

MD-Series

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



Main Advantages

- Located at or near the point of use thus reducing system volume, increase and reducing cycle time
- Compact in size and light weight
- Maintain vacuum despite fluctuations and drops in air pressure
- VMECA TWOFOLD SILENCER^{PT} assures low noise levels (about 30% lower than conventional silencer)
- Adjustable exhaust direction
- Optional Air-saving kit (AS-KIT) available to minimize energy consumption.
- Optional factory installed air control / vacuum release valves and digital vacuum switch available.
- Easily mountable and interchangeable vacuum cartridge (save the maintenance time)

Order No.

MD 303 S - 34 AS A3 R3 - CL A - S2 - N V
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Model

- **MD 303** - 3 stage nozzle
- MD 302 - 2 stage nozzle

② Exhaust type

- **S*** - Twofold Silencer
 - P - G3/8" port
- *S : Only for MD303..

③ Vacuum port

- **34** - G3/4"
 - H22* - Ø22 Hole
- * H22 : For direct installation

④ Air saving kit (108)

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

⑤ Voltage of air supply control valve

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

* D.. : Double solenoid valve is available only with 'DN' or 'DL', section ⑦

⑥ Voltage of vacuum release control valve

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

⑦ Solenoid Terminal

- DN - DIN type without lead wire
- DL - DIN type with lamp without lead wire
- **CL*** - Connector type with lamp & 0.3 m lead wire
- 2B* - DIN type with '2 in 1' BUS cable
(Air control v/v + Vacuum release v/v)
- 3B* - 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 ⑨
☞ About 'BUS cable' (340, 341)

⑧ Vacuum release flow adjust

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

⑨ Vacuum switch

- No mark - Vacuum gauge.
- **S2(P)** - Digital display output 2points, No analog supply M8-4Pin Connector type 0.3m lead wire.
- SG2(P) - Digital display output 2 points, No analog supply Grommet type 4-Core 2m lead wire.
- SG3(P) - Digital display output 2 points, Analog supply Grommet type 5-Core 2m lead wire.

※ Remark: ① S..(P)
└─ Output type :PNP open collector
② VCM8 42 : M8-4Pin connector wire.
 Only for type S2 or S2(P).

⑩ Non-return valve

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

⑪ Sealing

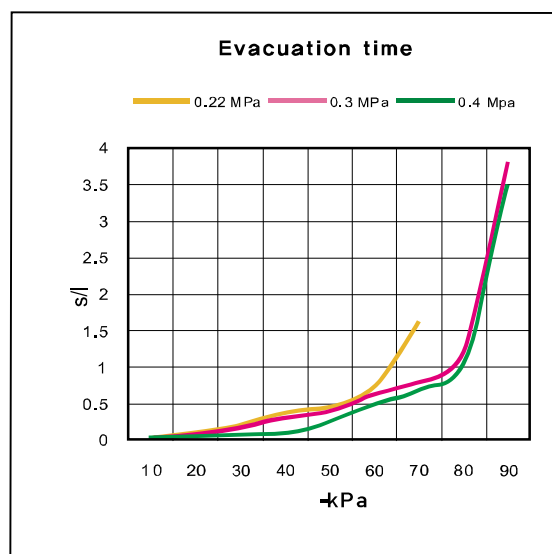
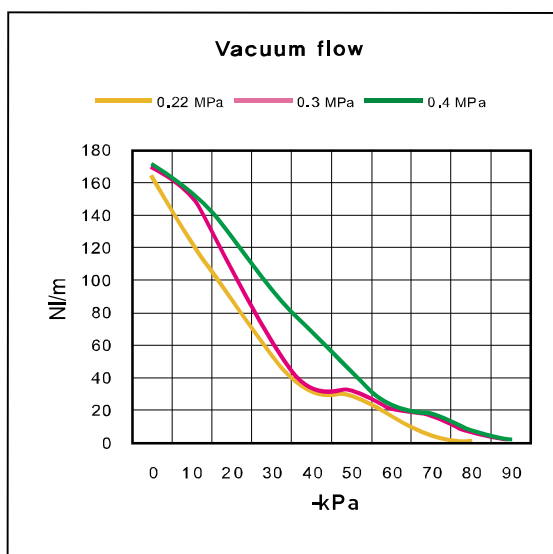
- No mark - Standard
- **V** - Viton®
- E - EPDM

Performance Data

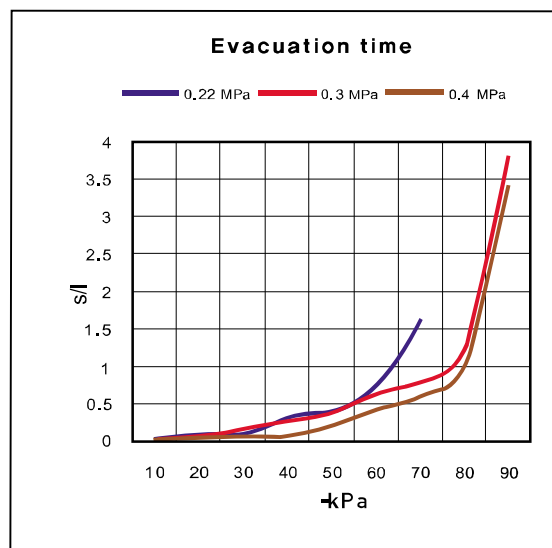
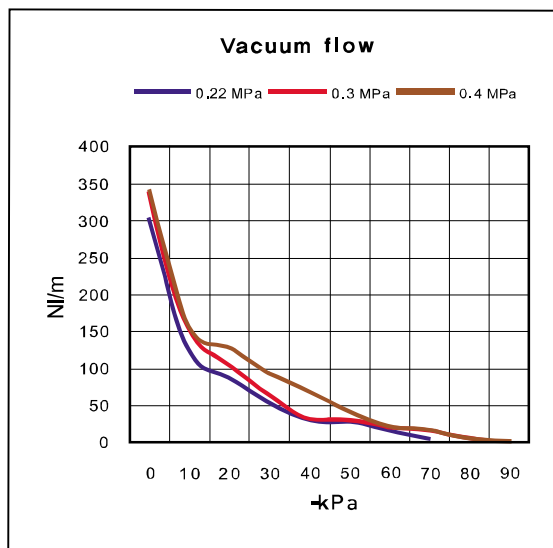
Model	MAX. Vacuum (-kPa)	Feed pressure (MPa)	Vacuum flow, NI/min, at different vacuum levels -kPa (-mmHg)									
			0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
MD 302..	75	0.22	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	0.3	170	152	106	64	33	32	22	16.5	6.4	1.9
	93	0.4	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1
MD 303..	75	0.22	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	0.3	338	152	106	64	33	32	22	16.5	6.4	1.9
	93	0.4	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1

Model	Feed pressure (MPa)	Air consumption (NI/min)	Time, s/l, to evacuate a volume to different vacuum levels -kPa (-mmHg)									
			10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)	
MD 302..	0.22	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-	
	0.3	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8	
	0.4	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5	
MD 303..	0.22	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-	
	0.3	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8	
	0.4	152	0.01	0.048	0.07	0.09	0.2	0.42	1.6	1	3.4	

▼ MD-302..



▼ MD-303..



MDL-Series

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



Main Advantages

- Located at or near the point of use thus reducing system volume, increase and reducing cycle time
- Compact in size and light weight
- Maintain vacuum despite fluctuations and drops in air pressure
- VMECA TWOFOLD SILENCER^{PT} assures low noise levels (about 30% lower than conventional silencer)
- Adjustable exhaust direction
- Optional Air-saving kit (AS-KIT) available to minimize energy consumption.
- Optional factory installed air control / vacuum release valves and digital vacuum switch available.
- Easily mountable and interchangeable vacuum cartridge (save the maintenance time)

Order No.

MDL 303 S - 34 AS A3 R3 - CL A - S2 - N V

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① **Model**

- **MDL 303** - 3 stage nozzle
- MDL 302 - 2 stage nozzle

② **Exhaust type**

- **S*** - Twofold Silencer
- P - G3/8" port

*S : Only for MDL303..

③ **Vacuum port**

- **34** - G3/4"
- H22* - Ø22Hole

* H22 : For direct installation

④ **Air saving kit** (📖 108)

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

⑤ **Voltage of air supply control valve**

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

* D.. : Double solenoid valve is available only with 'DN' or 'DL', section ⑦

⑥ **Voltage of vacuum release control valve**

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

⑦ **Solenoid Terminal**

- DN - DIN type without lead wire
- DL - DIN type with lamp without lead wire
- **CL*** - Connector type with lamp & 0.3 m lead wire
- 2B* - DIN type with '2 in 1' BUS cable
(Air control v/v + Vacuum release v/v)
- 3B* - 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 ⑨

📖 About 'BUS cable' (📖 340, 341)

⑧ **Vacuum release flow adjust**

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

⑨ **Vacuum switch**

- No mark - Vacuum gauge.
- **S2(P)** - Digital display output 2points, No analog supply M8-4Pin Connector type 0.3m lead wire.
- SG2(P) - Digital display output 2 points, No analog supply Grommet type 4-Core 2m lead wire.
- SG3(P) - Digital display output 2 points, Analog supply Grommet type 5-Core 2m lead wire.

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

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

⑩ **Non-return valve**

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

⑪ **Sealing**

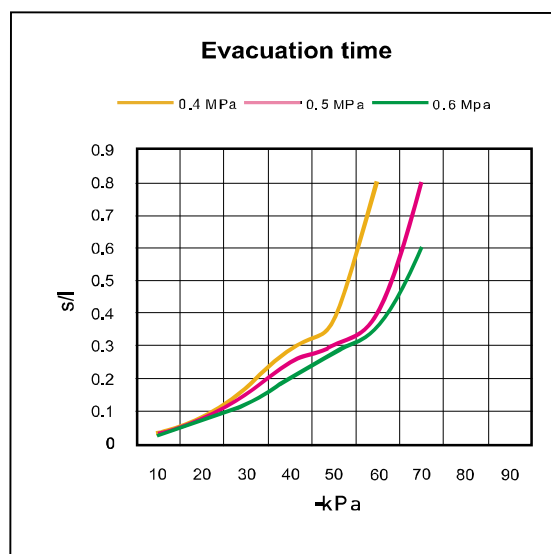
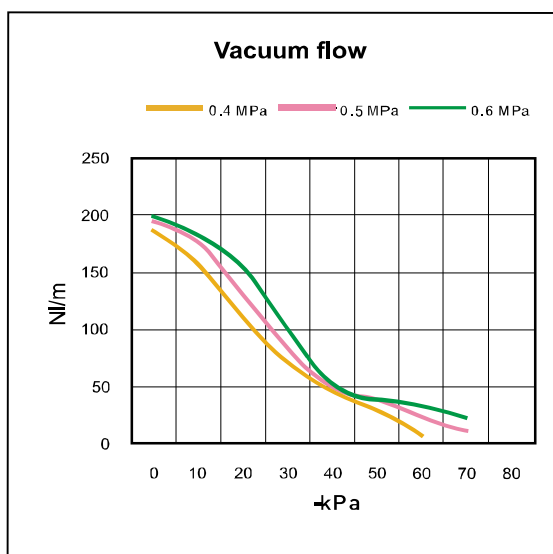
- No mark - Standard
- **V** - Viton®
- E - EPDM

Performance Data

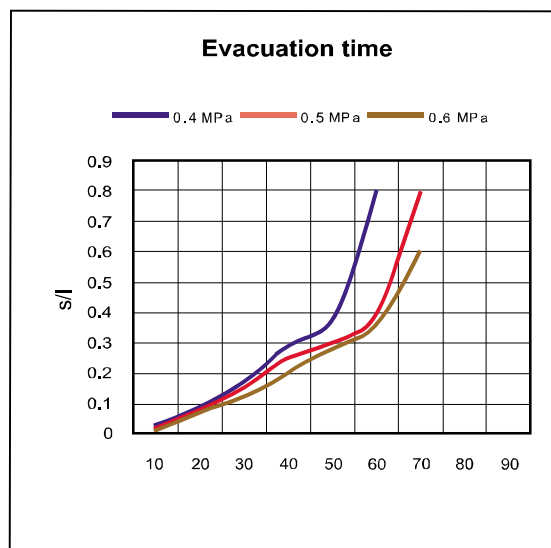
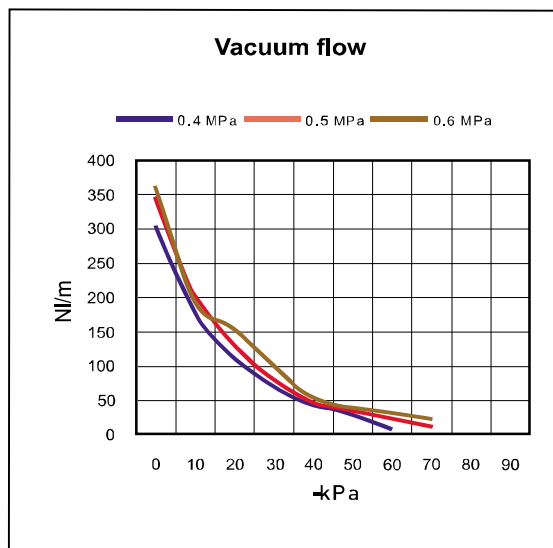
Model	MAX. Vacuum (-kPa)	Feed pressure (MPa)	Vacuum flow, NI/min, at different vacuum levels -kPa (-mmHg)									
			0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
MDL 302..	60	0.4	188	158	110	70	46	28	6.8	-	-	-
	70	0.5	195	176	130	82	50	37.5	23	11.3	-	-
	75	0.6	200	183	154	100	52	38	32	22	-	-
MDL 303..	60	0.4	302	176	110	70	46	28	6.8	-	-	-
	70	0.5	344	200	130	82	50	37.5	23	11.3	-	-
	75	0.6	362	194	154	100	52	38	32	22	-	-

Model	Feed pressure (MPa)	Air consumption (NI/min)	Time, s/l, to evacuate a volume to different vacuum levels -kPa (-mmHg)									
			10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)	
MDL 302..	0.4	70	0.035	0.084	0.17	0.29	0.38	0.8	-	-	-	
	0.5	85	0.027	0.08	0.15	0.25	0.3	0.4	0.8	-	-	
	0.6	104	0.028	0.08	0.12	0.2	0.28	0.36	0.6	-	-	
MDL 303..	0.4	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-	
	0.5	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-	
	0.6	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-	

▼ MDL-302..



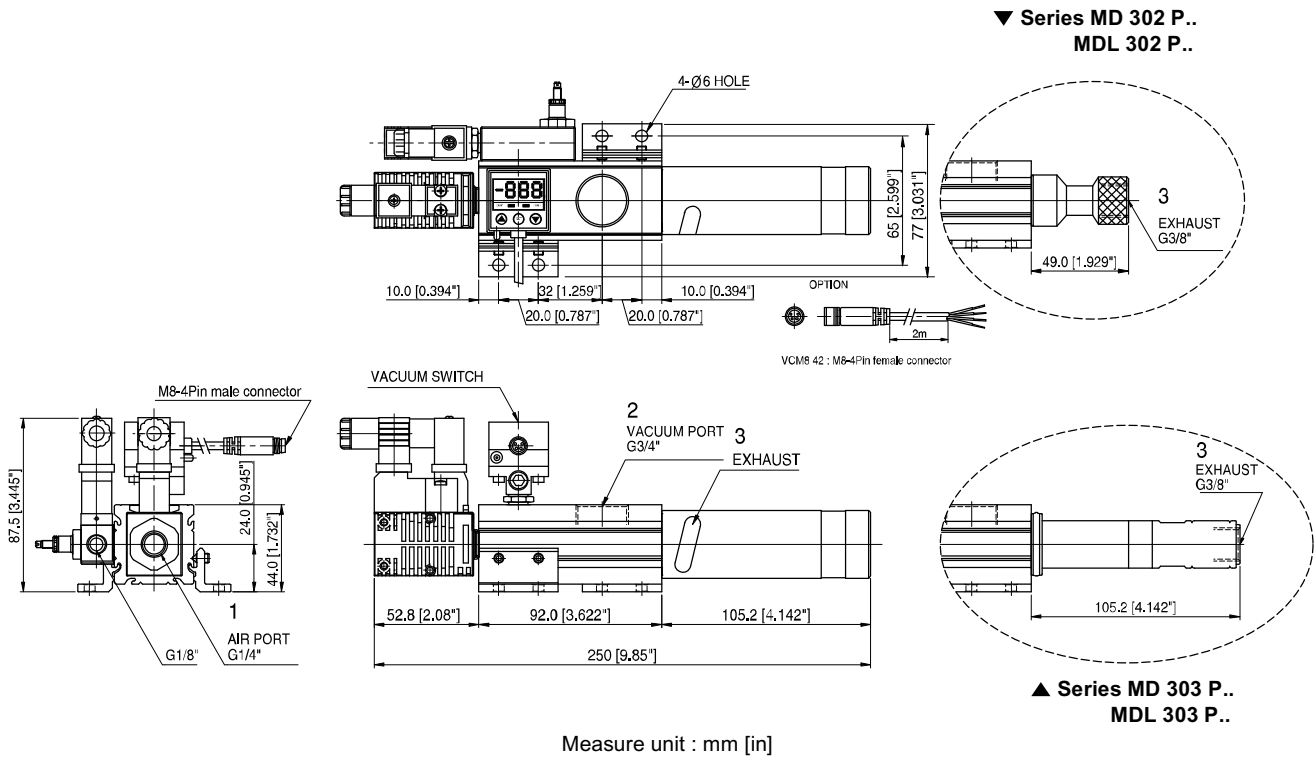
▼ MDL-303..



Dimensional Information

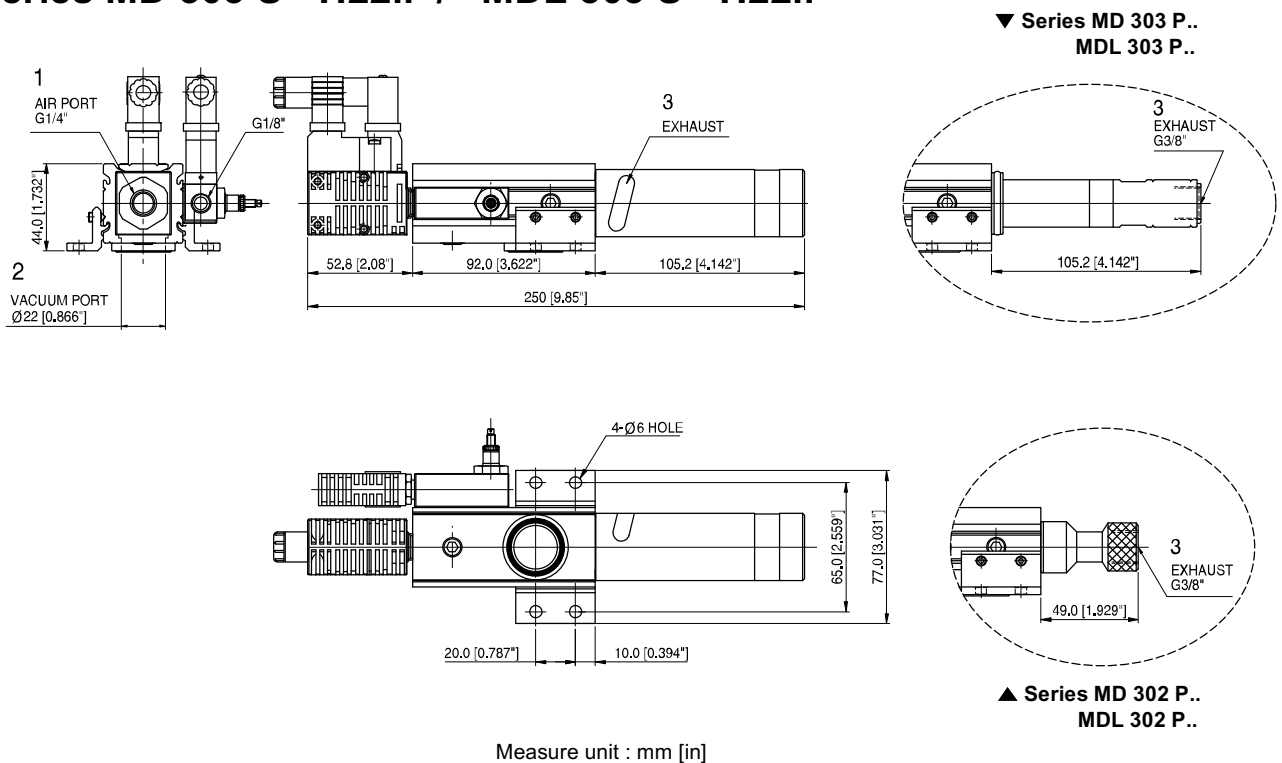
With Air Control valve, Vacuum Release Control valve and Digital Vacuum Switch

▼ Series MD 303 S - 34.. / MDL 303 S - 34..



With Air Control valve, Vacuum Release Control valve

▼ Series MD 303 S - H22.. / MDL 303 S - H22..



VACUUM PUMPS

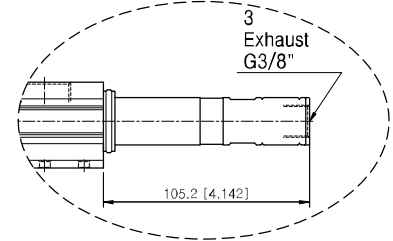
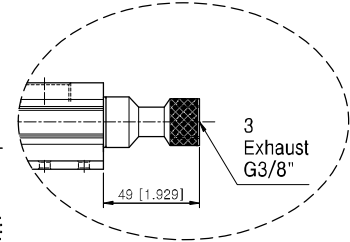
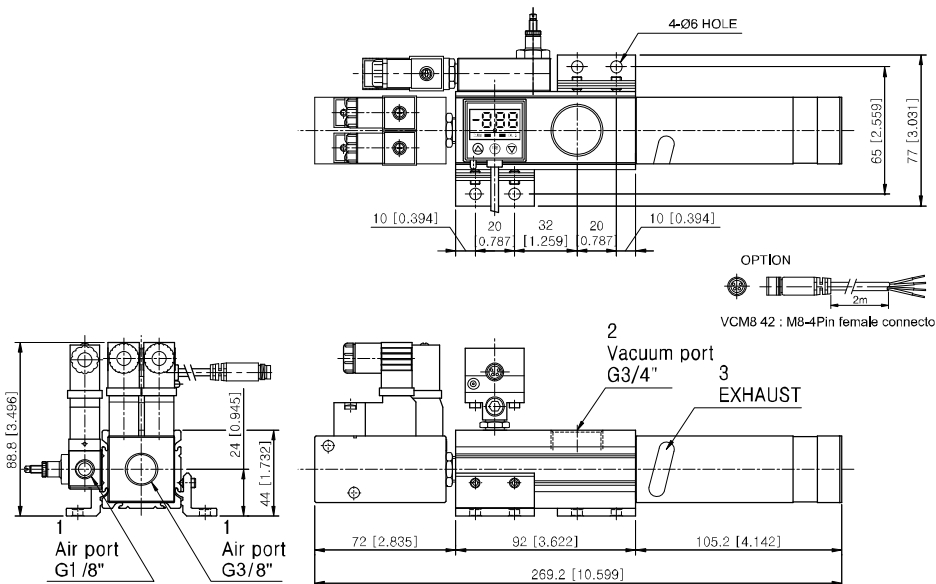


Dimensional Information

With Air Control valve (Double sol.type), Vacuum Release Control valve and Digital Vacuum Switch

▼ Series MD 303 S - 34.. / MDL 303 S - 34..

▼ Series MD 302 P.. MDL 302 P..



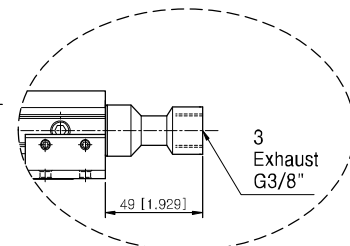
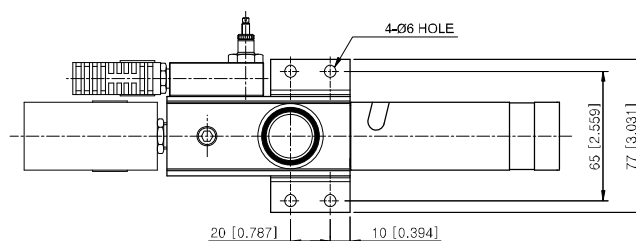
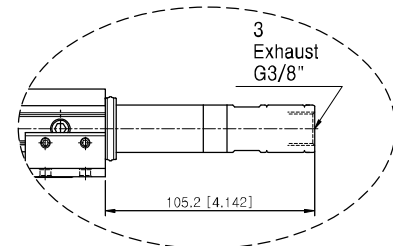
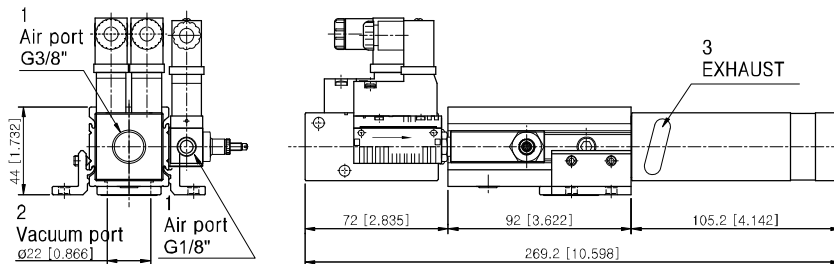
▲ Series MD 303 P.. MDL 303 P..

Measure unit : mm [in]

With Air Control valve (Double sol.type), Vacuum Release Control valve

▼ Series MD 303 S - H22.. / MDL 303 S - H22..

▼ Series MD 303 P.. MDL 303 P..



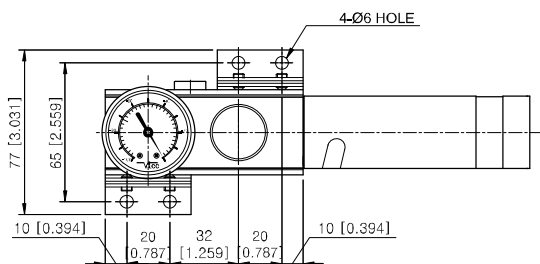
▲ Series MD 302 P.. MDL 302 P..

Measure unit : mm [in]

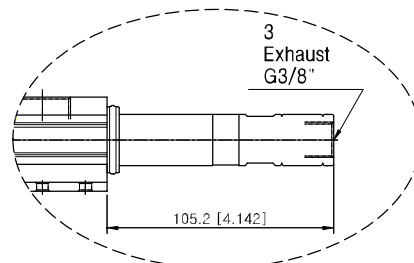
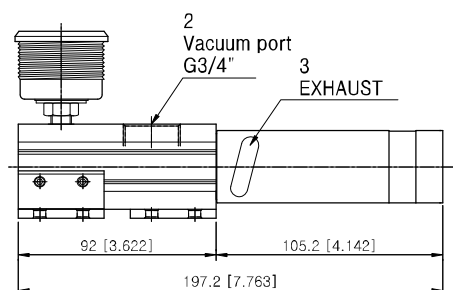
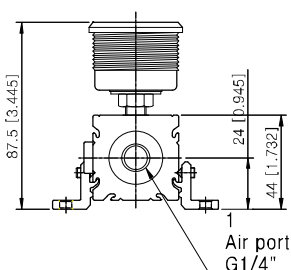
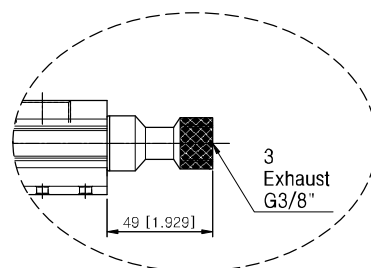
Dimensional Information

Standard

▼ Series MD 303 S - 34.. / MDL 303 S - 34..



▼ Series MD 302 P.. / MDL 302 P..

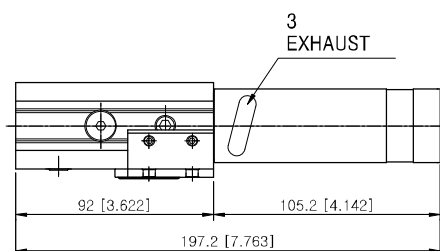
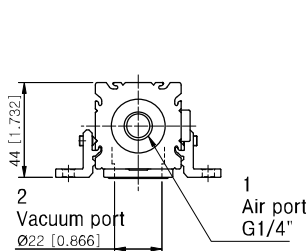


▲ Series MD 303 P.. / MDL 303 P..

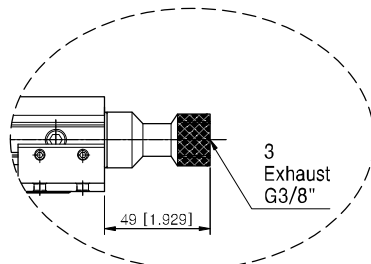
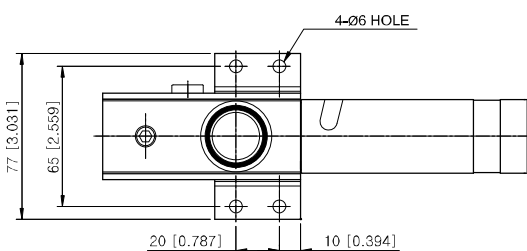
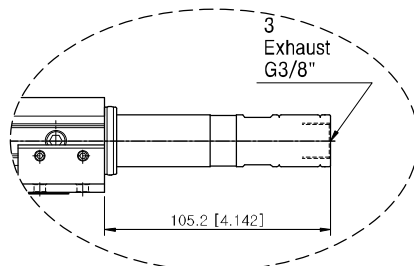
Measure unit : mm [in]

Standard

▼ Series MD 303 S - H22.. / MDL 303 S - H22..



▼ Series MD 303 P.. / MDL 303 P..



▲ Series MD 302 P.. / MDL 302 P..

Measure unit : mm [in]