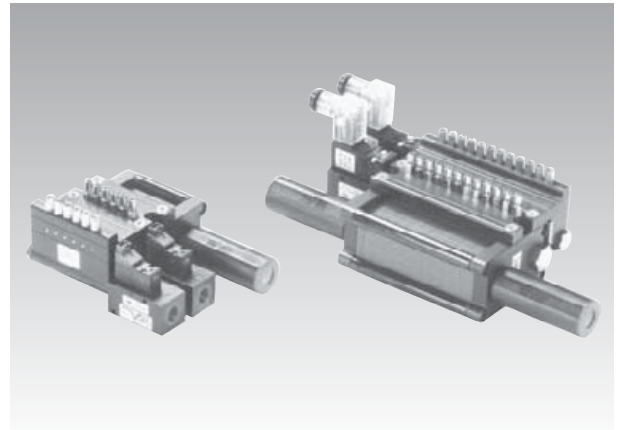


## One-Line Pump

|                            |  |
|----------------------------|--|
| <b>Max.vacuum level</b>    | : VTOX pump -93kpa (-697.5mmHg)<br>: VTOM pump -85kpa (-637.5mmHg) |
| <b>Max. flow rate</b>      | : VTOX pump 32NI/m x N stack<br>: VTOM pump 35NI/m x N stack       |
| <b>Supply air pressure</b> | : 4-6bar, max. 7bar  |
| <b>Supply air type</b>     | : Dry compressed air   |
| <b>Working temperature</b> | : -20°C to +80°C   |
| <b>Noise level</b>         | : 50 - 65dBA   |



This online model uses individual pumps to make up the complete unit, each pump is in itself a multi stage ejector unit. Each individual pump can be stacked to together thus creating a modular manifold based system. The advantages of this unit is that it can be operated using just two control valve (as to vacuum and equal vacuum release time to each vacuum pads) whilst retaining individual vacuum lines separate to one another, therefore if any leakage or surface deformation occurs and one pad loses it vacuum, it does not effect the vacuum level in the other pads. Also, it can be used vacuum port for purging work filter cleaning function. It will be achieved long life time vacuum filter & pump. Pumps can be stacked up from 4 - 16 unit depending upon requirements. The pumps can have seal material options of Viton® & EPDM for corrosive and acidic applications.

### Main advantages

- Individual vacuum lines
- Filter cleaning function
- Efficiency and economic
- Can be adjust vacuum release flow
- Compact & long life time

### Application

- Semiconductor
- Robotic
- Packaging
- Pick & Place System
- Metal Sheet Handling
- Automotive

## Order no.

**VTOX5 x 6 - A3 R3 - 3 - V**

①                      ②                      ③                      ④                      ⑤                      ⑥

### ① Model-Vacuum Flow

- **VTOX5** - 24 NI/min
- VTOM10 - 32 NI/min
- VTOM5 - 27 NI/min
- VTOM10 - 35 NI/min

### ② Vacuum Stack

- 4 - 4 stack    11 - 11 stack
- 5 - 5 stack    12 - 12 stack
- **6 - 6 stack    13 - 13 stack**
- 7 - 7 stack    14 - 14 stack
- 8 - 8 stack    15 - 15 stack
- 9 - 9 stack    16 - 16 stack
- 10 - 10 stack

※ Remark :

- VTOX10, VTOM10 maximum stack up to 12stacks
- VTOX5, VTOM5 : above 12 stack complete with 2 silencer
- VTOX10, VTOM10 : above 12 stack complete with 2 silencer

### ③ Air supply control valve

- A1 - AC110V
- A2 - AC220V
- **A3 - DC24V**

### ④ Vacuum release control Valves

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

### ⑤ Control valve & Solenoid terminal

- Piston valve
- 1 - DIN type without lead wire
- Piston valve
- 2 - DIN type with lamp without lead wire
- **3\*** - Piston valve
- Connector type with 0,3m lead wire& lamp
- D1 - Diaphragm valve
- DIN type without lead wire
- D2 - Diaphragm valve
- DIN type with lamp without lead wire
- D3\* - Diaphragm valve
- Connector type with 0,3m lead wire& lamp

※ Remarks : VTOX5, VTOM5 - over 12 stacks  
VTOX10, VTOM10 - over 8 stacks \* Using Piston valve  
\* : Only for DC24V

### ⑥ Sealing

- no mark - standard (NBR)
- **V** - Viton®
- E** - EPDM

### Characteristics

| Model  | max. vacuum<br>-kPa(-mmHg) | Max.<br>vacuum flow<br>(NI/m)/each stack | air<br>consumption<br>(NI/m)/each stack | noise level<br>(dBA) | weight(g)<br>/each stack | min hose inner Ø<br>(within 2m) |        |
|--------|----------------------------|--|---|----------------------|--------------------------|---------------------------------|--------|
|        |                            |  |   |                      |                          | air supply                      | vacuum |
| VTOX5  | 93                         | 24                                       | 21,6~24                                 | 55~65                | 37                       | > 8~10                          | > 2,5  |
| VTOX10 | (697,5)                    | 32                                       | 43,2~48                                 | 60~65                | 37                       | > 8~12                          | > 2,5  |
| VTOM5  | 85                         | 27                                       | 15~21                                   | 55~65                | 37                       | > 8~10                          | > 2,5  |
| VTOM10 | (637,5)                    | 35                                       | 30~42                                   | 60~65                | 37                       | > 8~12                          | > 2,5  |

※ Remark : unit weight (477g + each stack weight)

### Induce air in liters per minute (NI/m)

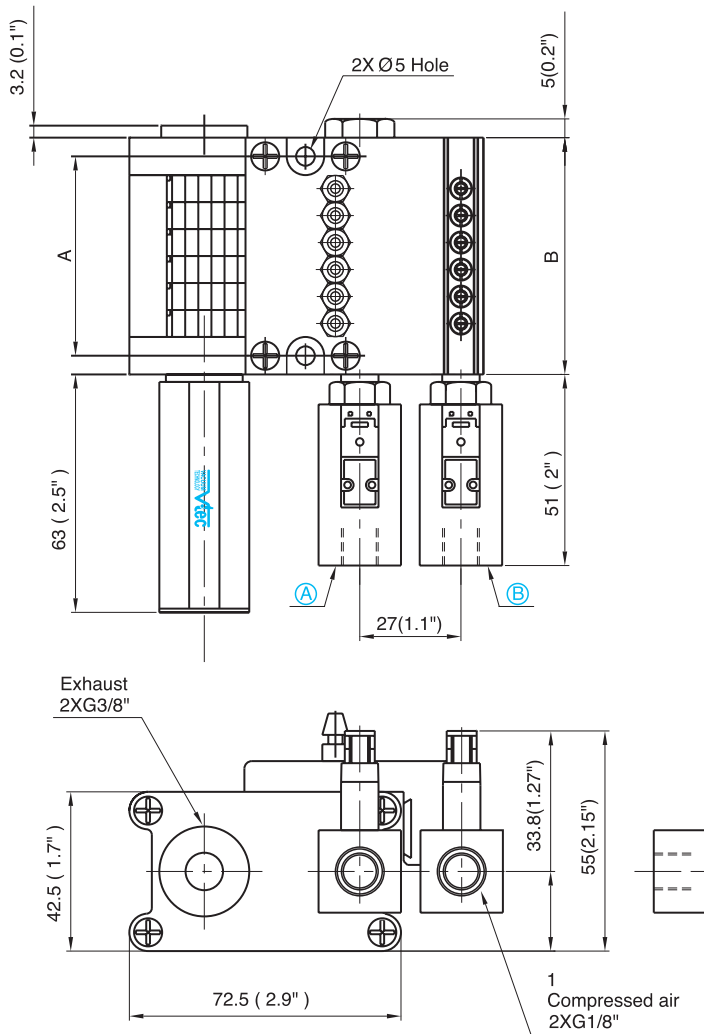
| Model \ -mmHg<br>-kPa | 0  | 75 | 150 | 225 | 300 | 375 | 450 | 525 | 600  | 675  |
|-----------------------|----|----|-----|-----|-----|-----|-----|-----|------|------|
|                       | 0  | 10 | 20  | 30  | 40  | 50  | 60  | 70  | 80   | 90   |
| VTOX5                 | 24 | 13 | 9   | 8   | 7   | 5   | 4   | 2,7 | 1,2  | 0,45 |
| VTOX10                | 32 | 21 | 17  | 15  | 14  | 11  | 9   | 5,4 | 2,4  | 0,9  |
| VTOM5                 | 27 | 16 | 13  | 12  | 11  | 8   | 6   | 2,4 | 0,66 |      |
| VTOM10                | 35 | 29 | 25  | 23  | 19  | 16  | 12  | 4,8 | 1,32 |      |

### Time in seconds to evacuate to vacuum level (sec/l)

| Model \ -mmHg<br>-kPa | 75    | 150   | 225   | 300   | 375   | 450   | 525   | 600    | 675   |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
|                       | 10    | 20    | 30    | 40    | 50    | 60    | 70    | 80     | 90    |
| VTOX5                 | 0,258 | 0,796 | 1,516 | 2,4   | 3,38  | 4,91  | 6,896 | 10,16  | 19,19 |
| VTOX10                | 0,129 | 0,398 | 0,758 | 1,2   | 1,78  | 2,455 | 3,445 | 5,08   | 9,594 |
| VTOM5                 | 0,218 | 0,556 | 1,00  | 1,576 | 2,356 | 3,44  | 5,27  | 10,216 |       |
| VTOM10                | 0,109 | 0,278 | 0,50  | 0,788 | 1,178 | 1,72  | 2,635 | 5,158  |       |

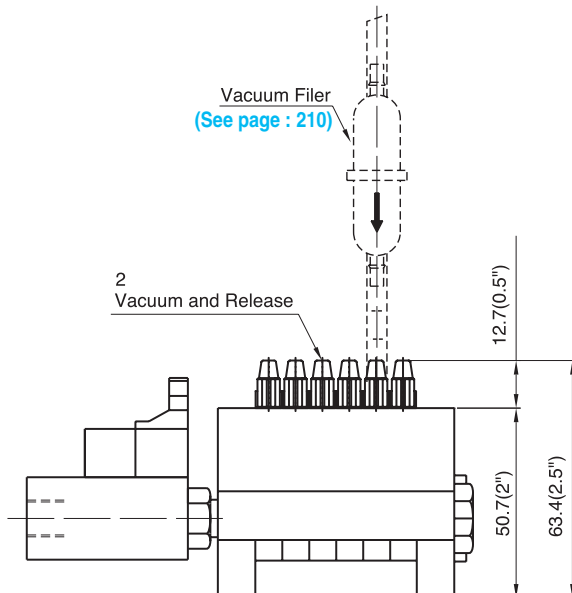
### Dimensional Information

VTOX <sup>5</sup>/<sub>10</sub>



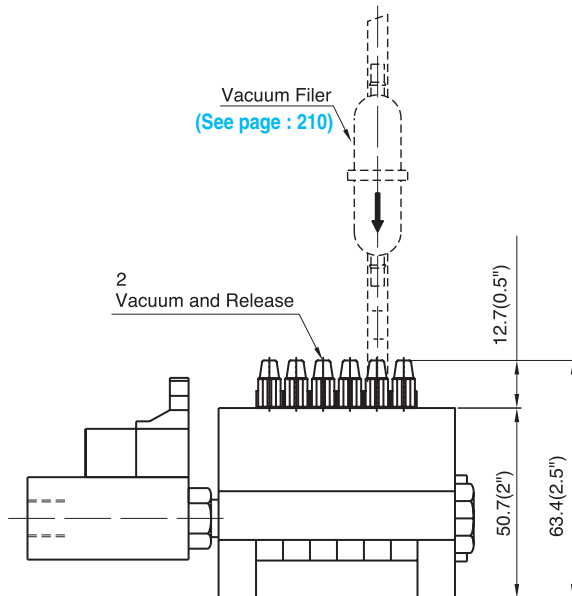
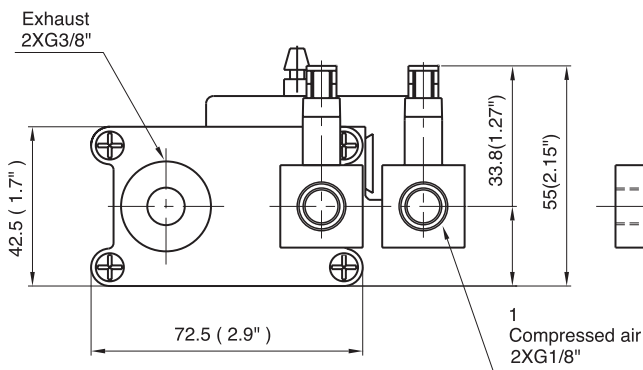
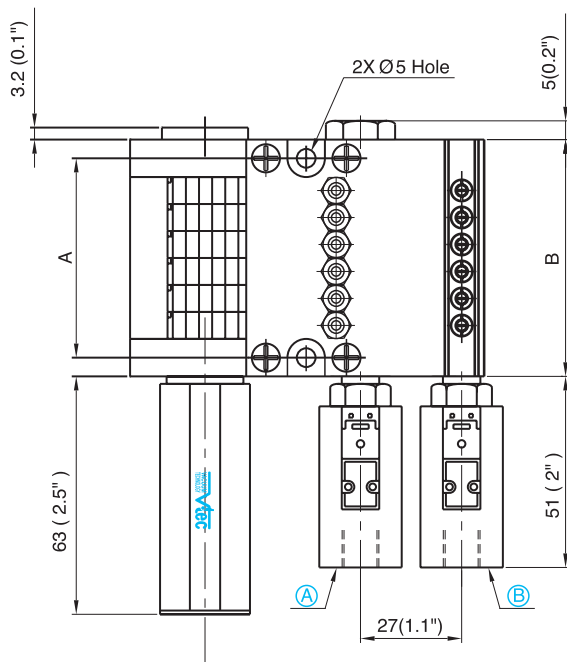
| (mm)      |       |       |
|-----------|-------|-------|
| VTOX 5,10 | A     | B     |
| 4 stack   | 38.3  | 48.3  |
| 5 stack   | 45.5  | 55.5  |
| 6 stack   | 53    | 63    |
| 7 stack   | 60    | 70    |
| 8 stack   | 67.5  | 77.5  |
| 9 stack   | 74.8  | 84.8  |
| 10 stack  | 82    | 92    |
| 11 stack  | 88.5  | 98.5  |
| 12 stack  | 96    | 106   |
| 13 stack  | 103.2 | 113.2 |
| 14 stack  | 111   | 121   |
| 15 stack  | 118   | 128   |
| 16 stack  | 125.2 | 135.8 |

Remark : (A) - Air supply (vacuum) control valve  
(B) - Vacuum release control valve



### Dimensional Information

# VTOM 5 10



(mm)

| VTOM 5,10 | A     | B     |
|-----------|-------|-------|
| 4 stack   | 38.3  | 48.3  |
| 5 stack   | 45.5  | 55.5  |
| 6 stack   | 53    | 63    |
| 7 stack   | 60    | 70    |
| 8 stack   | 67.5  | 77.5  |
| 9 stack   | 74.8  | 84.8  |
| 10 stack  | 82    | 92    |
| 11 stack  | 88.5  | 98.5  |
| 12 stack  | 96    | 106   |
| 13 stack  | 103.2 | 113.2 |
| 14 stack  | 111   | 121   |
| 15 stack  | 118   | 128   |
| 16 stack  | 125.2 | 135.8 |

Remark : (A) - Air supply (vacuum) control valve  
(B) - Vacuum release control valve