

PM-Series

- Max. vacuum level : -93 kPa (-27.46 inHg)
- Max. flow rate : 341~1364 NI/min (12.04~48.17 scfm)
- Supply air pressure : 3 ~ 6 bar, max 7 bar
(43.5~87 psi, max 101.5 psi)
- Air consumption : 97~608 NI/min (3.43~21.47 scfm)
- Supply air type : Dry compressed air
- Working temperature : -20°C to +80°C
- Noise level : 60~65 dBA



Main Advantages

- Maintains vacuum despite fluctuations and drops in air pressure.
- Various connection ports available.
- Fast evacuation time.
- Optional Air-Saving Kit (AS-KIT) available to minimize energy consumption.
- Optional factory installed air control / vacuum release valves and digital vacuum switches available.
- Strong aluminum body.
- Easily mountable and maintainable with interchangeable vacuum cartridge.

Order No.

PM 303X1 A - 34 - B1 - AS - A3 R3 - CL - S2 N V

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Model (Vacuum flows)

- **PM303 X 1** - 341 NI/min
- PM303 X 2 - 682 NI/min
- PM303 X 3 - 1023 NI/min
- PM303 X 4 - 1364 NI/min

② Body type

- **A** - Vacuum port on side
- B - Vacuum port on top & side

③ Vacuum port

- **34*** - G3/4"
- 01 - G1"

* 34 : Body type B is available only with vacuum port 34

④ Mounting bracket

- No mark - Not included
- **B1** - 4 Point support
- B2 - 2 Point L-type

⑤ Air saving kit (108)

- No mark - Not included
- **AS** - Air saving kit

⑥ 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 ⑧

⑦ Voltage of vacuum release control valve

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

⑧ 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)

⑨ Vacuum switch

No mark - Vacuum gauge attached

- **S2(P)** - Digital output 2 points, No analog supply, M8-4Pin male connector. (0.3m lead wire)
- SG2(P) - Digital output 2 points, No analog supply, Grommet type 4-Core 2m lead wire
- SG3(P) - Digital 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 - Not included

- **N** - Non-return valve

⑪ Sealing

No mark - NBR

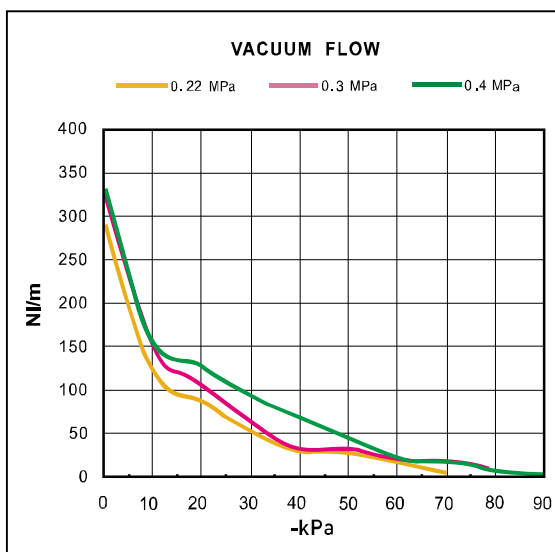
- **V** - Viton®
- E - EPDM

Performance Data

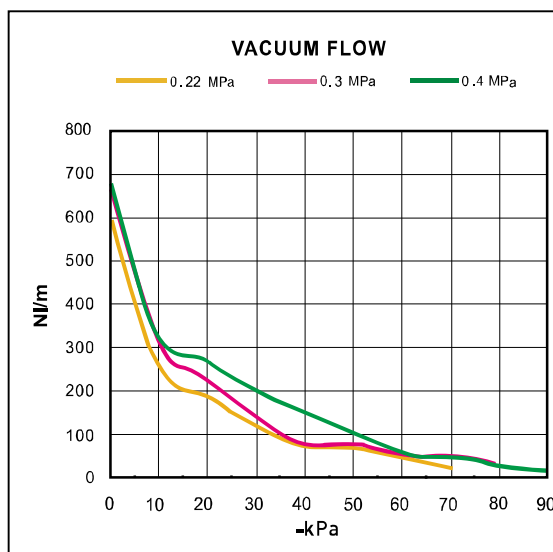
Vacuum flow, NI/min, at different vacuum levels -kPa (-mmHg)

Model	MAX. Vacuum (-kPa)	Feed pressure (MPa)	0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
PM 303X1..	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
PM 303X2..	75	0.22	604	245	176	106	62.8	57	33	9.2	-	-
	93	0.3	676	304	212	128	66	64	44	3.3	12.8	3.8
	93	0.4	682	308	255	188	138	86	46.6	34.6	13.8	4.2
PM 303X3..	75	0.22	902	368	264	159	94	86	50	14	-	-
	93	0.3	1014	456	318	192	99	96	66	50	19	6
	93	0.4	1023	462	383	282	207	129	70	52	21	6.3
PM 303X4..	75	0.22	1208	490	352	212	126	114	66	18	-	-
	93	0.3	1352	608	424	256	132	128	88	66	26	7.6
	93	0.4	1364	616	510	376	276	172	93	69	28	8.4

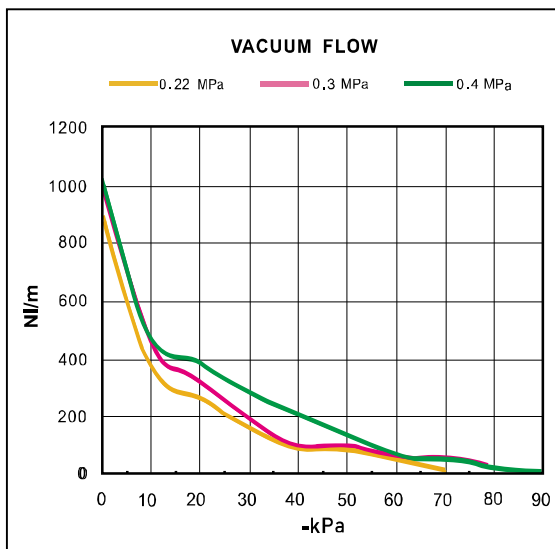
▼ PM 303 X1 ..



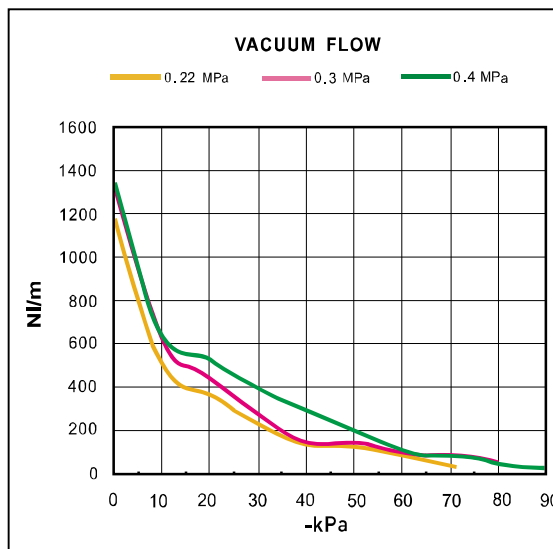
▼ PM 303 X2 ..



▼ PM 303 X3 ..



▼ PM 303 X4 ..

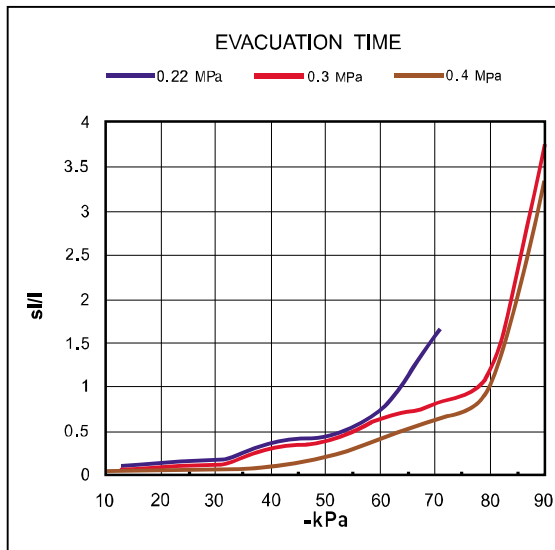


Performance Data

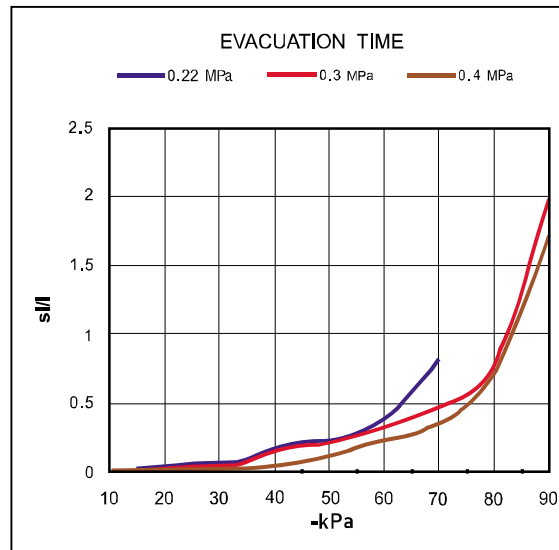
Time, s/l, to evacuate a volume to different vacuum levels -kPa (-mmHg)

Model	Feed pressure (MPa)	Air consumption (NI/min)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
PM 303X1..	0.22	97	0.019	0.009	0.16	0.32	0.42	0.73	1.62	-	-
	0.3	118	0.015	0.07	0.1	0.28	0.38	0.64	0.8	1.2	3.8
	0.4	158	0.01	0.048	0.07	0.09	0.2	0.42	0.6	1	3.4
PM 303X2..	0.22	194	0.011	0.043	0.05	0.17	0.23	0.38	0.81	-	-
	0.3	236	0.01	0.032	0.045	0.15	0.22	0.33	0.48	0.78	1.98
	0.4	304	0.01	0.026	0.037	0.047	0.12	0.23	0.35	0.7	1.72
PM 303X3..	0.22	291	0.006	0.03	0.038	0.1	0.14	0.24	0.54	-	-
	0.3	354	0.005	0.02	0.03	0.09	0.12	0.21	0.24	0.4	1.27
	0.4	456	0.004	0.01	0.02	0.03	0.06	0.14	0.2	0.33	1.13
PM 303X4..	0.22	388	0.005	0.02	0.027	0.08	0.1	0.18	0.4	-	-
	0.3	472	0.004	0.018	0.02	0.07	0.09	0.16	0.2	0.3	0.95
	0.4	608	0.003	0.01	0.01	0.02	0.05	0.1	0.15	0.25	0.85

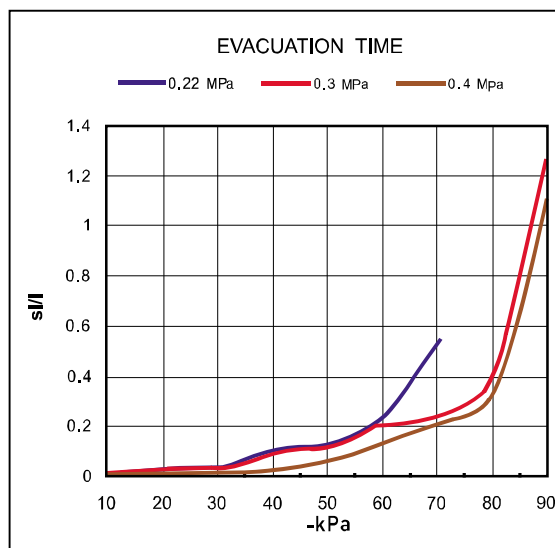
▼ PM 303 X1 ..



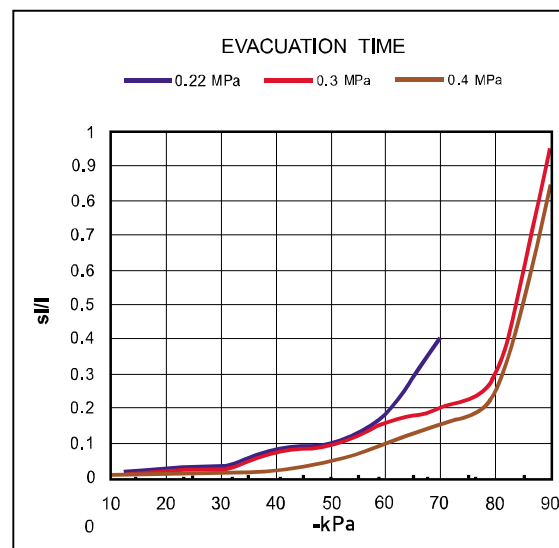
▼ PM 303 X2 ..



▼ PM 303 X3 ..



▼ PM 303 X4 ..

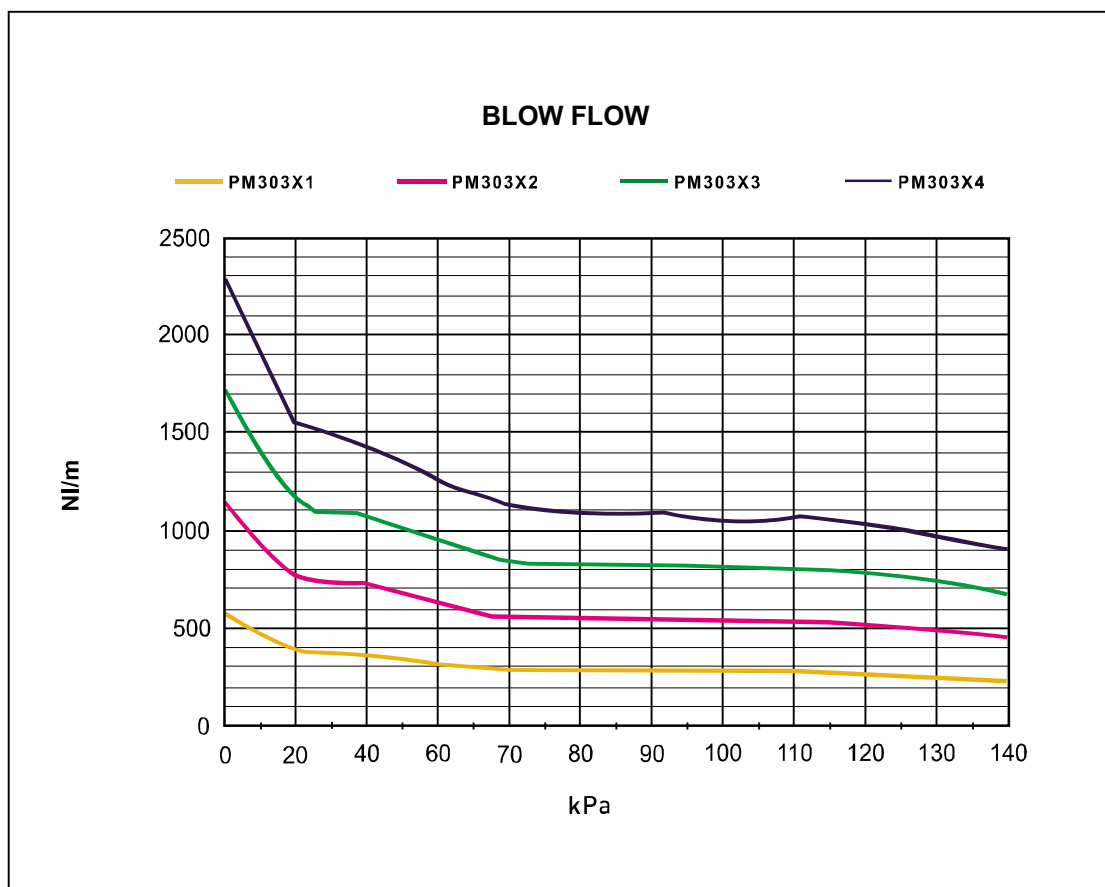


Performance Data

Blow flow, NI/min, at different internal pressure levels kPa (mmHg)

Model	Feed pressure (MPa)	Air consumption (NI/min)	0 (0)	20 (150)	40 (300)	60 (450)	70 (525)	80 (600)	90 (675)	100 (750)	110 (825)	120 (900)	130 (975)	140 (1050)
PM 303X1..	0.6	210	572	387	359	315	280	272	274	271	269	259	242	225
PM 303X2..	0.6	420	1144	774	718	630	560	544	548	542	538	518	484	450
PM 303X3..	0.6	630	1716	1161	1077	945	840	816	822	813	807	777	747	675
PM 303X4..	0.6	840	2288	1548	1436	1260	1120	1088	1096	1084	1076	1036	968	900

※ Remark : Choose the 'A' body type (Vacuum port on side) for blowing function.



PML-Series

- Max. vacuum level : -75 kPa (-22.15 inHg)
- Max. flow rate : 362~1448 NI/min (12.78~51.14 scfm)
- Supply air pressure : 4 ~ 6 bar, max 7 bar
(58~87 psi, max 101.5 psi)
- Air consumption : 70~416 NI/min (3.43~21.47 scfm)
- Supply air type : Dry compressed air
- Working temperature : -20°C to +80°C
- Noise level : 60~65 dBA



Main Advantages

- Large vacuum flow rate yet low air consumption.
- Various connection ports available.
- Fast evacuation time.
- Optional Air-Saving Kit (AS-KIT) available to minimize energy consumption.
- Optional factory installed air control / vacuum release valves and digital vacuum switches available.
- Strong aluminum body.
- Easily mountable and maintainable with interchangeable vacuum cartridge.

Order No.

PML 303X1 A - 34 - B1 - AS - A3 R3 - CL - S2 N V

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

① Model (Vacuum flows)

- **PML303 X 1** - 362 NI/min
- PML303 X 2 - 724 NI/min
- PML303 X 3 - 1086 NI/min
- PML303 X 4 - 1448 NI/min

② Body type

- **A** - Vacuum port on side
- B - Vacuum port on top & side

③ Vacuum port

- **34*** - G3/4"
- 01 - G1"

* 34 : Body type B is available only with vacuum port 34

④ Mounting bracket

- No mark - Not included
- **B1** - 4 Point support
- B2 - 2 Point L-type

⑤ Air saving kit (108)

- No mark - Not included
- **AS** - Air saving kit

⑥ 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 ⑧

⑦ Voltage of vacuum release control valve

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

⑧ 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)

⑨ Vacuum switch

- No mark - Vacuum gauge attached
- **S2(P)** - Digital output 2 points, No analog supply. M8-4Pin male connector. (0.3m lead wire)
- SG2(P) - Digital output 2 points, No analog supply. Grommet type 4-Core 2m lead wire
- SG3(P) - Digital 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 - Not included
- **N** - Non-return valve

⑪ Sealing

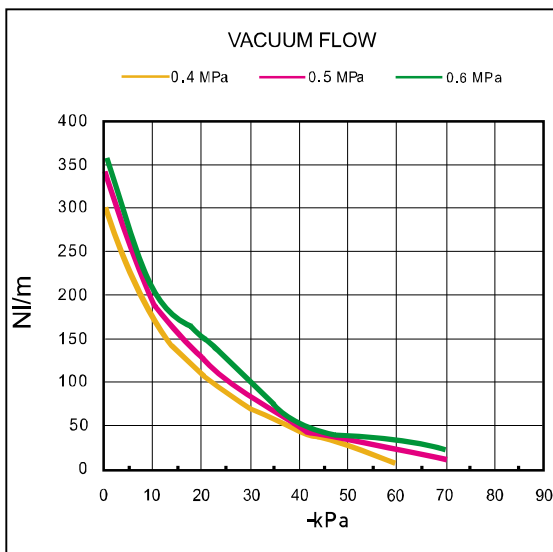
- No mark - NBR
- **V** - Viton®
- E - EPDM

Performance Data

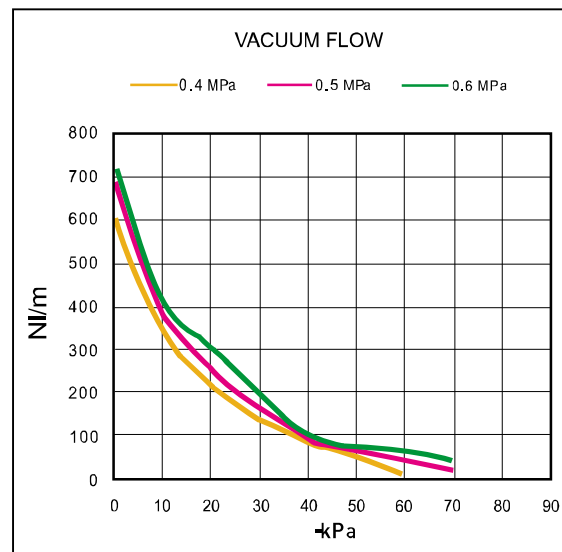
Vacuum flow, NI/min, at different vacuum levels -kPa (-mmHg)

Model	MAX. Vacuum (-kPa)	Feed pressure (MPa)	0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
PML 303X1..	60	0.4	302	172	110	70	46	28	6.8	-	-	-
	70	0.5	344	196	130	82	50	37.5	23	11.3	-	-
	75	0.6	362	207	154	100	52	38	32	22	-	-
PML 303X2..	60	0.4	604	344	220	140	92	56	13.6	-	-	-
	70	0.5	688	392	260	164	100	75	46	23.8	-	-
	75	0.6	724	415	308	200	104	76	64	44	-	-
PML 303X3..	60	0.4	906	516	330	210	138	84	20.4	-	-	-
	70	0.5	1032	588	390	246	150	112.5	69	34	-	-
	75	0.6	1086	621	462	300	156	114	96	66	-	-
PML 303X4..	60	0.4	1208	688	440	280	184	112	27	-	-	-
	70	0.5	1376	784	520	328	200	150	92	45	-	-
	75	0.6	1448	828	616	400	208	152	128	88	-	-

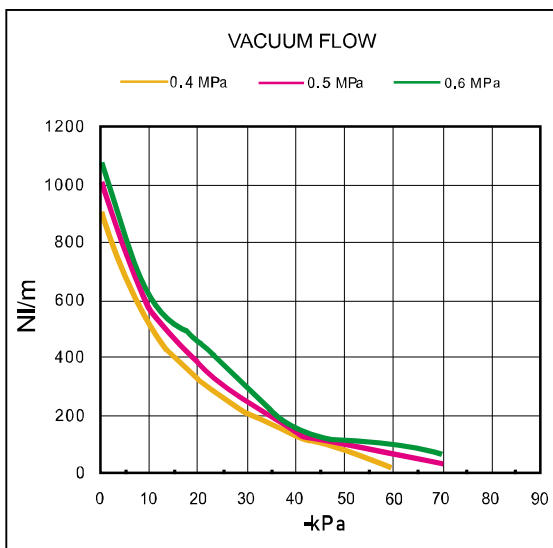
▼ PML 303 X1 ..



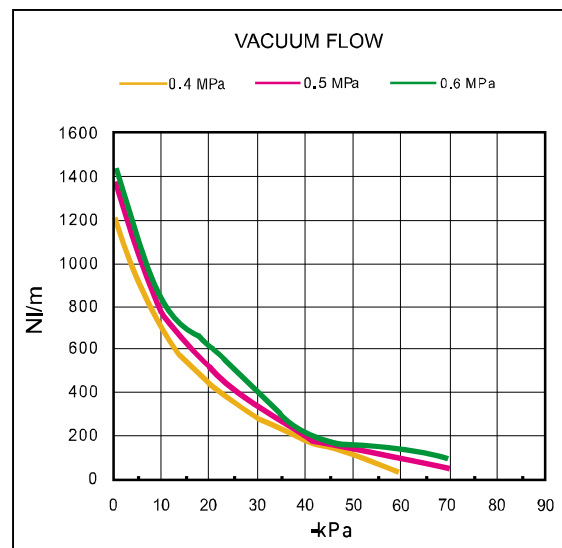
▼ PML 303 X2 ..



▼ PML 303 X3 ..



▼ PML 303 X4 ..



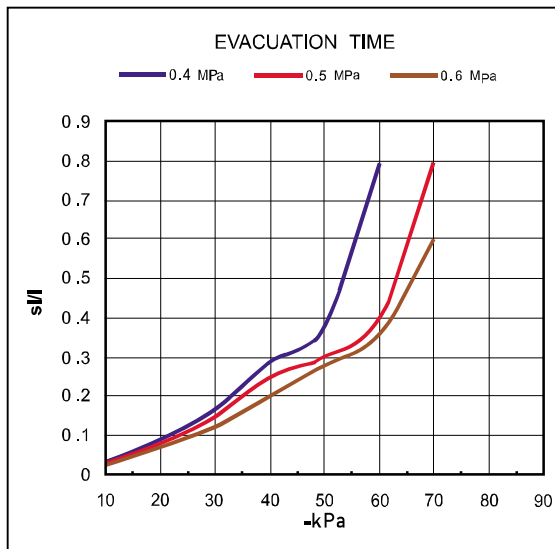
VACUUM PUMPS

Performance Data

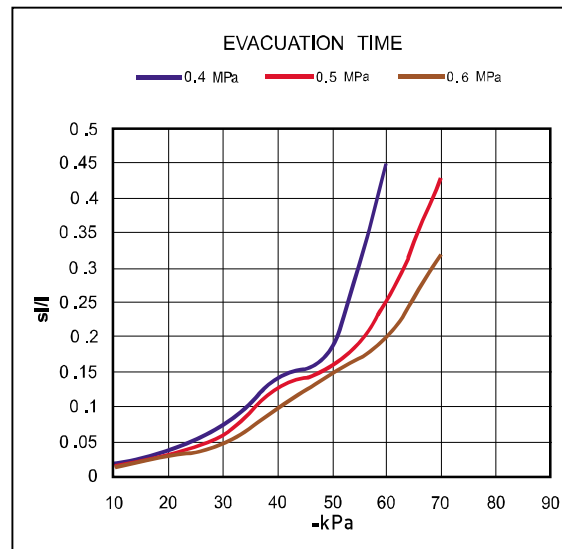
Time, s/l, to evacuate a volume to different vacuum levels -kPa(-mmHg)

Model	Feed pressure (MPa)	Air consumption (NI/min)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
PML 303X1..	0.4	70	0.032	0.09	0.17	0.29	0.38	0.8	-	-	-
	0.5	85	0.023	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	0.6	104	0.022	0.07	0.12	0.2	0.28	0.36	0.6	-	-
PML 303X2..	0.4	140	0.017	0.037	0.073	0.14	0.19	0.45	-	-	-
	0.5	170	0.014	0.032	0.06	0.128	0.16	0.25	0.43	-	-
	0.6	208	0.012	0.03	0.047	0.098	0.15	0.2	0.32	-	-
PML 303X3..	0.4	210	0.016	0.03	0.05	0.09	0.12	0.26	-	-	-
	0.5	255	0.0085	0.028	0.05	0.08	0.1	0.13	0.26	-	-
	0.6	312	0.0079	0.02	0.04	0.06	0.09	0.12	0.2	-	-
PML 303X4..	0.4	280	0.0089	0.023	0.04	0.07	0.09	0.2	-	-	-
	0.5	340	0.0057	0.018	0.03	0.063	0.075	0.1	0.2	-	-
	0.6	416	0.0053	0.015	0.029	0.052	0.071	0.09	0.15	-	-

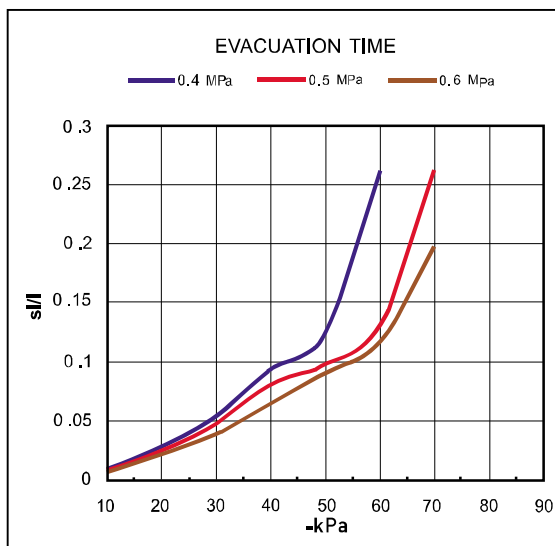
▼ PML 303 X1 ..



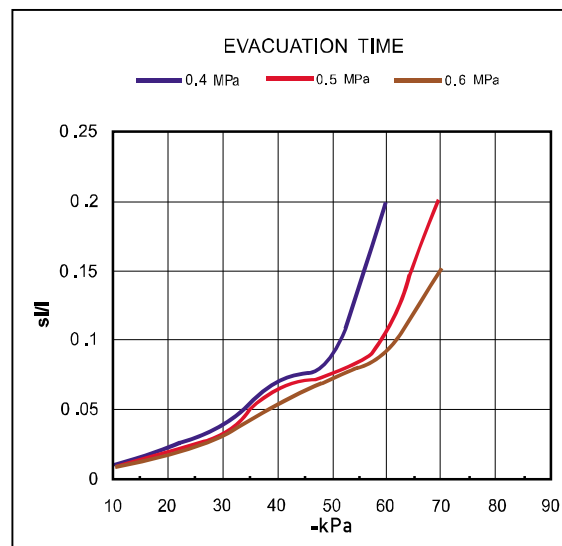
▼ PML 303 X2 ..



▼ PML 303 X3 ..



▼ PML 303 X4 ..

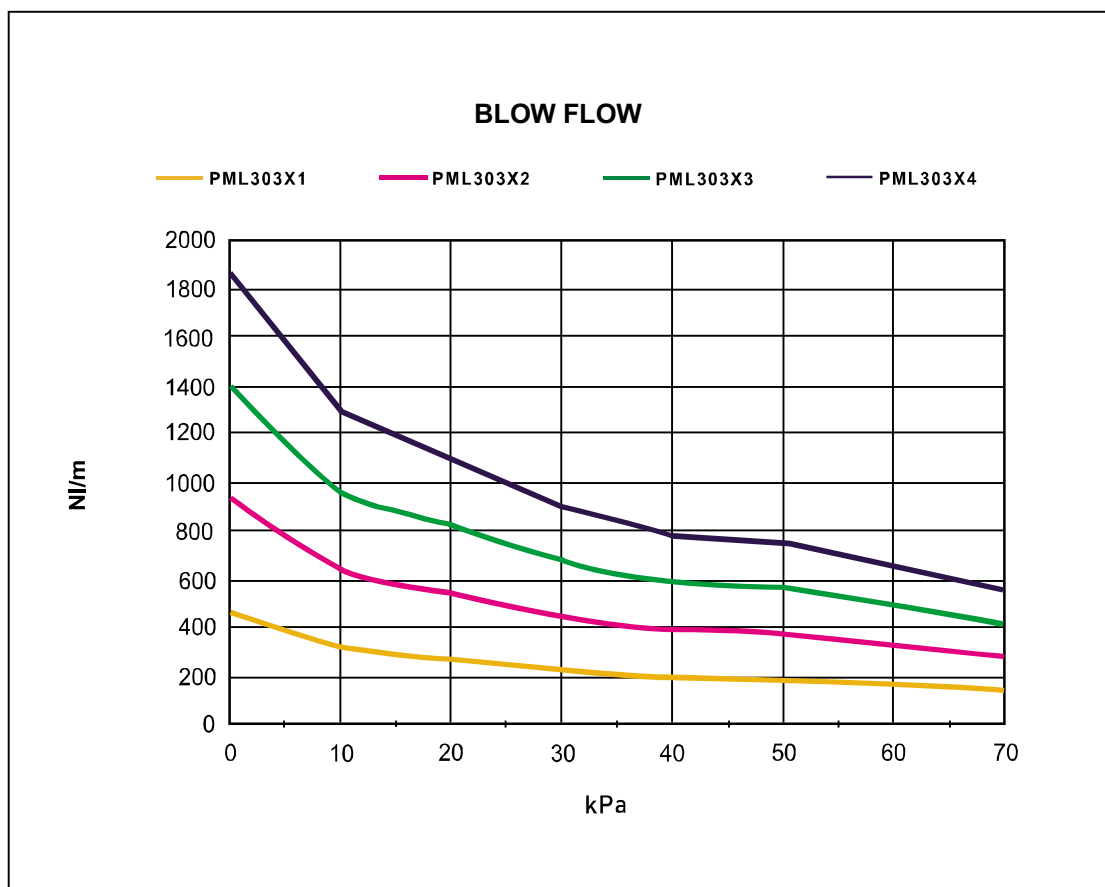


Performance Data

Blow flow, NI/min, at different internal pressure levels kPa (mmHg)

Model	Feed pressure (MPa)	Air consumption (NI/min)	0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)
PML 303X1..	0.6	104	470	320	272	225	196	189	165	140
PML 303X2..	0.6	208	940	640	544	450	392	378	330	280
PML 303X3..	0.6	312	1404	966	822	678	589	564	492	416
PML 303X4..	0.6	416	1868	1284	1096	904	784	752	656	556

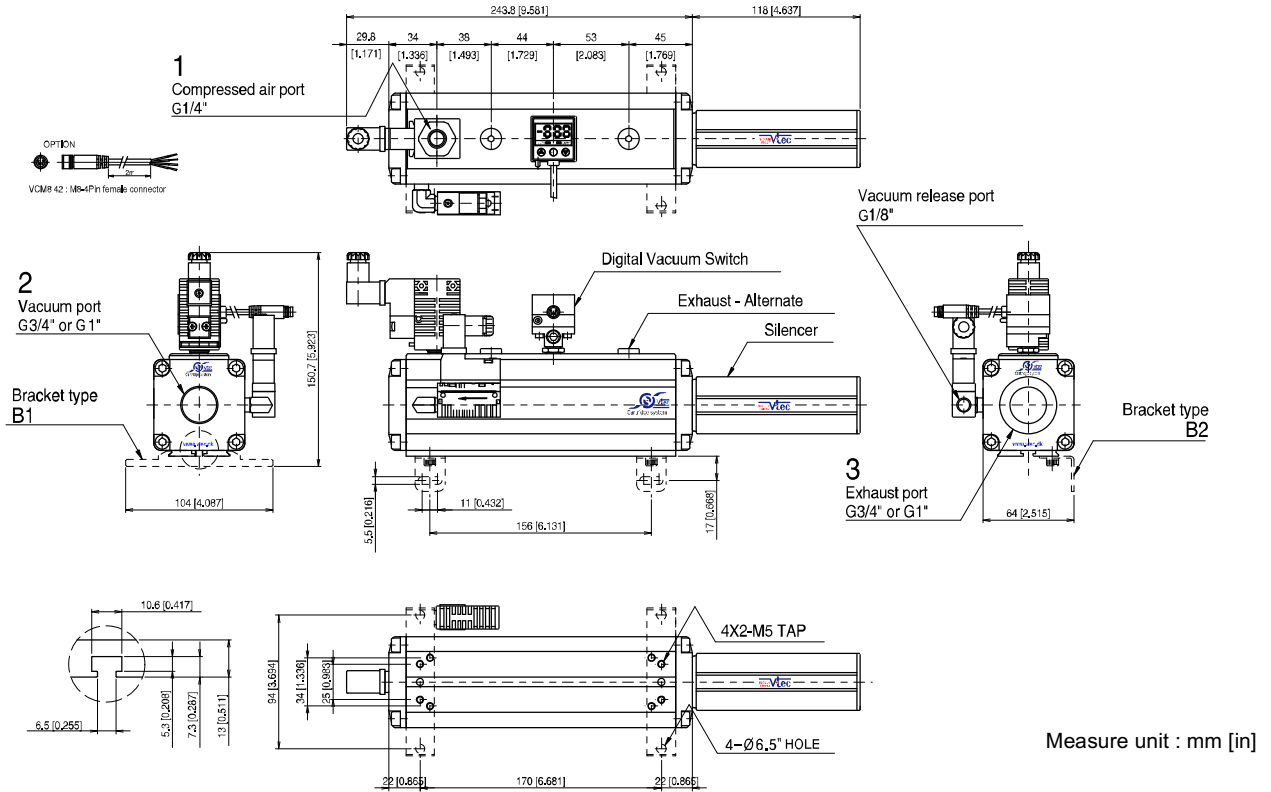
※ Remark : Choose the 'A' body type (Vacuum port on side) for blowing function.



Dimensional Information

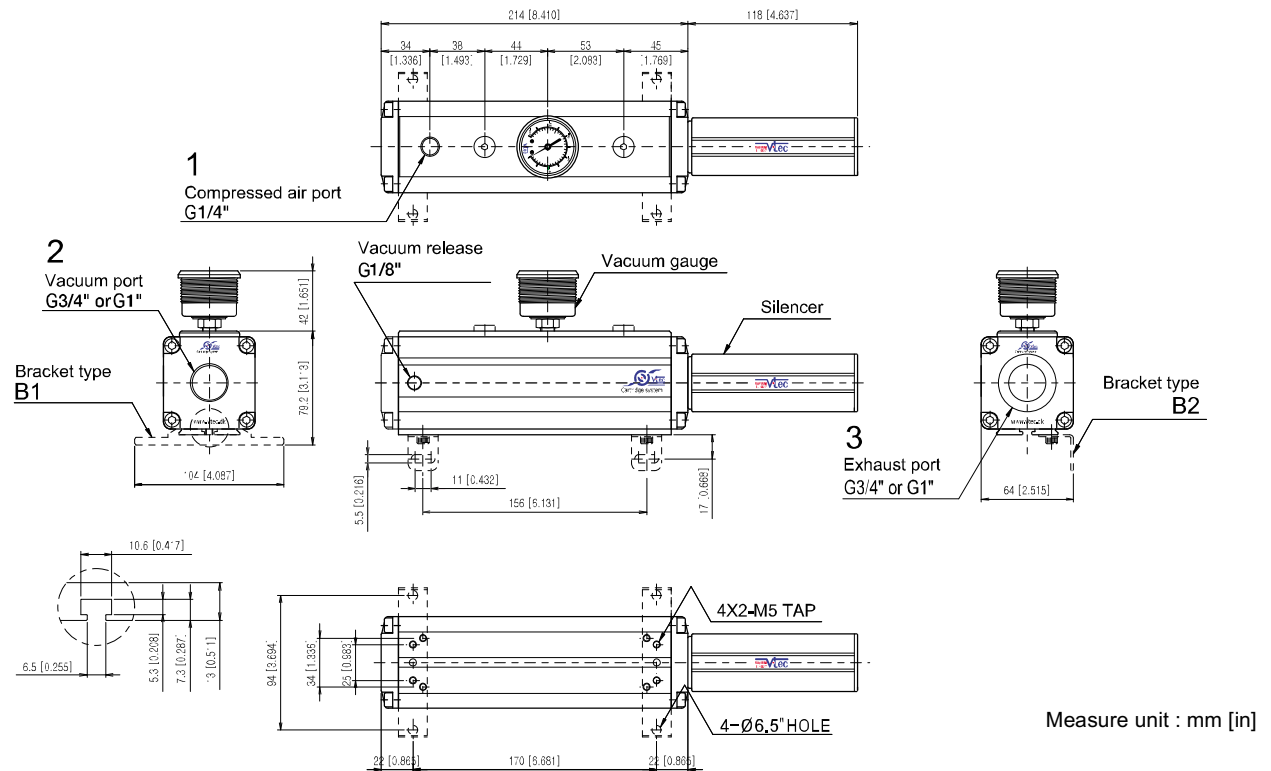
With Air Control valve, Vacuum release control valve, Digital vacuum switch

▼Series PM 303X()..A.. / PML 303X()..A..



Standard

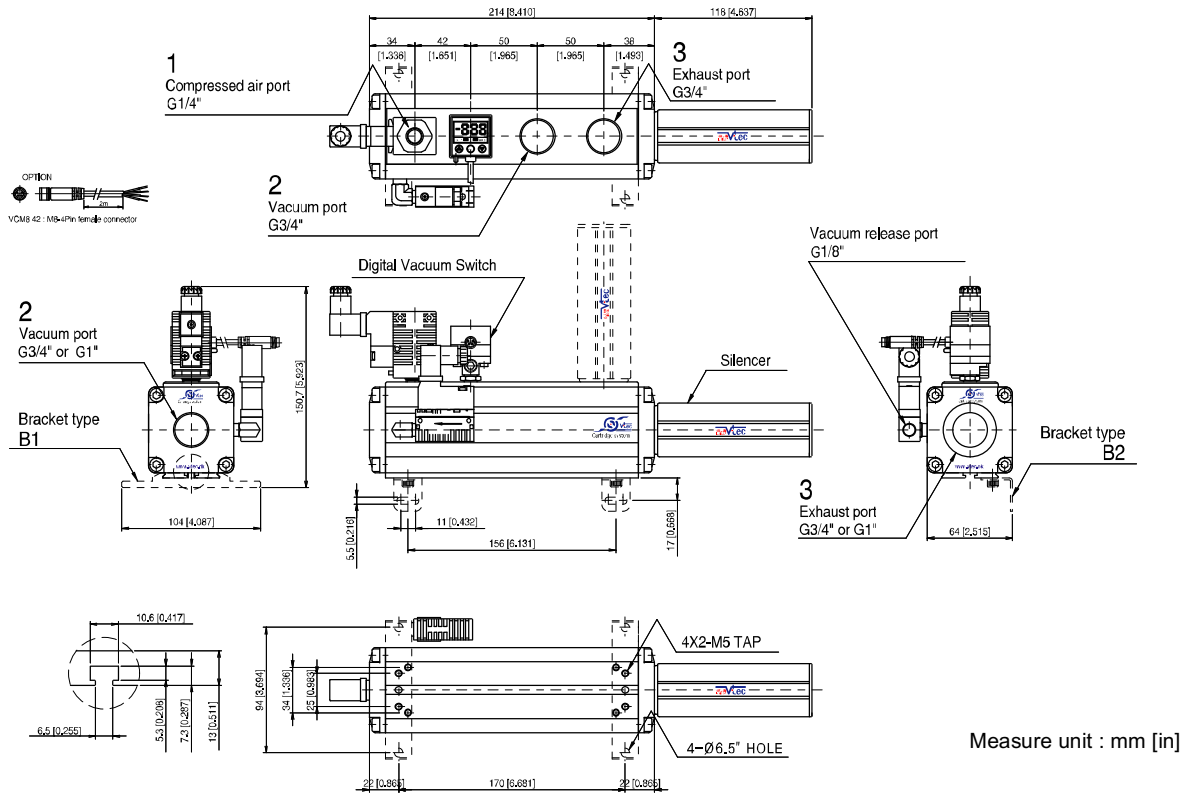
▼Series PM 303X()..A.. / PML 303X()..A..



Dimensional Information

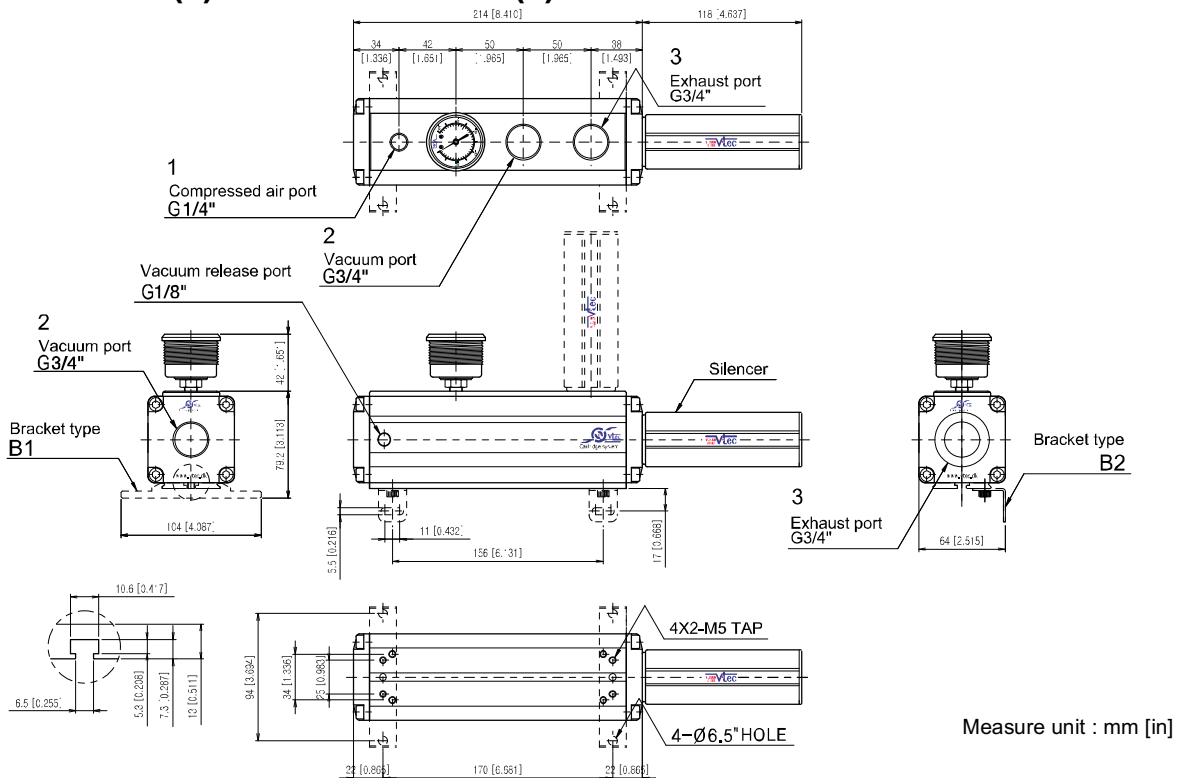
With Air Control valve, Vacuum release control valve, Digital vacuum switch

▼ Series PM 303X()..B.. / PML 303X()..B..



Standard

▼ Series PM 303X()..B.. / PML 303X()..B..



VACUUM PUMPS