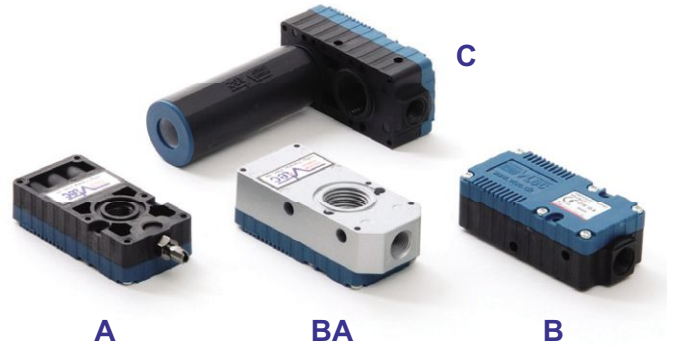


M-Mini Pump

- 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 ② ③ ④ ⑤ ⑥

- 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

- ⑤ **Vacuum switch / Quick release module**
- **S1** – Mechanical vacuum switch
 - Q1 – Quick release module : 12cm³
 - Q2 – Quick release module : 30cm³

* 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

※ 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

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)

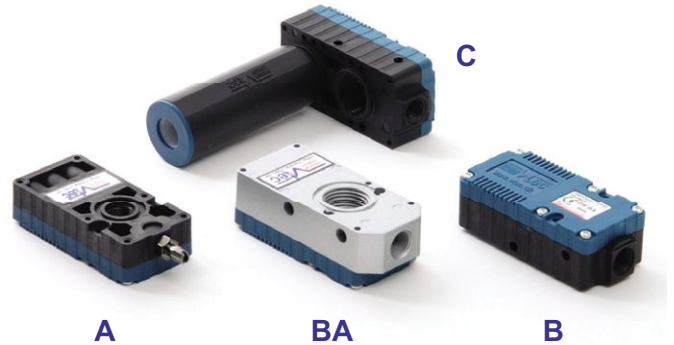
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62
	0	10	20	30	40	50	60	70	80
VTM5	37	26	16	14	10	8	6	2,4	0,66
VTM10	74	52	31	28	20	16	12	4,8	1,32
VTM20	149	99	62	54	40	32	22	10,5	2,7
VTM30	220	147	92	73	60	47	32	16	4,1

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 ② ③ ④ ⑤ ⑥

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 ³
Q2	- Quick release module : 30cm ³

※ 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)

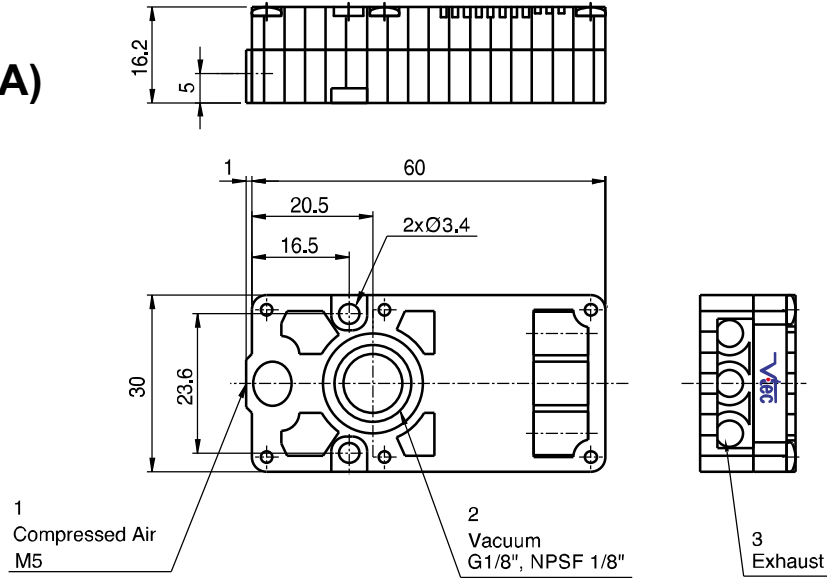
Model \ -inHg -kPa	0	2.95	5.9	8.85	11.81	14.76	17.71	20.67	23.62	26.57
	0	10	20	30	40	50	60	70	80	90
VTX5	32	18	9	8	7	6	5	3	1,2	0,45
VTX10	62	36	18	16	14	11	9	6	2,4	0,9
VTX20	124	72	35	32	27	22	18	12	4,8	1,8
VTX30	185	108	52	47	41	33	26	18	7,2	2,7

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

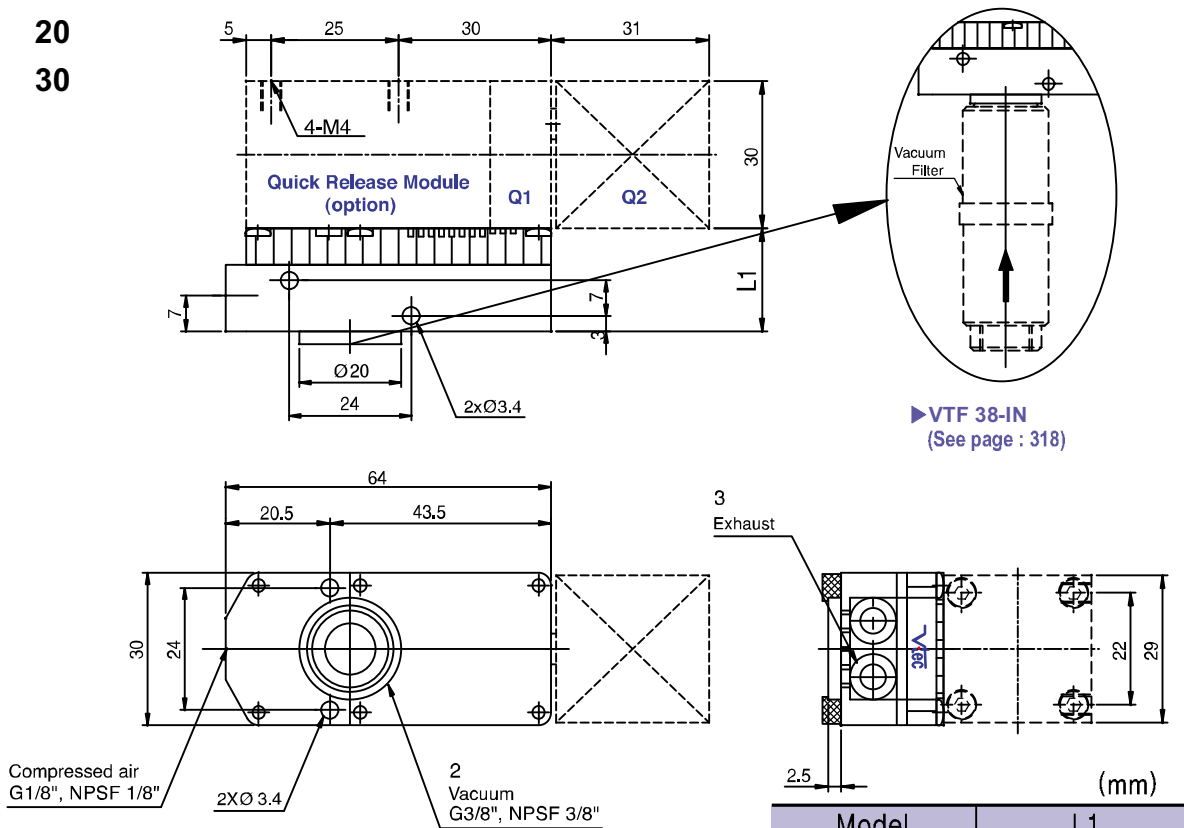
Dimensional Information

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



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

20
30



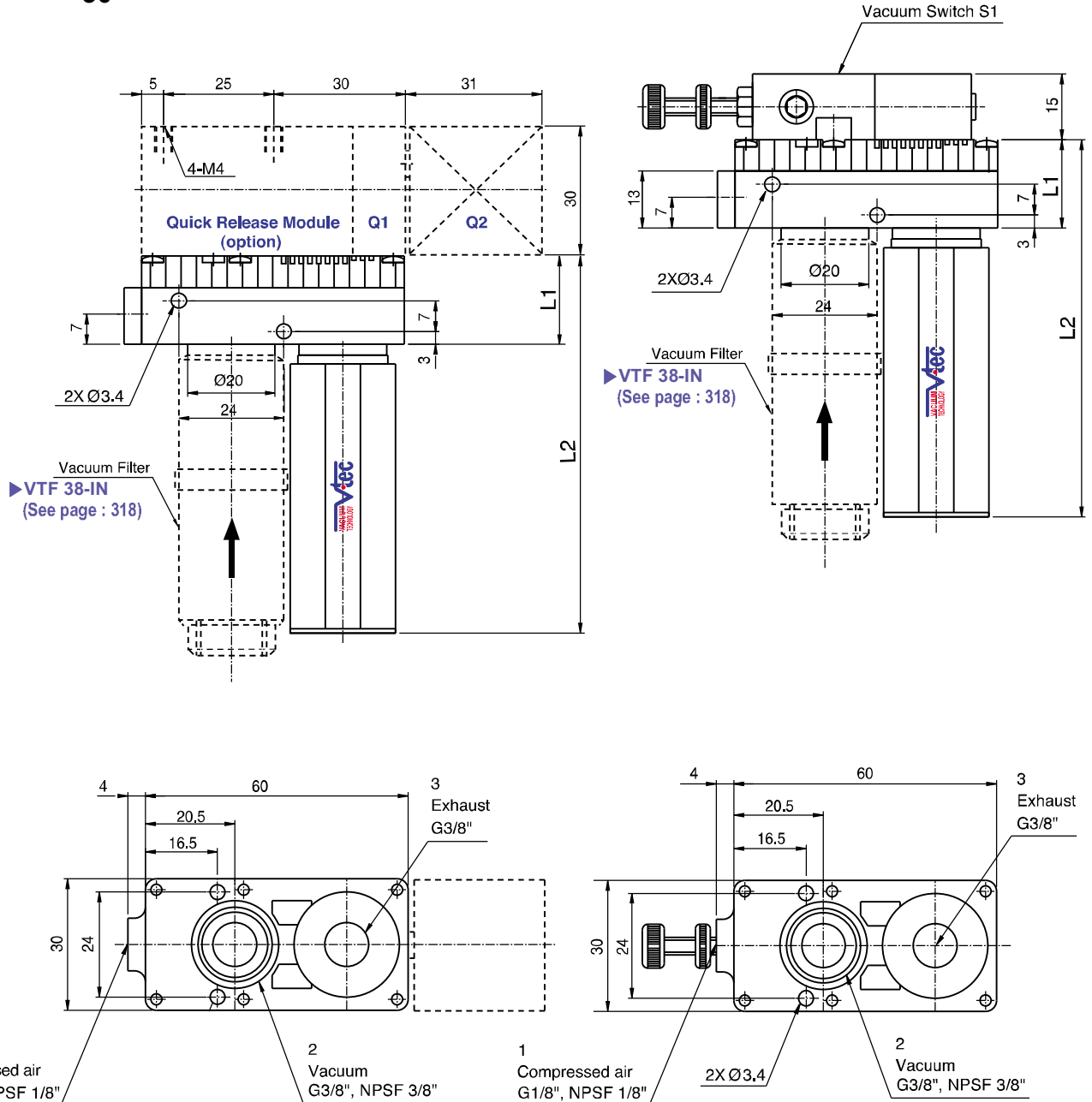
[Measure unit : mm]

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



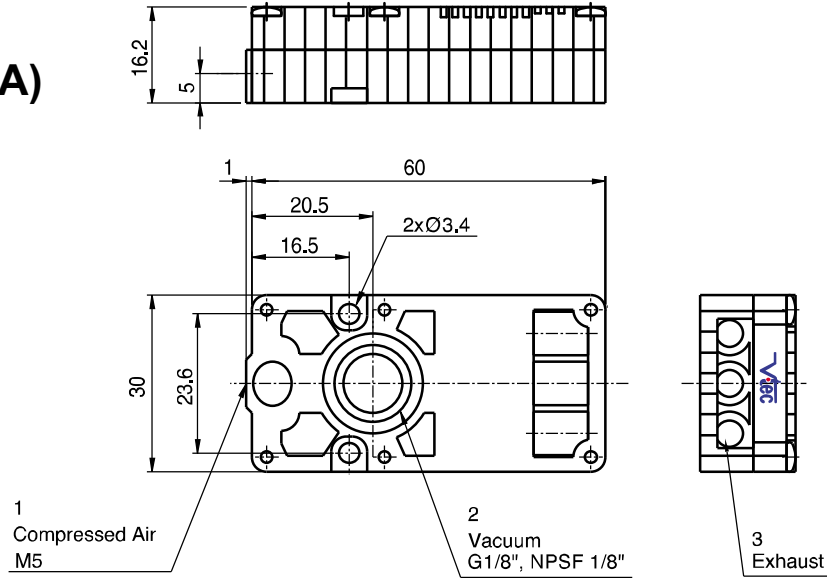
VACUUM PUMPS

[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

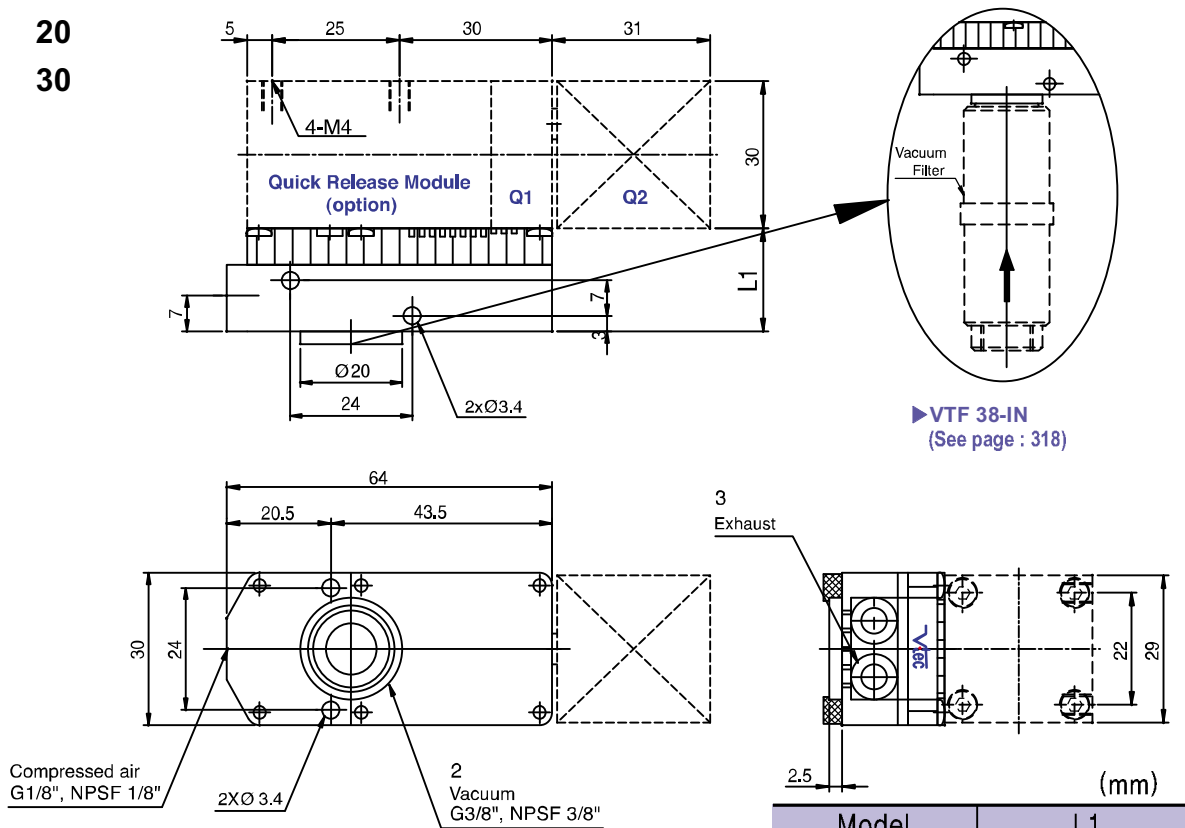
Dimensional Information

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



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

20
30



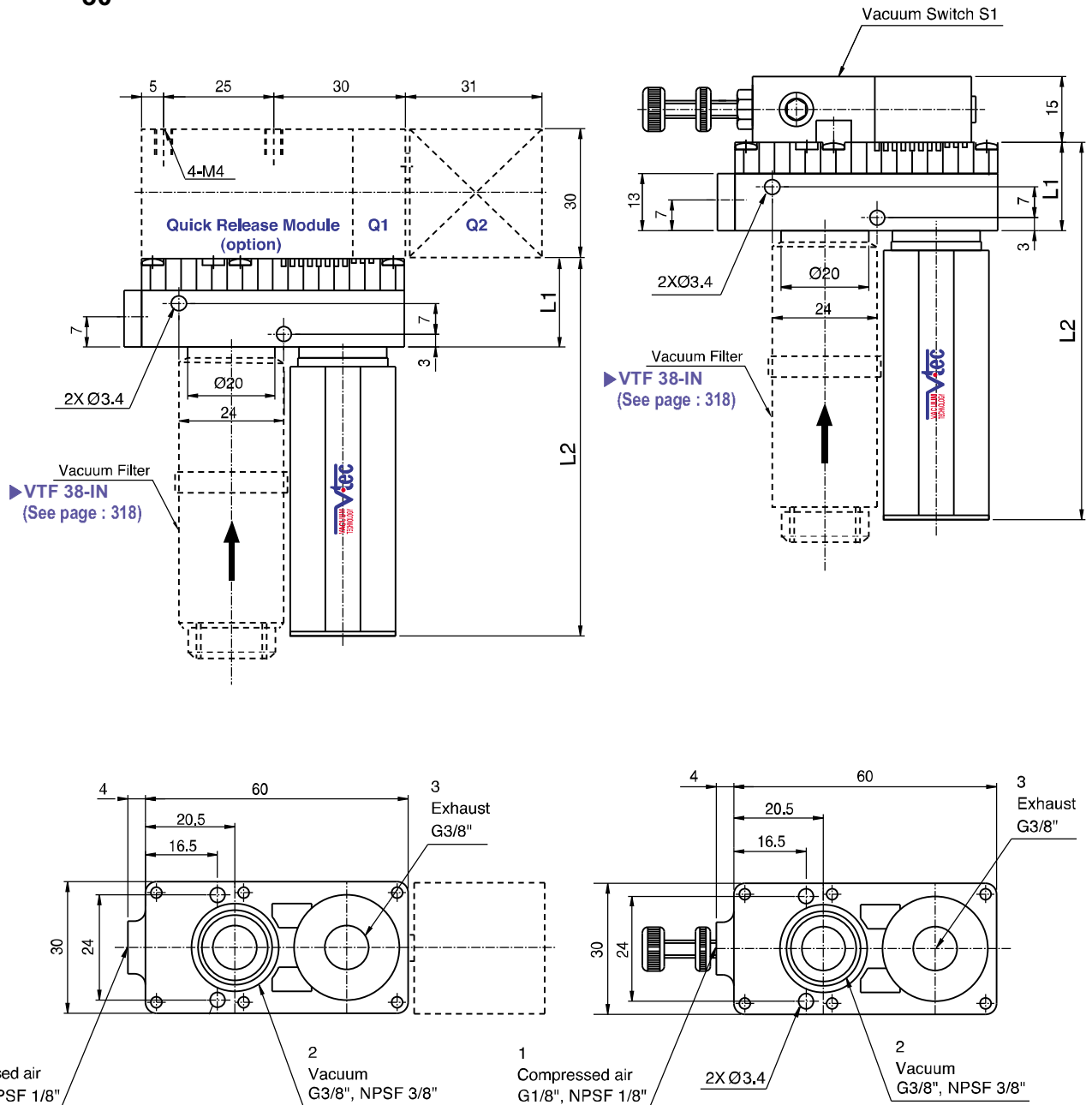
[Measure unit : mm]

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



VACUUM PUMPS

[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