 362 NI/min (12.79 scfm)
- Supply air pressure : 4 ~ 6 bar, max 7 bar  
(58~87 psi, max 101.5 psi)
- Air consumption : 70~104 NI/min (2.47~3.67 scfm)
- Supply air type : Dry compressed air
- Working temperature : -20°C to +80°C
- Noise level : 50~60 dBA



## Main Advantages

- High operational reliability despite fluctuating.
- Quick response time.
- VMECA Twofold Silencer<sup>PT</sup> assures low noise levels.
- Easy to distribute vacuum. (Multiple connection alternatives up to 8 ports.)
- Optional Air-Saving(AS) kit available to minimize energy consumption.
- Optional factory installed air control/vacuum release valves and vacuum switch available.
- Easily mountable and interchangeable vacuum cartridge.

## VLS 144 - AS - A3 R3 - CL A - S2 N V



### ① Vacuum Port

- **144** - G1/4" X 4EA
- 146 - G1/4" X 6EA
- 148 - G1/4" X 8EA

### ② Air saving kit (108)

- **AS** - Air saving kit attached

### ③ Voltage of air supply control valve

- A1 - AC110V
- A2 - AC220V
- **A3** - DC24V
- D1\* - AC110V
- D2\* - AC220V
- D3\* - DC24V

\* D.. : Double solenoid valve is available only with 'DN' or 'DL', section ⑤

### ④ Voltage of vacuum release control valve

- R1 - AC110V
- R2 - AC220V
- **R3** - DC24V

### ⑤ Solenoid Terminal

- DN - DIN type without lead wire
- DL - DIN type with lamp without lead wire
- **CL\*** - Connector type with lamp & 0.3 m lead wire
- 2B\* - DIN type with '2 in 1' BUS cable (Air control v/v + Vacuum release v/v)
- 3B\* -

\* Can not available with double solenoid valve

※ Remark

CL : Available only with DC24V

3B : Available only with DC24V

Available only with 'S2' or 'S2P', section ⑦

☞ About 'BUS cable' (340, 341)

### ⑥ Vacuum release flow adjust

- No mark - Standard
- **A** - Attached

### ⑦ Vacuum switch (108)

- **S2(P)** - Digital display output 2points, No analog supply M8-4Pin Connector type 0.3m lead wire.

SG2(P) - Digital display output 2 points, No analog supply Grommet type 4-Core 2m lead wire.

SG3(P) - Digital display output 2 points, Analog supply Grommet type 5-Core 2m lead wire.

※ Remark: ① S..(P)

↳ Output type :PNP open collector

② VCM8 42 : M8-4Pin connector wire. Only for type S2 or S2(P).

### ⑧ Non-return valve

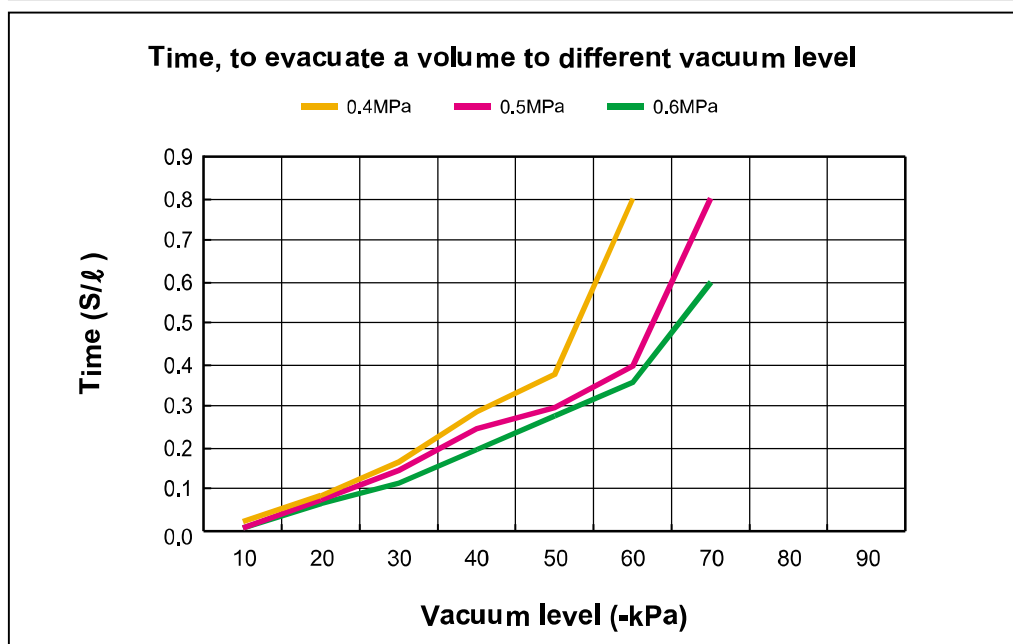
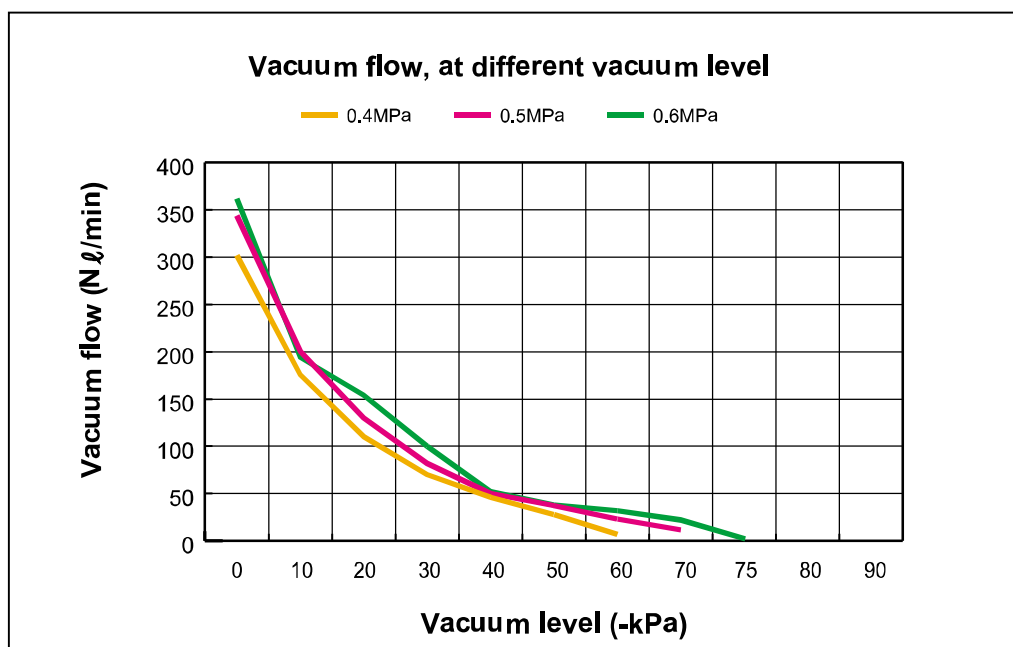
- No mark - Standard
- **N** - Non-return valve.

### ⑨ Sealing

- No mark - Standard
- **V** - Viton®
- E** - EPDM

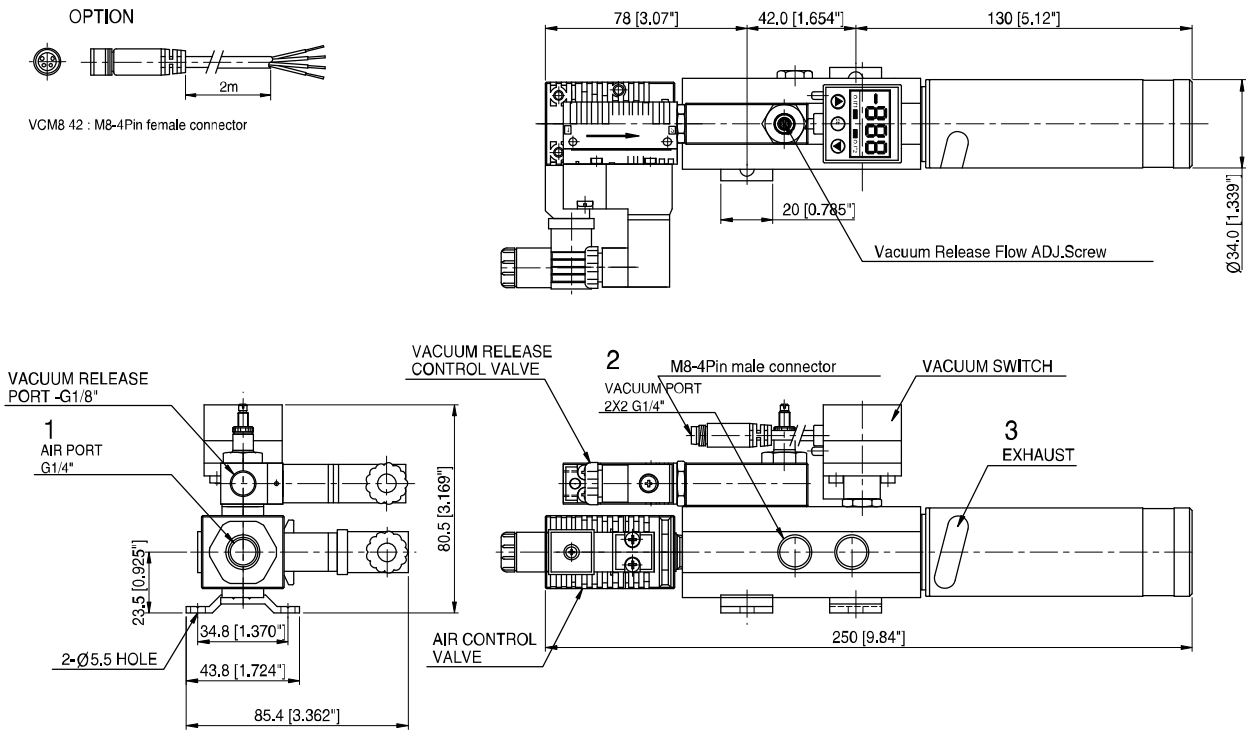
| Series | MAX. Vacuum (-kPa) | Feed pressure (MPa) | Vacuum flow, NI/min, at different vacuum level -kPa (-mmHg) |         |          |          |          |          |          |          |          |          |
|--------|--------------------|---------------------|---|---------|----------|----------|----------|----------|----------|----------|----------|----------|
|        |                    |                     | 0 (0)   | 10 (75) | 20 (150) | 30 (225) | 40 (300) | 50 (375) | 60 (450) | 70 (525) | 80 (600) | 90 (675) |
| VLS    | 60                 | 0.4                 | 302   | 176     | 110      | 70       | 46       | 28       | 6.8      | -        | -        | -        |
|        | 70                 | 0.5                 | 344   | 200     | 130      | 82       | 50       | 37.5     | 23       | 11.3     | -        | -        |
|        | 75                 | 0.6                 | 362   | 194     | 154      | 100      | 52       | 38       | 32       | 22       | -        | -        |

| Series | Feed pressure (MPa) | Air consumption (NI/min) | Time, s/l, to evacuate a volume to different vacuum level -kPa (-mmHg) |          |          |          |          |          |          |          |          |
|--------|---------------------|--------------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|
|        |                     |                          | 10 (75)  | 20 (150) | 30 (225) | 40 (300) | 50 (375) | 60 (450) | 70 (525) | 80 (600) | 90 (675) |
| VLS    | 0.4                 | 70                       | 0.028  | 0.09     | 0.17     | 0.29     | 0.38     | 0.8      | -        | -        | -        |
|        | 0.5                 | 85                       | 0.013  | 0.08     | 0.15     | 0.25     | 0.3      | 0.4      | 0.8      | -        | -        |
|        | 0.6                 | 104                      | 0.012  | 0.07     | 0.12     | 0.2      | 0.28     | 0.36     | 0.6      | -        | -        |



With Vacuum control valve, Vacuum release control valve and Digital Vacuum Switch

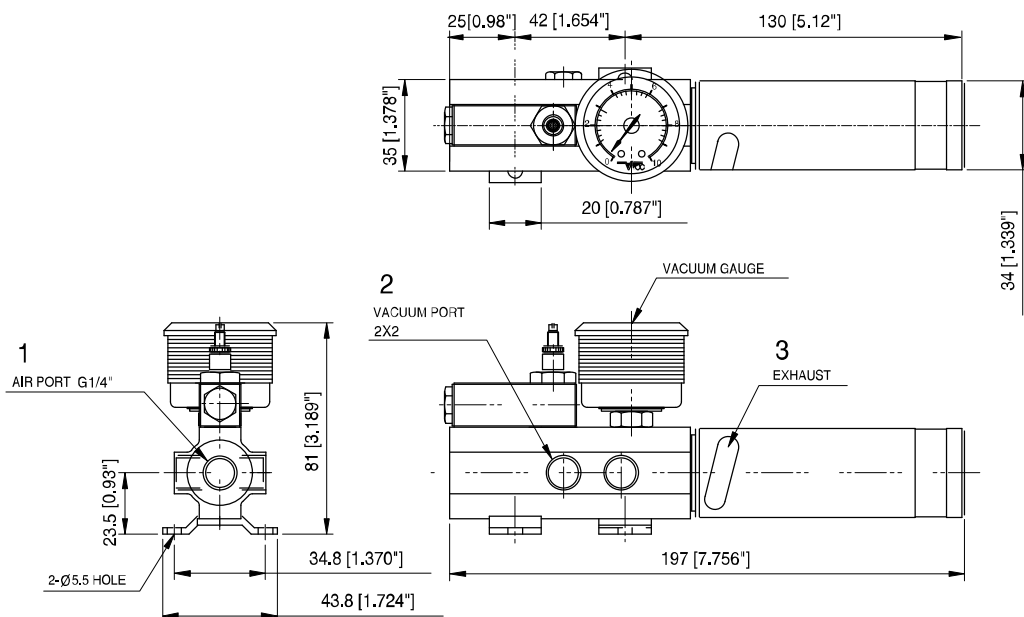
## ▼ Series VS 144.. / VLS 144..



Measure unit : mm [in]

Standard

## ▼ Series VS 144.. / VLS 144..

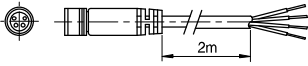


Measure unit : mm [in]

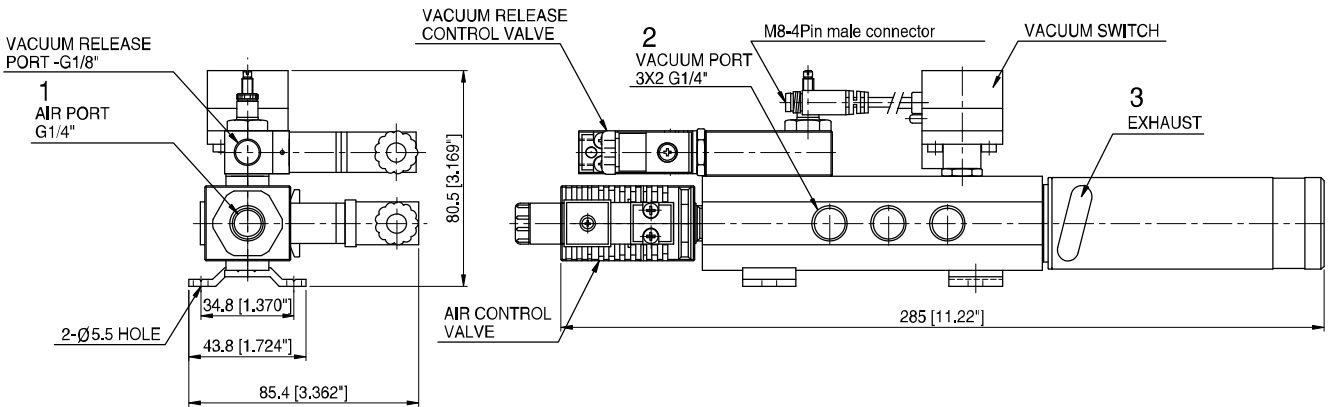
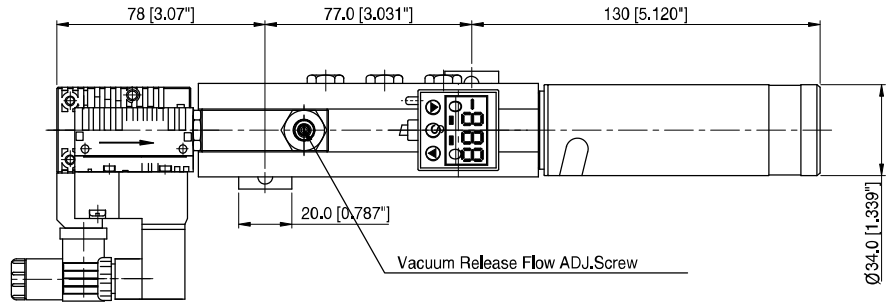
With Vacuum control valve, Vacuum release control valve and Digital Vacuum Switch

## ▼ Series VS 146.. / VLS 146..

OPTION



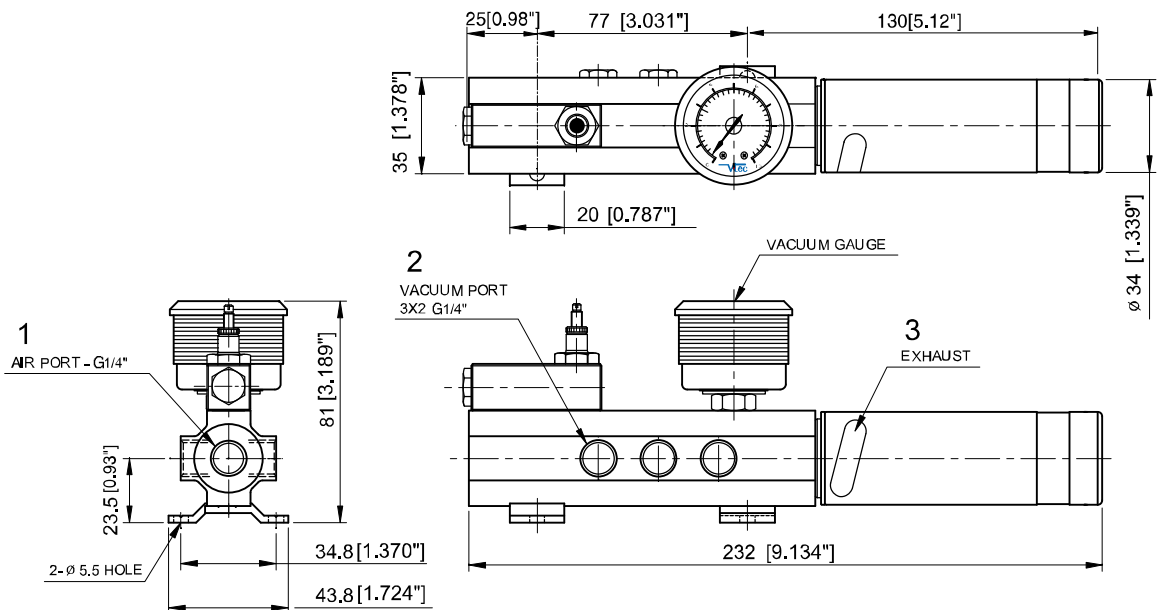
VCM8 42 : M8-4Pin female connector



Measure unit : mm [in]

Standard

## ▼ Series VS 146.. / VLS 146..

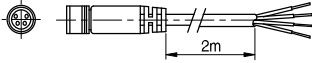


Measure unit : mm [in]

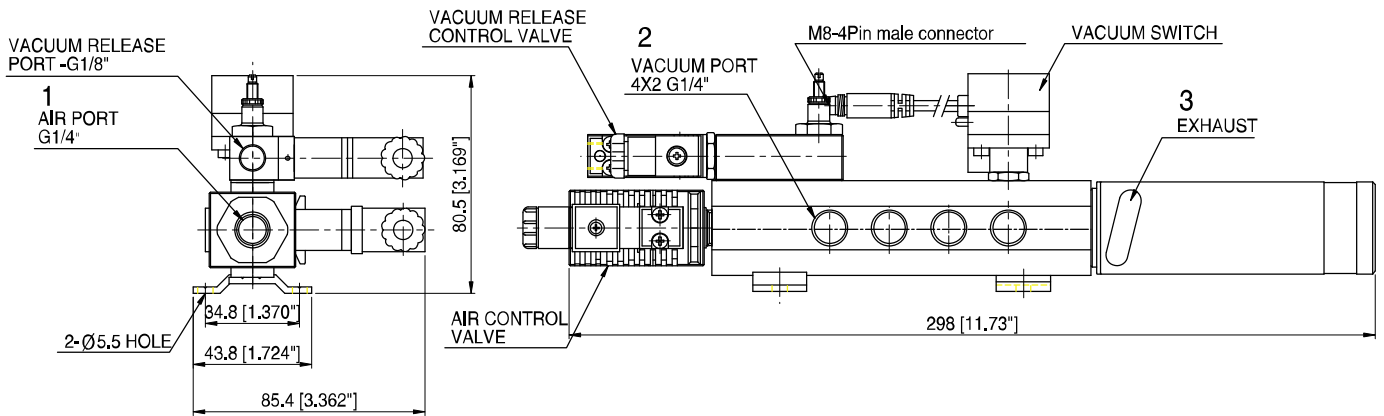
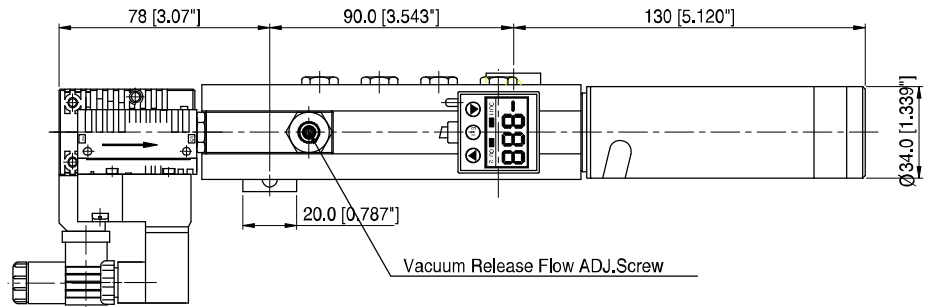
With Vacuum control valve, Vacuum release control valve and Digital Vacuum Switch

## ▼ Series VS 148.. / VLS 148..

OPTION



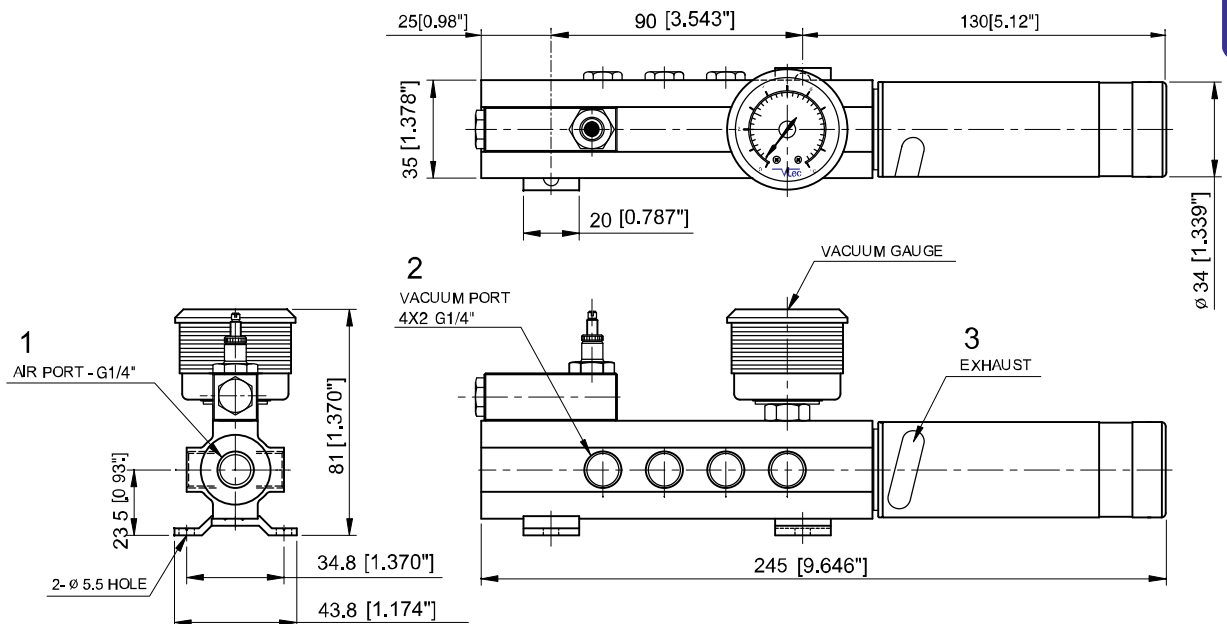
VCM8 42 : M8-4Pin female connector



Measure unit : mm [in]

Standard

## ▼ Series VS 148.. / VLS 148..



Measure unit : mm [in]

VACUUM PUMPS