

Mini pump

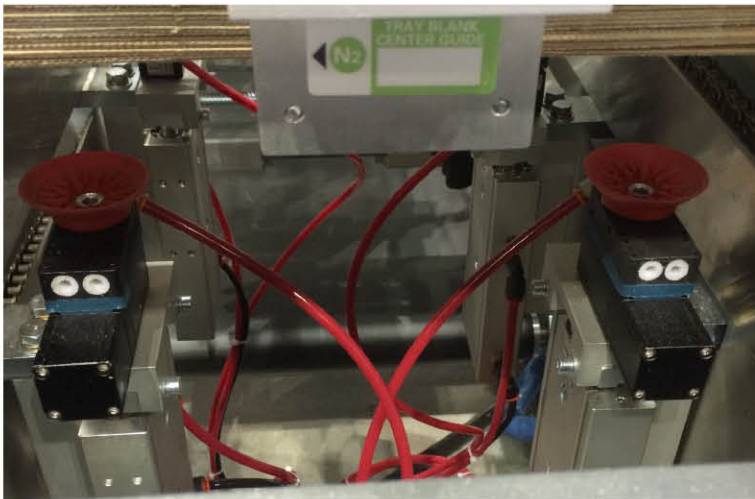
Features and Strengths

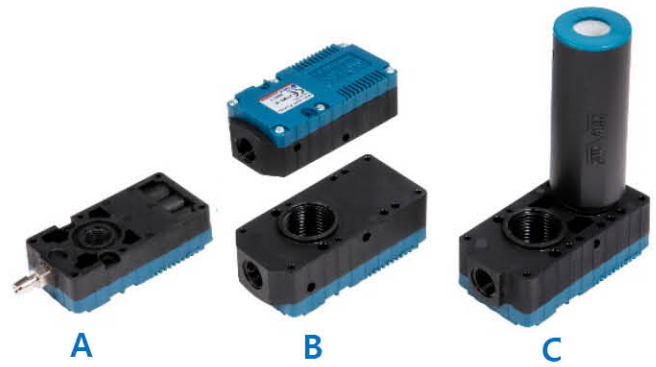
Multi stage ejector Various port size options
Very compact size and light weight
Large vacuum flow with high level of vacuum

Advantages

Available to be located directly onto the back of suction cups – Fast response time
High vacuum flow in efficient air consumption due to multi stage structure
Compact size and light weight

Application





Overall of specification

| Model | Max. Vacuum level (- kPa) | Max. Feed Pressure (bar) | Max. Vacuum Flow (NI/m) | Air Consumption (NI/m) |
|-------|---------------------------|--------------------------|-------------------------|------------------------|
| VTM5 | 85 | 7 | 37 | 15 ~ 21 |
| VTM10 | 85 | 7 | 74 | 30 ~ 42 |
| VTM20 | 85 | 7 | 149 | 60 ~ 84 |
| VTM30 | 85 | 7 | 220 | 90 ~ 126 |
| VTX5 | 92 | 7 | 32 | 21.6 ~ 24 |
| VTX10 | 92 | 7 | 62 | 43.2 ~ 48 |
| VTX20 | 92 | 7 | 124 | 86.4 ~ 96 |
| VTX30 | 92 | 7 | 185 | 129.6 ~ 144 |

VACUUM PUMPS / Mini pumps

Mini pump

VMECA Mini pump is multi stage vacuum ejector with compact design to be installed on limited space and at the near position from suction point. Mini pump has quick release option which can be possible for quick release function without additional vacuum release control valve.



Key advantages

- Multi-stage vacuum pump
- Compact size & light weight
- Quick release module – Available quick release without additional vacuum release valve



VACUUM PUMPS / Mini pumps

VTM5 / VTX5

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Aluminum and plastic body available
- Quick response time



Specifications

| Description | VTM5 | VTX5 |
|--------------------|-------------|-------------|
| Max. Vacuum level | -85 kPa | -92 kPa |
| Open Vacuum flow | 37 NI/min | 32 NI/min |
| Max. Feed pressure | 7 bar | 7 bar |
| Temperature | -20 ~ 80 °C | -20 ~ 80 °C |
| Noise level | 50 ~ 65 dbA | 50 ~ 65 dbA |
| Weight | 40 31.4 g | 31.4 g |

Vacuum Flow

| Model | Max. vacuum (-kPa) | Vacuum flow (NI/min) at different vacuum levels (-kPa) | | | | | | | | | |
|-------|--------------------|--|----|----|----|----|----|----|-----|------|------|
| | | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM5 | 85 | 37 | 26 | 16 | 14 | 10 | 8 | 6 | 2.4 | 0.66 | - |
| VTX5 | 92 | 32 | 18 | 9 | 8 | 7 | 6 | 5 | 3 | 1.2 | 0.45 |

Evacuation Time

| Model | Air Consumption (NI/min) | Evacuation time in sec / liter to reach different vacuum levels (-kPa) | | | | | | | | |
|-------|--------------------------|--|-------|-------|-------|-------|------|-------|--------|-------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM5 | 15 ~ 21 | 0.218 | 0.556 | 1.00 | 1.576 | 2.356 | 3.44 | 5.27 | 10.216 | - |
| VTX5 | 21.6 ~ 24 | 0.258 | 0.796 | 1.156 | 2.40 | 3.56 | 4.91 | 6.896 | 10.16 | 19.19 |

VTM10 / VTX10

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Aluminum and plastic body available
- Quick response time



Specifications

| Description | VTM10 | VTX10 |
|--------------------|-------------|-------------|
| Max. Vacuum level | -85 kPa | -92 kPa |
| Open Vacuum flow | 74 NI/min | 62 NI/min |
| Max. Feed pressure | 7 bar | 7 bar |
| Temperature | -20 ~ 80 °C | -20 ~ 80 °C |
| Noise level | 55 ~ 68 dbA | 55 ~ 68 dbA |
| Weight | 31.9 g | 31.9 g |

Vacuum Flow

| Model | Max. vacuum (-kPa) | Vacuum flow (NI/min) at different vacuum levels (-kPa) | | | | | | | | | |
|-------|--------------------|--|----|----|----|----|----|----|-----|------|-----|
| | | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM10 | 85 | 74 | 52 | 31 | 28 | 20 | 16 | 12 | 4.8 | 1.32 | - |
| VTX10 | 92 | 62 | 36 | 18 | 16 | 14 | 11 | 9 | 6 | 2.4 | 0.9 |

Evacuation Time

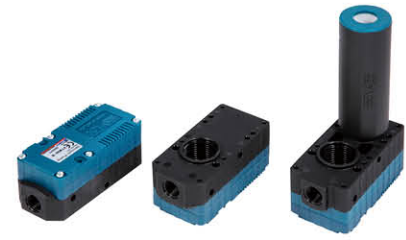
| Model | Air Consumption (NI/min) | Evacuation time in sec / liter to reach different vacuum levels (-kPa) | | | | | | | | |
|-------|--------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM10 | 30 ~ 42 | 0.109 | 0.278 | 0.5 | 0.788 | 1.178 | 1.72 | 2.635 | 5.158 | - |
| VTX10 | 43.2 ~ 48 | 0.129 | 0.398 | 0.758 | 1.2 | 1.78 | 2.455 | 3.445 | 5.08 | 9.594 |

VACUUM PUMPS / Mini pumps

VTM20 / VTX20

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Aluminum and plastic body available
- Quick response time



Specifications

| Description | VTM20 | VTX20 |
|--------------------|-------------|-------------|
| Max. Vacuum level | -85 kPa | -92 kPa |
| Open Vacuum flow | 149 NI/min | 124 NI/min |
| Max. Feed pressure | 7 bar | 7 bar |
| Temperature | -20 ~ 80 °C | -20 ~ 80 °C |
| Noise level | 60 ~ 68 dbA | 63 ~ 68 dbA |
| Weight | 42.6 g | 42.6 g |

Vacuum Flow

| Model | Max. vacuum (-kPa) | Vacuum flow (NI/min) at different vacuum levels (-kPa) | | | | | | | | | |
|-------|--------------------|--|----|----|----|----|----|----|------|-----|-----|
| | | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM20 | 85 | 149 | 99 | 62 | 54 | 40 | 32 | 22 | 10.5 | 2.7 | - |
| VTX20 | 92 | 124 | 72 | 35 | 32 | 27 | 22 | 18 | 12 | 4.8 | 1.8 |

Evacuation Time

| Model | Air Consumption (NI/min) | Evacuation time in sec / liter to reach different vacuum levels (-kPa) | | | | | | | | |
|-------|--------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM20 | 60 ~ 84 | 0.054 | 0.139 | 0.25 | 0.394 | 0.589 | 0.86 | 1.317 | 2.579 | - |
| VTX20 | 86.4 ~ 96 | 0.064 | 0.199 | 0.379 | 0.6 | 0.89 | 1.227 | 1.722 | 2.54 | 4.797 |

VTM30 / VTX30

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Aluminum and plastic body available
- Quick response time



Specifications

| Description | VTM30 | VTX30 |
|--------------------|-------------|-------------|
| Max. Vacuum level | -85 kPa | -92 kPa |
| Open Vacuum flow | 220 NI/min | 185 NI/min |
| Max. Feed pressure | 7 bar | 7 bar |
| Temperature | -20 ~ 80 °C | -20 ~ 80 °C |
| Noise level | 60 ~ 68 dbA | 60 ~ 68 dbA |
| Weight | 53.3 g | 53.3 g |

Vacuum Flow

| Model | Max. vacuum (-kPa) | Vacuum flow (NI/min) at different vacuum levels (-kPa) | | | | | | | | | |
|-------|--------------------|--|-----|----|----|----|----|----|----|-----|-----|
| | | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM30 | 85 | 220 | 147 | 92 | 73 | 60 | 47 | 32 | 16 | 4.1 | - |
| VTX30 | 92 | 185 | 108 | 52 | 47 | 41 | 33 | 26 | 18 | 7.2 | 2.7 |

Evacuation Time

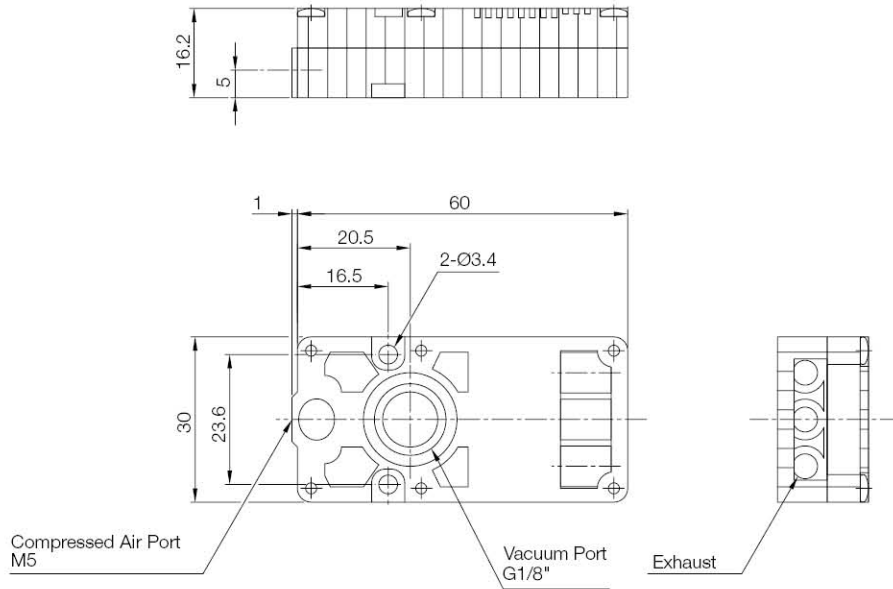
| Model | Air Consumption (NI/min) | Evacuation time in sec / liter to reach different vacuum levels (-kPa) | | | | | | | | |
|-------|--------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| VTM30 | 90~126 | 0.041 | 0.104 | 0.186 | 0.295 | 0.441 | 0.647 | 0.898 | 1.935 | - |
| VTX30 | 129.6~144 | 0.048 | 0.149 | 0.284 | 0.44 | 0.673 | 0.917 | 1.287 | 1.906 | 3.595 |

VACUUM PUMPS / Mini pumps

I Dimension – Basic Pump

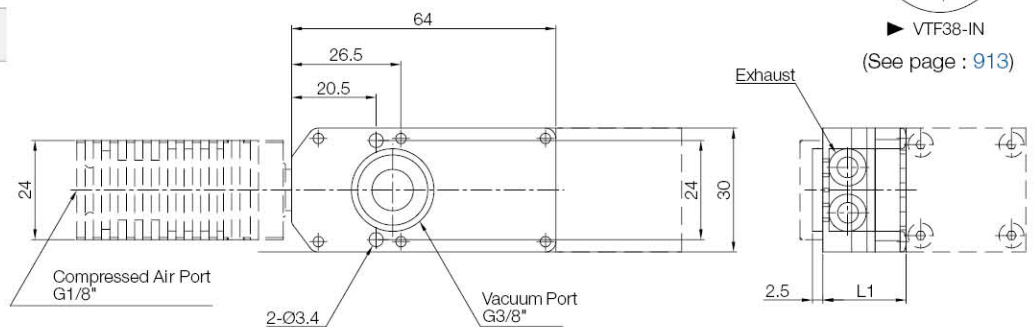
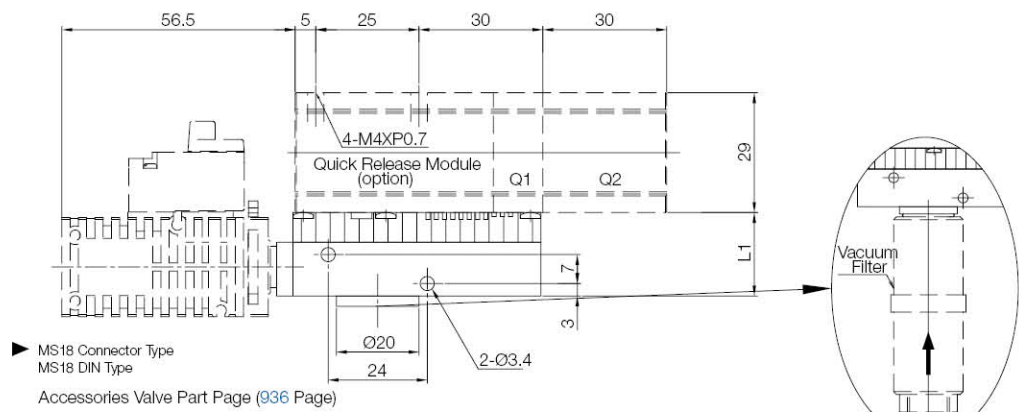
[Unit : mm]

VTM $\begin{pmatrix} 5 \\ 10 \end{pmatrix}$ - A
VTX $\begin{pmatrix} 5 \\ 10 \end{pmatrix}$ - A



VTM $\begin{pmatrix} 5 \\ 10 \\ 20 \\ 30 \end{pmatrix}$ -B(BA, NB)
VTX $\begin{pmatrix} 5 \\ 10 \\ 20 \\ 30 \end{pmatrix}$ -B(BA, NB)

| Model | L1 |
|----------|------|
| VTM(X)5 | 20.2 |
| VTM(X)10 | 20.2 |
| VTM(X)20 | 27.4 |
| VTM(X)30 | 34.6 |

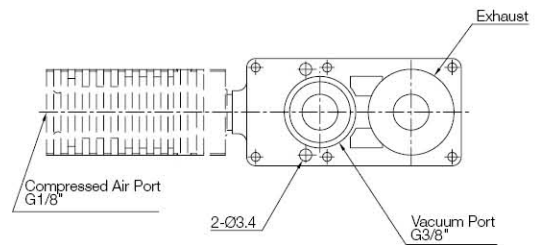
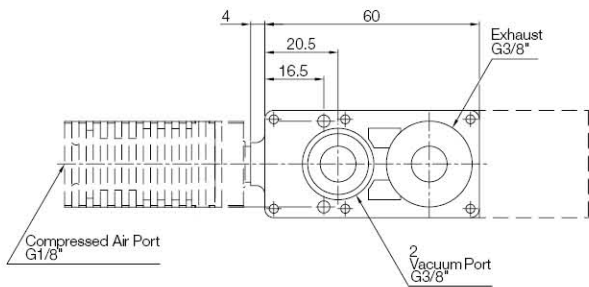
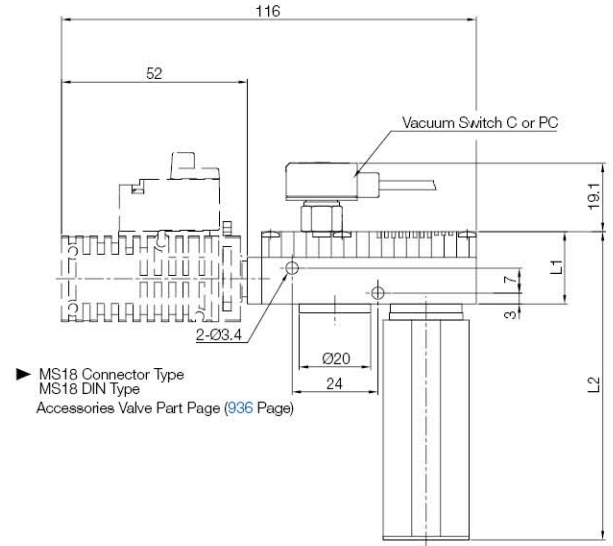
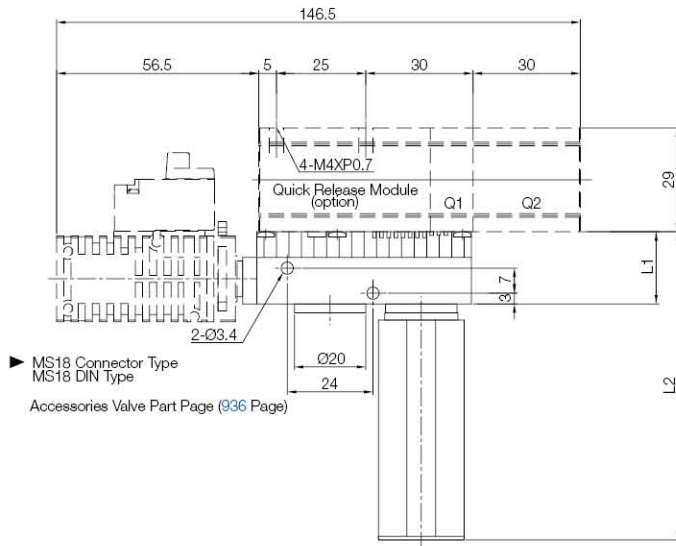


Dimension – Basic Pump

[Unit : mm]

VTM $\begin{pmatrix} 5 \\ 10 \\ 20 \\ 30 \end{pmatrix}$ -C
VTX

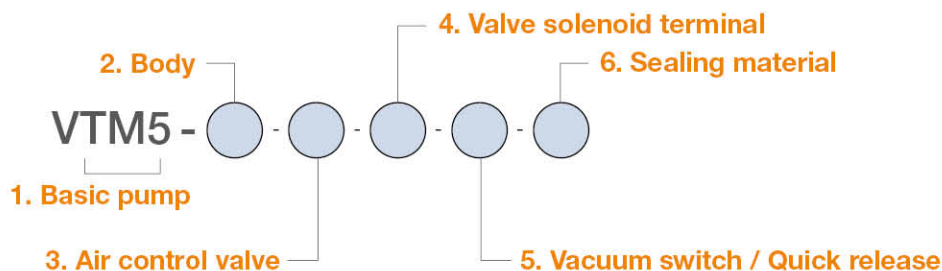
With switch S1



| Model | L1 | L2 |
|----------|------|-------|
| VTM(X)5 | 20.2 | 86.2 |
| VTM(X)10 | 20.2 | 86.2 |
| VTM(X)20 | 27.4 | 93.4 |
| VTM(X)30 | 34.6 | 100.6 |

VACUUM PUMPS / Mini pumps

I Build an Ordering No.



| 1. Basic pump | Description | Symbol |
|----------------------------------|---|--------|
| | Mini pump – M type | VTM5 |
| | Mini pump – M type | VTM10 |
| | Mini pump – M type | VTM20 |
| | Mini pump – M type | VTM30 |
| | Mini pump – X type | VTX5 |
| | Mini pump – X type | VTX10 |
| | Mini pump – X type | VTX20 |
| | Mini pump – X type | VTX30 |
| 2. Body | Description | Symbol |
| | Air port M5, Vacuum port G1/8", Internal silencer: Not available with VTM20, VTX20, VTM30 & VTX30 | A |
| | Air port G1/8", Vacuum port G3/8", Internal silencer | B |
| | Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | BA |
| | Air port G1/8", Vacuum port G3/8", External silencer | C |
| 3. Air control valve | Description | Symbol |
| | No air control valve | Blank |
| | Air control valve, AC110V | A1 |
| | Air control valve, AC220V | A2 |
| | Air control valve, DC24V | A3 |
| | Air control valve is not available with "A" body type | |
| 4. Valve terminal | Description | Symbol |
| | Solenoid Terminal, DIN, No LW | DN |
| | Solenoid Terminal, DIN, Lamp, No LW | DL |
| | Solenoid Terminal, Conn, Lamp & 0.3m LW: <i>Only available with DC24V</i> | CL |
| 5. Vacuum switch / Quick release | Description | Symbol |
| | LED Vacuum switch, No analog supply, M8-3pins, NPN | C |
| | LED Vacuum switch, No analog supply, M8-3pins, PNP | PC |
| | Quick Release Module : 12cm ³ | Q1 |
| | Quick Release Module : 30cm ³ | Q2 |
| 6. Sealing material | Description | Symbol |
| | NBR | Blank |
| | VITON | V |
| | EPDM | E |

I Spare Parts – Basic pumps

| Part No. | Description | Weight (g) |
|----------|---|------------|
| VTM5-A | Mini pump – M type, Air port M5, Vacuum port G1/8", Internal silencer | 27.3 |
| VTM5-B | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer | 31.4 |
| VTM5-BA | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 59.4 |
| VTM5-C | Mini pump – M type, Air port G1/8", Vacuum port G3/8", External silencer | 32.9 |
| VTM10-A | Mini pump – M type, Air port M5, Vacuum port G1/8", Internal silencer | 27.7 |
| VTM10-B | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer | 31.9 |
| VTM10-BA | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 59.8 |
| VTM10-C | Mini pump – M type, Air port G1/8", Vacuum port G3/8", External silencer | 33.1 |
| VTM20-B | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer | 42.6 |
| VTM20-BA | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 69.3 |
| VTM20-C | Mini pump – M type, Air port G1/8", Vacuum port G3/8", External silencer | 44.1 |
| VTM30-B | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer | 53.3 |
| VTM30-BA | Mini pump – M type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 78.6 |
| VTM30-C | Mini pump – M type, Air port G1/8", Vacuum port G3/8", External silencer | 54.8 |
| VTX5-A | Mini pump – X type, Air port M5, Vacuum port G1/8", Internal silencer | 27.3 |
| VTX5-B | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer | 31.4 |
| VTX5-BA | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 59.4 |
| VTX5-C | Mini pump – X type, Air port G1/8", Vacuum port G3/8", External silencer | 23.9 |
| VTX10-A | Mini pump – X type, Air port M5, Vacuum port G1/8", Internal silencer | 27.7 |
| VTX10-B | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer | 31.9 |
| VTX10-BA | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 59.8 |
| VTX10-C | Mini pump – X type, Air port G1/8", Vacuum port G3/8", External silencer | 33.1 |
| VTX20-B | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer | 42.6 |
| VTX20-BA | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 69.3 |
| VTX20-C | Mini pump – X type, Air port G1/8", Vacuum port G3/8", External silencer | 44.1 |
| VTX30-B | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer | 53.3 |
| VTX30-BA | Mini pump – X type, Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body | 78.6 |
| VTX30-C | Mini pump – X type, Air port G1/8", Vacuum port G3/8", External silencer | 54.8 |

I Spare Parts – Silencer

| Part No. | Description | Weight (g) |
|----------|---------------------------|------------|
| VTS-38 | Free Flow Silencer, G3/8" | 13.23 |