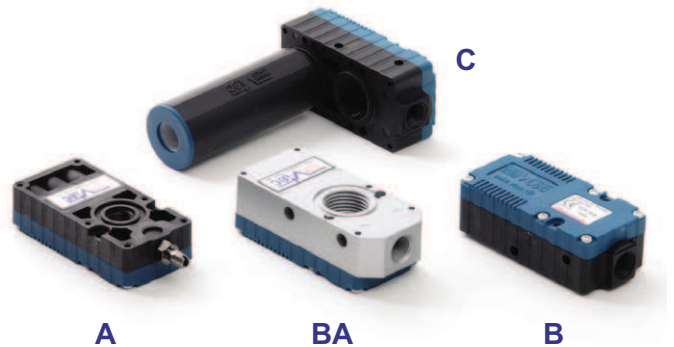


# ***MINI PUMPS***



## M-Mini Pump

- Max. vacuum level : **-85 kPa** (-25.1 inHg)
- Max. flow rate : **220 NI/min** (7.77 scfm)
- Supply air pressure : **4~6bar, max 7bar**  
(58~87 psi, Max 101.5 psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C to +80°C
- Noise level : 50~68 dBA



## Main Advantages

These M-Mini range pumps are compact and low weight design. Although they are the smallest of the VTM range they still use a Multi Stage Ejector principal for generating the vacuum, these pumps provide large capacity vacuum flow combined with high grade plastic, making the pumps resilient to most hazardous vapors. Because the pumps are too small they can be mounted locally to the vacuum requirement, even directly onto the back of suction cups if required. Different vacuum port sizes are available with options for an integrally mounted exhaust or a 3/8" detachable versions. The pumps can be specified with a vacuum switch or a quick release module attached directly onto the pump. The pump can have seal materials options of Viton® & EPDM for corrosive and acidic applications.

## Order No.

**VTM5 - B - A3 CL - S1 - V**



- ① **Model** – Capacity equivalent to electricity motor pump size
- **VTM5** – 0.05KW
  - VTM10 – 0.10KW
  - VTM20 – 0.20KW
  - VTM30 – 0.30KW

- ③ **Air supply control valve**
- A1 – AC110V
  - A2 – AC220V
  - **A3** – DC24V

- ④ **Solenoid Terminal**

DN – DIN type without lead wire

DL – DIN type with lamp without lead wire

- **CL\*** – Connector type with lamp & 0.3m lead wire

\* Available only with DC24V

- ② **Air Supply, Vacuum, Exhaust Port**

	Air	Vacuum	Exhaust
A	M5-Ø6	G1/8"	Internal silencer
NA	M5-Ø6	NPSF1/8"	Internal silencer
• B	G1/8"	G3/8"	Internal silencer
BA	G1/8"	G3/8"	Internal silencer, connection plate-AL
NB	NPSF1/8"	NPSF 3/8"	Internal silencer
BA	NPSF1/8"	NPSF 3/8"	Internal silencer, connection plate-AL
C	G1/8"	G3/8"	External silencer
NC	NPSF1/8"	NPSF 3/8"	External silencer

※ Standard pump model

VTM5 – A, NA, B, BA, NB, NBA, C, NC      VTM20 – B, BA, NB, NBA, C, NC  
VTM10 – A, NA, B, BA, NB, NBA, C, NC      VTM30 – B, BA, NB, NBA, C, NC

- ⑤ **Vacuum switch / Quick release module**

- **S1** – Mechanical vacuum switch

Q1 – Quick release module : 12cm<sup>3</sup>

Q2 – Quick release module : 30cm<sup>3</sup>

※ **Remark** : Air supply control valve available for vacuum pump B, BA, NB, NBA, C, NC type only.

- ⑥ **Sealing**

No mark – Standard (NBR)

- **V** – Viton®
- E** – EPDM

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM5	85 (25,1)	37	15-21	50 - 65	-	>2	>5	>8
VTM10		74	30-42	55 - 68	-	>2	>8	>10
VTM20		149	60-84	60 - 68	-	>4	>10	>12
VTM30		220	90-126	60 - 68	-	>6	>12	>15

\* Remarks : type weight = VTM5-A(B,BA,NBA,C,NC) : 26g(30,56,30,56,42,42)  
 VTM10-A(B,BA,NBA,C,NC) : 28g(32,58,32,58,44,44)  
 VTM20-B(BA,NB,NBA,C,NC) : 41g(79,41,79,53,53)  
 VTM30-B(BA,NB,NBA,C,NC) : 60g(98,60,98,72,72)

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

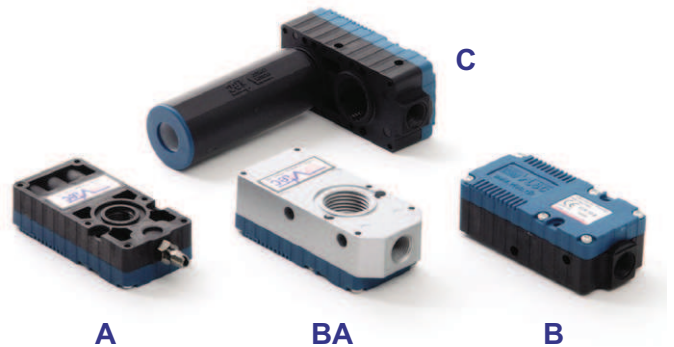
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	0	10	20	30	40	50	60	70	80
VTM5	37	26	16	14	10	8	6	2,4	0,66
VTM10	74	52	31	28	20	16	12	4,8	1,32
VTM20	149	99	62	54	40	32	22	10,5	2,7
VTM30	220	147	92	73	60	47	32	16	4,1

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

Model \ -inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	10	20	30	40	50	60	70	80
VTM5	0,218	0,556	1	1,576	2,356	3,44	5,27	10,216
VTM10	0,109	0,278	0,5	0,788	1,178	1,72	2,635	5,158
VTM20	0,054	0,139	0,25	0,394	0,589	0,86	1,317	2,579
VTM30	0,041	0,104	0,186	0,295	0,441	0,647	0,898	1,935

## X - Mini Pump

- Max. vacuum level** : -92 kPa (-27.17 inHg)
- Max. flow rate** : 185 NI/min (6.53 scfm)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C to +80°C
- Noise level** : 50~68 dBA



### Main Advantages

These X-Mini range pumps are a compact and low weight design. Although they are the smallest of the VTX range they still use a Multi Stage Ejector principal for generating the vacuum. The X-Mini has the same external dimensions to that of the M-Mini, however the internal ejector system is different to enable higher levels of vacuum to be achieved. The X-Mini is a pump that bridges the gap between the High Flow VTM range and the High Vacuum VTH Range, giving a balance of the two. The housings are made from high grade plastic, making the pumps resilient to most hazardous vapours. Because the pumps are so small they can be mounted locally to the vacuum requirement, even directly onto the back of suction cups if required. Different vacuum port sizes are available with options for an integrally mounted exhaust or a 3/8" detachable versions. The pumps can be specified with a vacuum switch or a vacuum quick release module attached directly onto the pump. The pump can have seal materials options of Viton® & EPDM for corrosive and acidic applications.

### Order No.

**VTX5 - B - A3 CL - S1 - V**



① **Model** – Capacity equivalent to electricity motor pump size

• VTX5	– 0.05KW
VTX10	– 0.10KW
VTX20	– 0.20KW
VTX30	– 0.30KW

② **Air Supply, Vacuum, Exhaust Port**

	Air	Vacuum	Exhaust
A	M5-Ø6	G1/8"	Internal silencer
NA	M5-Ø6	NPSF1/8"	Internal silencer
• B	G1/8"	G3/8"	Internal silencer
BA	G1/8"	G3/8"	Internal silencer, connection plate-AL
NB	NPSF1/8"	NPSF 3/8"	Internal silencer
NBA	NPSF1/8"	NPSF 3/8"	Internal silencer, connection plate-AL
C	G1/8"	G3/8"	External silencer
NC	NPSF1/8"	NPSF 3/8"	External silencer

※ Standard pump model  
 VTX5 – A, NA, B, BA, NB, NBA, C, NC    VTX20 – B, BA, NB, NBA, C, NC  
 VTX10 – A, NA, B, BA, NB, NBA, C, NC    VTX30 – B, BA, NB, NBA, C, NC

③ **Air supply control valve**

A1	– AC110V
A2	– AC220V
• A3	– DC24V

④ **Solenoid Terminal**

DN	– DIN type without lead wire
DL	– DIN type with lamp without lead wire
• CL*	– Connector type with lamp & 0.3m lead wire

\* Available only with DC24V

⑤ **Vacuum switch / Quick release module**

• S1	– Mechanical vacuum switch
Q1	– Quick release module : 12cm <sup>3</sup>
Q2	– Quick release module : 30cm <sup>3</sup>

※ Remark : Air supply control valve available for vacuum pump B, BA, NB, NBA, C, NC type only.

⑥ **Sealing**

No mark	– Standard (NBR)
• V	– Viton®
E	– EPDM



## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTX5	92 (27,17)	32	21,6-24	50 - 65	-	>2	>5	>8
VTX10		62	43,2-48	55 - 68	-	>2	>8	>10
VTX20		124	86,4-96	63 - 68	-	>4	>10	>12
VTX30		185	129,6-144	60 - 68	-	>6	>12	>15

\* Remarks : type weight = VTX5-A(B,BA,NB,NBA,C,NC) : 26g(30,56,30,56,42,42)  
 VTX10-A(B,BA,NBA,C,NC) : 28g(32,58,32,58,44,44)  
 VTX20-B(BA,NB,NBA,C,NC) : 41g(79,41,79,53,53)  
 VTX30-B(BA,NB,NBA,C,NC) : 60g(98,60,98,72,72)

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

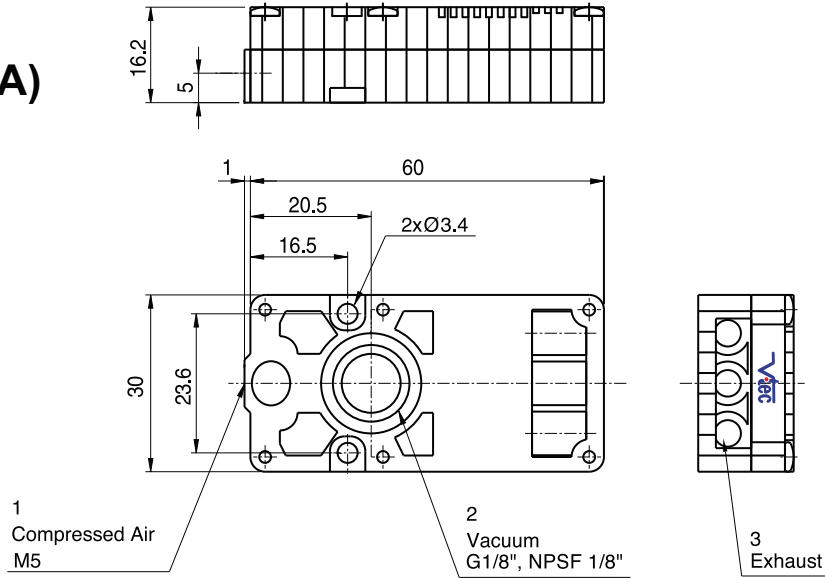
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90
VTX5	32	18	9	8	7	6	5	3	1.2	0.45
VTX10	62	36	18	16	14	11	9	6	2.4	0.9
VTX20	124	72	35	32	27	22	18	12	4.8	1.8
VTX30	185	108	52	47	41	33	26	18	7.2	2.7

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

Model \ -inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90
VTX5	0,258	0,796	1,156	2,4	3,56	4,91	6,896	10,16	19,19
VTX10	0,129	0,398	0,758	1,2	1,78	2,455	3,445	5,08	9,594
VTX20	0,064	0,199	0,379	0,6	0,89	1,227	1,722	2,54	4,797
VTX30	0,048	0,149	0,284	0,44	0,673	0,917	1,287	1,906	3,595

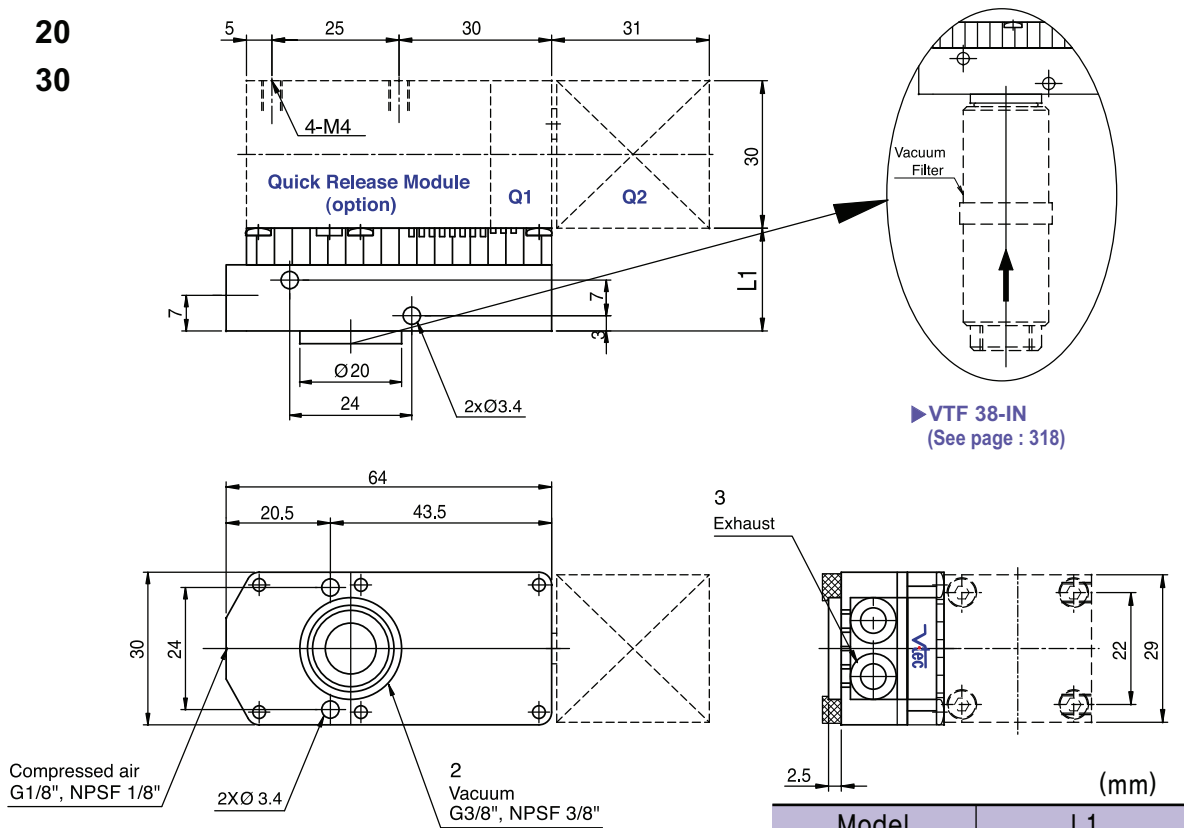
**Dimensional Information**

**5  
VTM(X) (10)-A(NA)**



**5  
VTM(X) (10)-B (BA, NB)**

20  
30



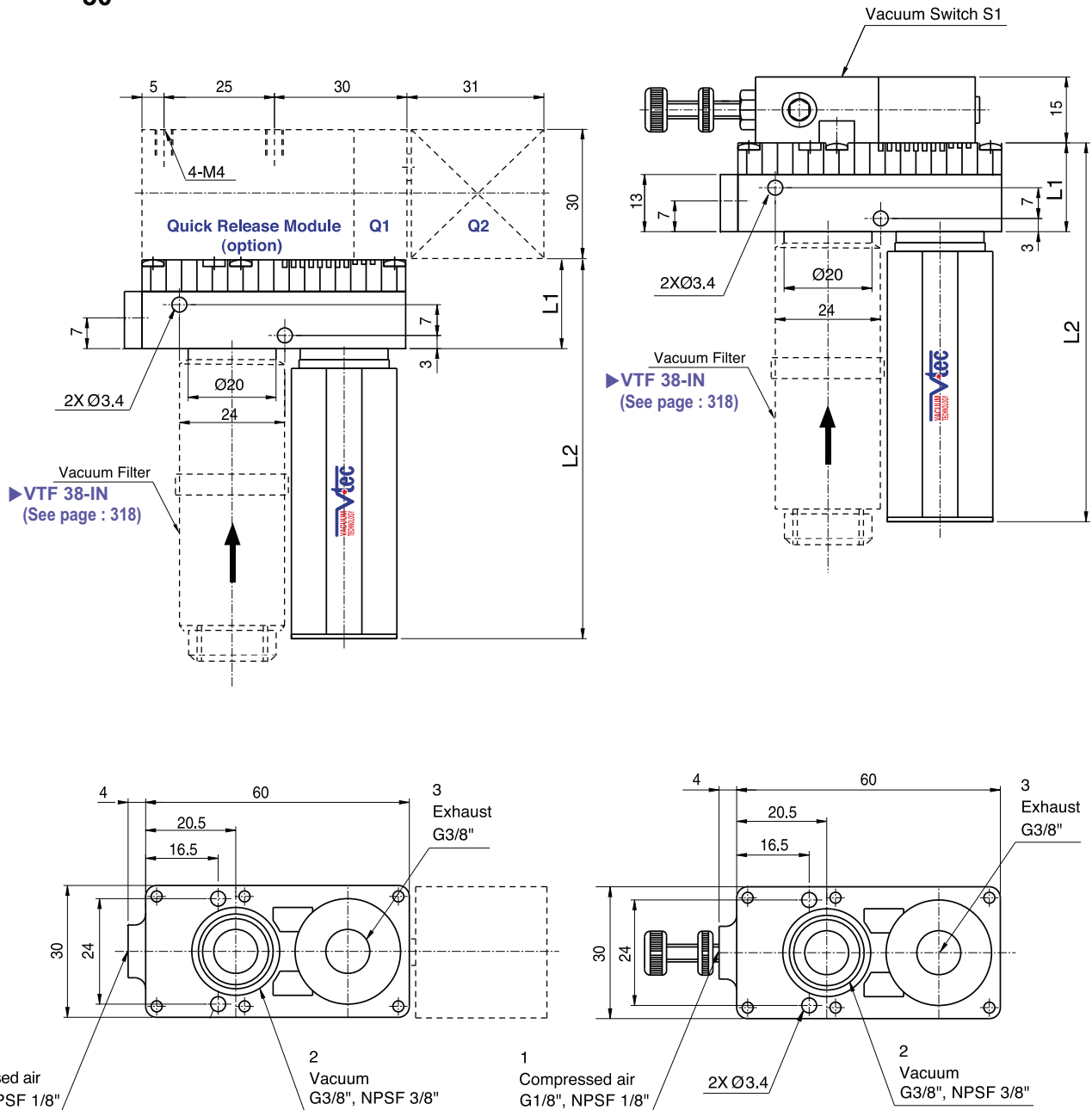
[ Measure unit : mm ]

Model	L1
VTM(X)5	20,2
VTM(X)10	20,2
VTM(X)20	27,4
VTM(X)30	34,6

## Dimensional Information

5  
**VTM(X) (10)-C (NC)**  
 20  
 30

with switch S1



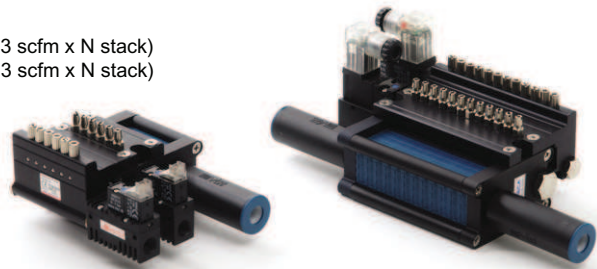
[ Measure unit : mm ]

	(mm)	
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



## One-Line Pump

- Max. vacuum level** : VTOX pump -92 kPa (-27.17 inHg)  
VTOM pump -85 kPa (-25.1 inHg)
- Max. flow rate** : VTOX pump 32 NI/min x N Stack (1.13 scfm x N stack)  
VTOM pump 35 NI/min x N Stack (1.23 scfm x N stack)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 50~65 dBA



This oneline 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 - CL - V



#### ① Model-Vacuum Flow

- **VTOX5** - 24 NI/min
- VTOX10 - 32 NI/min
- VTOM5** - 29 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 12 stacks
- VTOX5, VTOM5 : above 12 stack complete with 2 silencer
- VTOX10, VTOM10 : above 6 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 Solenoid Terminal

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

\* Available only with DC24V

☞ About 'BUS cable' (☞ 340, 341)

#### ⑥ Sealing

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

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)/each stack	air consumption (NI/m)/each stack	noise level (dBA)	weight (g) each stack	min hose inner $\varnothing$ (within 2m)	
						air supply	vacuum
VTOX5	92	24	21,6~24	55~65	37	> 8~10	> 2,5
VTOX10	(27,17)	32	43,2~48	60~65	37	> 8~12	> 2,5
VTOM5	85	27	15~21	55~65	37	> 8~10	> 2,5
VTOM10	(25,1)	35	30~42	60~65	37	> 8~12	> 2,5

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

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

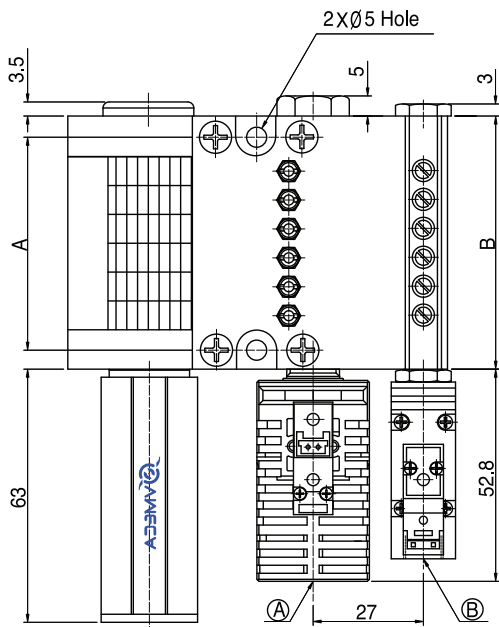
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90
VTOX5	24	13	9	8	7	5	4	2,7	1,2	0,45
VTOX10	32	21	17	15	14	11	9	5,4	2,4	0,9
VTOM5	27	16	13	12	11	8	6	2,4	0,66	
VTOM10	35	29	25	23	19	16	12	4,8	1,32	

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

Model \ -inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	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	3,455	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	

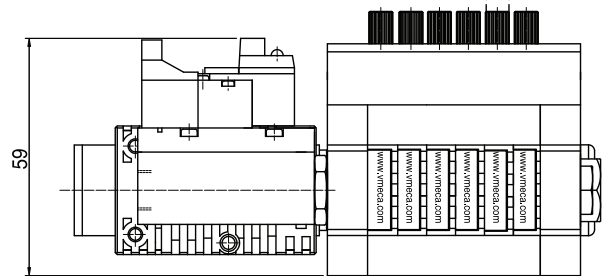
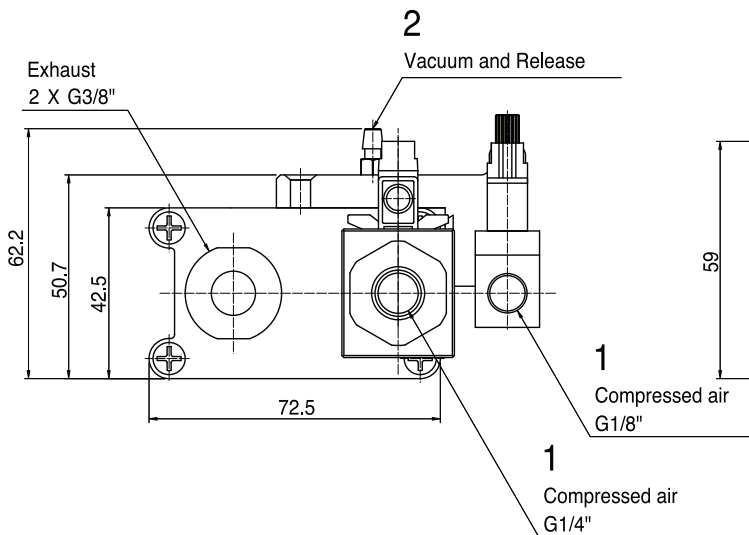
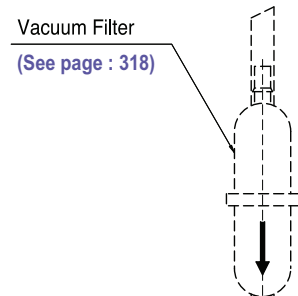
**Dimensional Information**

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



VTOX 5,10	(mm)	
	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

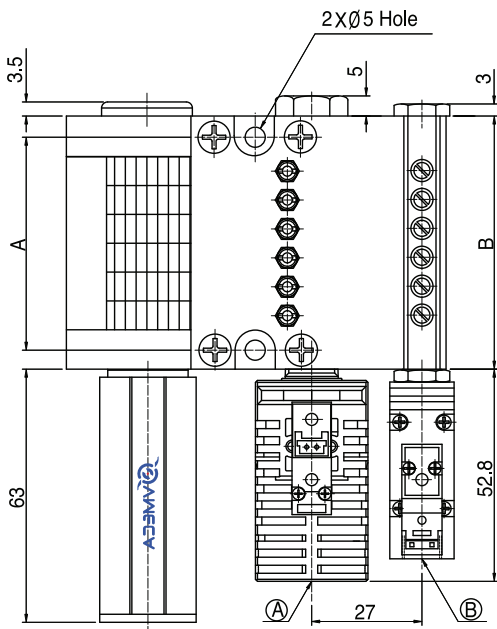
Remark : (A) - Air supply (vacuum) control valve  
(B) - Vacuum release control valve



[ Measure unit : inch ]

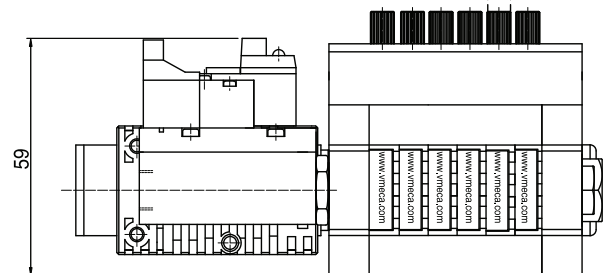
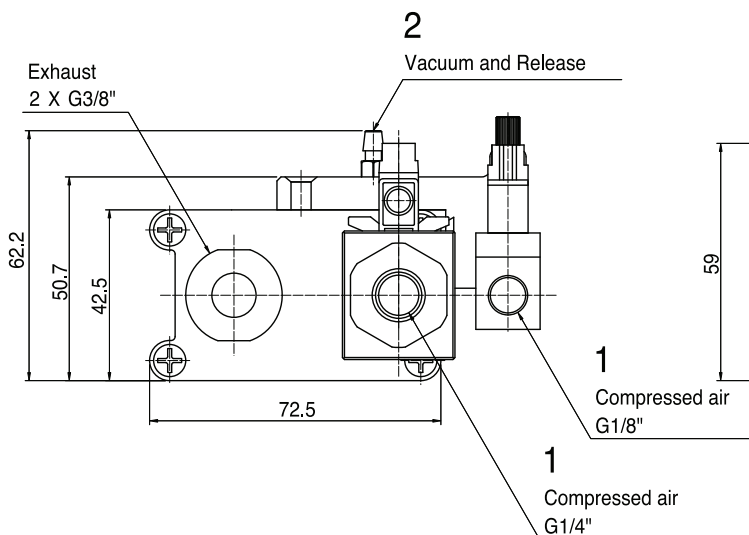
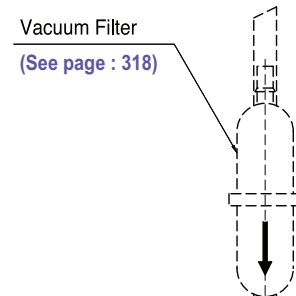
## Dimensional Information

### 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

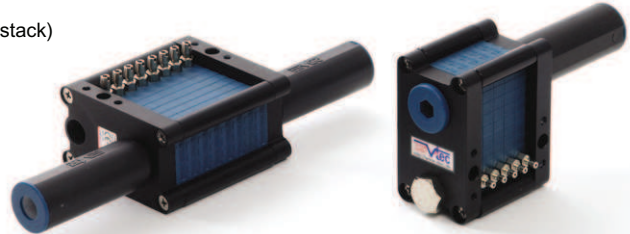
Remark : (A) – Air supply (vacuum) control valve  
(B) – Vacuum release control valve



[ Measure unit : inch ]

## M-Minimultiple Pump

- Max. vacuum level** : -85 kPa (-25.1 inHg)
- Max. flow rate** : 35 NI/min x N Stack (1.23 scfm x N stack)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 50~65 dBA



### Main Advantages

This M-Minimultiple 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 one control valve 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. Pumps can be stacked up from 2 - 16 unit depending upon requirements. The pumps can have seal material options of Viton® & EPDM for corrosive and acidic applications.

### Order No.

**VTM5 x 6 - A3 CL - 4 - V**



① **Model** – Capacity equivalent to electricity motor pump size

- **VTM5** – 0,05KW
- VTM10 – 0,1KW

③ **Air supply control valve**

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

⑤ **Vacuum port, inner dia of tube**

- 2 – Ø2
- **4** – Ø4

② **Vacuum stack**

- 2 – 2 stack    10 – 10 stack
- 3 – 3 stack    11 – 11 stack
- 4 – 4 stack    12 – 12 stack
- 5 – 5 stack    13 – 13 stack
- **6** – 6 stack    14 – 14 stack
- 7 – 7 stack    15 – 15 stack
- 8 – 8 stack    16 – 16 stack
- 9 – 9 stack

④ **Solenoid Terminal**

- DN – DIN type without lead wire
- DL – DIN type with lamp without lead wire

- **CL\*** – Connector type with lamp & 0,3m lead wire

\* Available only with DC24V

⑥ **Sealing**

- No mark – Standard (NBR)
- **V** – Viton®
- E** – EPDM

※ Remark : VTM5 maximum stack up to 16 stack  
(above 12 stack complete with 2 Silencer)  
VTM10 maximum stack up to 12 stack  
(above 6 stack complete with 2 Silencer)

**Characteristics**

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM5x2stack	85 (25.1)	27x2	30-42	55-60	67	> 2	> 2.5	3/8" x1
VTM5x3stack		27x3	45-63	55-60	80	> 2	> 2.5	3/8" x1
VTM5x4stack		27x4	60-84	55-60	247	> 4	> 2.5	3/8" x1
VTM5x5stack		27x5	75-105	60-65	255	> 4	> 2.5	3/8" x1
VTM5x6stack		27x6	90-126	60-65	281	> 4	> 2.5	3/8" x1
VTM5x7stack		27x7	105-147	60-65	299	> 4	> 2.5	3/8" x1
VTM5x8stack		27x8	120-168	60-65	317	> 6	> 2.5	3/8" x1
VTM5x9stack		27x9	135-189	60-65	335	> 6	> 2.5	3/8" x1
VTM5x10stack		27x10	150-210	60-65	353	> 6	> 2.5	3/8" x1
VTM5x11stack		27x11	165-231	60-65	371	> 6	> 2.5	3/8" x1
VTM5x12stack		27x12	180-252	60-65	389	> 6	> 2.5	3/8" x2
VTM5x13stack		27x13	195-273	60-65	417	> 6	> 2.5	3/8" x2
VTM5x14stack		27x14	210-294	60-65	435	> 8	> 2.5	3/8" x2
VTM5x15stack		27x15	225-315	60-65	453	> 10	> 2.5	3/8" x2
VTM5x16stack		27x16	240-336	60-65	471	> 10	> 2.5	3/8" x2
VTM10x2stack		85 (25.1)	35x2	60-84	55-60	67	> 4	> 4
VTM10x3stack	35x3		90-126	60-65	80	> 4	> 4	3/8" x1
VTM10x4stack	35x4		120-168	60-65	247	> 6	> 4	3/8" x1
VTM10x5stack	35x5		150-210	60-65	255	> 6	> 4	3/8" x1
VTM10x6stack	35x6		180-252	60-65	281	> 6	> 4	3/8" x2
VTM10x7stack	35x7		210-294	60-65	299	> 8	> 4	3/8" x2
VTM10x8stack	35x8		240-336	60-65	327	> 8	> 4	3/8" x2
VTM10x9stack	35x9		270-378	60-65	345	> 10	> 4	3/8" x2
VTM10x10stack	35x10		300-420	60-65	363	> 10	> 4	3/8" x2
VTM10x11stack	35x11		330-462	60-65	381	> 10	> 4	3/8" x2
VTM10x12stack	35x12		360-504	60-65	399	> 10	> 4	3/8" x2

VACUUM PUMPS

**Vacuum flow in (NI/m) at different Vacuum level (-kPa)**

Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	0	10	20	30	40	50	60	70	80
VTM5x1stack	27	16	13	12	11	8	6	2.4	0.66
VTM10x1 stack	35	29	25	23	19	16	12	4.8	1.32

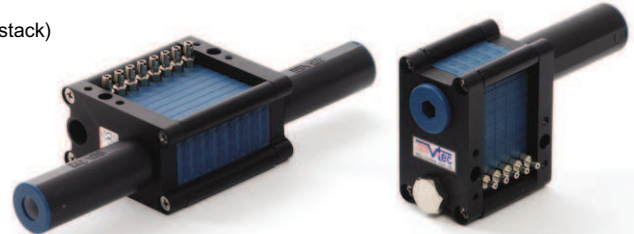
**Time in seconds to evacuate to vacuum level (sec/l)**

Model \ -inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	10	20	30	40	50	60	70	80
VTM5x1stack	0,218	0,556	1	1,576	2,356	3,44	5,270	10,216
VTM10x1 stack	0,109	0,278	0,5	0,788	1,178	1,72	2,635	5,158



## X - Minimultiple Pump

- Max. vacuum level** : -92 kPa (-27.17 inHg)
- Max. flow rate** : 32 NI/min x N Stack (1.13scfm x N stack)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 55~65 dBA



### Main Advantages

This X-Minimultiple pump model uses individual pumps to make up the complete unit, each pump is in itself a multi stage ejector unit. The X-Minimultiple pump has the same external dimensions to that of the M-Minimultiple pump, however the internal ejector system is different to enable higher levels of vacuum to be achieved. The X-Minimultiple pump is a pump that bridges the gap between the High Flow VTM pump range and the High Vacuum VTH Range, giving a balance of the two. Each individual pump can be stacked together thus creating a modular manifold based system.

The advantages of this unit is that it can be operated using just one control valve whilst retaining individual vacuum lines separate to one another, therefore if any leakage or surface deformation occurs and one pad loses its vacuum, it does not effect the vacuum level in the other pads. Pumps can be stacked up from 2-16 units depending upon requirements. The pumps can have seal material options of Viton® & EPDM for corrosive and acidic applications.

### Order No.

**VTX5 x 6 - A3 CL - 4 V**

①                      ②                      ③                      ④                      ⑤                      ⑥

① **Model** – Capacity equivalent to electricity motor pump size

• <b>VTX5</b>	– 0,05KW
VTX10	– 0,1KW

③ **Air supply control valve**

A1	– AC110V
A2	– AC220V
• <b>A3</b>	– DC24V

⑤ **Vacuum port, inner dia of tube**

2	– Ø2
• <b>4</b>	– Ø4

② **Vacuum stack**

2 – 2 stack	10 – 10 stack
3 – 3 stack	11 – 11 stack
4 – 4 stack	12 – 12 stack
5 – 5 stack	13 – 13 stack
• <b>6 – 6 stack</b>	<b>14 – 14 stack</b>
7 – 7 stack	15 – 15 stack
8 – 8 stack	16 – 16 stack
9 – 9 stack	

④ **Solenoid Terminal**

DN	– DIN type without lead wire
DL	– DIN type with lamp without lead wire
• <b>CL*</b>	– Connector type with lamp & 0,3m lead wire

\* Available only with DC24V

⑥ **Sealing**

No mark	– Standard (NBR)
• <b>V</b>	– Viton®
E	– EPDM

\* Remark : VTX5 maximum stack up to 16 stack  
(above 12 stack complete with 2 Silencer)  
VTX10 maximum stack up to 12 stack  
(above 6 stack complete with 2 Silencer)

**Characteristics**

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTX5x2stack	92 (27,17)	24x2	43,2-48	55-60	67	>2	>2,5	3/8"X1
VTX5x3stack		24x3	64,8-72	55-60	80	>2	>2,5	3/8"X1
VTX5x4stack		24x4	84,4-96	60-63	247	>4	>2,5	3/8"X1
VTX5x5stack		24x5	108-120	60-63	255	>4	>2,5	3/8"X1
VTX5x6stack		24x6	129,6-144	60-63	281	>4	>2,5	3/8"X1
VTX5x7stack		24x7	151,2-168	60-63	299	>4	>2,5	3/8"X1
VTX5x8stack		24x8	172,8-192	60-63	317	>6	>2,5	3/8"X1
VTX5x9stack		24x9	194,4-216	60-63	335	>6	>2,5	3/8"X1
VTX5x10stack		24x10	216-240	60-63	353	>6	>2,5	3/8"X1
VTX5x11stack		24x11	237,6-264	60-63	371	>6	>2,5	3/8"X1
VTX5x12stack		24x12	259,2-288	60-63	389	>6	>2,5	3/8"X2
VTX5x13stack		24x13	280,8-312	60-63	417	>6	>2,5	3/8"X2
VTX5x14stack		24x14	302,4-336	60-63	435	>8	>2,5	3/8"X2
VTX5x15stack		24x15	324-360	60-63	453	>10	>2,5	3/8"X2
VTX5x16stack		24x16	345,6-384	60-63	471	>10	>2,5	3/8"X2
VTX10x2stack		92 (27,17)	32x2	86,4-96	60-63	67	>4	>4
VTX10x3stack	32x3		129,6-144	63-65	80	>4	>4	3/8"X1
VTX10x4stack	32x4		172,8-192	63-65	247	>6	>4	3/8"X1
VTX10x5stack	32x5		216-240	63-65	255	>6	>4	3/8"X1
VTX10x6stack	32x6		259,2-288	63-65	281	>6	>4	3/8"X2
VTX10x7stack	32x7		302,4-336	63-65	299	>6	>4	3/8"X2
VTX10x8stack	32x8		345,6-384	63-65	327	>8	>4	3/8"X2
VTX10x9stack	32x9		388,8-432	63-65	345	>10	>4	3/8"X2
VTX10x10stack	32x10		432-480	63-65	363	>10	>4	3/8"X2
VTX10x11stack	32x11		475,2-528	63-65	381	>10	>4	3/8"X2
VTX10x12stack	32x12		518,4-576	63-65	399	>10	>4	3/8"X2

VACUUM PUMPS

**Vacuum flow in (NI/m) at different Vacuum level (-kPa)**

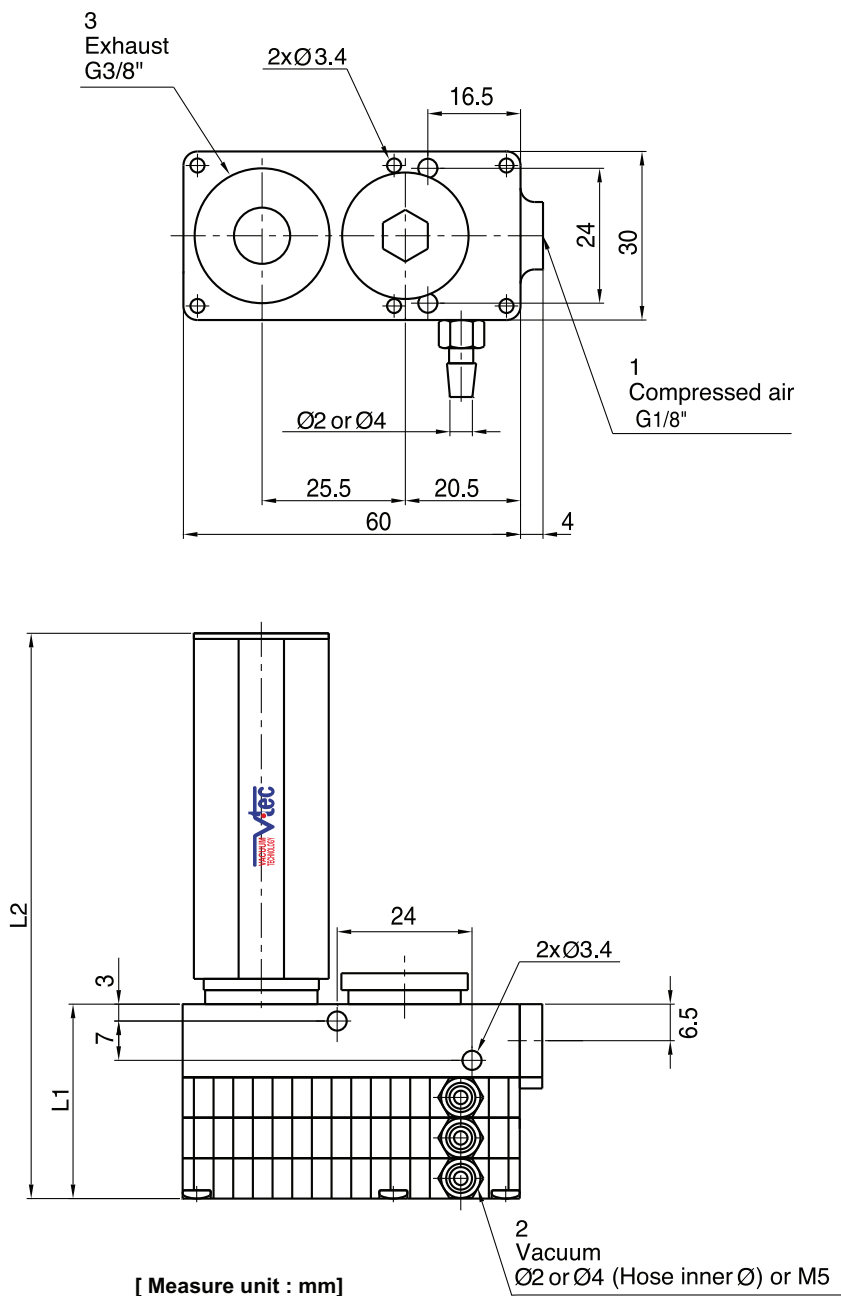
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90
VTX5x1stack	24	13	9	8	7	5	4	2,7	1,2	0,45
VTX10x1stack	32	21	17	15	14	11	9	5,4	2,4	0,9

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

Model \ -inHg -kPa	2.59	2.95	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90
VTX5x1stack	0,258	0,796	1,516	2,4	3,56	4,91	6,896	10,16	19,19
VTX10x1stack	0,129	0,398	0,758	1,2	1,78	2,455	3,445	5,08	9,594

Dimensional Information

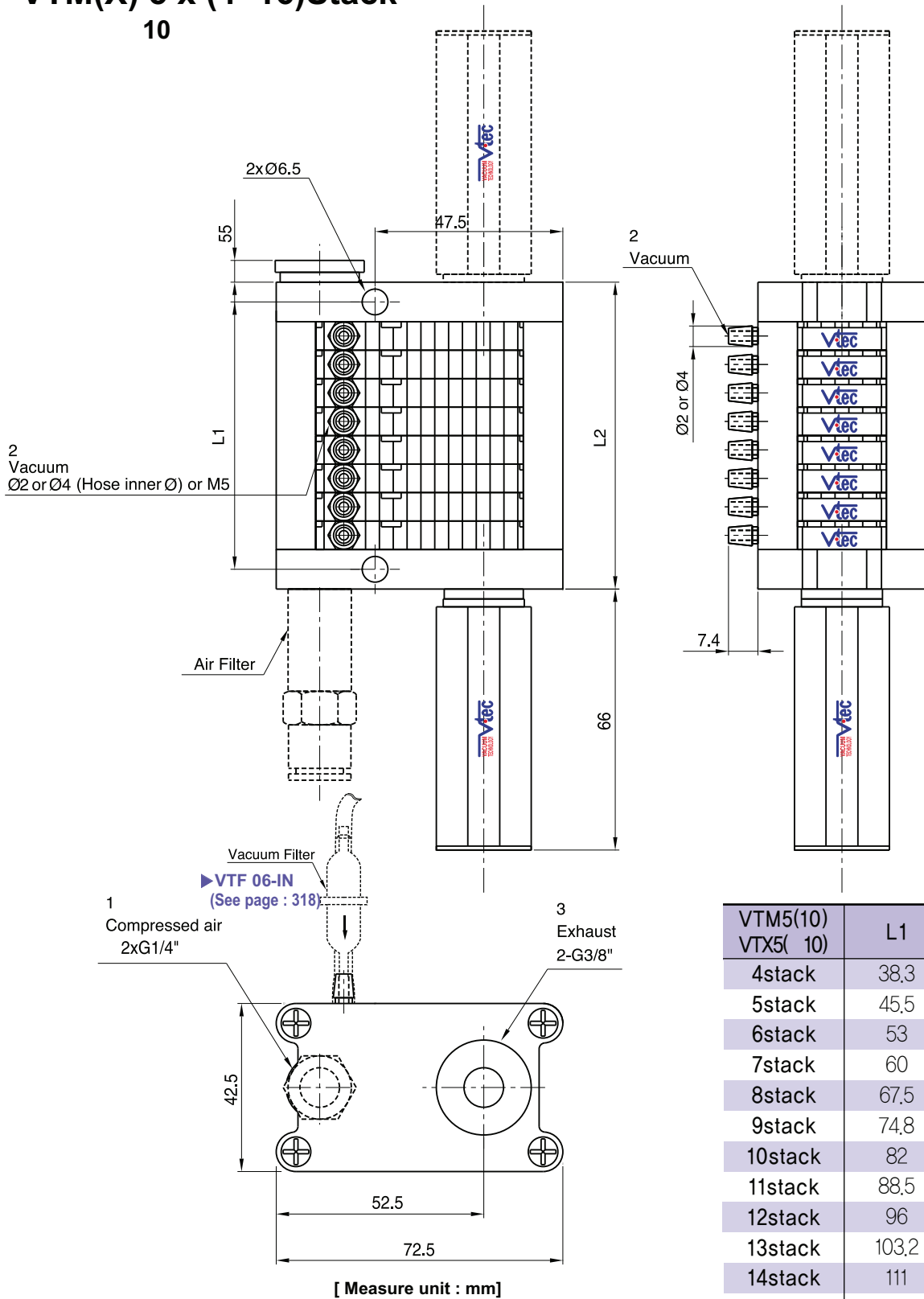
**VTM(X) 5 x (2, 3)Stack**  
10



	(mm)	
VTM5(10)	L1	L2
VTX5(10)		
2stack	28	94
3stack	35	101

Dimensional Information

**VTM(X) 5 x (4~16)Stack**  
10



	(mm)	
	L1	L2
VTM5(10) VTX5( 10)		
4stack	38,3	48,3
5stack	45,5	55,5
6stack	53	63
7stack	60	70
8stack	67,5	77,5
9stack	74,8	84,8
10stack	82	92
11stack	88,5	98,5
12stack	96	106
13stack	103,2	113,2
14stack	111	121
15stack	118	128
16stack	125,2	135,2

VACUUM PUMPS

## M-Midimultiple Pump

- Max. vacuum level** : -85 kPa (-25.1 inHg)
- Max. flow rate** : 220 NI/min x N Stack  
(7.77scfm x N stack)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 50~65 dBA



### Main Advantages

Basically this pump is similar function with mini multiple stack pump. Each individual pump can be stacked up thus creating a modular manifold based system. The advantages of this unit is that it can be operated with one supply air port and activating individual vacuum pump which mounted on the manifold, as the result if any leakage occurs due to product surface deformation of one vacuum pad, it will not affect the vacuum performance in other vacuum pads. This pump can be stacked up from 2stack to 6stacks, depending on the requirement. This pump has sealing option of VITON® and EPDM for corrosive and acidic application. Also, can be integrated vacuum filters directly on the pumps.

### Order No.

**VTM10 x 6 - B - A3 - CL - V**



① **Model** – Capacity equivalent to electricity motor pump size

• VTM10	– 0.1KW
VTM20	– 0.2KW
VTM30	– 0.3KW

② **Vacuum stack**

2	– 2 stack
3	– 3 stack
4	– 4 stack
5	– 5 stack
• 6	– 6 stack

③ **Vacuum port , Exhaust port**

	Vacuum	Exhaust
• B	G 3/8"	Internal silencer
BA	G 3/8"	Internal silencer, connection plate-AL
NB	NPSF 3/8"	Internal silencer
NBA	NPSF 3/8"	Internal silencer, connection plate-AL
C	G 3/8"	external silencer
NC	NPSF 3/8"	external silencer

④ **Air supply control valve**

A1	– AC110V
A2	– AC220V
• A3	– DC24V

⑤ **Solenoid Terminal**

DN	– DIN type without lead wire
DL	– DIN type with lamp without lead wire
• CL*	– Connector type with lamp & 0.3m lead wire

\* Available only with DC24V

⑥ **Sealing**

No mark	– Standard (NBR)
• V	– Viton®
E	– EPDM

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)		min hose inner Ø (within 2m)		
					B, NB	C, NC	air supply	vacuum	exhaust
VTM10×2	85 (25.1)	74×2	60–84	50–60	380	393	∅4	∅8	3/8"×2
VTM10×3		74×3	90–126	50–60	532	545	∅6	∅8	3/8"×3
VTM10×4		74×4	120–168	55–60	695	708	∅6	∅8	3/8"×4
VTM10×5		74×5	150–210	60–65	850	863	∅6	∅8	3/8"×5
VTM10×6		74×6	180–252	60–65	998	1011	∅8	∅8	3/8"×6
VTM20×2	85 (25.1)	149×2	120–168	50–60	399	412	∅6	∅10	3/8"×2
VTM20×3		149×3	180–252	55–60	560	573	∅6	∅10	3/8"×3
VTM20×4		149×4	240–336	60–65	735	748	∅8	∅10	3/8"×4
VTM20×5		149×5	300–420	60–65	899	912	∅10	∅10	3/8"×5
VTM20×6		149×6	360–504	60–68	1058	1071	∅10	∅10	3/8"×6
VTM30×2	85 (25.1)	220×2	180–252	55–60	421	434	∅6	∅12	3/8"×2
VTM30×3		220×3	270–378	60–65	587	600	∅8	∅12	3/8"×3
VTM30×4		220×4	360–504	60–65	775	788	∅10	∅12	3/8"×4
VTM30×5		220×5	450–630	60–68	947	960	∅10	∅12	3/8"×5
VTM30×6		220×6	540–756	60–68	1116	1129	∅10	∅12	3/8"×6

\* Remarks : BA(NBA)type weight = B type weight+(26g.xstack)

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	0	10	20	30	40	50	60	70	80	
VTM10x1 Stack	74	52	31	28	20	16	12	4.8	1.32	
VTM20x1 Stack	149	99	62	54	40	32	22	10.5	2.7	
VTM30x1 Stack	220	147	92	73	60	47	32	16	4.1	

VACUUM PUMPS

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

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	10	20	30	40	50	60	70	80	
VTM10x1 Stack	0.109	0.278	0.5	0.788	1.178	1.72	2.635	5.158	
VTM20x1 Stack	0.054	0.139	0.25	0.394	0.589	0.86	1.317	2.579	
VTM30x1 Stack	0.041	0.104	0.186	0.295	0.441	0.647	0.898	1.935	



## X - Midimultiple Pump

- Max. vacuum level : -92 kPa (-27.17 inHg)
- Max. flow rate : 185 NI/min x N Stack  
(6.53 scfm x N stack)
- Supply air pressure : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 50~65 dBA

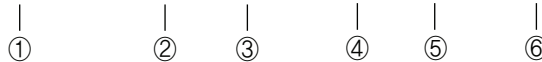


### Main Advantages

The X-Midimultiple pump has the same external dimension to X-Midimultiple pump. It enabling it to achieve higher vacuum level. Each individual pump can be stacked up thus creating a modular manifold based system. The advantage of this pump is that it has a bigger vacuum port as the applications requiring large vacuum flow and high vacuum level. If any leakage occurs due to product surface deformation of one vacuum pad, it will not affect the vacuum performance in the other pads. This pump can be stacked up from 2 stacks to 6 stacks. Also, can be specified with an air control solenoid valve and with Viton® or EPDM as seal options.

### Order No.

**VTX10 x 6 - B - A3 CL - V**



① Model – Capacity equivalent to electricity motor pump size

• VTX10	– 0,1KW
VTX20	– 0,2KW
VTX30	– 0,3KW

③ Vacuum port , Exhaust port

	Vacuum	Exhaust
• B	G 3/8"	Internal silencer
BA	G 3/8"	Internal silencer, connection plate-AL
NB	NPSF 3/8"	Internal silencer
NBA	NPSF 3/8"	Internal silencer, connection plate-AL
C	G 3/8"	External silencer
NC	NPSF 3/8"	External silencer

⑤ Solenoid Terminal

DN	– DIN type without lead wire
DL	– DIN type with lamp without lead wire
• CL*	– Connector type with lamp & 0,3m lead wire

\* Available only with DC24V

② Vacuum stack

2	– 2 stack
3	– 3 stack
4	– 4 stack
5	– 5 stack
• 6	– 6 stack

④ Air supply control valve

A1	– AC110V
A2	– AC220V
• A3	– DC24V

⑥ Sealing

No mark	– Standard (NBR)
• V	– Viton®
E	– EPDM

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)		min hose inner Ø (within 2m)		
					B,NB	C,NC	air supply	vacuum	exhaust
VTX10 x 2	92 (27.17)	62x2	86.4-96	50-60	380	393	>4	>8	3/8" x 2
VTX10 x 3		62x3	129.6-144	50-60	532	545	>6	>8	3/8" x 3
VTX10 x 4		62x4	172.8-192	55-60	695	708	>6	>8	3/8" x 4
VTX10 x 5		62x5	216-240	60-65	850	863	>6	>8	3/8" x 5
VTX10 x 6		62x6	259.2-288	60-65	998	1011	>8	>8	3/8" x 6
VTX20 x 2	92 (27.17)	124x2	172.8-192	50-60	399	412	>6	>10	3/8" x 2
VTX20 x 3		124x3	259.2-288	55-60	560	573	>6	>10	3/8" x 3
VTX20 x 4		124x4	345.6-384	60-65	735	748	>8	>10	3/8" x 4
VTX20 x 5		124x5	432-480	60-65	899	912	>10	>10	3/8" x 5
VTX20 x 6		124x6	518.4-576	60-65	1058	1071	>10	>10	3/8" x 6
VTX30 x 2	92 (27.17)	185x2	259.2-288	55-60	421	434	>6	>12	3/8" x 2
VTX30 x 3		185x3	388.8-432	60-65	587	600	>8	>12	3/8" x 3
VTX30 x 4		185x4	518.4-576	60-65	775	788	>10	>12	3/8" x 4
VTX30 x 5		185x5	648-720	60-65	947	960	>10	>12	3/8" x 5
VTX30 x 6		185x6	777.6-864	60-65	1116	1129	>10	>12	3/8" x 6

※ Remarks : BA(NBA) type weight = B type weight + (26g x stack)

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90	
VTX10 x1Stack	62	36	18	16	14	11	9	6	2.4	0.9	
VTX20 x1Stack	124	72	35	32	27	22	18	12	4.8	1.8	
VTX30 x1Stack	185	108	52	47	41	33	26	18	7.2	2.7	

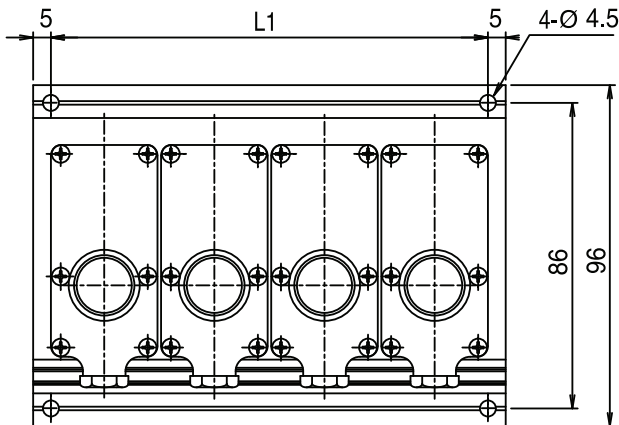
VACUUM PUMPS

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

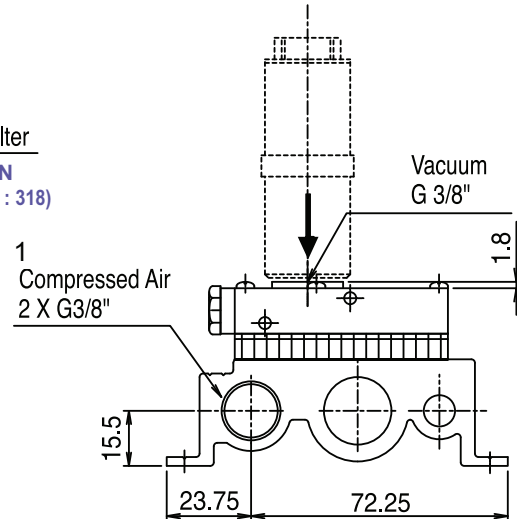
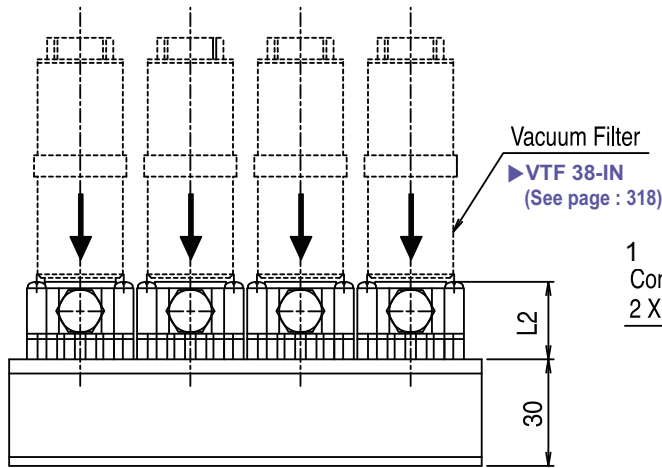
Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90	
VTX10 x1Stack	0.129	0.398	0.758	1.2	1.78	2.455	3.445	5.08	9.594	
VTX20 x1Stack	0.064	0.199	0.379	0.6	0.89	1.227	1.722	2.54	4.797	
VTX30 x1Stack	0.048	0.149	0.284	0.44	0.673	0.917	1.287	1.906	3.595	

Dimensional Information

**VTM(X) 10 x (2~6)-NB**  
**20                      B**  
**30**



(mm)		
Model	L1	L2
VTM(X)10x2-B,NB	61	21.8
VTM(X)10x3-B,NB	92	21.8
VTM(X)10x4-B,NB	123	21.8
VTM(X)10x5-B,NB	154	21.8
VTM(X)10x6-B,NB	185	21.8
VTM(X)20x2-B,NB	61	29
VTM(X)20x3-B,NB	92	29
VTM(X)20x4-B,NB	123	29
VTM(X)20x5-B,NB	154	29
VTM(X)20x6-B,NB	185	29
VTM(X)30x2-B,NB	61	36.2
VTM(X)30x3-B,NB	92	36.2
VTM(X)30x4-B,NB	123	36.2
VTM(X)30x5-B,NB	154	36.2
VTM(X)30x6-B,NB	185	36.2



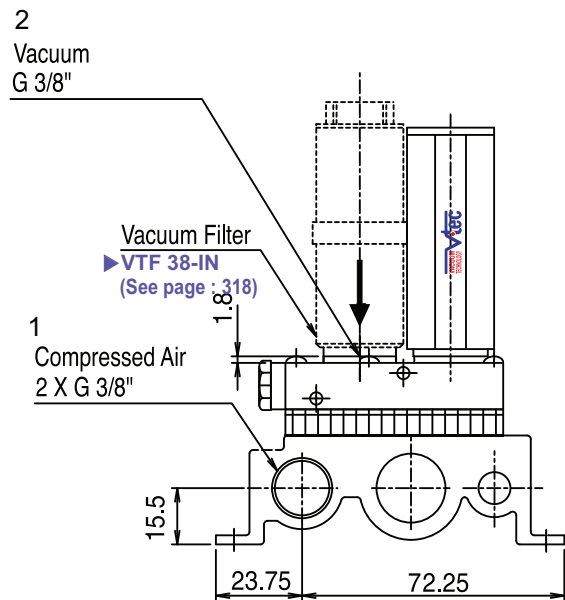
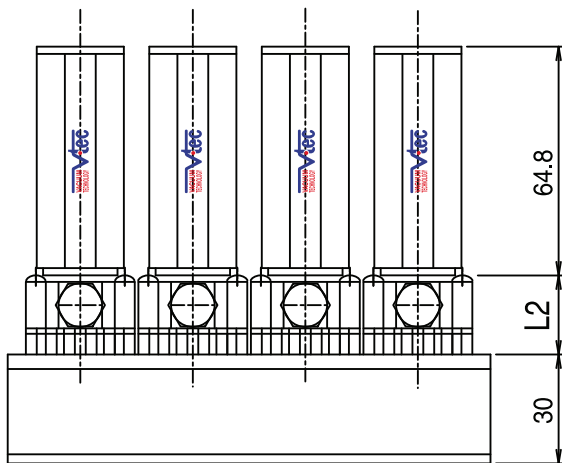
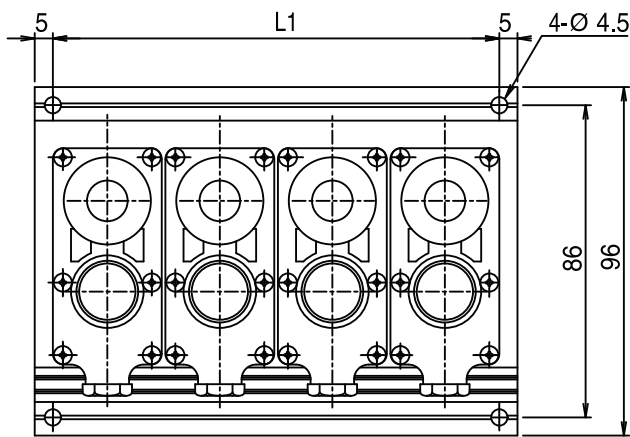
[ Measure unit : mm ]

**Dimensional Information**

**VTM 10 x (2~6)-NC**  
 20                      C  
 30

(mm)

Model	L1	L2
VTM(X)10x2-C,NC	61	21.8
VTM(X)10x3-C,NC	92	21.8
VTM(X)10x4-C,NC	123	21.8
VTM(X)10x5-C,NC	154	21.8
VTM(X)10x6-C,NC	185	21.8
VTM(X)20x2-C,NC	61	29
VTM(X)20x3-C,NC	92	29
VTM(X)20x4-C,NC	123	29
VTM(X)20x5-C,NC	154	29
VTM(X)20x6-C,NC	185	29
VTM(X)30x2-C,NC	61	36.2
VTM(X)30x3-C,NC	92	36.2
VTM(X)30x4-C,NC	123	36.2
VTM(X)30x5-C,NC	154	36.2
VTM(X)30x6-C,NC	185	36.2

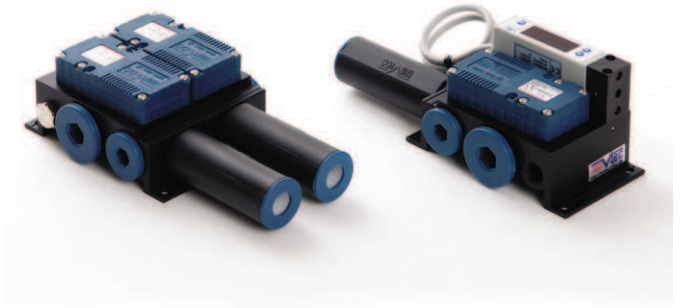


[ Measure unit : mm ]

VACUUM PUMPS

## M-Duplex Pump

- Max. vacuum level : -85 kPa (-25.1 inHg)
- Max. flow rate : 390 NI/min (13.77scfm)
- Supply air pressure : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 57~65 dBA



### Main Advantages

M-Duplex pump is similar to the block type in that it uses the components of the mini type multi stage vacuum pump. The pumps are mounted onto a dual station manifold. This manifold enables compact and simple installation. The manifold can accommodate two VTM30 pumps thus producing a VTM60, which gives high flow rates in a compact format. A vacuum switch can be ordered with the unit which piggy backs one of the pumps again for compact and easy installation. There is an option for mounting the exhausts one either side or both on one end of the manifold. There is also the option of connecting vacuum and air supply connections on either side of the manifold block, vacuum connections are BSP 1/2" X2.

### Order No.

## VTM20KD - C - V



#### ① Model Capacity equivalent to electricity motor pump size

- **VTM20KD** - 0,2KW
- VTM30KD - 0,3KW
- VTM40KD - 0,4KW
- VTM50KD - 0,5KW
- VTM60KD - 0,6KW

#### ② Vacuum Switch

- **(P)C** - Digital display output 2points, No analog supply M8 4-Pin connector type.
- (P)G - Digital display output 2points, No analog supply 4-Core 2m Grommet lead wire.
- (P)GA - Digital display output 2points, Analog supply 5-Core 2m Grommet lead wire.
- S1 - Mechanical vacuum switch
- S4 - Flashing LED light display NPN output 2points, No analog supply, 4-Core 1m lead wire.
- S5 - Flashing LED light display PNP output 1point, No analog supply, 3-Core 1m lead wire.

※ Remark : (P), Output type : PNP open collector

#### ③ Sealing

- No mark - Standard (NBR)
- **V** - Viton®
- E - EPDM

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM20KD	85 (25.1)	149	60-84	57 - 58	179	>4	>10	>12
VTM30KD		220	90-126	57 - 58	190	>6	>10	>15
VTM40KD		292	120-168	57 - 60	321	>6	>12	>15
VTM50KD		341	150-216	58 - 63	329	>8	>12	>18
VTM60KD		390	180-252	60 - 65	338	>8	>15	>18

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	0	10	20	30	40	50	60	70	80
VTM20KD	149	99	62	54	40	32	22	10.5	2.7
VTM30KD	220	147	92	73	60	47	32	16	4.1
VTM40KD	292	200	110	93	80	63	43	21	5.4
VTM50KD	341	228	135	115	100	79	60	24	6.6
VTM60KD	390	256	259	137	119	94	64	32	8.5

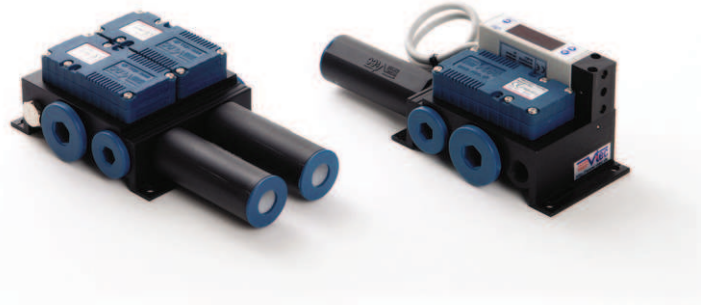
## Time in seconds to evacuate to vacuum level (sec/l)

Model \ -inHg -kPa	2.59	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	10	20	30	40	50	60	70	80
VTM20KD	0,054	0,139	0,25	0,394	0,589	0,86	1,317	2,579
VTM30KD	0,041	0,104	0,186	0,295	0,441	0,647	0,898	1,935
VTM40KD	0,027	0,069	0,125	0,197	0,294	0,431	0,658	1,289
VTM50KD	0,023	0,058	0,104	0,164	0,245	0,359	0,549	1,074
VTM60KD	0,018	0,046	0,083	0,131	0,196	0,286	0,439	0,859



## X - Duplex Pump

- Max. vacuum level : -92 kPa (-27.17 inHg)
- Max. flow rate : 332 NI/min (11.72 scfm)
- Supply air pressure : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 57~65 dBA



### Main Advantages

The Duplex VTX type is similar to the mini block type in that it uses the components of the mini type multi stage vacuum pump. The X-Duplex has the same external dimensions to that of the M-Duplex, however the internal ejector system is different to enable higher levels of vacuum to be achieved. The pumps are mounted onto a dual station manifold.

This manifold enables compact and simple installation. The manifold can accommodate two VTX30 pumps thus producing a X-Duplex 60, which gives higher flow rates in a compact format. A vacuum switch can be ordered with the unit which piggy backs one of the pumps again for compact and easy installation. There is an option for mounting the exhausts one either side, or both on one end of the manifold. There is also the option of connecting.

### Order No.

## VTX20KD - C - V



#### ① Model – Capacity equivalent to electricity motor pump size

- VTX20KD – 0.2KW
- VTX30KD – 0.3KW
- VTX40KD – 0.4KW
- VTX50KD – 0.5KW
- VTX60KD – 0.6KW

#### ② Vacuum Switch

- (P)C – Digital display output 2points, No analog supply M8 4-Pin connector type.
- (P)G – Digital display output 2points, No analog supply 4-Core 2m Grommet lead wire.
- (P)GA – Digital display output 2points, Analog supply 5-Core 2m Grommet lead wire.
- S1 – Mechanical vacuum switch
- S4 – Flashing LED light display NPN output 2points, No analog supply, 4-Core 1m lead wire.
- S5 – Flashing LED light display PNP output 1point, No analog supply, 3-Core 1m lead wire.

※ Remark : (P).  
 Output type : PNP open collector

#### ③ Sealing

- No mark – Standard (NBR)
- V – Vitor®
- E – EPDM

## Characteristics

Model	max. vacuum -kPa (-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTX20KD	92 (27.17)	124	86,4 – 96	57 – 60	179	>4	>10	>12
VTX30KD		185	129,6 – 144	57 – 63	190	>6	>10	>15
VTX40KD		247	172,8 – 192	60 – 63	321	>6	>12	>15
VTX50KD		290	216 – 240	60 – 65	329	>8	>12	>18
VTX60KD		332	259,2 – 288	60 – 65	338	>8	>15	>18

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90	
VTX20KD	124	72	35	32	27	22	18	12	4.8	1.8	
VTX30KD	185	108	52	47	41	33	26	18	7.2	2.7	
VTX40KD	247	144	69	63	54	44	35	23	9.6	3.6	
VTX50KD	290	171	86	78	66	55	43	29	12	4.5	
VTX60KD	332	198	102	93	78	65	51	34	14,4	5,4	

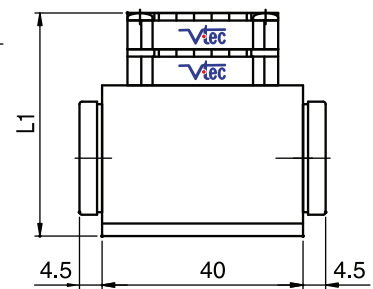
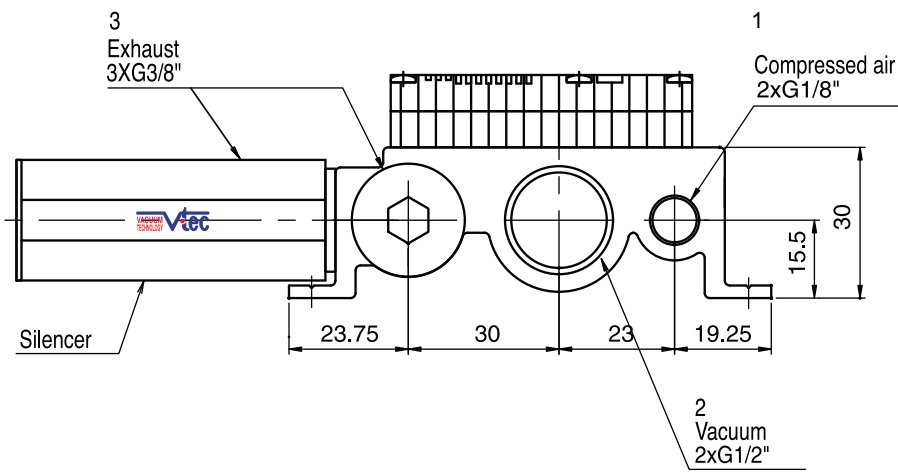
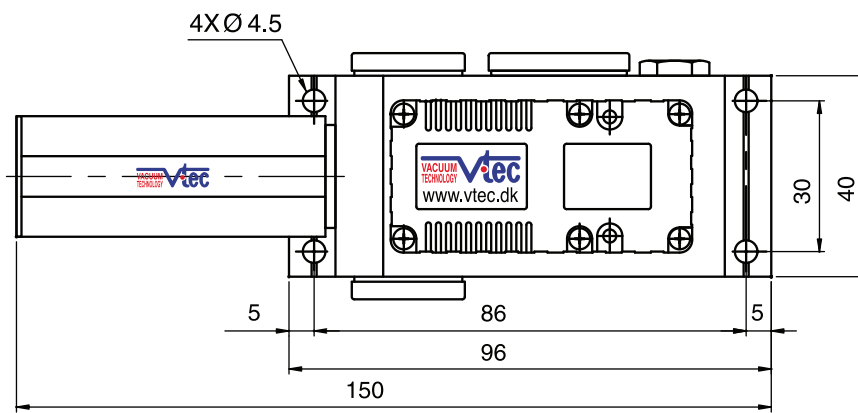
## Time in seconds to evacuate to vacuum level (sec/l)

Model	-inHg -kPa	2.95	150	5.9	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90	
VTX20KD	0.064	0.199	0.379	0.6	0.89	1,227	1,722	2,54	4,797	
VTX30KD	0.048	0.149	0.284	0.44	0.673	0.917	1,287	1,906	3,595	
VTX40KD	0.032	0.099	0.189	0.29	0.445	0.613	0,858	1,273	2,398	
VTX50KD	0.027	0.083	0.158	0,25	0,371	0,511	0,714	1,016	1,999	
VTX60KD	0.021	0.067	0.126	0.2	0,297	0,409	0,569	0,848	1,599	

Dimensional Information

Standard

**VTM(X) 20KD**  
30

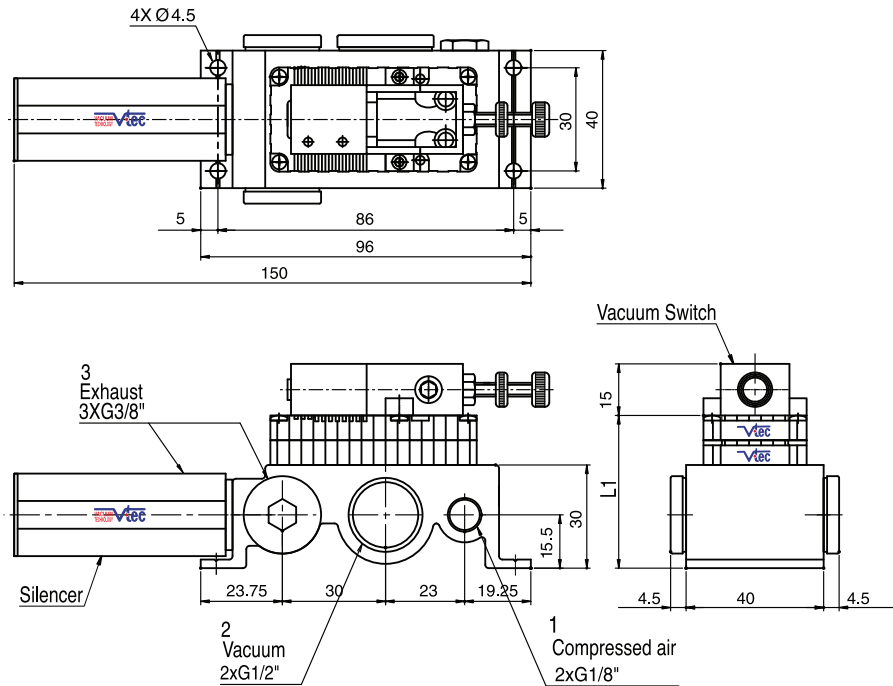


[ Measure unit : mm ]

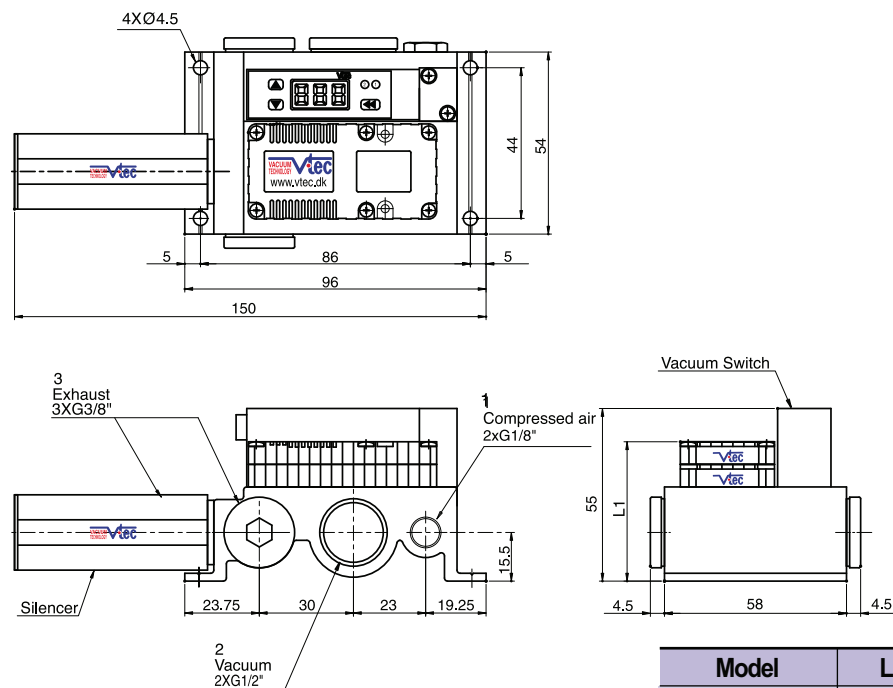
Model	L1 (mm)
VTM(X)20KD	44.4
VTM(X)30KD	51.6

## Dimensional Information

with switch S1



with switch → (P)C,(P)G, (P)GA



Model	L1 (mm)
VTM(X)20KD	44.4
VTMI(X)30KD	51.6

[ Measure unit : mm ]

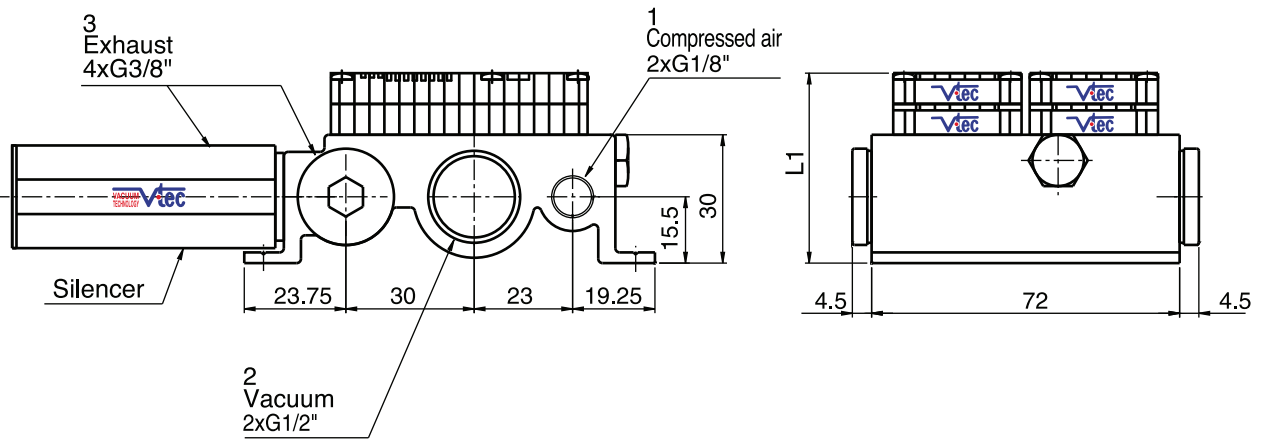
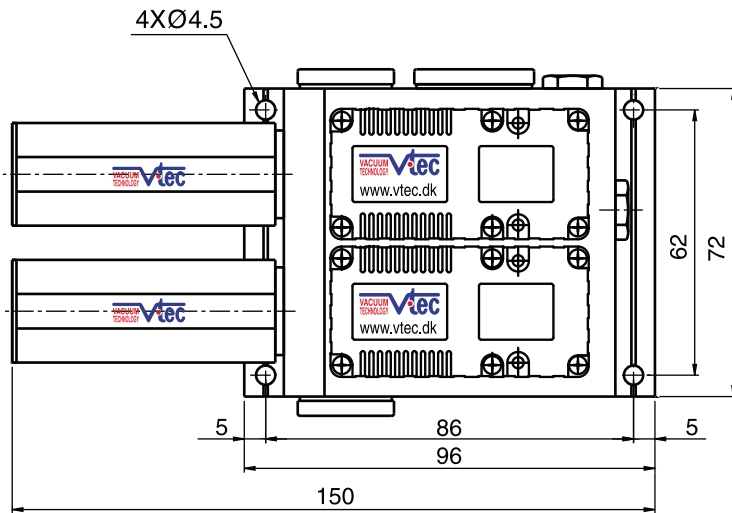
Dimensional Information

Standard

VTM(X) 40KD

50

60

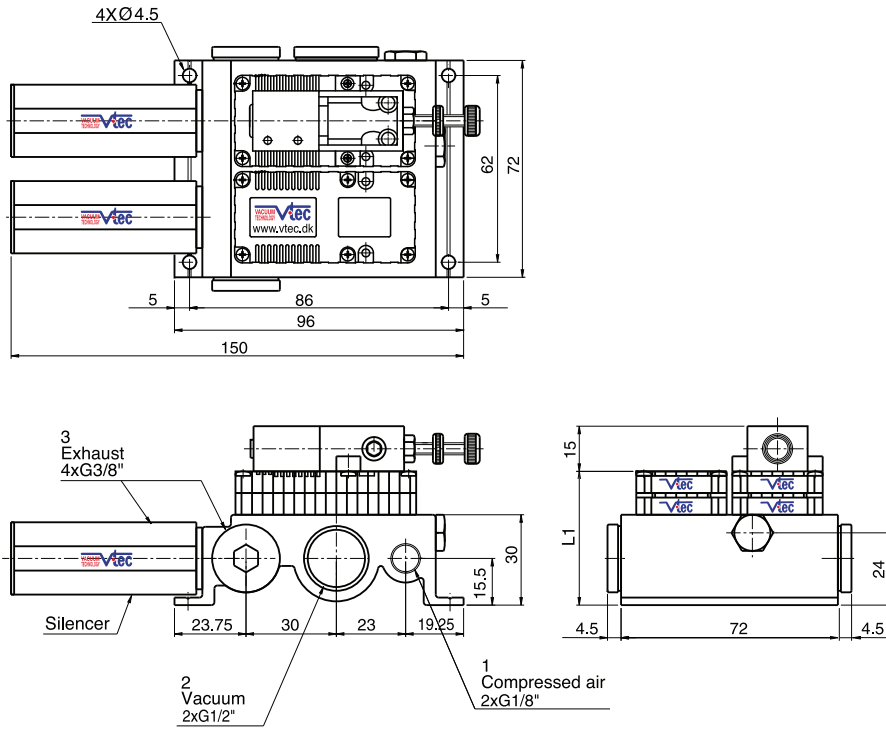


[ Measure unit : mm ]

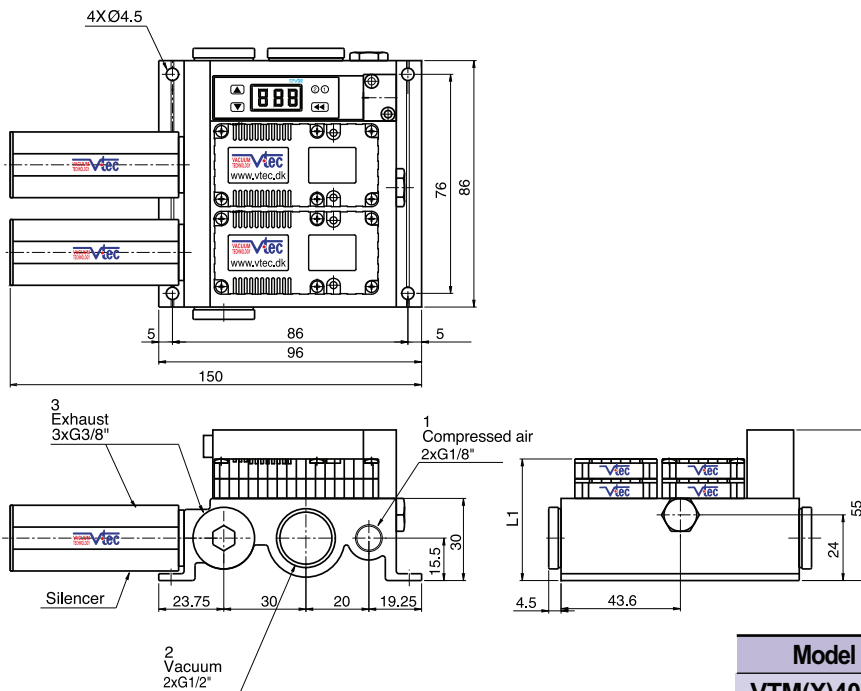
Model	L1 (mm)
VTM(X)40KD	44.4
VTM(X)50KD	51.6
VTM(X)60KD	51.6

## Dimensional Information

with swithc S1



with switch → (P)C,(P)G, (P)GA



[ Measure unit : mm]

Model	L1 (mm)
VTM(X)40KD	44.4
VTM(X)50KD	51.6
VTM(X)60KD	51.6



## Conveying Pump (Air Movers)

### VTRA Pump

- Max. vacuum level* : -84.4 kPa (-24.92 inHg)
- Max. flow rate* : 3396 NI/m (119.9 scfm)
- Supply air pressure* : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type* : Dry compressed air



#### Main Advantages

This is a series of adjustable flow rate single stage vacuum pumps particularly good for use in high contamination areas where dust and small debris is likely to enter the vacuum line. The design of this pump enables particles and small debris to pass directly through the pump. High flow rates can be achieved in conjunction with vacuum levels down to -84.4Kpa whilst maintaining a high performance to air consumption ratio.

### VTRF Pump

- Max. vacuum level* : -33.8 kPa (-9.98 inHg)
- Max. flow rate* : 4670 NI/m (164.9 scfm)
- Supply air pressure* : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type* : Dry compressed air



#### Main Advantages

These pumps provide a reliable and cost effective solution for in line product transfer, particularly for transferring bulk materials, granules, continuous strips and powders. Like the VTRA the pump has a straight through design, hence they are non-clogging and maintenance free. High flows can be achieved with in line bore sizes up to 1 1/2" .

### Order No.

#### VTRA 375 - AL

①

②

① Vacuum pump

- VTRA 250
- VTRA 375
- VTRA 500
- VTRA 750

② Material

- AL - Aluminum
- SS - Stainless steel

#### VTRF 5-6 - AL

①

②

① Vacuum pump

- VTRF 2-3
- VTRF 3-3
- VTRF 5-6
- VTRF 7-6
- VTRF 15-3
- VTRF 15-6

② Material

- AL - Aluminum
- SS - Stainless steel

## VTRA Air consumption vs, Vacuum level (-kPa) NI/m, 5.5 bar

Model \ -inHg -kPa	4.99	9.98	14.97	19.93	24.92
	16.9	33.8	50.7	67.5	84.4
VTRA250	113	170	235	275	340
VTRA375	175	325	481	594	820
VTRA500	340	623	792	934	1274
VTRA750	651	872	1245	1783	2547

## VTRA Vacuum flow vs, Vacuum level (-kPa) NI/m

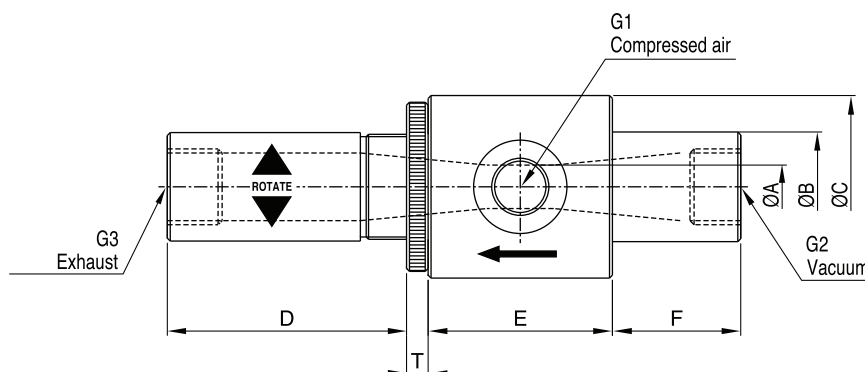
Model \ -inHg -kPa	4.99	9.98	14.97	19.93	24.92
	16.9	33.8	50.7	67.5	84.4
VTRA250	283	243	204	164	127
VTRA375	849	736	623	524	396
VTRA500	1698	1330	1132	991	651
VTRA750	3396	2462	1975	1443	1132

## VTRF series performance data

Model	air velocity (ft/sec)	vacuum flow (NI/m)	vacuum level (-kPa)	air consumption (NI/m)	
				2.8bar	5.5bar
VTRF2-3	490	283	27	88	170
VTRF3-3	328	424	15.2	99	170
VTRF5-6	362	849	33.8	396	679
VTRF7-6	326	1698	27	792	1358
VTRF15-3	224	4670	4.4	396	679
VTRF15-6	272	5660	8.5	792	1358

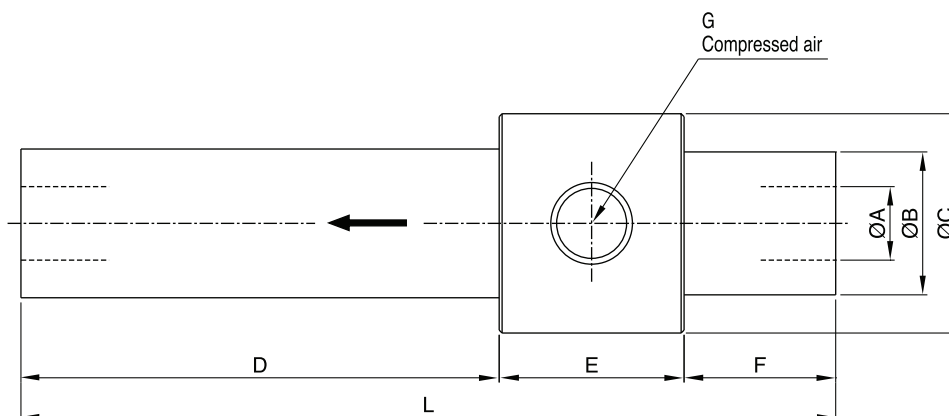
**Dimensional Information**

**VTRA Series**



Model	Dimension									
	ØA	ØB	ØC	D	E	F	T	G1	G2	G3
VTRA250	6,8 (0,267")	18,8 (0,732")	31,3 (1,232")	41 (1,614")	31,6 (1,244")	22 (0,866")	3,7 (0,145")	G1/8"	G1/4"	G1/4"
VTRA375	9,6 (0,377")	25,2 (0,992")	43,5 (1,712")	69,8 (2,748")	44,4 (1,748")	37,6 (1,480")	5 (0,196")	G3/8"	G1/2"	G1/2"
VTRA500	12,7 (0,5")	31,4 (1,236")	50 (1,968")	63,5 (2,5")	50,8 (2")	38 (1,496")	5 (0,196")	G3/8"	G1/2"	G3/4"
VTRA750	19,1 (0,751")	37,8 (1,488")	56,8 (2,236")	85,7 (3,374")	50,8 (2")	38,2 (1,503")	5 (0,196")	G1/2"	G3/4"	G1"

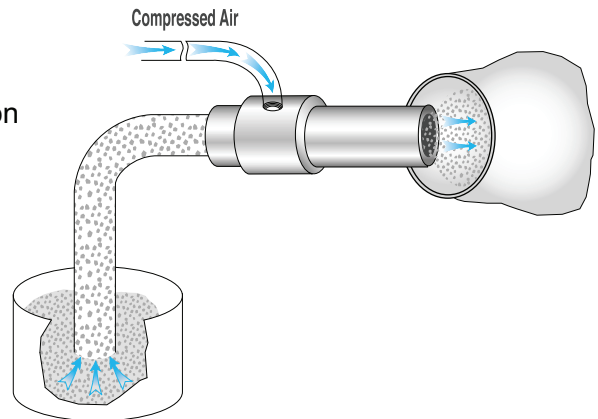
**VTRF Series**



Model	Dimension							
	ØA	ØB	ØC	D	E	F	L	G
VTRF2-3	6,4 (0,252")	18,4 (0,724")	31,5 (1,240")	45 (1,771")	24,9 (0,980")	19 (0,748")	88,9 (3,5")	G1/8"
VTRF3-3	9,5 (0,374")	18,8 (0,740")	31,3 (1,232")	45,3 (1,783")	25,5 (1,003")	18,2 (0,716")	89 (3,503")	G1/8"
VTRF5-6	12,6 (0,496")	24,5 (0,964")	37,6 (1,480")	82 (3,228")	31,7 (1,248")	26 (1,023")	139,7 (5,5")	G1/4"
VTRF7-6	19 (0,748")	31,8 (1,251")	50 (1,968")	101,8 (4,007")	50,6 (1,992")	38 (1,496")	190,4 (7,496")	G3/8"
VTRF15-3	38,2 (1,503")	49,6 (1,952")	69 (2,716")	101,4 (3,992")	50,8 (2")	38,2 (1,503")	190,4 (7,496")	G3/8"
VTRF15-6	38,2 (1,503")	49,6 (1,952")	69 (2,716")	101,4 (3,992")	50,8 (2")	38,2 (1,503")	190,4 (7,496")	G3/8"

## Application

- ▶ Unloading vibrator feeders
- ▶ Reloading hoppers with plastic Regrind
- ▶ Transferring of engine valves in grinding operation
- ▶ Chip removal in drilling operation
- ▶ Transfer power detergent and caustic chemicals
- ▶ Convey peanut husks
- ▶ Selvedge removal in trimming operation
- ▶ Mandrel collection system







# CLASSIC PUMPS



## L-Classic Pump

- Max. vacuum level : **-91 kPa** (-26.87 inHg)
- Max. flow rate : **1370 NI/min** (48.43 scfm)
- Supply air pressure : **3~6bar, max 7bar**  
(43.5~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 50~65 dBA



### Main Advantages

This is most significant model base on the multi stage principle. Low compressed air are required for massive evacuation volumes at high vacuum flow and high vacuum level rate. Vtec air saving kit is available in this pump in order to maximum reduce the energy usage. VITON® & EPDM seals can be also stipulated as option.

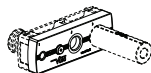
### Order No.

## V T M 2 5 L - 1 4 3 4 A - A S - A 3 R 3 - C L S G 2 N V

①

#### ① Model – Capacity equivalent to electricity motor pump size

- **VTM25L** – 0.25KW
- VTM50L – 0.50KW
- VTM75L – 0.75KW
- VTM100L – 1.00KW
- VTM125L – 1.25KW
- VTM150L – 1.50KW



#### ② Connection plate

	Air port	Vacuum port	Mat'l
1412 A	G1/4"	G1/2"	Aluminum
• <b>1434 A</b>	G1/4"	G3/4"	
1401 A	G1/4"	G1"	
N1412 A	NPT1/4"	NPT1/2"	
N1434 A	NPT1/4"	NPT3/4"	
N1401 A	NPT1/4"	NPT 1"	
1812 P	G1/8"	G1/2"	All PPS
1834 P	G1/8"	G3/4"	
N1812 P	NPT1/8"	NPT1/2"	
N1834 P	NPT1/8"	NPT3/4"	

#### \* Remark :

- Air supply port with air control valve or AS-kit : G1/4"
- PPS Mat'l is available in VTM25L ~ VTM100L

#### ③ Air saving Kit

( 108 )

- No mark – Standard
- **AS** – Air saving kit attached

②

#### ④ Air supply control valve

- A1 – AC 110V
- A2 – AC 220V
- **A3** – DC 24V
- D1\* – AC 110V
- D2\* – AC 220V
- D3\* – DC 24V

D.\* : Double solenoid valve  
Double solenoid valve is available only with 'DN' or 'DL', section ⑥

#### ⑤ Vacuum release control valve

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

#### ⑥ Solenoid Terminal

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

\* 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 )

⑤

#### ⑦ Vacuum switch

- S2(P) – Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** – Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) – Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

#### \* Remark : ① S..(P)

Output type : PNP open collector.

② VCM8 42 : M8-4Pin female connector, only for type S2(P)

#### ⑧ Non-return valve

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

#### ⑨ Sealing

- No mark – Standard (NBR)
- **V** – Viton®
- E** – EPDM



## Characteristics

Model	max.vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM25L	91 (26.87)	365	114	50 – 65	643	>4	>12	>12
VTM50L		622	228	50 – 65	644	>6	>15	>15
VTM75L		841	342	50 – 65	760	>8	>19	>22
VTM100L		1060	456	50 – 65	761	>8	>19	>22
VTM125L		1195	570	60 – 65	877	>10	>25	>32
VTM150L		1370	684	60 – 65	878	>10	>25	>32

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

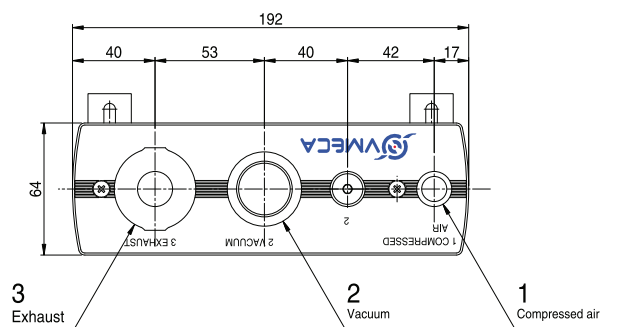
Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		0	10	20	30	40	50	60	70	80	90
VTM25L		365	169	124	76	43	33	25	17	7	0.8
VTM50L		622	327	236	149	83	65	49	33	14	1.6
VTM75L		841	481	354	221	122	97	73	49	21	2.4
VTM100L		1060	634	449	293	161	129	96	64	27	3.2
VTM125L		1195	789	522	360	193	152	120	80,6	33,3	3,8
VTM150L		1370	937	589	418	237	187	144	97,2	39,6	4,32

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

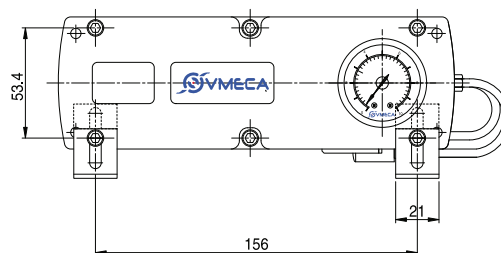
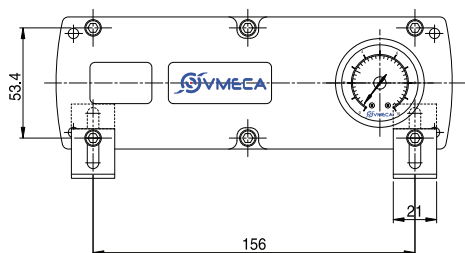
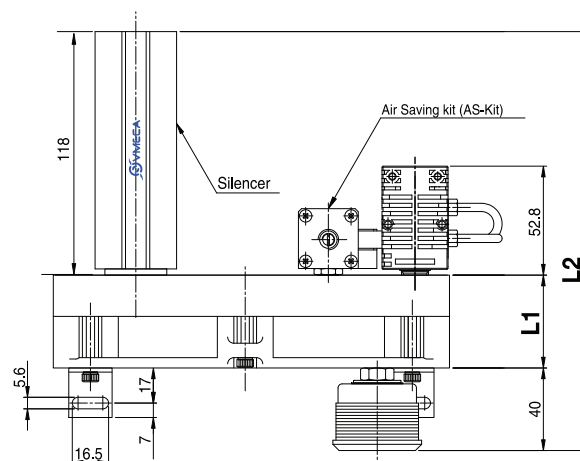
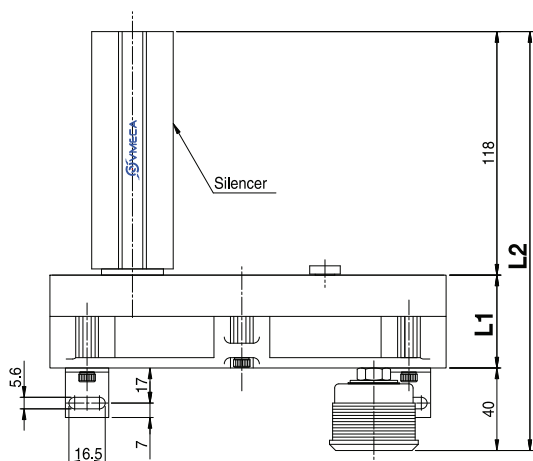
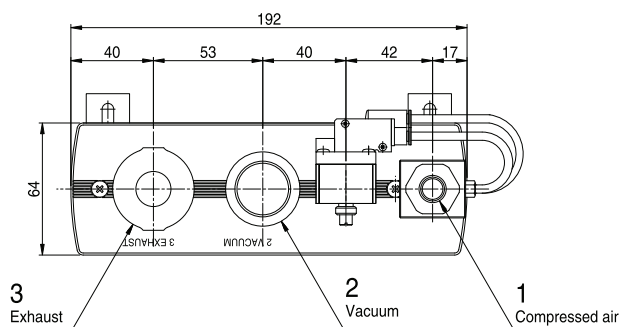
Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		10	20	30	40	50	60	70	80	90
VTM25L		0,02	0,056	0,12	0,24	0,425	0,66	1,02	1,64	4,6
VTM50L		0,013	0,032	0,062	0,12	0,221	0,33	0,51	0,85	2,3
VTM75L		0,01	0,024	0,047	0,09	0,159	0,248	0,383	0,62	1,73
VTM100L		0,007	0,016	0,031	0,06	0,106	0,165	0,255	0,41	1,15
VTM125L		0,0061	0,0147	0,0302	0,053	0,089	0,143	0,215	0,36	1,01
VTM150L		0,0051	0,0134	0,0294	0,046	0,071	0,115	0,175	0,31	0,87

## Dimensional Information

### Standard



### with AS - KIT



[ Measure unit : mm ]

(mm)

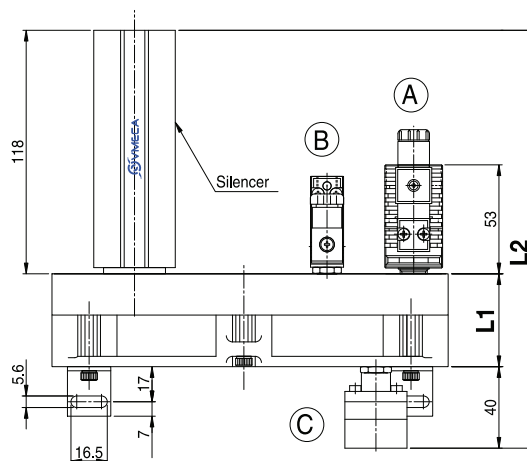
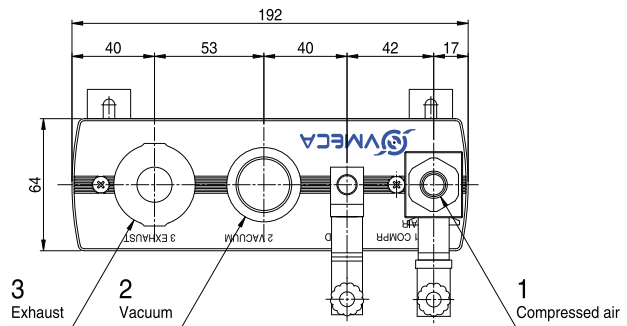
Port 1 : G1/4", NPT1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	L1	L2
VTM25L	45.5	203.5
VTM50L	45.5	203.5
VTM75L	65	223
VTM100L	65	223
VTM125L	84.5	242.5
VTM150L	84.5	242.5

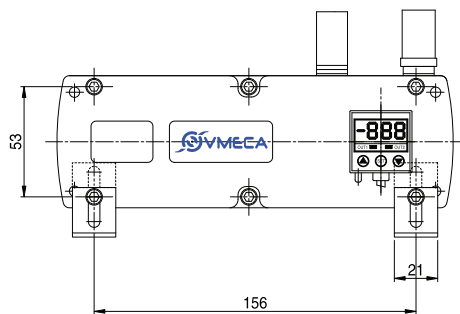
Port 1 : G1/4", NPSF1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

## Dimensional Information

Air supply control valve  
 Vacuum release control valve  
 Digital display vacuum switch



- Ⓐ Air supply control valve
- Ⓑ Vacuum release control valve
- Ⓒ Digital display vacuum switch



[ Measure unit : mm ]

Port 1 : G1/4, NPSF1/4"  
 Port 2 : G1/2", G3/4", G1"  
           NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

	(mm)	
Model	L1	L2
<b>VTM25L</b>	45.5	206.5
<b>VTM50L</b>	45.5	206.5
<b>VTM75L</b>	65	226
<b>VTM100L</b>	65	226
<b>VTM125L</b>	84.5	245.5
<b>VTM150L</b>	84.5	245.5

## VL-Classic Pump

- Max. vacuum level : **-80 kPa** (-23.62 inHg)
- Max. flow rate : **2061 NI/min** (72.78 scfm)
- Supply air pressure : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 50~65 dBA



### Main Advantages

VL-Classic pumps produces the high flow rate gradually while vacuum level is increasing so it is useful for leakage system. Vtec Air Saving kit is available in this pump in order to maximum reduce the energy usage. VITON® & EPDM seals can be also stipulated as option.

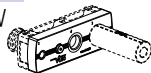
### Order No.

## VTL25 - 1434 A - AS - A3 R3 - CL SG2 N V



#### ① Model - Capacity equivalent to electricity motor pump size

- **VTL25** - 0.25KW
- VTL50 - 0.50KW
- VTL75 - 0.75KW
- VTL100 - 1.00KW
- VTL125 - 1.25KW
- VTL150 - 1.50KW
- VTL175 - 1.75KW
- VTL200 - 2.00KW



#### ② Connection plate

	Air port	Vacuum port	
1412 A	G1/4"	G1/2"	Aluminum
• <b>1434 A</b>	G1/4"	G3/4"	
1401 A	G1/4"	G1"	
N1412 A	NPT1/4"	NPT1/2"	
N1434 A	NPT1/4"	NPT3/4"	
N1401 A	NPT1/4"	NPT 1"	All PPS
1812 P	G1/8"	G1/2"	
1834 P	G1/8"	G3/4"	
N1812 P	NPT1/8"	NPT1/2"	
N1834 P	NPT1/8"	NPT3/4"	

#### \* Remark :

- Air supply port with air control valve or AS-kit
- VTL25~VTL150 : G1/8"
- VTL175~VTL200 : G3/8"
- PPS Mat'l is available in VTL25L~ VTL125

#### ③ Air saving Kit

( 108 )

- No mark - Standard
- **AS** - Air saving kit attached

#### ④ Air supply control valve

- A1 - AC 110V
- A2 - AC 220V
- **A3** - DC 24V
- D1\* - AC 110V
- D2\* - AC 220V
- D3\* - DC 24V

D.\* : Double solenoid valve  
Double solenoid valve is available only with 'DN' or 'DL', section ⑥

#### ⑤ Vacuum release control valve

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

#### ⑥ Solenoid Terminal

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

\* Can not available with double solenoid valve

#### \* Remark

- CL : Available only with DC24V  
Can not available with VTL175, VTL200
- 3B : Available only with DC24V  
Available only with 'S2' or 'S2P', section ⑦

About 'BUS cable' ( 340, 341 )

#### ⑦ Vacuum switch

- S2(P) - Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** - Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) - Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

#### \* Remark : ① S..(P)

Output type : PNP open collector.

② VCM8 42 : M8-4Pin female connector.  
only for type S2(P)

#### ⑧ Non-return valve

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

#### ⑨ Sealing

- No mark - Standard (NBR)
- **V** - Viton®
- E** - EPDM

## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTL25	80 (23.62)	379	78-105	50 - 65	643	>4	>12	>12
VTL50		650	156-210	50 - 65	644	>6	>15	>15
VTL75		820	234-315	50 - 65	760	>8	>19	>22
VTL100		990	312-420	50 - 65	761	>8	>19	>22
VTL125		1090	390-525	60 - 65	877	>10	>25	>32
VTL150		1303	468-630	60 - 65	878	>10	>25	>32
VTL175		1682	546-735	60 - 65	994	>10	>32	>40
VTL200		2061	624-840	60 - 65	995	>10	>32	>40

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67
		0	10	20	30	40	50	60	70
VTL25		379	200	139	94	51	40	28	18
VTL50		650	374	266	176	102	77	56	36
VTL75		820	490	370	245	138	116	92	49
VTL100		990	607	473	323	197	152	109	69
VTL125		1090	750	547	390	241	192	138	87
VTL150		1303	907	614	456	282	228	162	102
VTL175		1682	1060	678	515	314	267	189	118
VTL200		2061	1217	729	574	363	294	218	134

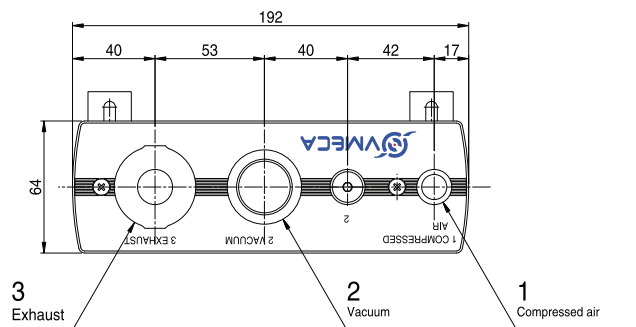
VACUUM PUMPS

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

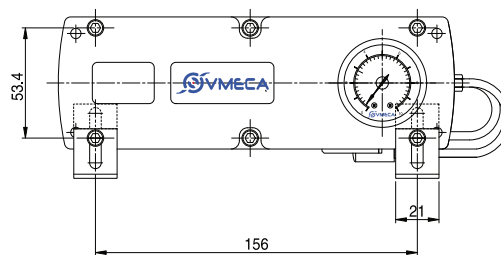
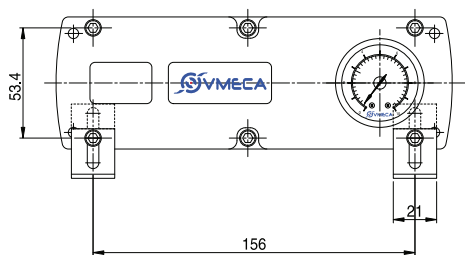
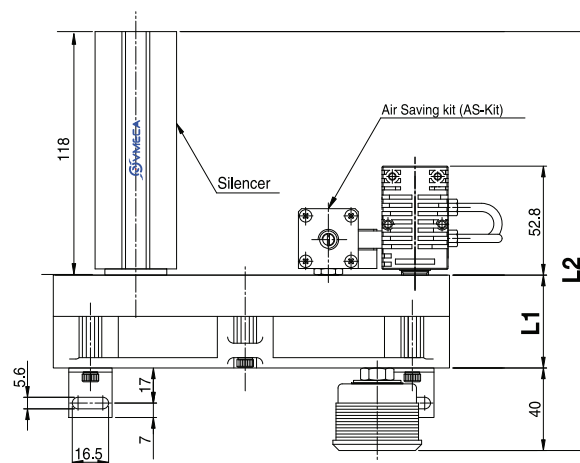
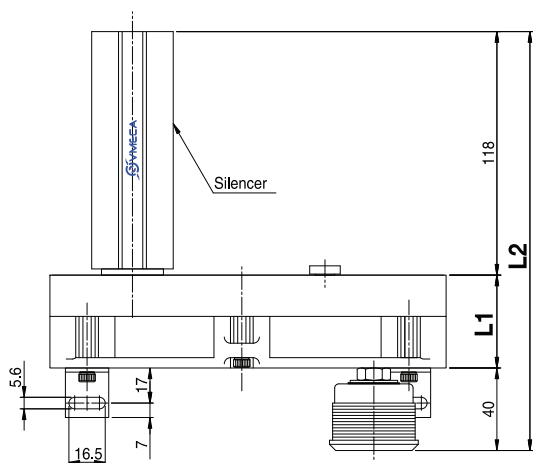
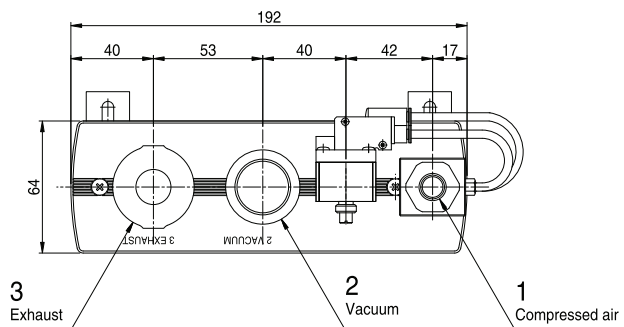
Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67
		10	20	30	40	50	60	70
VTL25		0.017	0.045	0.09	0.18	0.34	0.53	0.85
VTL50		0.012	0.027	0.05	0.1	0.18	0.27	0.43
VTL75		0.008	0.021	0.04	0.08	0.13	0.2	0.32
VTL100		0.0069	0.015	0.03	0.05	0.09	0.14	0.22
VTL125		0.0058	0.014	0.026	0.044	0.076	0.118	0.19
VTL150		0.0049	0.013	0.022	0.037	0.062	0.095	0.15
VTL175		0.0047	0.012	0.021	0.035	0.057	0.087	0.14
VTL200		0.0043	0.011	0.019	0.033	0.051	0.078	0.12

## Dimensional Information

### Standard



### with AS - KIT



[ Measure unit : mm ]

(mm)

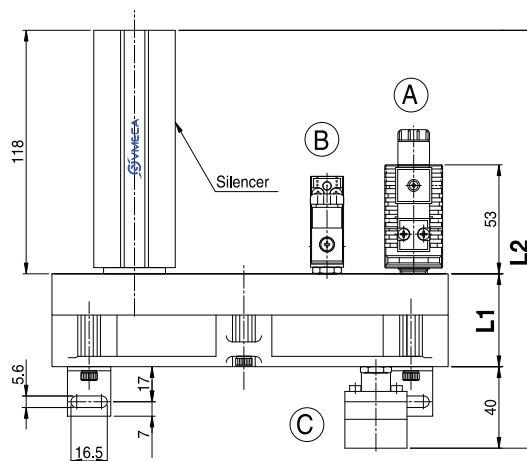
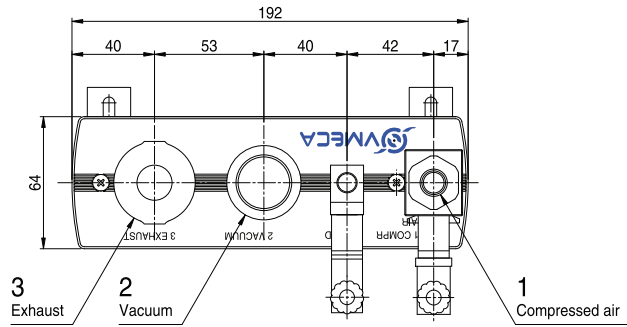
Port 1 : G1/4", NPT1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	L1	L2
VTL25	45.5	203.5
VTL50	45.5	203.5
VTL75	65	223
VTL100	65	223
VTL125	84.5	242.5
VTL150	84.5	242.5
VTL175	104	262
VTL200	104	262

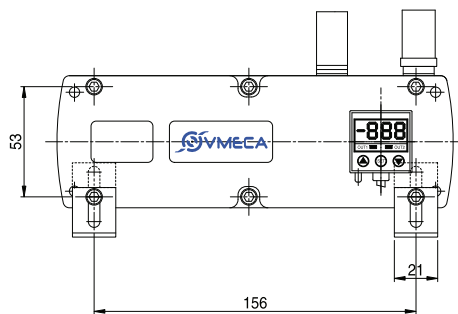
Port 1 : VTL25~VTL150 : G1/4", NPSF 1/4"  
 VTL175~VTL200 : G3/8", NPSF 3/8"  
 Port 2 : G1/2", G3/4", G 1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

## Dimensional Information

Air supply control valve  
 Vacuum release control valve  
 Digital display vacuum switch



- Ⓐ Air supply control valve
- Ⓑ Vacuum release control valve
- Ⓒ Digital display vacuum switch



[ Measure unit : mm ]

(mm)

Port 1 : VTL25~VTL150 : G1/4", NPSF 1/4"  
                           VTL175~VTL200 : G3/8", NPSF 3/8"  
 Port 2 : G1/2", G3/4", G 1"  
                           NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	L1	L2
VTL25	45.5	206.5
VTL50	45.5	206.5
VTL75	65	226
VTL100	65	226
VTL125	84.5	245.5
VTL150	84.5	245.5
VTL175	104	265
VTL200	104	265

## M-Classic Pump

- Max. vacuum level : **-92 kPa** (-27.17 inHg)
- Max. flow rate : **1580 NI/min** (55.8 scfm)
- Supply air pressure : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 50~65 dBA



### Main Advantages

This Classic VTM pump is probably the most commonly used multi Stage ejector it is available in a large range of sizes and configurations. Each pump comes complete with an exhaust silencer, gauge and fixing brackets. The body whilst robust is also lightweight. The housings are manufactured from PPS high grade plastic, which means most hazardous vapors, can be accommodated. Pump sizes range from a VTM25 to the high flow VTM200. All units are available with the option of an air saving kit and non-return valves. Viton® and EPDM seals can also be stipulated as options.

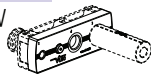
### Order No.

## VTM25 - 1434 A - AS - A3 R3 - CL SG2 N V



#### ① Model - Capacity equivalent to electricity motor pump size

- **VTM25** - 0.25KW
- VTM50 - 0.50KW
- VTM75 - 0.75KW
- VTM100 - 1.00KW
- VTM125 - 1.25KW
- VTM150 - 1.50KW
- VTM175 - 1.75KW
- VTM200 - 2.00KW



#### ② Connection plate

	Air port	Vacuum port	
1412 A	G1/4"	G1/2"	Aluminum
• <b>1434 A</b>	G1/4"	G3/4"	
1401 A	G1/4"	G1"	
N1412 A	NPT1/4"	NPT1/2"	
N1434 A	NPT1/4"	NPT3/4"	
N1401 A	NPT1/4"	NPT 1"	
1812 P	G1/8"	G1/2"	All PPS
1834 P	G1/8"	G3/4"	
N1812 P	NPT1/8"	NPT1/2"	
N1834 P	NPT1/8"	NPT3/4"	

#### \* Remark :

- Air supply port with air control valve or AS-kit  
VTM25~VTM150 : G1/4"  
VTM175~VTM200 : G3/8"
- PPS Mat I is available in VTM25 ~ VTM125

#### ③ Air saving Kit

( [ ] 108 )

- No mark - Standard
- **AS** - Air saving kit attached

#### ④ Air supply control valve

A1	- AC 110V
A2	- AC 220V
• <b>A3</b>	- DC 24V
D1*	- AC 110V
D2*	- AC 220V
D3*	- DC 24V

D.\* : Double solenoid valve  
Double solenoid valve is available only with 'DN' or 'DL', section ⑥

#### ⑤ Vacuum release control valve

R1	- AC110V
R2	- AC220V
• <b>R3</b>	- DC24V

#### ⑥ Solenoid Terminal

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

\* Can not available with double solenoid valve

#### \* Remark

- CL : Available only with DC24V  
Can not available with VTM175, VTM200
- 3B : Available only with DC24V  
Available only with 'S2' or 'S2P', section ⑦

☞ About 'BUS cable' ( [ ] 340, 341 )

#### ⑦ Vacuum switch

- S2(P) - Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** - Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) - Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

#### \* Remark : ① S..(P)

Output type : PNP open collector.

② VCM8 42 : M8-4Pin female connector, only for type S2(P)

#### ⑧ Non-return valve

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

#### ⑨ Sealing

- No mark - Standard (NBR)
- **V** - Viton®
- E** - EPDM



## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM25	92 (27.17)	389	78-108	50 - 65	620	>4	>12	>12
VTM50		647	150-210	50 - 65	622	>6	>15	>15
VTM75		890	228-318	50 - 65	794	>8	>19	>22
VTM100		1100	300-420	50 - 65	795	>8	>19	>22
VTM125		1200	378-528	60 - 65	936	>10	>25	>32
VTM150		1380	450-630	60 - 65	947	>10	>25	>32
VTM175		1490	528-738	60 - 65	1148	>10	>32	>40
VTM200		1580	600-840	60 - 65	1150	>12	>32	>40

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90	
VTM25	389	220	147	74	37	27	18	10	5	0.8	
VTM50	647	400	279	146	73	54	36	20	10	1.6	
VTM75	890	600	366	220	110	82	54	30	15	2.4	
VTM100	1100	750	453	291	146	109	72	40	20	3.2	
VTM125	1200	900	530	356	182	135	90	50	25	4	
VTM150	1380	1020	597	416	218	162	108	60	30	4.8	
VTM175	1490	1120	654	471	254	189	126	70	35	5.6	
VTM200	1580	1200	701	521	290	216	144	80	40	6.4	

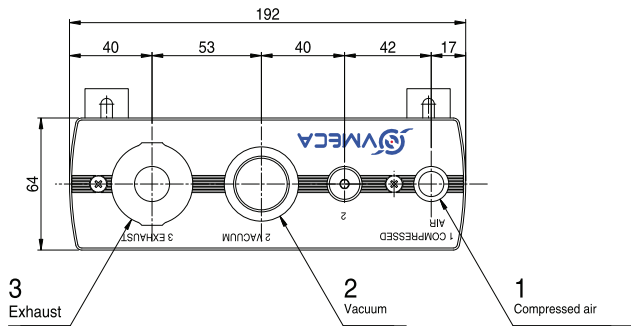
VACUUM PUMPS

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

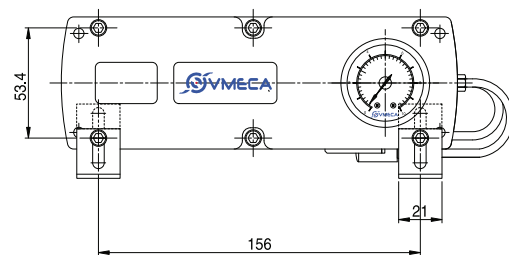
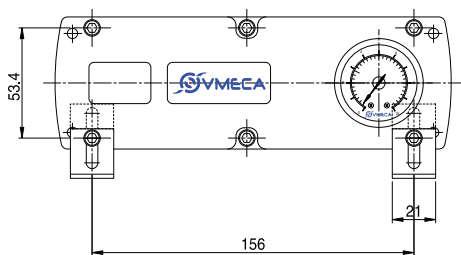
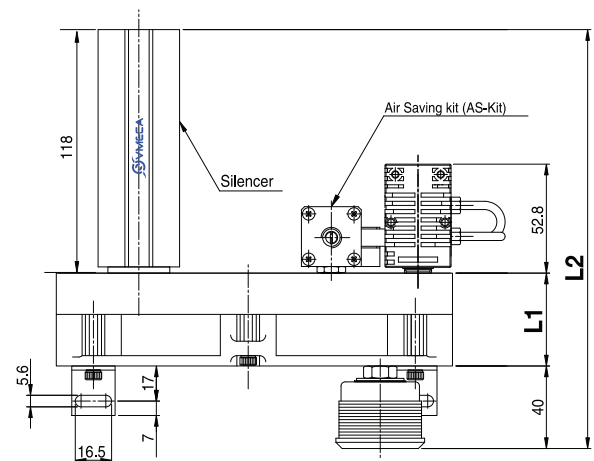
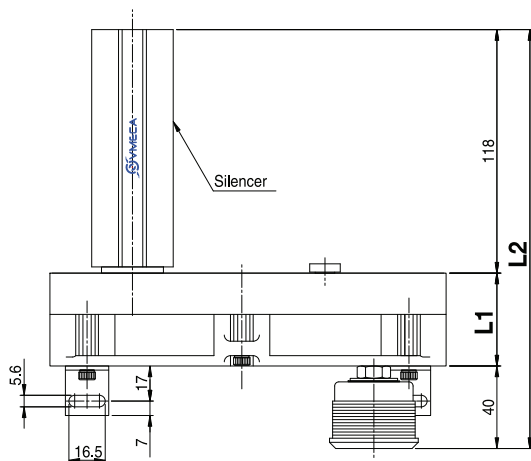
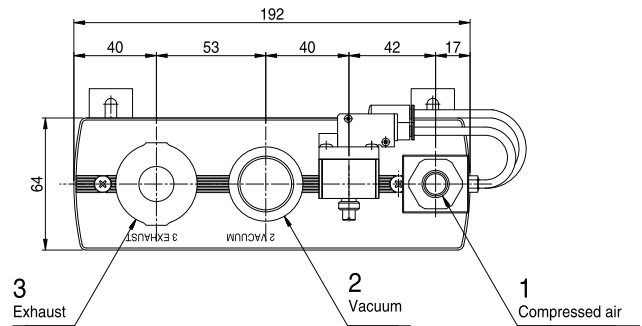
Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90	
VTM25	0.019	0.048	0.11	0.239	0.416	0.686	1.122	1.91	4.21	
VTM50	0.012	0.03	0.066	0.125	0.209	0.345	0.593	1.05	2.19	
VTM75	0.009	0.023	0.05	0.094	0.157	0.259	0.445	0.788	1.644	
VTM100	0.006	0.015	0.033	0.063	0.105	0.173	0.297	0.526	1.097	
VTM125	0.0055	0.0143	0.0311	0.055	0.092	0.151	0.260	0.46	1.96	
VTM150	0.0052	0.0135	0.0296	0.047	0.078	0.129	0.223	0.394	0.823	
VTM175	0.005	0.0127	0.0279	0.039	0.065	0.108	0.186	0.329	0.686	
VTM200	0.0048	0.0113	0.0258	0.027	0.054	0.09	0.153	0.274	0.67	

## Dimensional Information

### Standard



### with AS - KIT



[ Measure unit : mm ]

(mm)

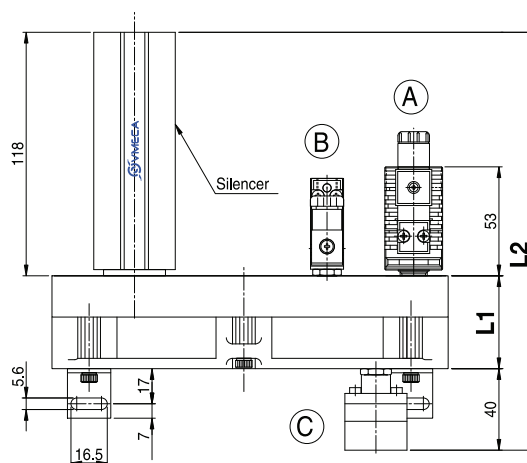
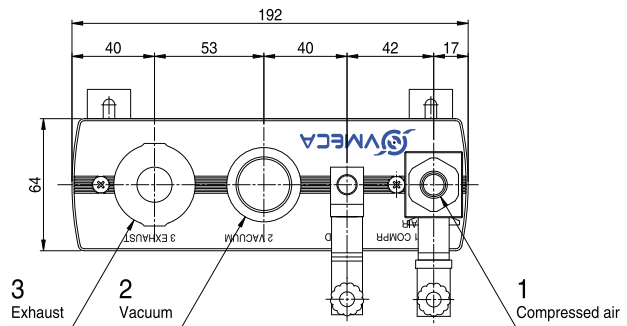
Port 1 : G1/4", NPT1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	L1	L2
VTM25	45.5	203.5
VTM50	45.5	203.5
VTM75	65	223
VTM100	65	223
VTM125	84.5	242.5
VTM150	84.5	242.5
VTM175	104	262
VTM200	104	262

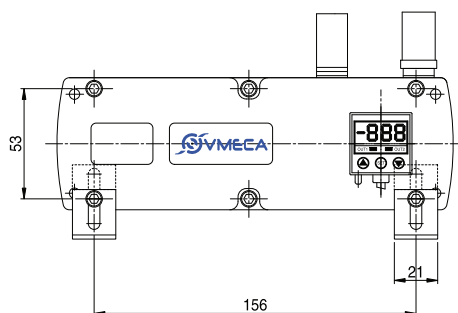
Port 1 : VTM25 ~ VTM150 : G1/4", NPSF 1/4"  
 VTM175 ~ VTM200 : G3/8", NPSF 3/8"  
 Port 2 : G1/2", G3/4", G 1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

## Dimensional Information

Air supply control valve  
 Vacuum release control valve  
 Digital display vacuum switch



- Ⓐ Air supply control valve
- Ⓑ Vacuum release control valve
- Ⓒ Digital display vacuum switch



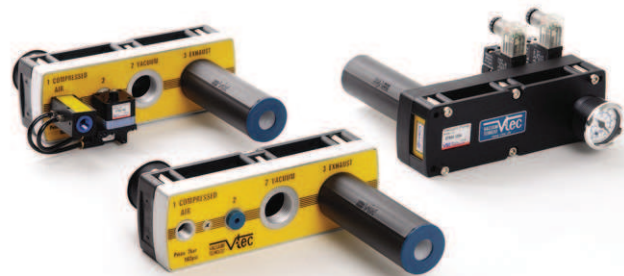
[ Measure unit : mm ]  
 (mm)

Port 1 : VTM25 ~ VTM150 : G1/4", NPSF 1/4"  
 VTM175 ~ VTM200 : G3/8", NPSF 3/8"  
 Port 2 : G1/2", G3/4", G 1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	L1	L2
VTM25	45.5	206.5
VTM50	45.5	206.5
VTM75	65	226
VTM100	65	226
VTM125	84.5	245.5
VTM150	84.5	245.5
VTM175	104	265
VTM200	104	265

## X-Classic Pump

- Max. vacuum level : **-97 kPa** (-28.64 inHg)
- Max. flow rate : **521 NI/min** (18.4 scfm)
- Supply air pressure : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 55 ~ 65 dBA



### Main Advantages

This Classic VTX type is a pump that bridges the gap between the High Flow VTM range and the High Vacuum VTH Range, giving a balance of the two. The X-Classic has the same external dimensions to that of the M-Classic, however the internal ejector system is different to enable higher levels of vacuum to be achieved. Each pump comes complete with an exhaust silencer, gauge and fixing brackets. The body whilst robust is also lightweight. The housings are manufactured from PPS high grade plastic, which means most hazardous vapors, can be accommodated. Pump sizes range from a VTX25 to the VTX75. All units are available with the option of an air saving kit and non-return valves. Viton® and EPDM seals can also be stipulated as options.

### Order No.

**VTX25 - 1434 A - AS - A3 R3 - CL - SG2 N V**

①	②	③	④	⑤	⑥	⑦	⑧	⑨																																										
<b>① Model</b> – Capacity equivalent to electricity motor pump size		<b>④ Air supply control valve</b>		<b>⑦ Vacuum switch</b>																																														
<ul style="list-style-type: none"> <li>• <b>VTX25</b> – 0.25KW</li> <li>VTX50 – 0.50KW</li> <li>VTX75 – 0.75KW</li> </ul>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>A1</td><td>– AC 110V</td></tr> <tr><td>A2</td><td>– AC 220V</td></tr> <tr><td>• <b>A3</b></td><td>– DC 24V</td></tr> <tr><td>D1*</td><td>– AC 110V</td></tr> <tr><td>D2*</td><td>– AC 220V</td></tr> <tr><td>D3*</td><td>– DC 24V</td></tr> </table>		A1	– AC 110V	A2	– AC 220V	• <b>A3</b>	– DC 24V	D1*	– AC 110V	D2*	– AC 220V	D3*	– DC 24V	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>S2(P)</td><td>– Digital output 2points, No analog supply M8-4Pin male connector (0.3m lead wire)</td></tr> <tr><td>• <b>SG2(P)</b></td><td>– Digital output 2points, No analog supply Grommet type 4-core 2m lead wire</td></tr> <tr><td>SG3(P)</td><td>– Digital output 2points, Analog supply Grommet type 4-core 2m lead wire</td></tr> </table>		S2(P)	– Digital output 2points, No analog supply M8-4Pin male connector (0.3m lead wire)	• <b>SG2(P)</b>	– Digital output 2points, No analog supply Grommet type 4-core 2m lead wire	SG3(P)	– Digital output 2points, Analog supply Grommet type 4-core 2m lead wire																											
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E	– EPDM																																																	

\* Remark :  
• Air supply port with air control valve or AS-kit  
≡ G 1/4"

\* 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)

## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTX25	97 (28,64)	185	150~210	55 – 60	633	>4	>12	>12
VTX50		365	228~318	60 – 65	633	>6	>15	>15
VTX75		521	300~420	60 – 65	796	>8	>19	>22

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

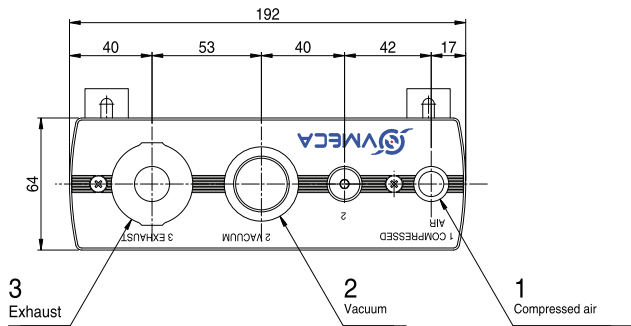
Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05
	0	10	20	30	40	50	60	70	80	90	95	
VTX25	185	148	105	66	35	27	21	15	12	4,2	1,5	
VTX50	365	292	207	132	69	54	42	30	23	8,4	3	
VTX75	521	424	309	198	102	81	63	45	35	12,6	4,5	

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

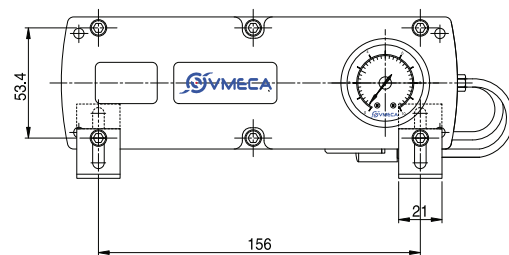
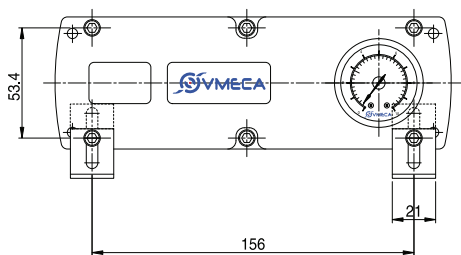
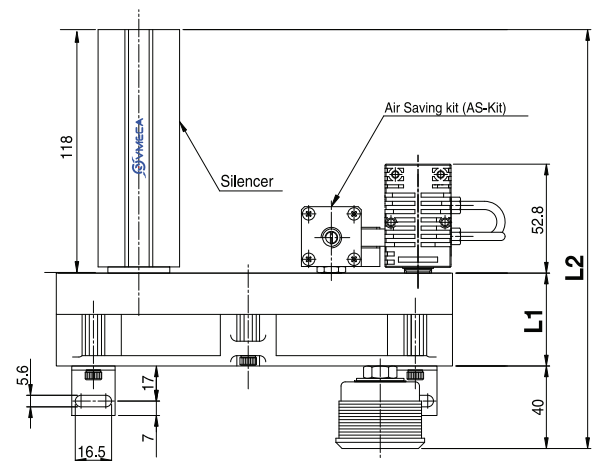
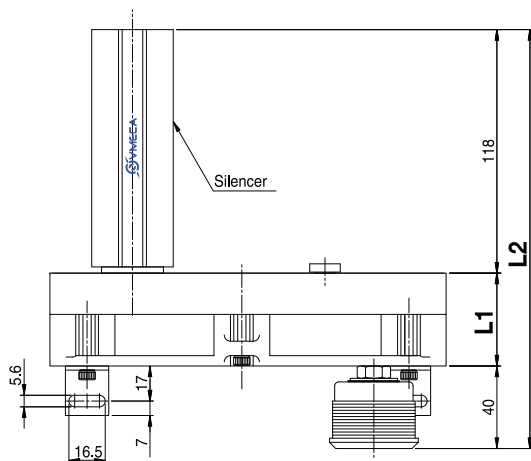
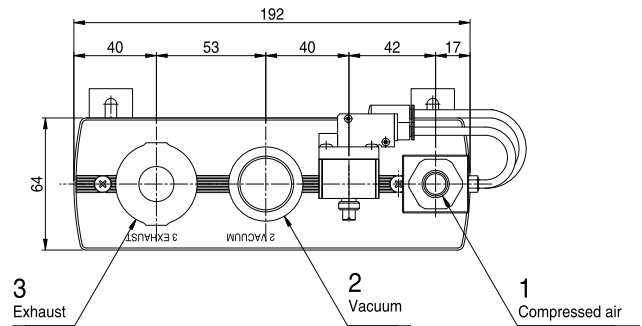
Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05
	10	20	30	40	50	60	70	80	90	95	
VTX25	0,028	0,068	0,134	0,26	0,49	0,736	1,126	1,598	2,7	3,76	
VTX50	0,014	0,035	0,067	0,13	0,25	0,368	0,563	0,799	1,35	1,88	
VTX75	0,011	0,023	0,046	0,095	0,167	0,246	0,376	0,533	0,9	1,264	

## Dimensional Information

### Standard



### with AS - KIT



[ Measure unit : mm ]

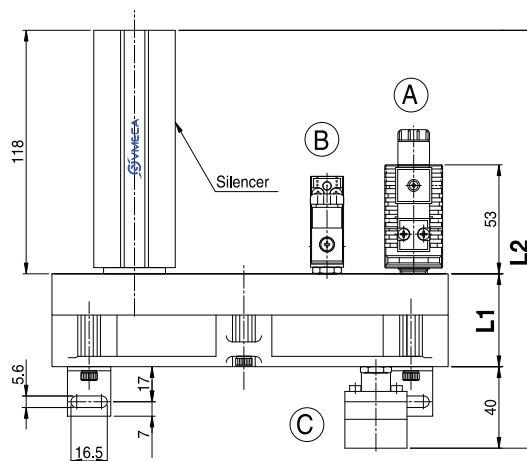
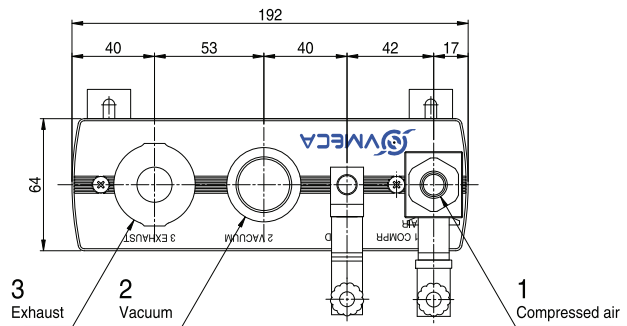
Port 1 : G1/4, NPSF1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

Model	(mm)	
	L1	L2
VTX25	45.5	203.5
VTX50	45.5	203.5
VTX75	65	223

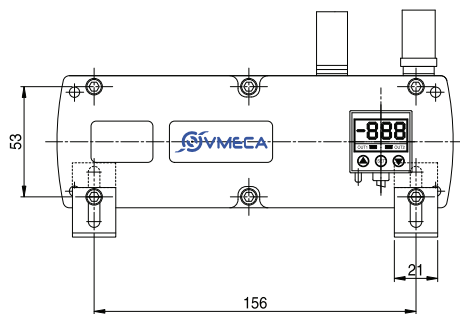
Port 1 : G1/4", NPSF 1/4"  
 Port 2 : G1/2", G3/4", G 1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

## Dimensional Information

Air supply control valve  
 Vacuum release control valve  
 Digital display vacuum switch



- (A) Air supply control valve
- (B) Vacuum release control valve
- (C) Digital display vacuum switch



[ Measure unit : mm ]

Port 1 : G1/4", NPT 1/4"  
 Port 2 : G1/2", G3/4", G 1"  
           NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

	(mm)	
Model	L1	L2
VTX25	45.5	206.5
VTX50	45.5	206.5
VTX75	65	226

## MM - Midiflex Pump

- Max. vacuum level* : **-92 kPa** (-27.17 inHg)
- Max. flow rate* : **2200 NI/min** (77.69 scfm)
- Supply air pressure* : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type* : Dry compressed air
- Working temperature* : -20°C ~ 80°C
- Noise level* : 55 ~ 65 dBA



### Main Advantages

This MM-Midiflex pump is a compact manifold based multi stage ejector multi pump arrangement. Much higher flow rates and fast evacuation times can be achieved with this type of pump.

The pump features a pressure gauge and a vacuum gauge along with two G3/4" ports for connecting more than one large bore vacuum pipe. As with most of the other pumps the MM-Midiflex can be specified with an air saving kit, and with Viton® or EPDM as seal options. This manifold has a special design allowing you to choose between two vacuum ports suited for your application. The pumps to achieve a combination of high flow rates and the highest vacuum levels.

### Order No.

**VTMM100 - V34 - AS A3 - SG2 - N V**



① **Model** – Capacity equivalent to electricity motor pump size

- **VTMM100** – 1KW
- VTMM150 – 1.5KW
- VTMM200 – 2KW
- VTMM200F – 2KW

② **Vacuum port**

- **V34** – 2XG3/4" (VTMM100, 150, 200)
- V01 – G1" (VTMM100, 150, 200)
- V02 – G1 1/2" (VTMM200F)

③ **Air saving kit** ( 108 )

- No mark – Standard
- **AS** – Air saving kit attach

④ **Air supply control valve**

- no mark – Without control valve
- A1 – AC110V Electrically operated valve
- A2 – AC220V Electrically operated valve
- **A3** – DC24V Electrically operated valve
- A4 – Pneumatically operated valve

⑤ **Vacuum switch**

- S2(P) – Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** – Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) – Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

※ Remark : ① S..(P)  
 Output type : PNP open collector.  
 ② VCM8 42 : M8-4Pin female connector.  
 only for type S2(P)

⑥ **Non return valve**

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

⑦ **Sealing**

- No mark – Standard (NBR)
- **V** – Viton®
- E** – EPDM



## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTMM100	92 (27.17)	1290	300~420	55~60	2389	>8	>19	>22
VTMM150		1740	450~630	55~65	2558	>10	>25	>32
VTMM200		2150	600~780	55~65	2981	>10	>32	>40
VTMM200F		2200	600~780	55~65	3260	>10	>32	>40

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90	
VTMM100	1290	844	562	291	146	109	72	40	20	3.2	
VTMM150	1740	1206	700	420	216	162	180	60	27	4.5	
VTMM200	2150	1530	1010	520	290	216	144	80	40	6.4	
VTMM200F	2200	1540	1016	528	290	216	144	80	40	6.4	

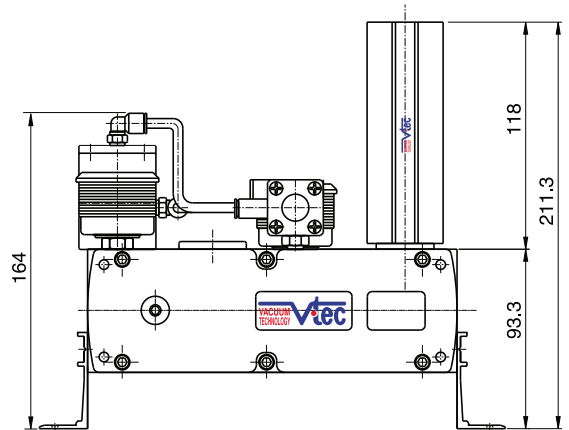
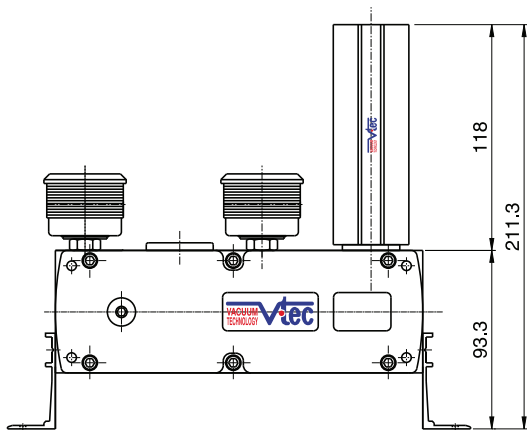
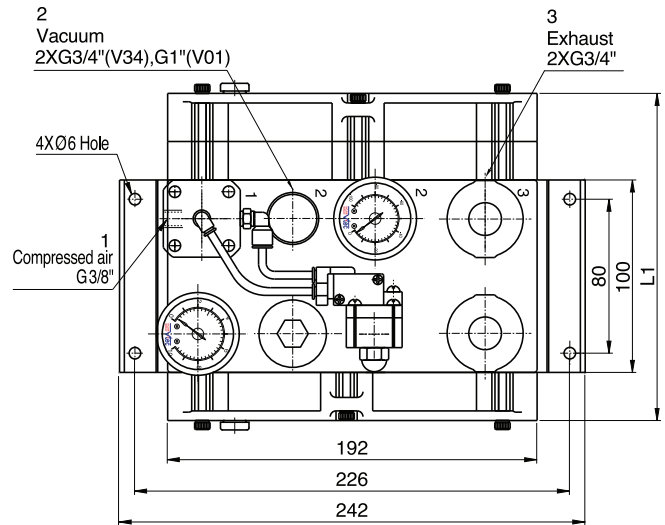
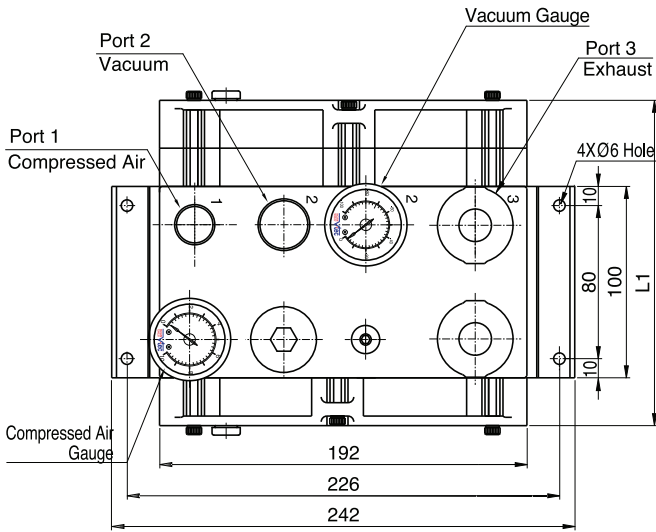
## Time in seconds to evacuate to vacuum level (sec/l)

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	10	20	30	40	50	60	70	80	90	
VTMM100	0,0053	0,0144	0,031	0,063	0,105	0,173	0,297	0,526	1,097	
VTMM150	0,0046	0,011	0,025	0,047	0,078	0,129	0,223	0,394	0,823	
VTMM200	0,0032	0,0076	0,0165	0,029	0,054	0,09	0,153	0,274	0,67	
VTMM200F	0,0031	0,0075	0,0164	0,029	0,054	0,09	0,153	0,274	0,67	

Dimensional Information

100  
VTMM (150)  
200

with AS - KIT



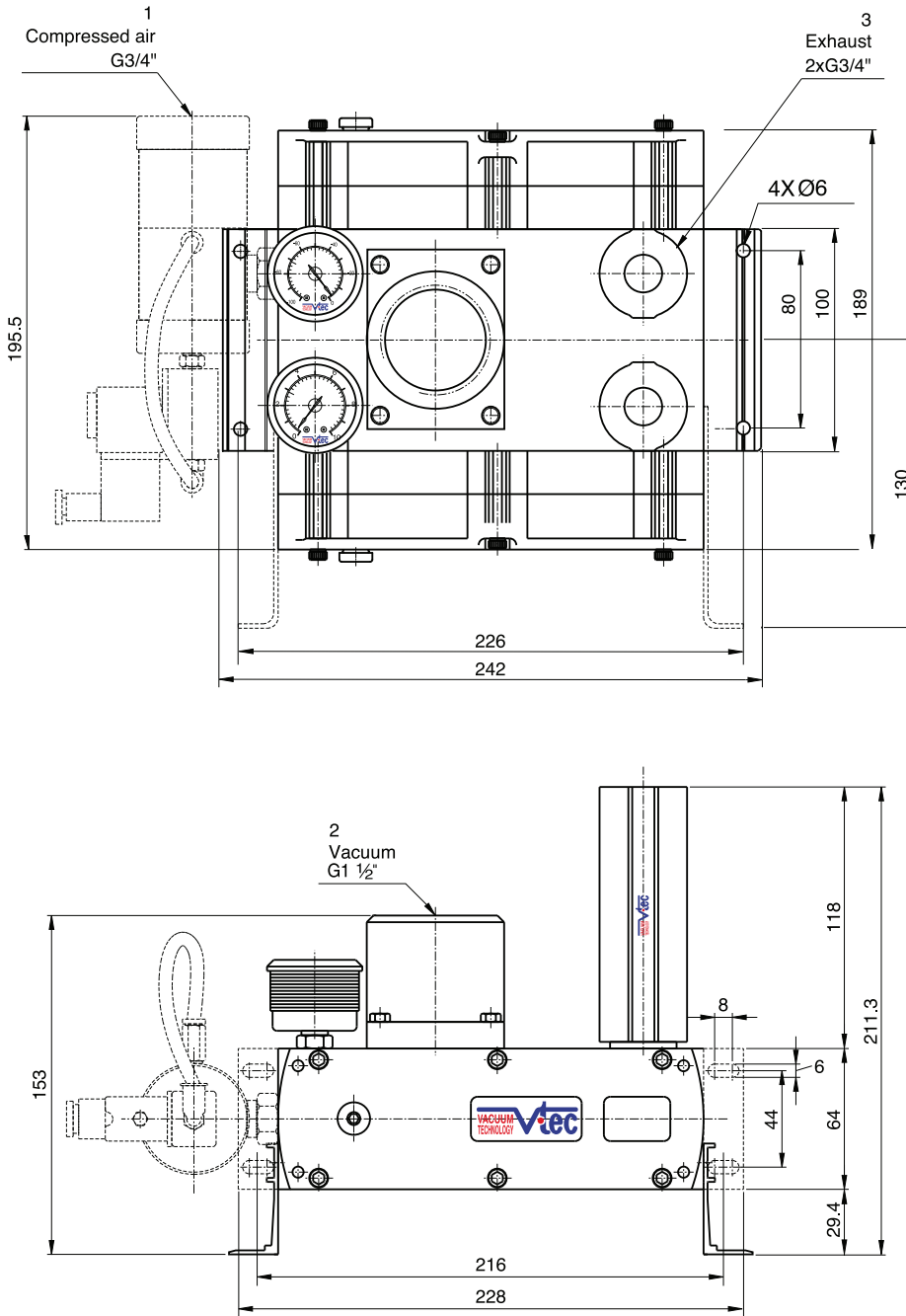
Port1 : G1/2"  
Port2 : 2xG3/4"(V34), G1" (V01)  
Port3 : 2xG3/4"

[ Measure unit : mm ]

(mm)	
Model	L1
VTMM100	150
VTMM150	169.5
VTMM200	189

Dimensional Information

VTMM 200F with air supply control valve



- Port1 : G3/4"
- Port2 : G1 1/2" (V02)
- Port3 : 2xG3/4"

[ Measure unit : mm ]

VACUUM PUMPS

## MX - Midiflex Pump

- Max. vacuum level** : **-97 kPa** (-28.64 inHg)
- Max. flow rate** : **1355 NI/min** (47.85 scfm)
- Supply air pressure** : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 63 ~ 68 dBA



## Main Advantages

This MX-Midiflex pump is a compact manifold based multi stage ejector multi pump arrangement. The MX-Midiflex has the same external dimensions to that of the VTMM, however the internal ejector system is different to enable higher levels of vacuum to be achieved. A good balance between higher flow rates and higher vacuum levels with fast evacuation times can be achieved with this type of pump. The pump features a vacuum gauge along with two 3/4" ports for connecting more than one large bore vacuum pipe. As with most of the other pumps the MX-Midiflex can be specified with an air saving kit, and with Viton® or EPDM as seal options.

## Order No.

**VTMX100 - V34 - AS - A3 - SG2 - N V**



① **Model** – Capacity equivalent to electricity motor pump size

- **VTMX100** – 1KW
- VTMX200 – 2KW
- VTMX300** – 3KW

② **Vacuum port**

- **V34** – 2XG3/4"
- V01 – G1"

③ **Air saving kit** (☑108)

- no mark – standard
- **AS** – Air saving kit attach

④ **Air supply control valve**

- no mark – Without control valve
- A1 – Electrically operated valve AC110V
- A2 – Electrically operated valve AC220V
- **A3** – Electrically operated valve DC24V
- A4 – Pneumatically operated valve

⑤ **Vacuum switch**

- S2(P) – Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** – Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P)** – Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

※ Remark : ① S..(P)  
→ Output type : PNP open collector.  
② VCM8 42 : M8-4Pin female connector.  
only for type S2(P)

⑥ **Non return valve**

- no mark – standard
- **N** – non return valve

⑦ **Sealing**

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

## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTMX100	97 (28.64)	695	504~600	63 ~ 68	2390	>8	>19	>22
VTMX200		1037	756~900	63 ~ 68	2549	>10	>25	>32
VTMX300		1355	1008~1200	63 ~ 68	3438	>10	>32	>40

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

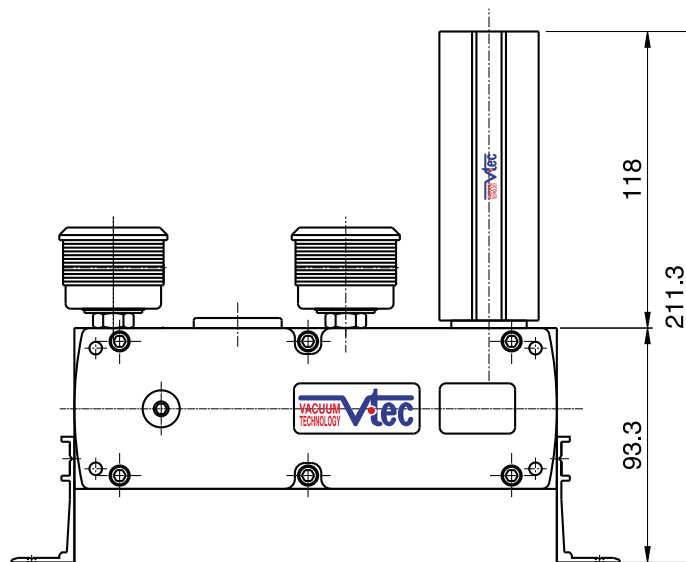
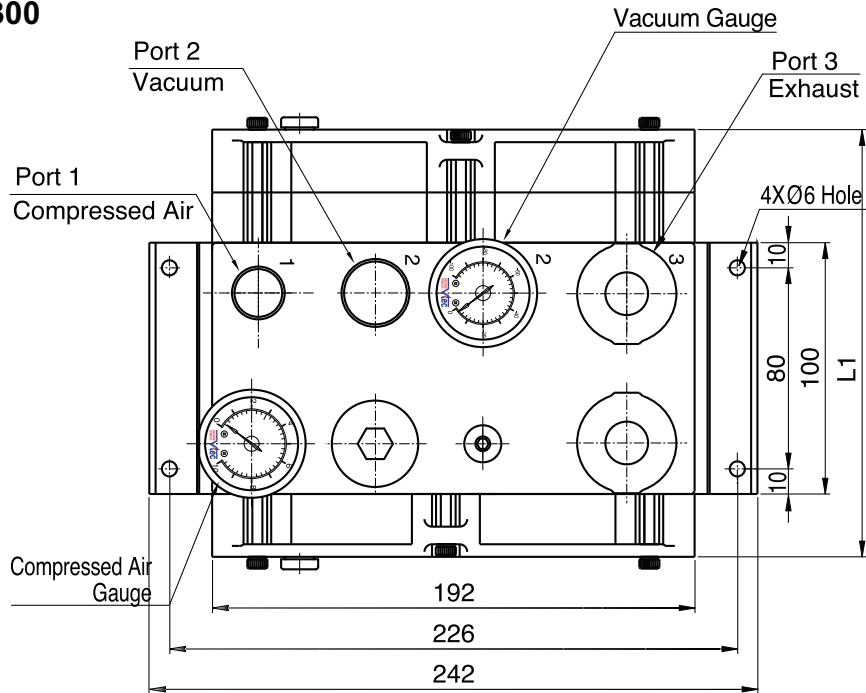
Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05
	0	10	20	30	40	50	60	70	80	90	95	
VTMX100	695	568	411	260	139	108	84	60	45	17	6	
VTMX200	1037	844	615	398	211	162	126	90	69	26	9	
VTMX300	1355	1096	813	530	289	216	168	120	92	33	12	

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

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05
	10	20	30	40	50	60	70	80	90	95	
VTMX100	0.0093	0.017	0.036	0.064	0.123	0.184	0.272	0.397	0.674	0.948	
VTMX200	0.0064	0.012	0.024	0.047	0.082	0.123	0.186	0.256	0.448	0.631	
VTMX300	0.0049	0.009	0.018	0.031	0.061	0.092	0.141	0.197	0.336	0.473	

**Dimensional Information**

**100  
VTMX (200)  
300**



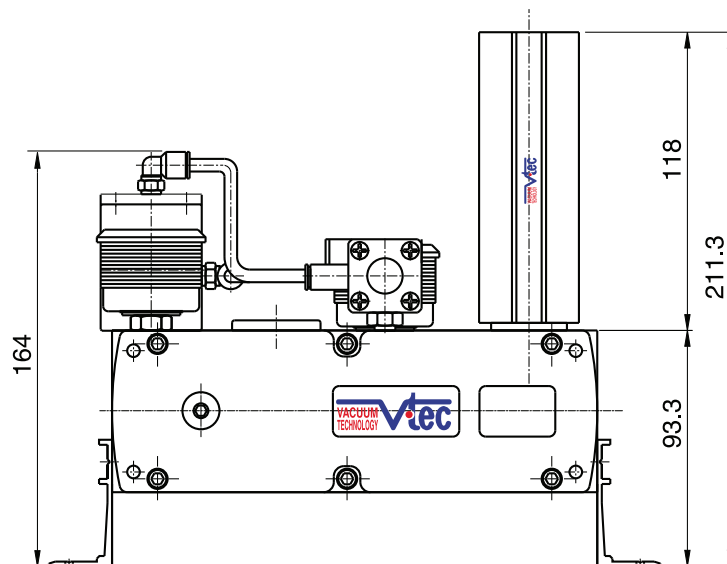
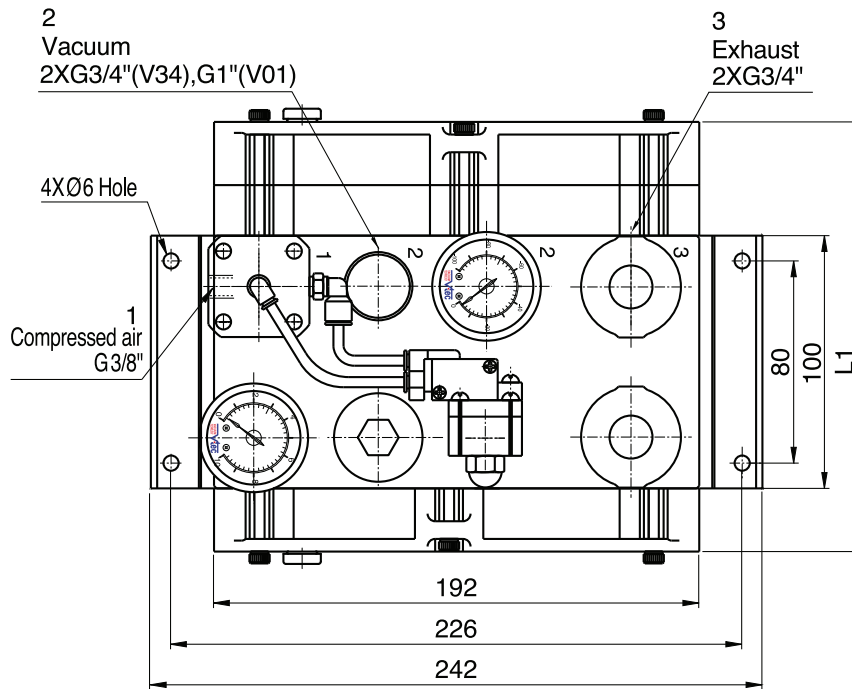
[ Measure unit : mm ]

- Port1 : G1/2"
- Port2 : 2xG3/4" (V34), G 1" (V01)
- Port3 : 2xG3/4"

Model	L1 (mm)
VTMX100	150
VTMX200	169.5
VTMX300	208.5

Dimensional Information

with AS - KIT



[ Measure unit : mm ]

- Port1 : G1/2", G3/8"
- Port2 : 2xG3/4" (V34), G 1" (V01)
- Port3 : 2xG3/4"

Model	L1 (mm)
VTMX100	150
VTMX200	169.5
VTMX300	208.5

VACUUM PUMPS

## H - Classic / H - Midiflex Pump

- Max. vacuum level : **-100.8 kPa** (-29.76 inHg)
- Max. flow rate : **1042 NI/min** (36.8 scfm)
- Supply air pressure : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 60 ~ 65 dBA

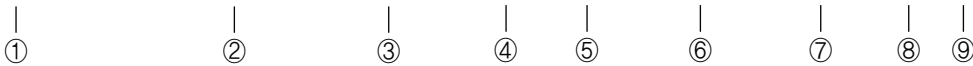


### Main Advantages

The H-Classic / H-Midiflex range produces the very highest vacuum levels, whilst maintaining good flow rates for quick evacuation time. There are three models to choose from two classic sharp pumps and one midiflex pump, ranging from VTH50 to the VTH300. As with most of the other pumps there are options for an air saving kit, integral non return valve and Viton® or EPDM seals.

### Order No.

## VTH50 - 1434 A - AS - A3 R3 - CL - SG2 N V



- ① Model – Capacity equivalent to electricity motor pump size
- **VTH50** – 0.30KW
  - **VTH150** – 0.90KW
  - **VTH300** – 1.00KW

- ② Connection plate

	Air port	Vacuum port	Mat' l
VTH50, VTH150	1412 A	G1/4"	G1/2"
	<b>1434 A</b>	G1/4"	G3/4"
	1401 A	G1/4"	G1"
	N1412 A	NPT1/4"	NPT1/2"
	N1434 A	NPT1/4"	NPT3/4"
	N1401 A	NPT1/4"	NPT 1"
All PPS	1812 P	G1/8"	G1/2"
	1834 P	G1/8"	G3/4"
	N1812 P	NPT1/8"	NPT1/2"
	N1834 P	NPT1/8"	NPT3/4"
VTH300	V34	G1/2"	2XG3/4"
	V01	G1/2"	G1"

- ※ Remark :
- Air supply port with air control valve or AS-kit  
VTH50, VTH150 : G1/4"  
VTH300 : G3/8"
  - PPS Mat' l is available with VTH50, VTH150

- ③ Air saving Kit ( 108 )
- No mark – Standard
  - **AS** – Air saving kit attached

- ④ Air supply control valve
- |             |           |
|-------------|-----------|
| A1          | – AC 110V |
| A2          | – AC 220V |
| • <b>A3</b> | – DC 24V  |
| D1*         | – AC 110V |
| D2*         | – AC 220V |
| D3*         | – DC 24V  |

D.\* : Double solenoid valve  
Double solenoid valve is available only with 'DN' or 'DL', section ⑥

- ⑤ Vacuum release control valve
- |             |          |
|-------------|----------|
| R1          | – AC110V |
| R2          | – AC220V |
| • <b>R3</b> | – DC24V  |

- ⑥ Solenoid Terminal
- |              |   |
|--------------|---|
| DN           | – DIN type without lead wire  |
| DL           | – DIN type with lamp without lead wire  |
| • <b>CL*</b> | – Connector type with lamp & 0.3m lead wire   |
| 2B*          | – DIN type with '2 in 1' BUS cable<br>(Air control v/v + Vacuum release v/v)                  |
| 3B*          | – DIN type with '3 in 1' BUS cable<br>(Air control v/v + Vacuum release v/v + Digital switch) |

\* Can not available with double solenoid valve

- ※ Remark  
CL : Available only with DC24V  
Can not available with VTH300  
3B : Available only with DC24V  
Available only with 'S2' or 'S2P', section ⑦  
 About 'BUS cable' ( 340, 341 )

- ⑦ Vacuum switch
- |                 |   |
|-----------------|---|
| S2(P)           | – Digital output 2points, No analog supply<br>M8-4Pin male connector (0.3m lead wire) |
| • <b>SG2(P)</b> | – Digital output 2points, No analog supply<br>Grommet type 4-core 2m lead wire        |
| SG3(P)          | – Digital output 2points, Analog supply<br>Grommet type 4-core 2m lead wire           |

※ Remark : ① S..(P)  
Output type : PNP open collector.  
② VCM8 42 : M8-4Pin female connector, only for type S2(P)

- ⑧ Non-return valve
- |            |                    |
|------------|--------------------|
| No mark    | – Standard         |
| • <b>N</b> | – Non-return valve |

- ⑨ Sealing
- |            |                  |
|------------|------------------|
| No mark    | – Standard (NBR) |
| • <b>V</b> | – Viton®         |
| <b>E</b>   | – EPDM           |



## Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTH50	100,8 (29.76)	185	120-156	60-65	632	>8	>12	>12
VTH150		521	420-456	60-65	780	>8	>15	>15
VTH300		1042	870-912	60-65	2682	>10	>19	>22

## Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05	29.23
	0	10	20	30	40	50	60	70	80	90	95	99	
VTH50	185	147	106	66	32	21	15	9,6	7,8	3,6	1,2	0,3	
VTH150	521	423	307	198	105	78	54	39	27	7,8	3,6	0,48	
VTH300	1042	846	614	396	210	156	108	78	54	15,6	7,2	0,96	

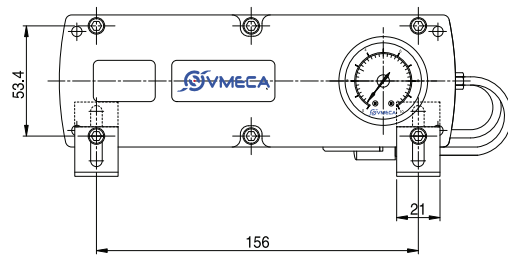
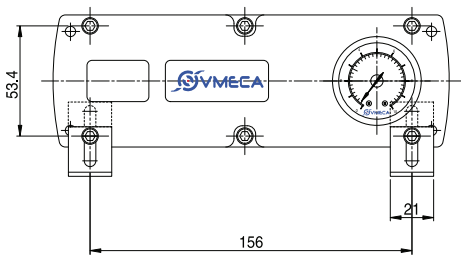
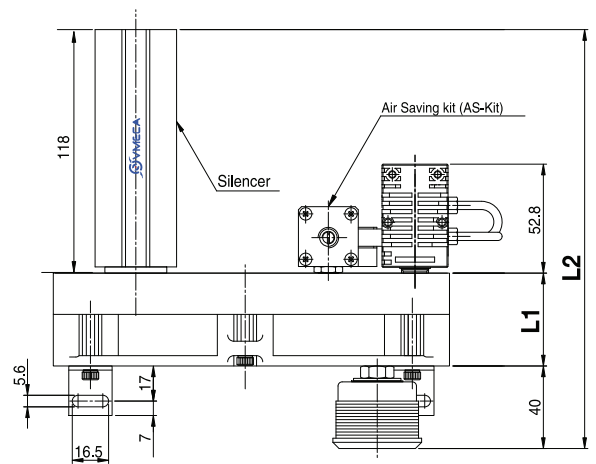
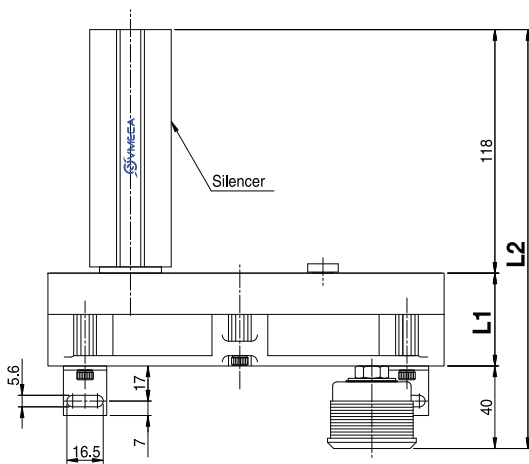
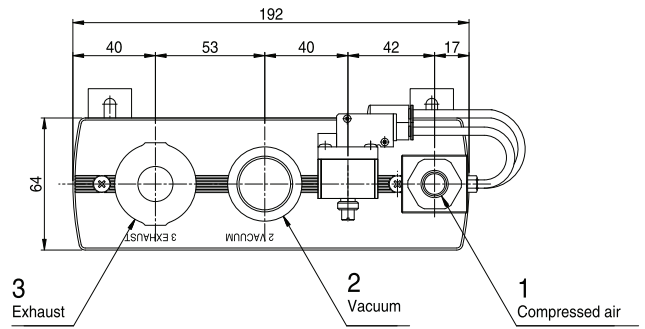
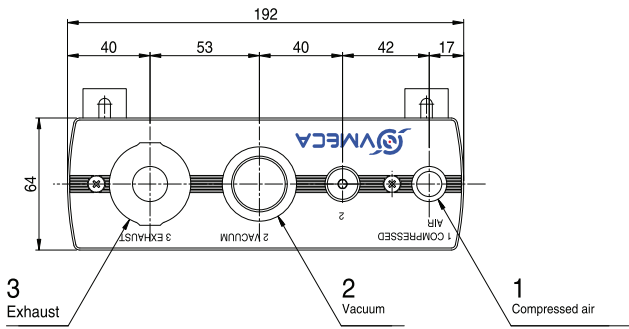
## Time in seconds to evacuate to vacuum level (sec/l)

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57	28.05	29.23
	10	20	30	40	50	60	70	80	90	95	99	
VTH50	0,029	0,07	0,12	0,25	0,55	0,92	1,446	2,2	3,39	4,986	9,18	
VTH150	0,011	0,025	0,05	0,097	0,17	0,272	0,41	0,6	1,17	1,82	3,586	
VTH300	0,006	0,013	0,025	0,048	0,085	0,136	0,205	0,3	0,585	0,91	1,798	

Dimensional Information

Standard

with AS - KIT



[ Measure unit : mm ]

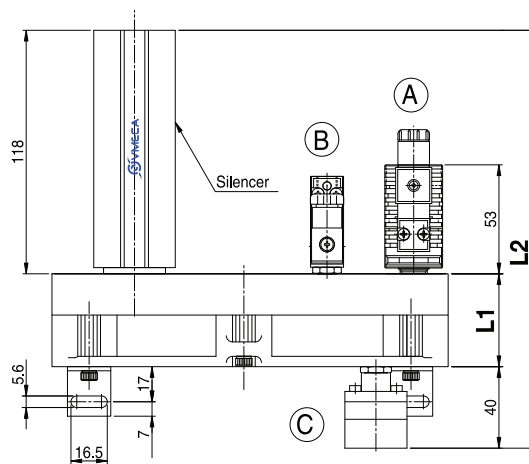
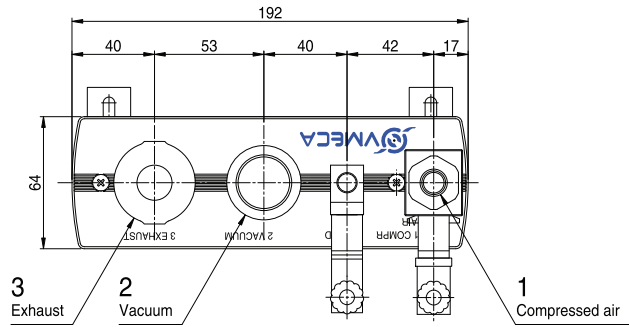
Port 1 : G1/4, NPT1/4"  
 Port 2 : G1/2", G3/4", G1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

	(mm)	
Model	L1	L2
VTH50	45.5	203.5
VTH150	65	223

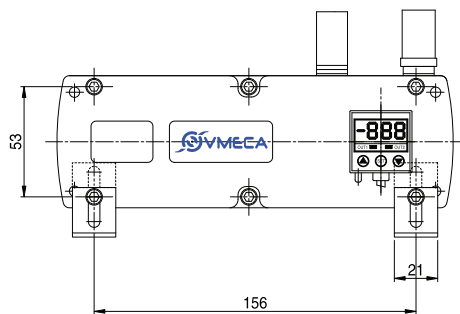
Port 1 : G1/4", NPSF 1/4"  
 Port 2 : G1/2", G3/4", G 1"  
 NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

**Dimensional Information**

Air supply control valve  
 Vacuum release control valve  
 Digital display vacuum switch



- Ⓐ Air supply control valve
- Ⓑ Vacuum release control valve
- Ⓒ Digital display vacuum switch



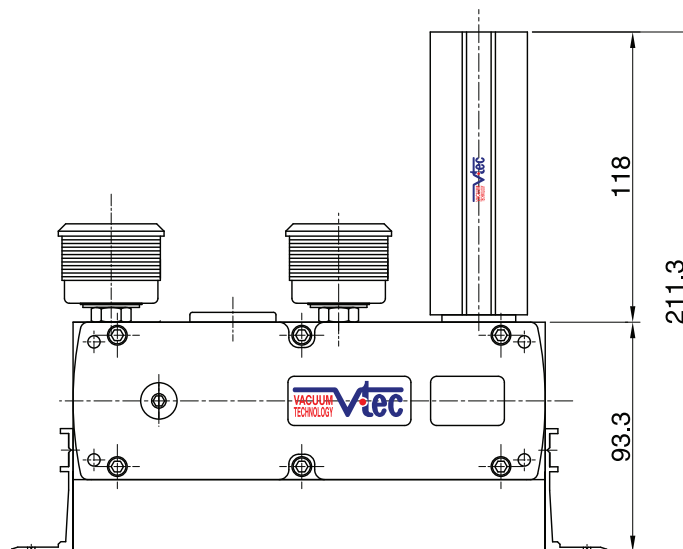
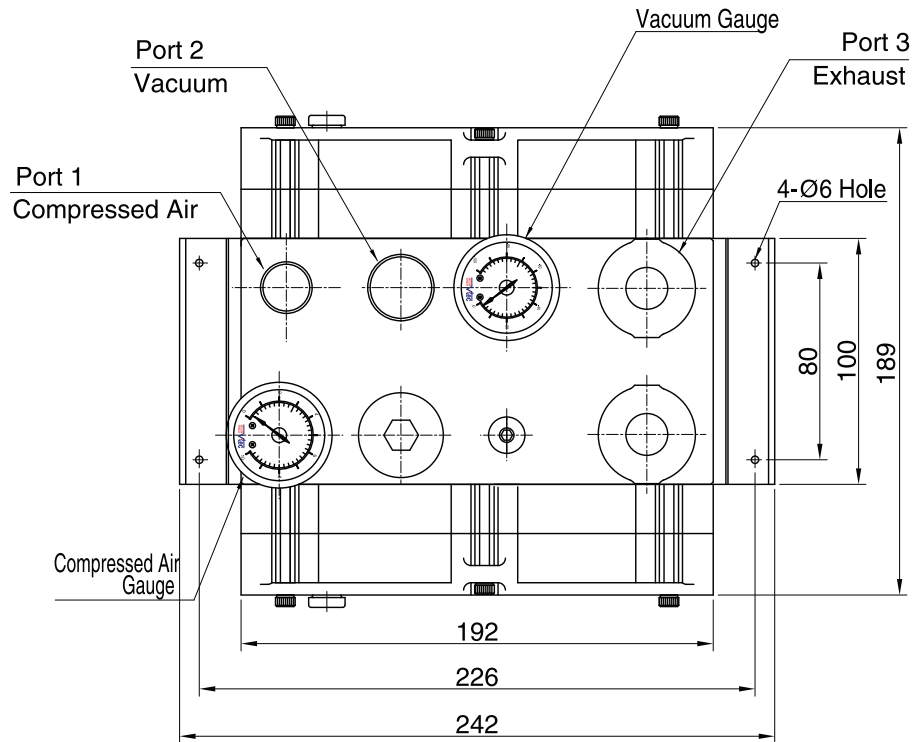
[ Measure unit : mm ]

Port 1 : G1/4", NPSF 1/4"  
 Port 2 : G1/2", G3/4", G 1"  
           NPT1/2", NPT3/4", NPT 1"  
 Port 3 : G3/4"

	(mm)	
Model	L1	L2
VTH50	45.5	206.5
VTH150	65	226

Dimensional Information

Standard  
VTH 300

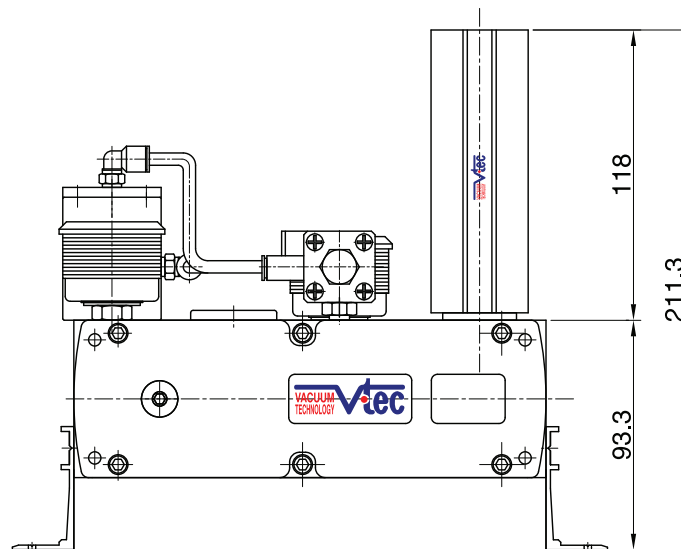
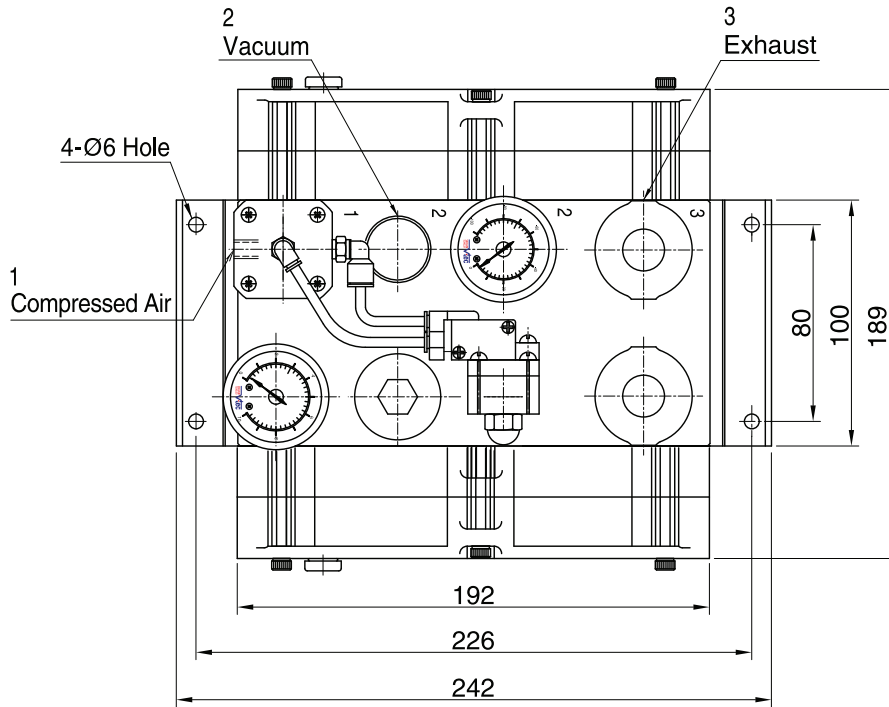


[ Measure unit : mm ]

- Port1 : G1/2"
- Port2 : 2xG3/4" (V34), G1" (V01)
- Port3 : 2xG3/4"

Dimensional Information

with AS - KIT



[ Measure unit : mm ]

- Port1 : G3/8"
- Port2 : 2xG3/4" (V34), G1"(V01)
- Port3 : 2xG3/4"

VACUUM PUMPS

## L - Maxflex Pump

- Max. vacuum level : **-91 kPa** (-26.87 inHg)
- Max. flow rate : **6100 NI/min** (215.4 scfm)
- Supply air pressure : **3~6bar, max 7bar**  
(43.5~87 psi, max 101.5psi)
- Supply air type : Dry compressed air
- Working temperature : -20°C ~ 80°C
- Noise level : 55 ~ 68 dBA



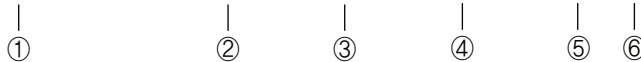
### Main Advantages

This is the most significant model based on the multi stage principle. Low compressed air are required for massive evacuation volumes at high vacuum flow and high vacuum level rate Vtec air saving kit is available in this pump in order to maximize the reduction of energy usage.

The pumps utilize an integrally mounted large bore air supply ON/OFF valve as an option. Viton® & EPDM seals can be also stipulated as an option as well.

### Order No.

## VTM150LEF - AS - A3 - SG2 - N V



#### ① Model – Capacity equivalent to electricity motor pump size

- **VTM150LEF** – 1.5KW
- VTM200LEF – 2KW
- VTM300LEF – 3KW
- VTM400LEF – 4KW
- VTM500LEF – 5KW
- VTM600LEF – 6KW
- VTM800LEF – 8KW

#### ② Air saving kit ( 108 )

- No mark – Standard
- **AS** – Air saving kit attach

#### ③ Air supply control valve

- No mark – Without control valve
- A1 – AC110V Electrically operated valve
- A2 – AC220V Electrically operated valve
- **A3** – DC24V Electrically operated valve
- A4 – Pneumatically operated valve

#### ④ Vacuum switch

- S2(P) – Digital output 2points, No analog supply  
M8-4Pin male connector (0,3m lead wire)
- **SG2(P)** – Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) – Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

\* Remark : ① S..(P)  

 Output type : PNP open collector.  
 ② VCM8 42 : M8-4Pin female connector.  
 only for type S2(P)

#### ⑤ Non return valve

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

#### ⑥ Sealing

- No mark – Standard (NBR)
- **V** – Viton®
- E** – EPDM

**Characteristics**

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTM150LEF	91 (26.87)	1680	684	55~65	3143	>8	>25	>32
VTM200LEF		2100	912	55~65	3260	>10	>32	>40
VTM300LEF		2600	1368	55~68	3660	>12	>40	>60
VTM400LEF		3180	1824	55~68	5785	>12	>40	>60
VTM500LEF		4200	2280	60~68	6275	>14	>45	>70
VTM600LEF		5010	2736	60~68	6641	>14	>50	>70
VTM800LEF		6100	3648	60~68	7497	>15	>50	>75

**Vacuum flow in (NI/m) at different Vacuum level (-kPa)**

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		0	10	20	30	40	50	60	70	80	90
VTM150LEF		1680	838	642	439.2	244.8	190.8	144	97.2	39.6	4.32
VTM200LEF		2100	1260	900	585.6	326.4	254.4	192	129.6	52.8	5.76
VTM300LEF		2600	1800	1260	878.4	489.6	381.6	288	194.4	92	8.67
VTM400LEF		3180	2400	1608	1171	652.8	508.8	384	259.2	105.6	11.52
VTM500LEF		4200	2950	2020	1464	816	636	480	324	132	14.4
VTM600LEF		5010	3450	2450	1757	979.2	763.2	576	388.8	158.4	17.28
VTM800LEF		6100	4200	3340	2342	1306	1018	768	518.4	211.2	23

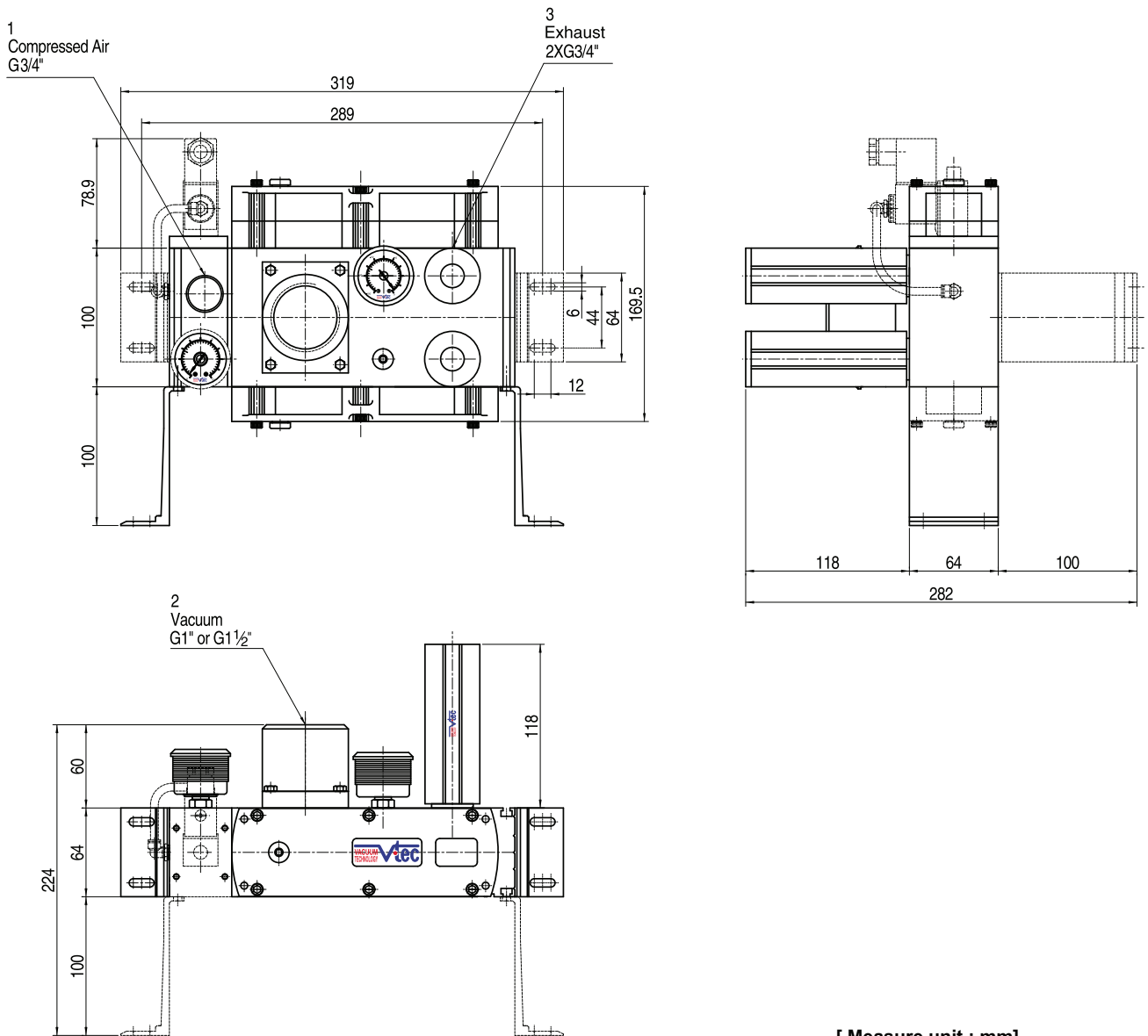
VACUUM PUMPS

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

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		10	20	30	40	50	60	70	80	90
VTM150LEF		0.0033	0.009	0.02	0.04	0.071	0.11	0.17	0.31	0.87
VTM200LEF		0.0025	0.007	0.015	0.03	0.053	0.083	0.128	0.21	0.58
VTM300LEF		0.0017	0.005	0.01	0.02	0.035	0.055	0.085	0.16	0.44
VTM400LEF		0.0013	0.004	0.008	0.015	0.027	0.041	0.064	0.11	0.29
VTM500LEF		0.001	0.003	0.006	0.012	0.021	0.033	0.051	0.09	0.26
VTM600LEF		0.0008	0.0023	0.005	0.01	0.018	0.028	0.043	0.08	0.22
VTM800LEF		0.0006	0.0018	0.004	0.008	0.013	0.021	0.032	0.05	0.15

Dimensional Information

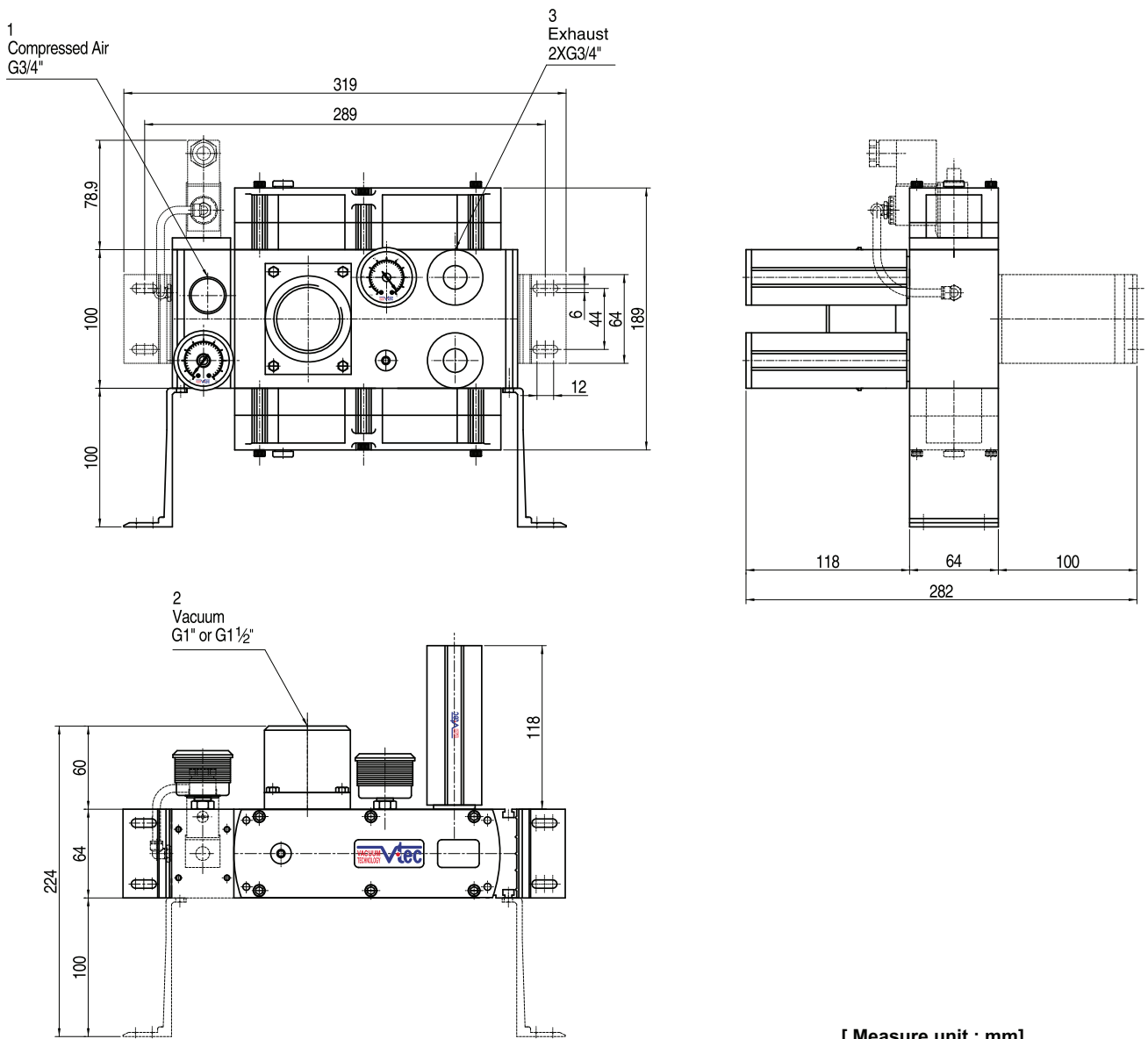
VTM150LEF





Dimensional Information

VTM200LEF

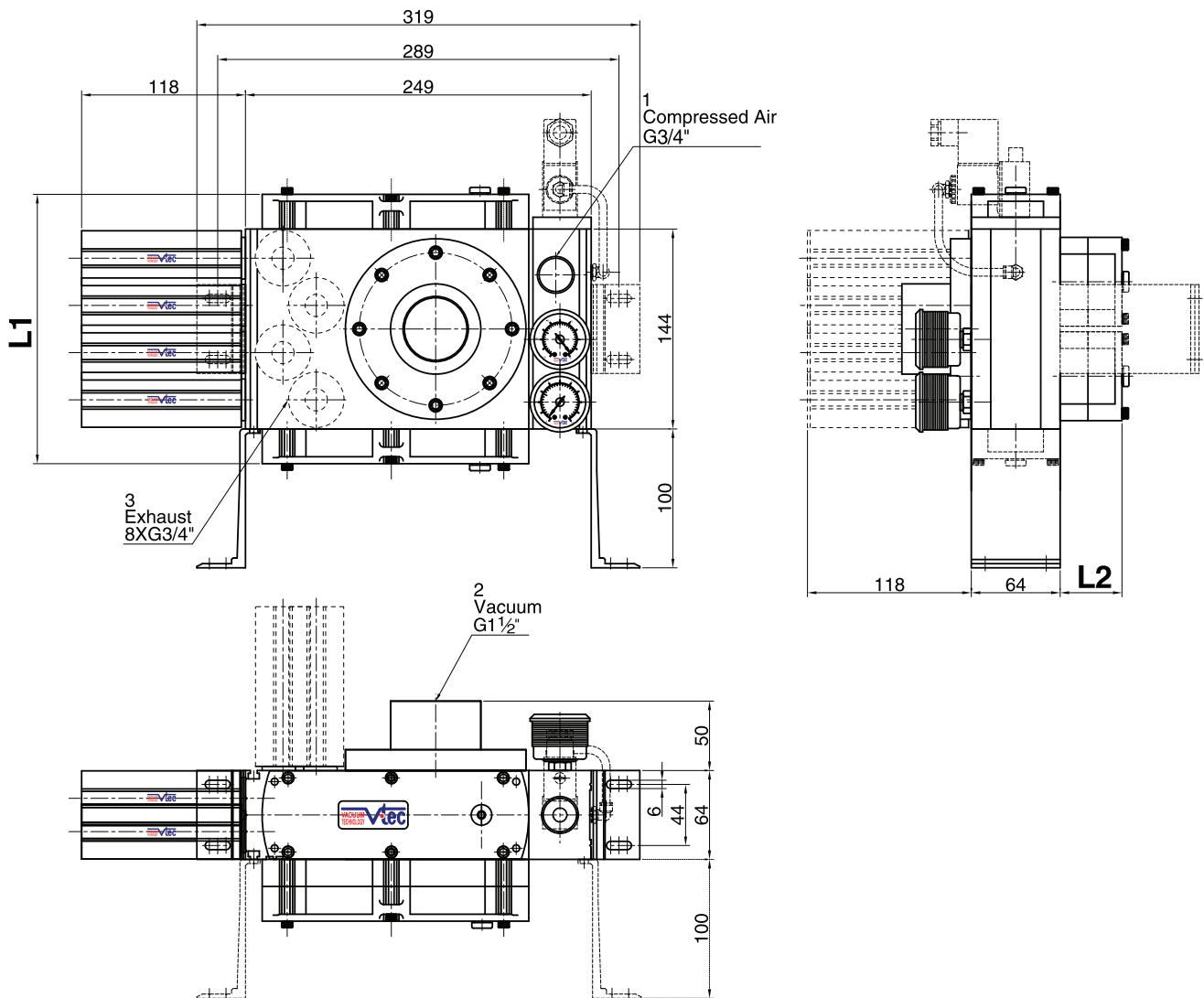


VACUUM PUMPS

Dimensional Information

**VTM300LEF**

400  
500

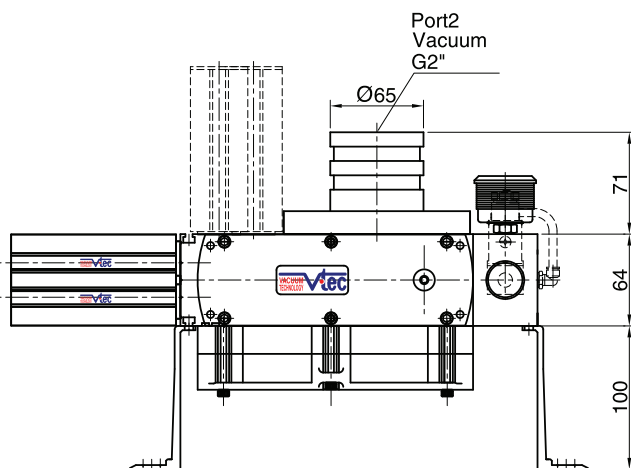
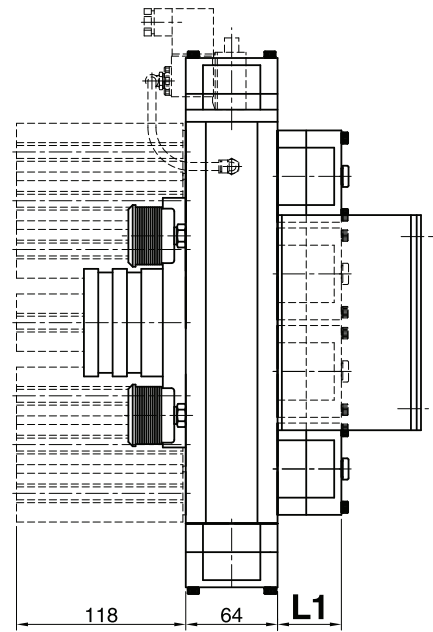
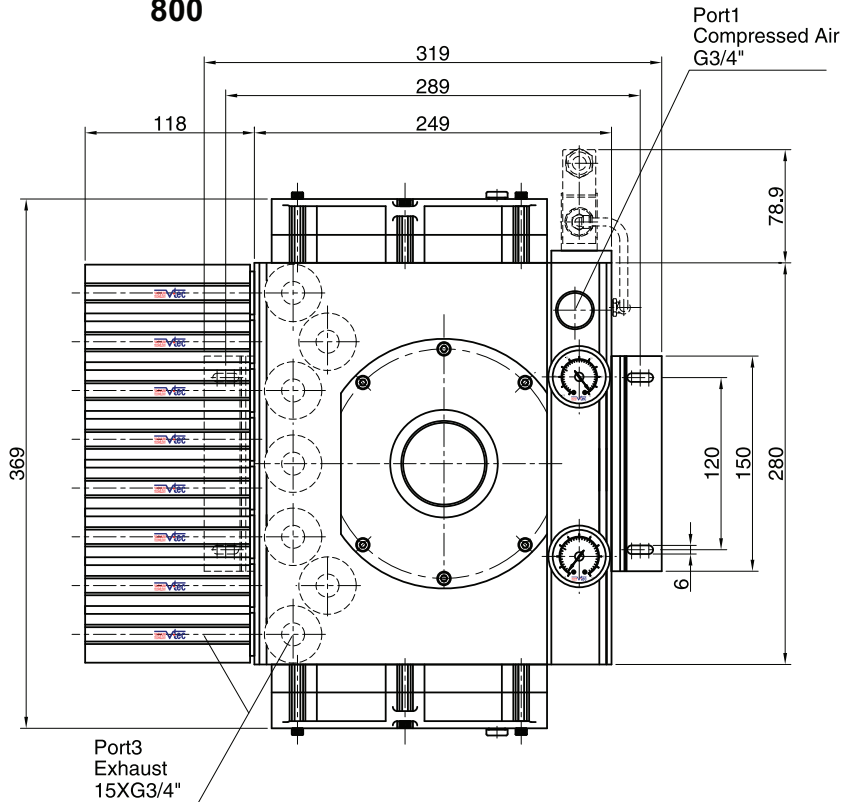


[ Measure unit : mm ]

Model	(mm)	
	L1	L2
VTM300LEF	194	44.5
VTM400LEF	233	44.5
VTM500LEF	233	64

Dimensional Information

**VTM600LEF**  
**800**



[ Measure unit : mm ]

(mm)	
Model	L1
VTM600LEF	44.5
VTM800LEF	64

VACUUM PUMPS

## M - Maxflex Pump

- Max. vacuum level** : -92 kPa (-27.17 inHg)
- Max. flow rate** : 11000 NI/min (388.5 scfm)
- Supply air pressure** : 4~6bar, max 7bar  
(58~87 psi, max 101.5psi)
- Supply air type** : Dry compressed air
- Working temperature** : -20°C ~ 80°C
- Noise level** : 55 ~ 68 dBA



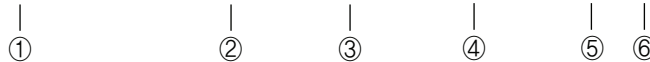
### Main Advantages

This range of M-Maxflex pumps produces the very highest flow rates, as the name denotes all the pumps uses a large bore common vacuum port with port sizes up to 2". This type of pump has many applications but is particularly useful for high leakage systems, porous materials centerising vacuum system and large vacuum circuits.

The pumps are based around a manifold design and utilize an integrally mounted large bore air supply on/off valve as option. The pumps also come with vacuum and air pressure gauges with two options for positioning of the exhausts, mounting brackets are also supplied. Air saving kits and VITON® & EPDM seals options are also available with this pump.

### Order No.

## VTMM200EF - AS - A3 - SG2 - N V



#### ① Model – Capacity equivalent to electricity motor pump size

- **VTMM200EF** – 2KW
- VTMM300EF – 3KW
- VTMM400EF – 4KW
- VTMM500EF – 5KW
- VTMM600EF – 6KW
- VTMM800EF – 8KW
- VTMM1000EF – 10KW

#### ② Air saving kit (108)

- No mark – Standard
- **AS** – Air saving kit attach

#### ③ Air supply control valve

- No mark – Without control valve
- A1 – AC110V Electrically operated valve
- A2 – AC220V Electrically operated valve
- **A3** – DC24V Electrically operated valve
- A4 – Pneumatically operated valve

#### ④ Vacuum switch

- S2(P) – Digital output 2points, No analog supply  
M8-4Pin male connector (0.3m lead wire)
- **SG2(P)** – Digital output 2points, No analog supply  
Grommet type 4-core 2m lead wire
- SG3(P) – Digital output 2points, Analog supply  
Grommet type 4-core 2m lead wire

※ Remark : ① S..(P)  
→ Output type : PNP open collector.

② VCM8 42 : M8-4Pin female connector.  
only for type S2(P)

#### ⑤ Non return valve

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

#### ⑥ Sealing

- No mark – Standard (NBR)
- **V** – Viton®
- E – EPDM

**Characteristics**

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTMM200EF	92 (27.17)	2200	600-780	55~65	4270	>10	>32	>40
VTMM300EF		3300	900-1260	55~65	5584	>12	>40	>60
VTMM400EF		4400	1200-1680	55~65	5939	>12	>40	>60
VTMM500EF		5500	1500-2100	65~68	6275	>14	>45	>70
VTMM600EF		6600	1800-2520	65~68	11579	>14	>50	>70
VTMM800EF		8800	2400-3360	65~68	12300	>15	>50	>75
VTMM1000EF		11000	3000-4140	65~68	15800	>18	>65	>90

**Vacuum flow in (NI/m) at different Vacuum level (-kPa)**

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		0	10	20	30	40	50	60	70	80	90
VTMM200EF		2200	1540	1016	528	290	216	144	80	40	6.4
VTMM300EF		3300	2310	1781	793	435	324	216	120	60	9.6
VTMM400EF		4400	3080	2036	1058	580	432	288	160	80	12.8
VTMM500EF		5500	3850	2545	1323	725	540	360	200	100	16
VTMM600EF		6600	4620	3055	1588	870	648	432	240	120	19.2
VTMM800EF		8800	6164	4076	2119	1160	864	576	320	160	25.6
VTMM1000EF		11000	7700	5090	2646	1450	1080	720	400	200	32

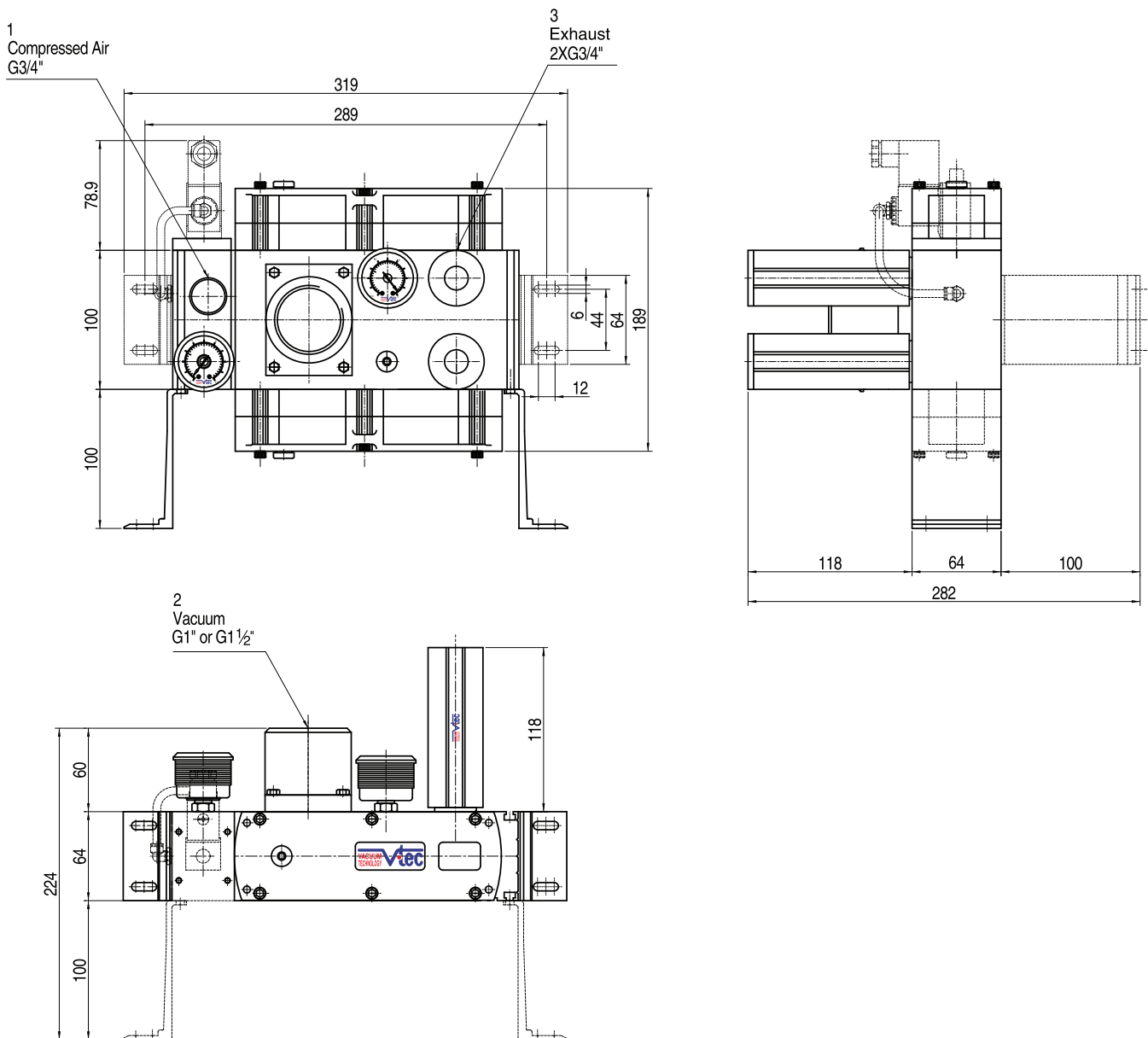
VACUUM PUMPS

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

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
		10	20	30	40	50	60	70	80	90
VTMM200EF		0.0031	0.0075	0.0164	0.029	0.054	0.09	0.153	0.274	0.67
VTMM300EF		0.0023	0.0056	0.0123	0.022	0.041	0.068	0.115	0.206	0.503
VTMM400EF		0.0015	0.0038	0.0082	0.014	0.027	0.045	0.076	0.137	0.335
VTMM500EF		0.0013	0.0033	0.0072	0.013	0.024	0.04	0.067	0.120	0.294
VTMM600EF		0.0012	0.0028	0.0062	0.011	0.021	0.034	0.057	0.103	0.252
VTMM800EF		0.0008	0.0019	0.0041	0.007	0.014	0.022	0.038	0.068	0.168
VTMM1000EF		0.0007	0.0016	0.0036	0.006	0.012	0.018	0.031	0.057	0.147

Dimensional Information

**VTMM200EF**

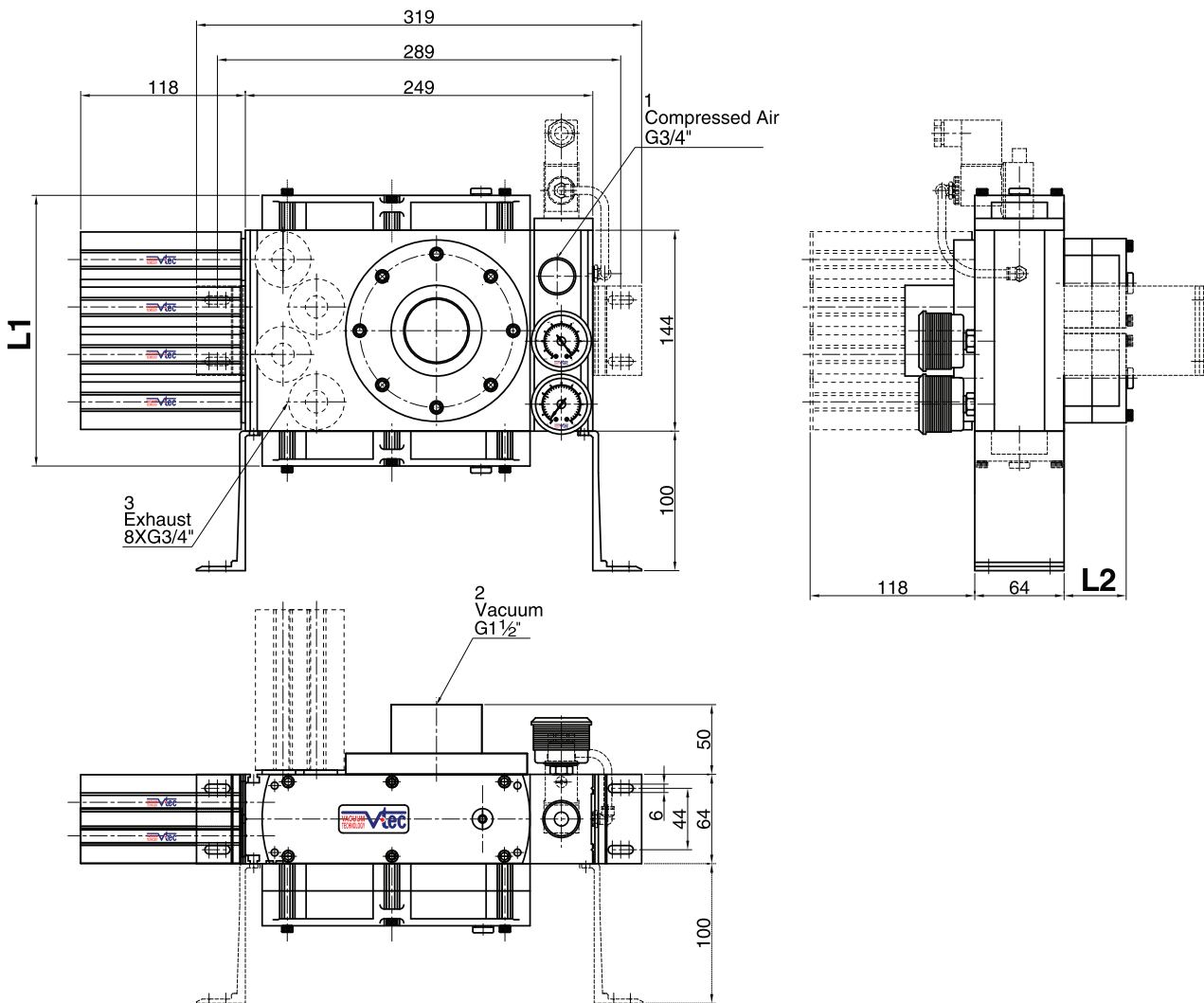


[ Measure unit : mm ]

**Dimensional Information**

**VTMM300EF**

400  
500



[ Measure unit : mm ]

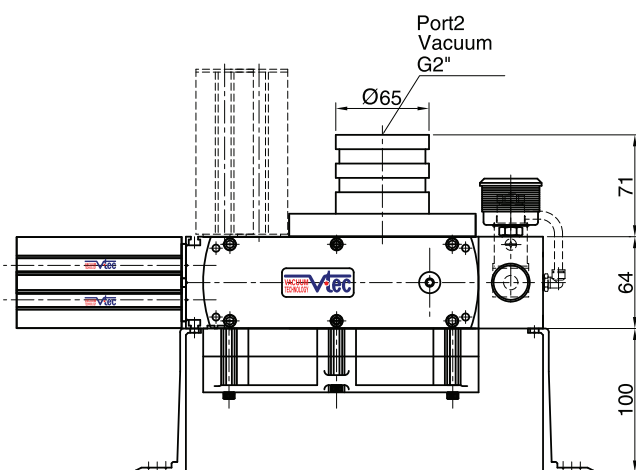
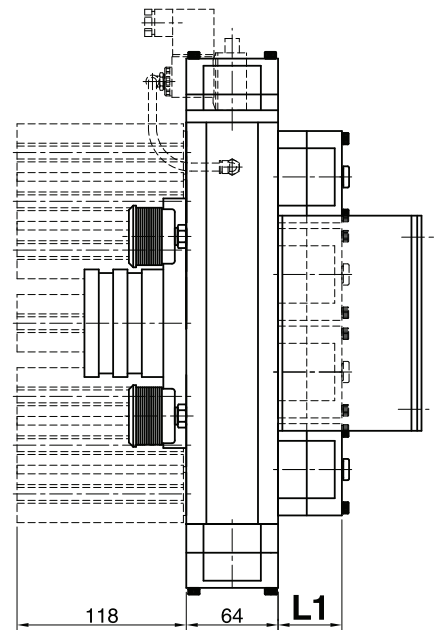
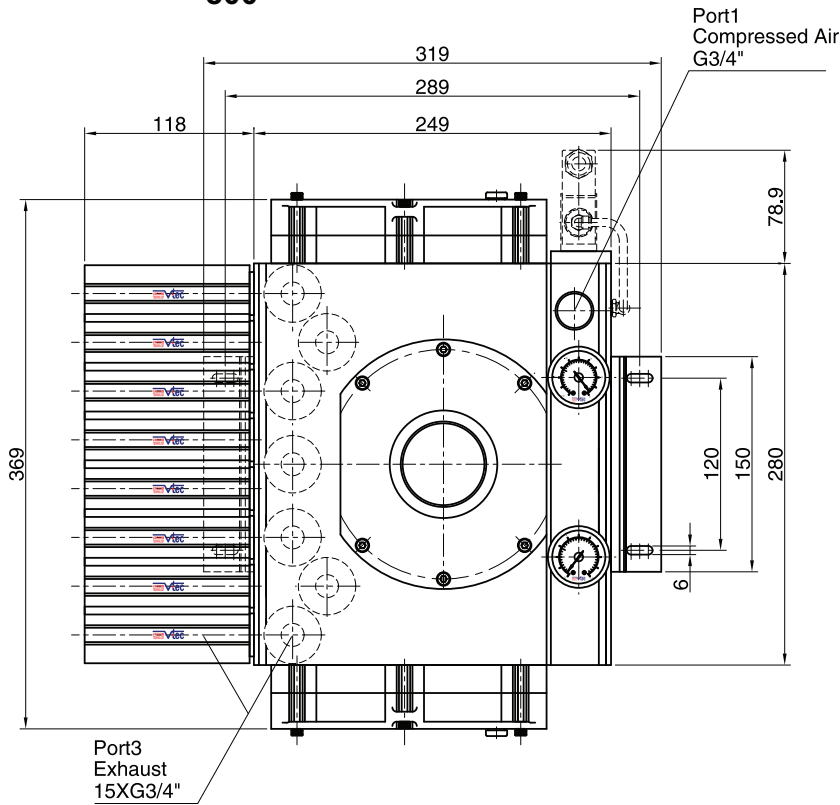
(mm)

Model	L1	L2
VTMM300-EF	194	44.5
VTMM400-EF	233	44.5
VTMM500-EF	233	44.5

VACUUM PUMPS

**Dimensional Information**

**VTMM600EF  
800**



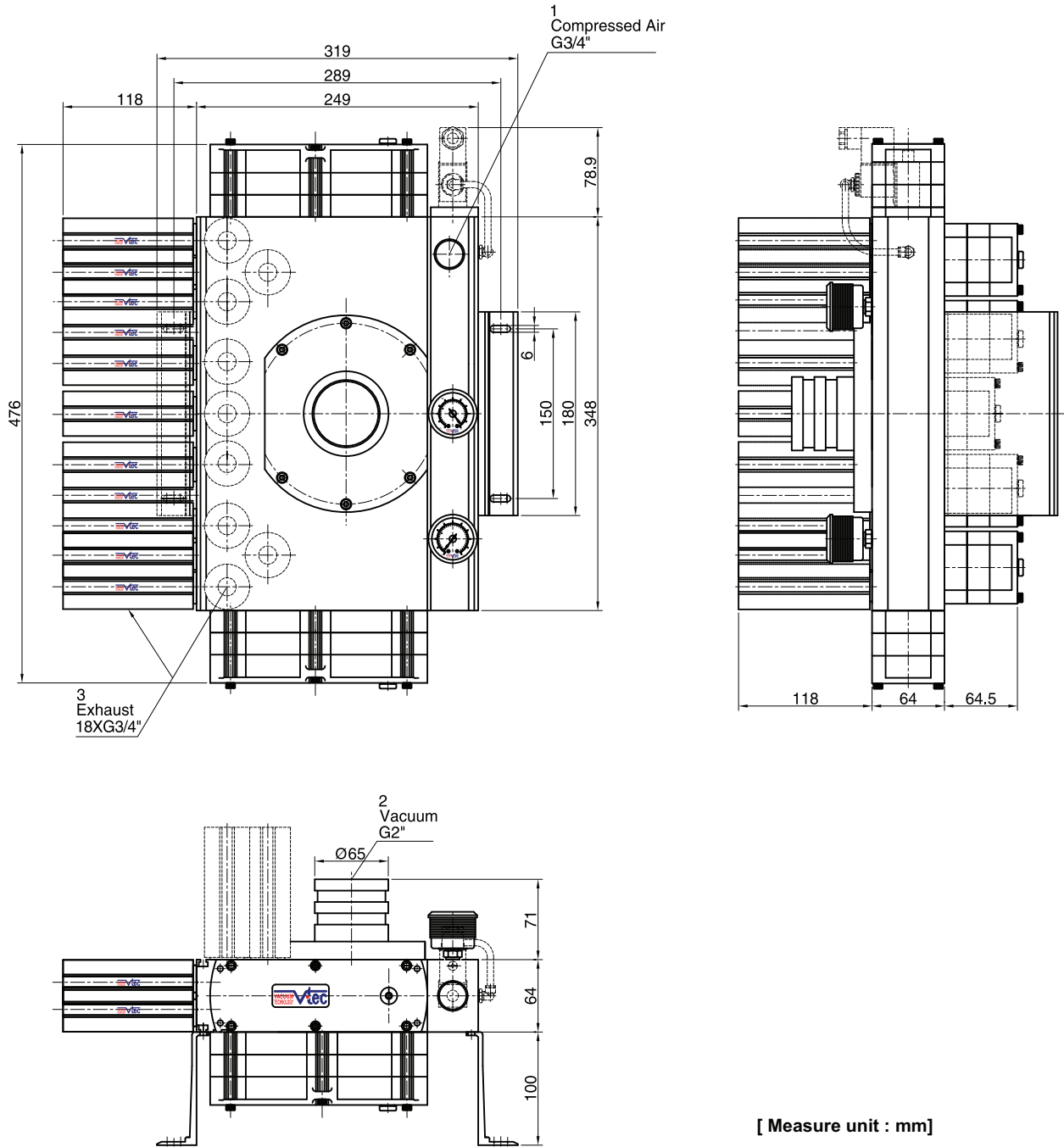
[ Measure unit : mm ]

Model	L1 (mm)
VTMM600-EF	44.5
VTMM800-EF	64



Dimensional Information

**VTMM1000EF**

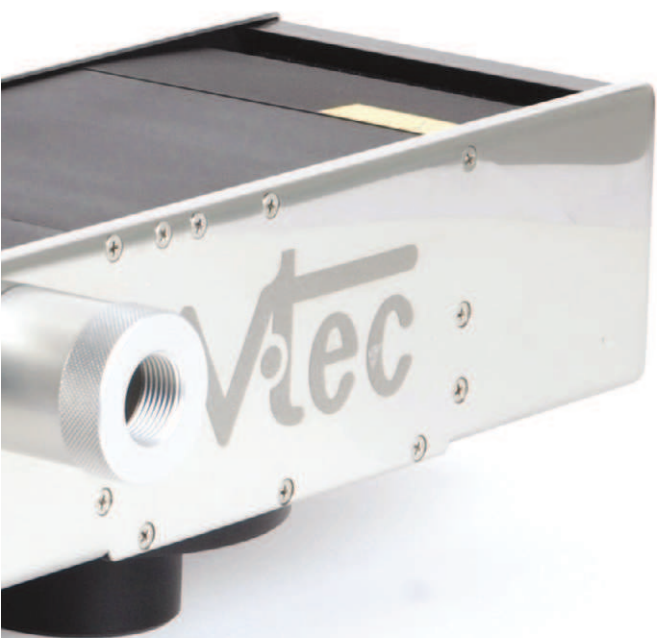


VACUUM PUMPS



# ***MEGA PUMPS***

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## Mega Pump

- Max. vacuum level* : **-92 kPa** (-27.17 inHg)
- Max. flow rate* : **14460 NI/min** (510.6 scfm)
- Supply air pressure* : **4~6bar, max 7bar**  
(58~87 psi, max 101.5psi)
- Supply air type* : Dry compressed air
- Working temperature* : -20°C ~ +80°C
- Noise level* : 68 ~ 76 dBA



## Main Advantages

The largest compressed air-driven vacuum pump in the market place, that is comparatively compact and light weight. This pump is mainly used on applications where larger air volume is to be evacuated or to compensate for the leakage flow must remarkable application for this pump will be in conveying system for granules, transferring bulk materials and powder. This unit is complete with vacuum gauge, pressure gauge and mechanical ON/OFF valve as standard. Air saving kit, solenoid valve, non-return valve, and with VITON® or EPDM as seal options.

## Order No.

**VTML200**      - **AS**   - **N**   **V**  
 ①                      ②                      ③                      ④                      ⑤

① **Model** – Capacity equivalent to electricity motor pump size

- **VTML200** – 2KW
- VTML400 – 4KW
- VTML600 – 6KW
- VTML800 – 8KW
- VTML1000 – 10KW
- VTML1200 – 12KW

② **Exhaust**

- **No mark** – Free flow exhaust duct
- CP – Concentration port

③ **Air saving kit** ( 108 )

- No mark – Standard
- **AS** – Air saving kit attach

④ **Non return valve**

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

⑤ **Sealing**

- No mark – Standard (NBR)
- **V** – Viton®
- E – EPDM

### Characteristics

Model	max. vacuum -kPa(-inHg)	Max. vacuum flow (NI/m)	air consumption (NI/m)	noise level (dBA)	weight (g)	min hose inner Ø (within 2m)		
						air supply	vacuum	exhaust
VTML200	92 (27.17)	2410	600-780	68-76	4926	>10	>32	>40
VTML400		4820	1200-1680	68-76	5116	>12	>40	>60
VTML600		7230	1800-2520	68-76	5900	>14	>50	>70
VTML800		9640	2400-3360	68-76	6700	>15	>50	>75
VTML1000		12050	3000-4140	68-76	7800	>18	>65	>90
VTML1200		14460	3600-4920	68-76	8800	>20	>75	>100

### Vacuum flow in (NI/m) at different Vacuum level (-kPa)

Model	-inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.76	20.67	23.62	26.57
		0	10	20	30	40	50	60	70	80	90
VTML200		2410	1688	1116	580	290	216	144	80	40	6.4
VTML400		4820	3376	2232	1160	580	432	288	160	80	12.8
VTML600		7230	5064	3348	1740	870	648	432	240	120	19.2
VTML800		9640	6752	4464	2320	1160	864	576	320	160	25.6
VTML1000		12050	8440	5580	2900	1450	1080	720	400	200	32
VTML1200		14460	10128	6696	3480	1740	1296	864	480	240	38.4

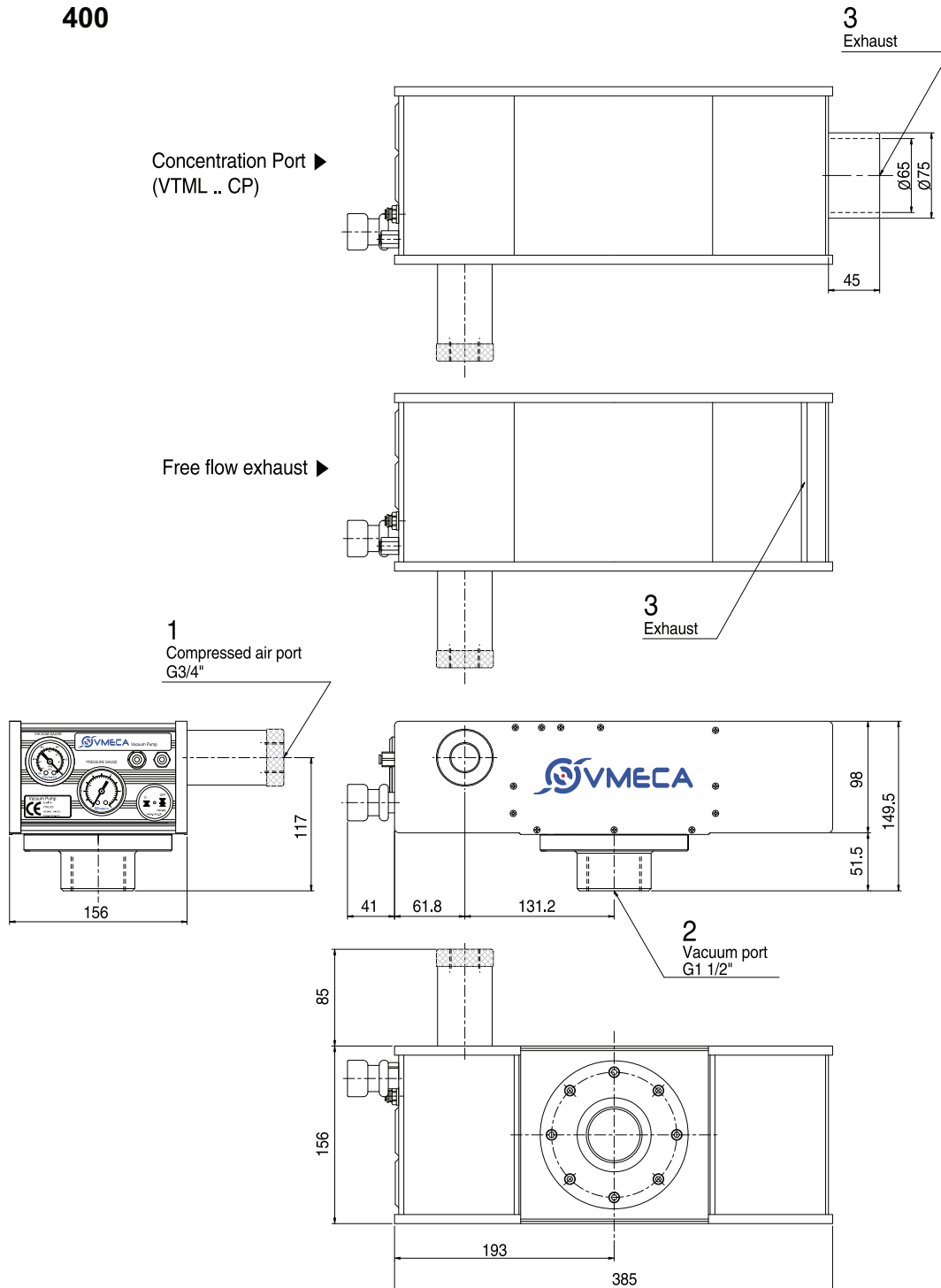
VACUUM  
PUMPS

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

Model	-inHg -kPa	2.95	5.9	8.85	11.81	14.76	17.76	20.67	23.62	26.57
		10	20	30	40	50	60	70	80	90
VTML200		0,0021	0,0055	0,0124	0,029	0,054	0,09	0,153	0,274	0,67
VTML400		0,0011	0,0027	0,0062	0,014	0,027	0,045	0,076	0,137	0,335
VTML600		0,0009	0,0021	0,0047	0,011	0,021	0,034	0,057	0,103	0,252
VTML800		0,0006	0,0014	0,0031	0,007	0,014	0,023	0,038	0,068	0,168
VTML1000		0,0005	0,0012	0,0026	0,006	0,012	0,018	0,031	0,057	0,147
VTML1200		0,0004	0,0009	0,0021	0,005	0,009	0,014	0,024	0,045	0,125

Dimensional Information

**VTML200**  
**400**

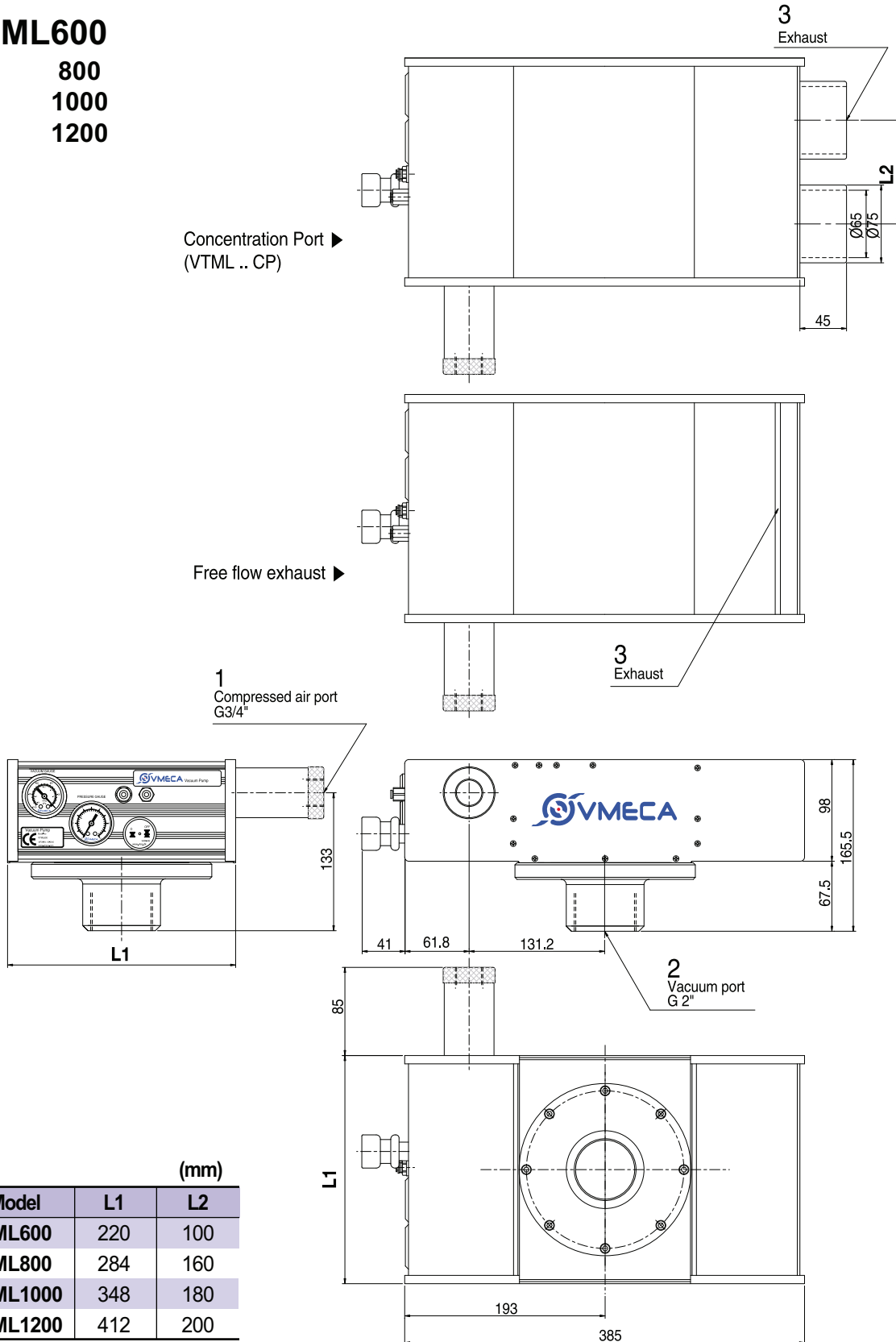


[ Measure unit : mm ]

Dimensional Information

**VTML600**

- 800
- 1000
- 1200



	(mm)	
Model	L1	L2
VTML600	220	100
VTML800	284	160
VTML1000	348	180
VTML1200	412	200

[ Measure unit : mm ]

VACUUM PUMPS