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Keyboard pump

Page 761

· Multi-stage vacuum ejector
· Vacuum filter in one body with auto filter cleaning system
· Available to multi stack with individual vacuum system

SKC pump

Page 753

· VMECA vacuum cartridge technology integrated
· Switch and valve in one body
· QR valve (Quick release valve) for faster vacuum release time
· Available to multi stack with individual vacuum system

Green pump

Page 901

· VMECA vacuum cartridge technology integrated
· High polished clean surface (= for food, pharma industry)
· Vacuum filter self-cleaning system

V pump

Page 707

· VMECA vacuum cartridge technology integrated
· Manifold (Distributor) in one body

VD pump

Page 891

· VMECA vacuum cartridge technology
· Located at or near the point of use thus reducing system volume, increase and reducing cycle time.

Turtle pump

Page 621

· VMECA vacuum cartridge technology integrated
· Vacuum filter in one body with auto filter cleaning system

Magic pump

Page 655

· VMECA vacuum cartridge technology integrated
· Flexibly rotatable vacuum pump

PM pump

Page 901

· VMECA vacuum cartridge technology integrated
· High vacuum flow with durable aluminum body

VACUUM PUMPS

Index

MPM pump Page 707

· VMECA vacuum cartridge technology integrated
· Available for up to 16 cartridges

Mega pump Page 727

· The biggest vacuum pump in VMECA pump range
· High vacuum flow

VCS speeder Page 829

· VMECA vacuum cartridge technology integrated
· Level compensator and vacuum ejector in one body

VSM pump Page 839

· VMECA vacuum cartridge technology integrated
· Various mounting options for easy installation

VSMR pump Page 857

· VMECA vacuum cartridge technology integrated
· Quick release function without additional vacuum release valve
· Auto release function

VQ pump Page 821

· VMECA vacuum cartridge technology integrated
· Quick release function without additional vacuum release valve
· Auto filter cleaning system with blow off function

SC pump Page 813

· VMECA vacuum cartridge technology integrated
· Check valve for fast evacuation time (More than 2times faster than conventional ejectors)

Conveying pump Page 826

· High vacuum flow to transfer bulk material and venting gases
· Full stainless steal option is available

How to select proper vacuum pump

Sealed system

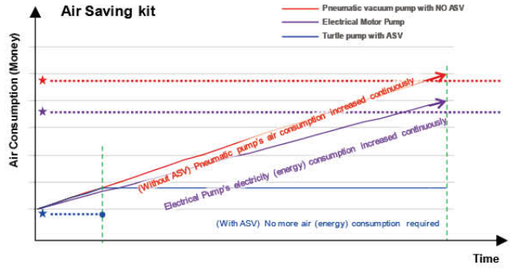
For sealed system the capacity of the pump is determined by how fast the system can be evacuated to a certain vacuum level.
This capacity is called the evacuation time of the pump and is normally specified in sec/l. This value is multiplied by the volume of the system in order to obtain the evacuation time to the desired vacuum level.

Non-sealed system

With non-sealed system (lifting porous material), the case is different. To maintain the desired vacuum level the pump must have the capacity to pump away the air-leaking in by establishing the leaking flow; it is possible, by reading the pump data, to find the right pump for the application in question. If the leakage occurs via a known aperture, the flow can be established according to the diagram.
When the leakage occurs through a porous material or in an unknown way, the flow can be established by a test with a vacuum pump. The pump is connected to the system and the obtained vacuum level is read.
(It should be at least -20kPa)

Air saving system

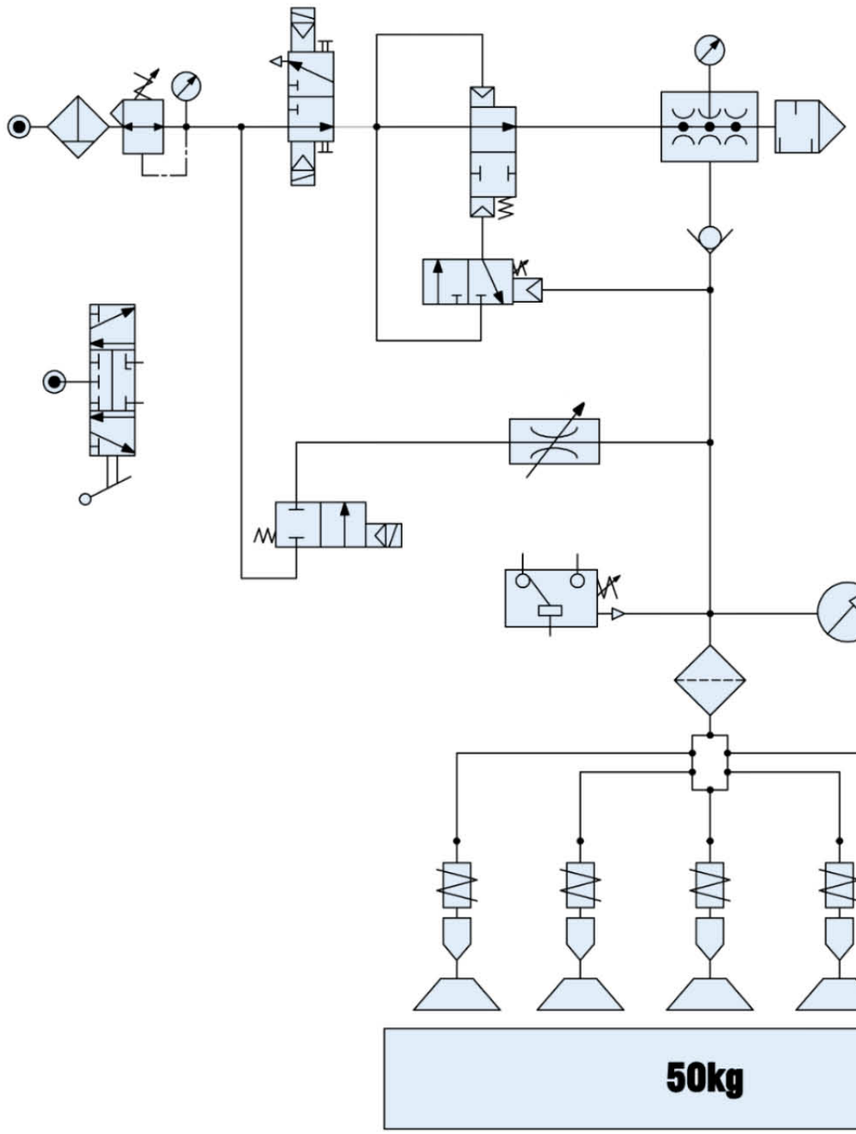
Electrically driven, mechanical vacuum pumps normally work during the whole working period and the vacuum requirements are controlled by a valve on the vacuum side. In system with compressed air-driven vacuum pumps it is often possible to save a lot of energy. As these pumps have a faster reaction time (fast start-up) the pump can be shut off when the vacuum is no longer needed. Many Pumps can be delivered with Air saving system as option.



The example for vacuum system

EX) If, you have to move in packing box(50kg) with suction cup and suction time-within 0.3sec using to the condition as follows :

Condition : air pipe length=3m, air pipe(hose) inner diameter=6mm, Quantity of suction cup ; 5pcs
What is proper vacuum pump & suction cup model?



① Moving weight	: 50
② Suction time	: 0.3 second
③ Selected suction cup	: VB75(B) PU - 12F
④ Suction cup material	: PU
⑤ Suction cup quantity(Pcs)	: 5
⑥ Diameter of suction cup(mm)	: 75
⑦ Air vacuum hose length(m)	: 3
⑧ Inner diameter of air hose(mm)	: 6
⑨ Volume of suction cup(Nl)	: 0.55
⑩ Volume of vacuum air hose(Nl)	: 0.085
⑪ Selected vacuum Pump	VTC3032-2-ASV-A3
⑫ Air supply control valve	: VMS14D–3–2
⑬ Vacuum release control valve	: MS18-3-2
⑭ Selected vacuum filter	: VTF 34 – 2
(You can to be select to size of a vacuum filter according to capability of infected material.)	
⑮ Vacuum switch (transition signal for next movement)	: VP20C
⑯ Ball joint (to use in curve or uneven objects)	: BJ12
⑰ Level spring (to use to compensator differences in level)	: L1230T
⑱ Needle valve (vacuum level controlling valve)	
⑲ Vacuum manifold	: VTDC34 – 14X5
⑳ Air filter / regulator (remove to dust, water, rust, etc.)	
㉑ Hand valve (using to manual)	

HOW TO SELECT SUCTION CUP SIZE

$$= 113 \times \sqrt{\frac{m \times n}{u \times s}} \quad = 113 \times \sqrt{\frac{50 \times 2}{60 \times 2}}$$

D: Suction cup diameter (mm)
m: Mass to life (kg)
u: Vacuum level (-kPa)
n: Safety factor
s: The number of suction cup

▶VB75 = (You are desirable to select a little bigger size suction cup than the actual size they have)

WHAT IS PROPER SUCTION CUP SIZE

VB75 (110cm3) = 0.11l x 5 (pcs) = 0.55l
· 0.55l (Quantity of vacuum pad : 5pcs)

* Please refer to the page on 18 and 19 for the volume of suction cup)

AIR PIPE, SUCTION CUP & VACUUM FILTER

$$\cdot V = \frac{\pi \times d2 \times L}{4} \times \frac{1}{1000} = \frac{3.14 \times 0.6^2 \times 300}{4} \times \frac{1}{1000} \fallingdotseq 0.085\ell$$

V = Capacity (liter)
d = inside diameter of air pipe (cm)
L = length of air pipe (cm)

Filter (VTF34-2) : 160cm3 = 0.16l

▶Needed vacuum capacity = capacity of suction cup + capacity of air pipe + vacuum filter
0.795l = 0.55l + 0.085l + 0.16l

THE SELECTION OF VACUUM PUMP

VTC3031-2 : 0.795(l) x 0.50 = 0.39
VTC3032-2 : 0.795(l) x 0.25 = 0.19
VTC3133-2 : 0.795(l) x 0.14 = 0.11
VTC3134-2 : 0.795(l) x 0.10 = 0.07
VTC3032-2

Because when there is a vacuum leak from the work piece or the piping and a drop in vacuum pressure which causes the air pressure drop

ASV Kit (Air Saving Kit + Air control valve)

Air Saving

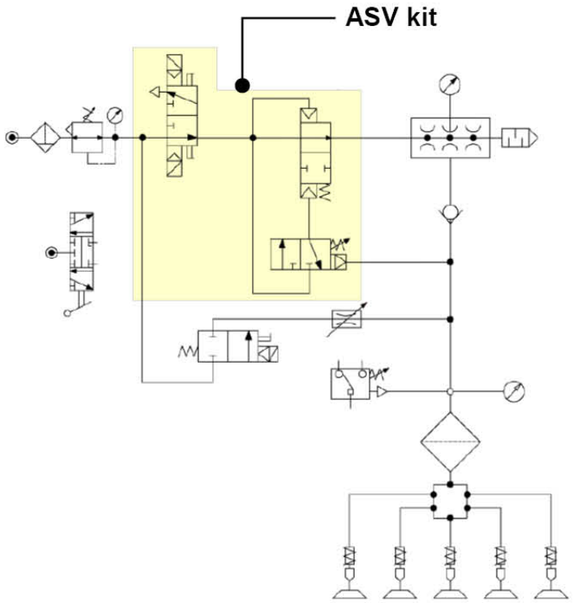
Has anyone ever told you that air is free? Well, think again because compressed air still uses energy and costs money to use it. VMECA's ongoing principle on saving air and giving you the highest performance have always been our standard.

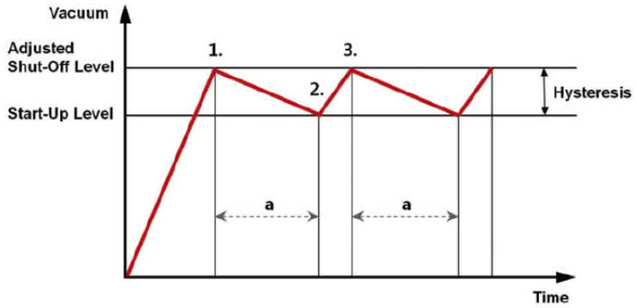
Air Saving Kit

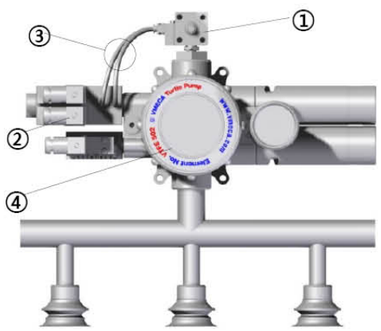
VMECA have always offered various ranges of compressed air-driven vacuum pumps in the market. VMECA ensures the best solutions to customers by offering the most efficient products in the market.

VMECA's Air Saving-Kit(AS-Kit) effectively prevents compressed air loss. Air Saving-Kit is a pneumatic control system that cuts off the vacuum pump once the desired vacuum level has been achieved, thus minimizing the energy (compressed air) consumption of the vacuum pump.

In case the vacuum level drops below the working level (required vacuum level), then the Air Saving-Kit reactivates the vacuum pump allowing for safe handling of product. The Air Saving-Kit is the most suitable in sealed systems(applications).







ASV kit – Turtle pump

1. Pneumatical vacuum switch, VP-01 NC
2. Pneumatical air ON/OFF valve
   + Compressed air control valve
3. Hose of polyurethane, D=4/1.5
4. Turtle pump with non-return type

AS Kit (Air Saving Kit)

Air Saving

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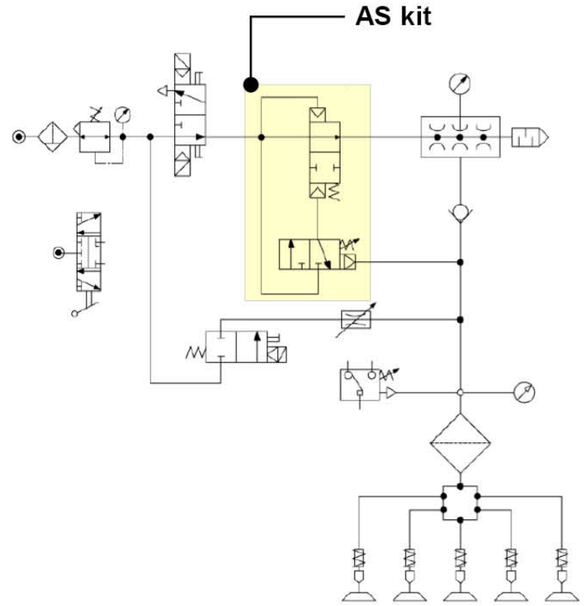
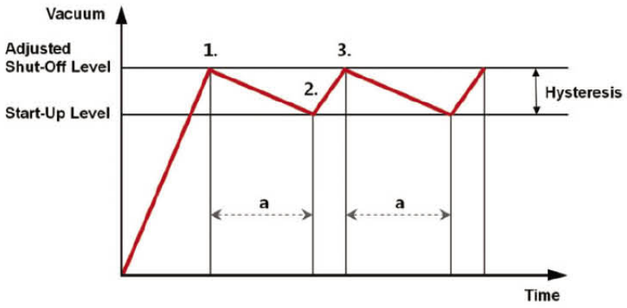
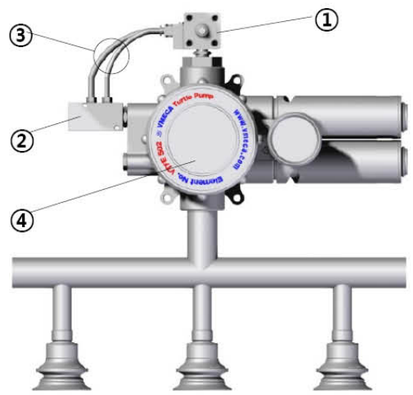






AS kit - Turtle pump

1. Pneumatical vacuum switch, VP-01 NC
2. Pneumatical air ON/OFF valve
3. Hose of polyurethane, D=4/1.5
4. Turtle pump with non-return type

Technical data

Model	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)			Page
						Air supply	Vacuum	Exhaust	
VTC3021	92	3~4	171	97~152	50~60	6	8	10	
VTC3031	92	3~4	341	97~152		6	8	10	
VTCL3021	75	4~6	200	70~104	50~60	6	8	10	
VTCL3031	75	4~6	362	70~104		6	8	10	
VTC3022	92	3~4	342	194~304	60~65	8	12	18	
VTC3032	92	3~4	682	194~304		8	12	18	
VTCL3022	75	4~6	400	140~208	60~65	6	12	18	
VTCL3032	75	4~6	724	140~208		6	12	18	
VTC3122	92	3~4	342	194~304	60~65	8	15	15	
VTC3123	92	3~4	513	291~456		10	19	22	
VTC3124	92	3~4	684	388~608		10	22	32	
VTC3132	92	3~4	682	194~304	60~65	8	15	15	
VTC3133	92	3~4	1023	291~456		10	19	22	
VTC3134	92	3~4	1364	388~608		10	22	32	
VTCL3122	75	4~6	400	140~208	60~65	8	15	15	
VTCL3123	75	4~6	600	210~312		10	19	22	
VTCL3124	75	4~6	800	280~416		10	22	32	
VTCL3132	75	4~6	724	140~208	60~65	8	15	15	
VTCL3133	75	4~6	1086	210~312		10	19	22	
VTCL3134	75	4~6	1448	280~416		10	22	32	
M3122	92	3~4	342	194~304	50~60	8	15	15	
M3123	92	3~4	513	291~456		10	19	22	
M3124	92	3~4	684	388~608		10	22	32	
ML3122	75	4~6	362	140~208	50~60	8	15	15	
ML3123	75	4~6	600	210~312		10	19	22	
ML3124	75	4~6	800	280~416		10	22	32	
M3132	92	3~4	682	194~304	50~60	8	15	15	
M3133	92	3~4	1023	291~456		10	19	22	
M3134	92	3~4	1364	388~608		10	22	32	
ML3132	75	4~6	724	140~208	50~60	8	15	15	
ML3133	75	4~6	1086	210~312		10	19	22	
ML3134	75	4~6	1448	280~416		10	22	32	

Technical data

Model	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)			Page
						Air supply	Vacuum	Exhaust	
GS203F	90	3~4	85.8	21~32	52~58	4~6	6	8	
GS252	94	5~6	113	70.5~83.5	60~68	6~8	6	10	
GS253F	94	5~6	146	70.5~83.5		6~8	8	10	
GS302	93	3~4	171	97~152		4~6	8	10	
GSL302	75	4~6	200	70~104		6~8	8	10	
GH203F	90	3~4	172	40~56	52~58	6~8	8	10	
GH252	94	5~6	222	141~167	60~68	6~8	8	10	
GH253F	94	5~6	292	141~167		6~8	8	10	
GH302	93	3~4	343	194~304		6~8	8	10	
GHL302	75	4~6	400	140~208		6~8	8	10	
VS144	92	3~4	341	97~152	50~60	6	8	10	
VS146	92	3~4	341	97~152		6	8	10	
VS148	92	3~4	341	97~152		6	8	10	
VLS144	75	4~6	362	70~104	50~60	6	8	10	
VLS146	75	4~6	362	70~104		6	8	10	
VLS148	75	4~6	362	70~104		6	8	10	
MD302	92	3~4	171	82~152	50~66	6	8	10	
MD303	92	3~4	341	70~104		6	8	10	
MDL302	75	4~6	200	82~152	50~66	6	8	10	
MDL303	75	4~6	362	70~104		6	8	10	
PM303X1	92	3~4	341	97~158	60~65	8	12	12	
PM303X2	92	3~4	682	194~304		8	15	15	
PM303X3	92	3~4	1023	291~456		10	19	22	
PM303X4	92	3~4	1364	388~608		10	22	32	
PML303X1	75	4~6	362	70~104	60~65	8	12	12	
PML303X2	75	4~6	724	140~208		8	15	15	
PML303X3	75	4~6	1086	210~312		10	19	22	
PML303X4	75	4~6	1448	280~416		10	22	32	
MPM303x6	92	3~4	2048	588~804	55~62	11	35	40	
MPM303x8	92	3~4	2728	784~1072		11	35	40	
MPM303x10	92	3~4	3410	980~1340		11	40	45	
MPM303x12	92	3~4	4092	1176~1608		12	40	50	
MPM303x14	92	3~4	4774	1372~1876		13	40	50	
MPM303x16	92	3~4	5456	1568~2144		14	45	60	

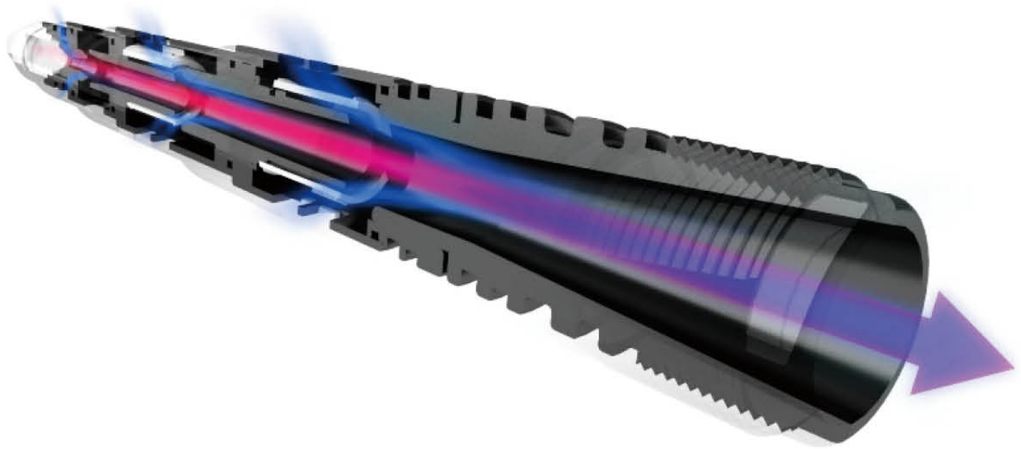
Technical data

Model	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)			Page
						Air supply	Vacuum	Exhaust	
MPML303x6	75	4~6	2172	420~624	55~62	8	35	40	
MPML303x8	75	4~6	2896	560~832		8	35	40	
MPML303x10	75	4~6	3620	700~1040		9	40	40	
MPML303x12	75	4~6	4344	840~1248		10	40	50	
MPML303x14	75	4~6	5068	980~1456		10	45	55	
MPML303x16	75	4~6	5792	1120~1664		14	45	60	
ML200	92	4~6	2410	600~780	68~76	10	32	40	
ML400	92	4~6	4820	1200~1680		12	40	60	
ML600	92	4~6	7230	1800~2520		14	50	70	
ML800	92	4~6	9640	2400~3360		15	50	75	
ML1000	92	4~6	12050	3000~4140		18	65	90	
ML1200	92	4~6	14460	3600~4920		20	75	100	
VCML100	92	3~4	1384	388~608	60~65	8	22	75	
VCML200	92	3~4	2728	784~1072		10	32	75	
VCML400	92	3~4	5456	1586~2144		12	40	75	
VCML100L	75	4~6	1448	280~416	60~65	8	22	75	
VCML200L	75	4~6	2896	560~832		10	32	75	
VCML400L	75	4~6	5792	1120~1664		12	40	75	
SKC203	90	3~4	171.6	34~64	50~60	6	6	-	
VKM5	85	3~6	26	12~21	50~65	4	2	6	
VKX5	92	3~6	23	13~22		4	2	6	
VKM61	85	3~6	37	15~21	50~65	4	6	10	
VKM62	85	3~6	74	30~42		4~10	6	10	
VKX61	92	3~6	31	21.6~24		4~10	6	10	
VKX62	92	3~6	62	43.2~48		4~10	6	10	
VKM73	85	3~6	111	10~58	50~65	4~10	8	12	
VKM74	85	3~6	135	54~78		4~10	8	12	
VKX73	92	3~6	94	49~66		4~10	8	12	
VKX74	92	3~6	109	66~88		4~10	8	12	
MC102	85	1.2~2.6	16.5	6.8~10.6	50~50	4	4	6	
VCS102	85	1.2~2.6	16.5	6.8~10.6	55~65	4~6	8	6	
VCS202	90	3~4	41.3	17~32		4~6	8	8	

Technical data

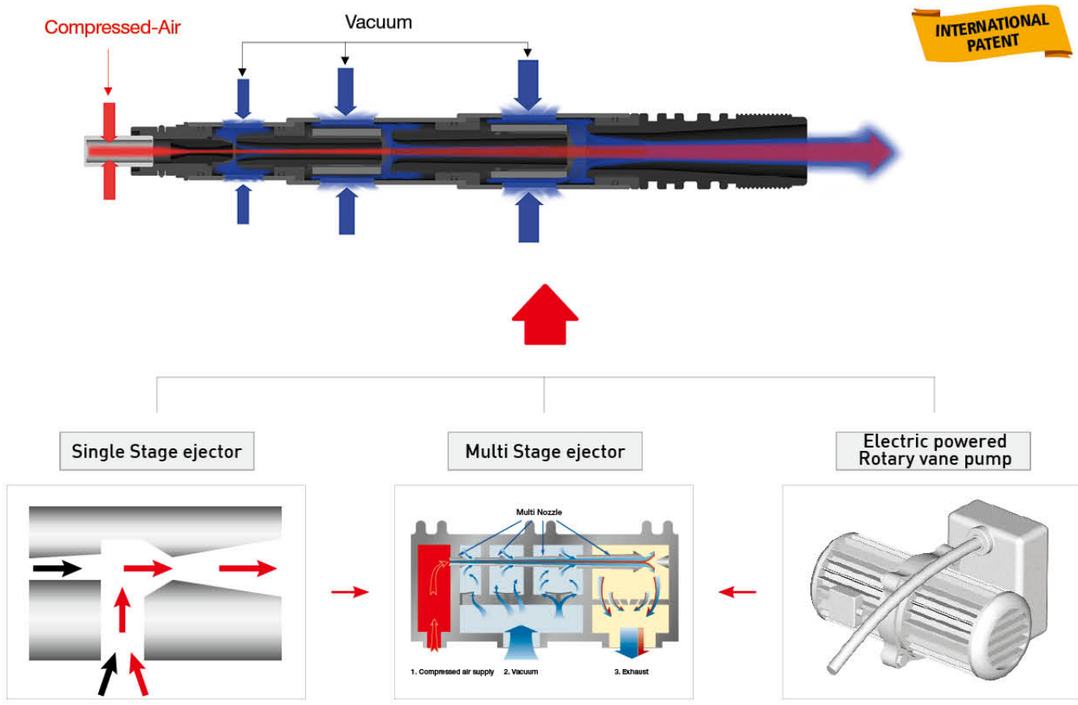
Model	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)			Page
						Air supply	Vacuum	Exhaust	
VSM202	90	3~4	44	22~40.5	55~65	8	8	8	
VSM203	90	3~4	84.5	21~40		8	8	10	
VSM302	92	3~4	171	82~152		8	12	12	
VSM303	92	3~4	341	82~152		8	12	14	
VSMR202	90	3~4	42	22~40.5	55~65	8	8	8	
VSMR203	90	3~4	84.5	21~40		8	8	10	
VQ202	90	3~4	44	22~40.5	55~65	4~6	8	8	
VQ203	90	3~4	84.5	21~40		4~6	8	10	
SC202	90	3~4	44	22~40.5	59~65	4~6	8	8	
SC203	90	3~4	84.5	21~40		4~6	8	10	
VTM5	85	4~6	37	15~25	50~65	2	5	8	
VTM10	85	4~6	74	30~42		2	8	10	
VTM20	85	4~6	149	60~84		4	10	12	
VTM30	85	4~6	220	90~126		6	12	15	
VTX5	92	4~6	32	21.6~24	50~68	2	5	8	
VTX10	92	4~6	62	43.2~48		2	8	10	
VTX20	92	4~6	124	86.4~96		4	10	12	
VTX30	92	4~6	185	129.6~144		6	12	15	
VTM5 x (N)	85	4~6	27 x N	30~336	50~65	2~10	2.5	3/8" x 1~2	
VTM10 x (N)	85	4~6	35 x N	60~504		4~10	4	3/8" x 1~2	
VTX5 x (N)	92	4~6	24 x N	43~384	55~65	2~10	2.5	3/8" x 1~2	
VTX10 x (N)	92	4~6	32 x N	86~570		4~10	4	3/8" X 1~2	
VTOM5 x (N)	85	4~6	27	15~21	50~65	8~10	2.5	10	
VTOM10 x (N)	85	4~6	35	30~42		8~10	4	12	
VTOX5 x (N)	92	4~6	24	21.6~24		8~10	2.5	10	
VTOX10 x (N)	92	4~6	32	43.2~48		8~10	4	12	
VTRA250	84.4	5.5	283	113~340	---	6	8	8	
VTRA375	84.4	5.5	849	175~820	---	8	10	10	
VTRA500	84.4	5.5	1698	340~1274	---	10	14	14	
VTRA750	84.4	5.5	3396	651~2547	---	12	19	19	
VTRF2-3	27	2.8~5.5	283	88~170	---	6	8	8	
VTRF3-3	15.2	2.8~5.5	424	99~170	---	6	10	10	
VTRF5-6	33.8	2.8~5.5	849	396~679	---	8	12	12	
VTRF7-6	27	2.8~5.5	1698	792~1358	---	10	19	19	
VTRF15-3	4.4	2.8~5.5	4670	396~679	---	8	38	38	
VTRF15-6	8.5	2.8~5.5	5660	792~1358	---	10	38	38	

VMECA VACUUM CARTRIDGE



- ✓ Patented in 18 countries around the world
- ✓ Extremely compact size and light weight
- ✓ Efficient energy consumption
- ✓ High vacuum level and vacuum flow
- ✓ Stable performance despite drop or fluctuation of compressed air pressure
- ✓ Easy maintenance

53% less energy consumption & Vacuum flow **3times higher**



VMECA VACUUM CARTRIDGE

VC102

Features and Strengths

· Two stage – VMECA micro cartridge
· The most compact size multi stage vacuum ejector
· High vacuum level (-83 kPa) at low air pressure
· Extremely low air consumption
· Reliable performance despite inconsistent compressed air pressure
· International patent

Specifications

Description	VC102
Max. Vacuum level	-83 kPa
Open Vacuum flow	16 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	0.7 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC102	50	1.1	11.5	6.3	2.2	1.6	0.7	-	-	-	-	-
	83	1.8	14.2	9.4	3.3	2.2	2	1.4	0.8	0.4	0.18	-
	83	2.2	16	11.9	5.1	2.3	1.4	1.3	0.9	0.3	0.12	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC102	1.1	5.9	0.68	3	6.1	11.8	27.2	-	-	-	-
	1.8	8.2	0.4	1.48	4.3	6.9	9.1	15.3	27.4	50.2	-
	2.2	10	0.34	1.6	3.9	7	10.4	17.5	30.9	61.4	-

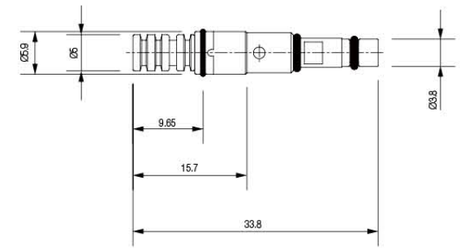
Build an Ordering No.

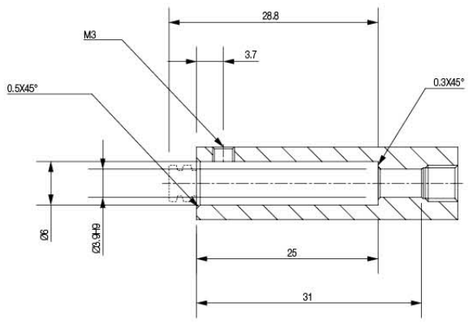
1. Cartridge	Description	Ordering No.
	Micro vacuum cartridge, 2-stage	VC102
	Micro vacuum cartridge, 2-stage, Holding plug	VC102P

Spare Parts – Plug

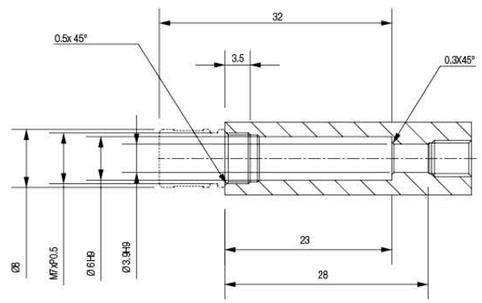
Model	Description	Weight (g)
VCP-M7	Holding plug	0.8

Dimensions – Basic Pump





VC102



VC102P

VMECA VACUUM CARTRIDGE

VC202

Features and Strengths

- Two stage – VMECA mini cartridge
- High vacuum level (-90 kPa) at low air pressure
- Efficient air consumption with high vacuum level and vacuum flow
- International patent
- Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC202
Max. Vacuum level	-90 kPa
Open Vacuum flow	41.3 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	2.67 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC202	50	1.7	35	25.4	12.8	8.3	4	-	-	-	-	-
	65	2.2	38.8	29.5	17	11.5	8	5.2	1.4	-	-	-
	90	3.14	41.3	36.9	26	15.8	11	8.9	6.6	3.9	2	-
	85	4	40	36.5	31	23	14.1	7.6	6.4	3.9	1.3	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC202	1.7	17	0.26	0.59	1.29	2.56	-	-	-	-	-
	2.2	20	0.18	0.48	0.95	1.55	2	2.5	-	-	-
	3.14	26	0.15	0.37	0.61	1.5	1.5	2	3.8	6.2	-
	4	32	0.14	0.39	0.59	0.9	1.2	1.8	3.2	6.9	-

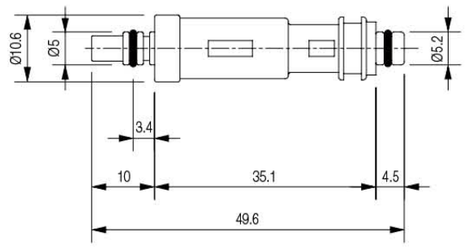
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Mini vacuum cartridge, 2-stage	VC202
	Mini vacuum cartridge, 2-stage, Non-return valve	VC202-N
	Mini vacuum cartridge, 2-stage, Holding plug	VC202P
	Mini vacuum cartridge, 2-stage, Holding plug, Non-return valve	VC202P-N

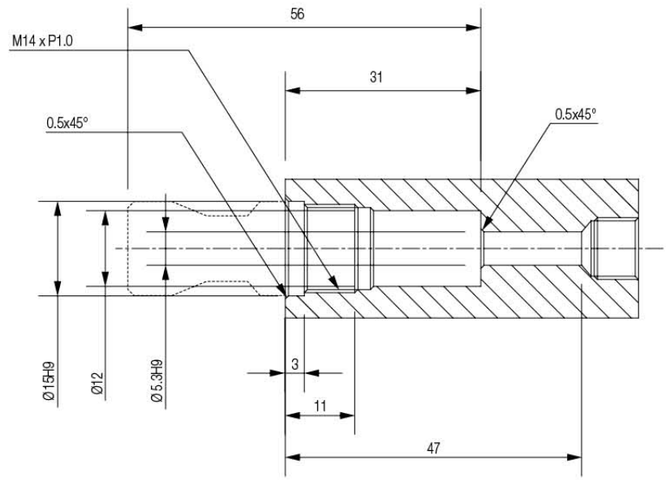
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M14	Holding plug	6.01

Dimensions – Basic Pump



VC202



VC202P

VMECA VACUUM CARTRIDGE

VC203

Features and Strengths

· Three stage – VMECA mini cartridge
· High vacuum level (-90 kPa) at low air pressure
· Efficient air consumption with high vacuum level and vacuum flow
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC203
Max. Vacuum level	-90 kPa
Open Vacuum flow	85.8 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	5.45 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC203	50	1.7	5.6	25.4	12.8	8.3	4	-	-	-	-	-
	65	2.2	67.2	29.5	17	11.5	8	5.2	1.4	-	-	-
	90	3.14	85.6	36.9	26	15.8	11	8.9	6.6	3.9	2	-
	85	4	85.8	42.7	31	23	14.1	7.6	6.4	3.9	1.3	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC203	1.7	17	0.12	0.49	1.2	2.4	-	-	-	-	-
	2.2	20	0.08	0.38	0.8	1.47	1.9	2.4	-	-	-
	3.14	26	0.06	0.28	0.52	1.4	1.4	2	3.2	6	-
	4	32	0.075	0.26	0.49	0.8	1	1.8	3	6.8	-

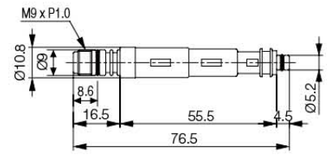
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Mini vacuum cartridge, 3-stage	VC203
	Mini vacuum cartridge, 3-stage, Non-return valve	VC203-N
	Mini vacuum cartridge, 3-stage, M14 Two-fold silencer	VC203S
	Mini vacuum cartridge, 3-stage, M14 Two-fold silencer, Non-return valve	VC203S-N
	Mini vacuum cartridge, 3-stage, M15 Direct silencer	VC203DS
	Mini vacuum cartridge, 3-stage, M15 Direct silencer, Non-return valve	VC203DS-N
	Mini vacuum cartridge, 3-stage, M15 Two-fold silencer	VC203LS
	Mini vacuum cartridge, 3-stage, M15 Two-fold silencer, Non-return valve	VC203LS-N
	Mini vacuum cartridge, 3-stage with vacuum filter, M16 silencer	VC203FS1
	Mini vacuum cartridge, 3-stage with vacuum filter, M16 silencer, Non-return valve	VC203FS1-N

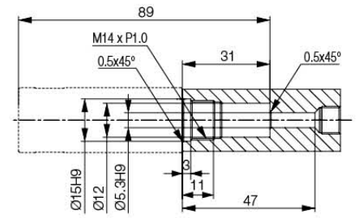
Spare Parts – Plug & Silencer

Part No.	Description	Weight (g)
VTS-M15	M15 Direct silencer	11.79
VTTS-M14	M14 Two-fold silencer	18.38
VTTS-M15	M15 Two-fold silencer	15.3
VTS-M16-203	M16 silencer	6.62

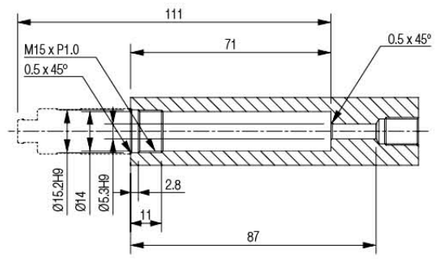
Dimensions – Basic Pump



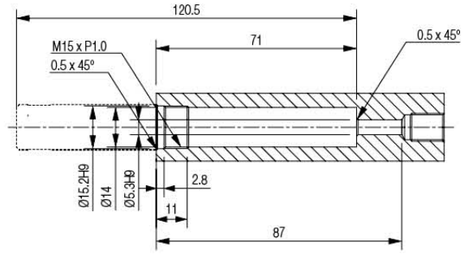
VC203



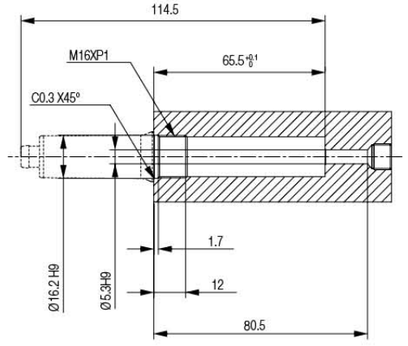
VC203S



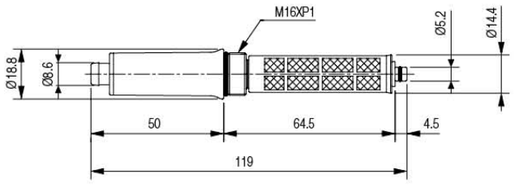
VC203DS

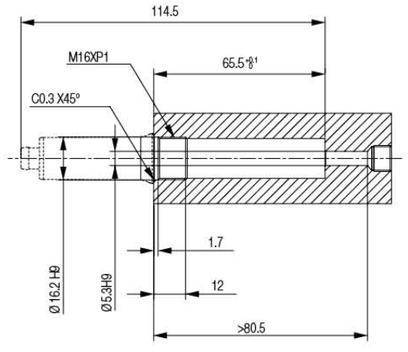


VC203LS



VC203





VC203LS

VMECA VACUUM CARTRIDGE

VC252

Features and Strengths

· Two stage – VMECA mini premium cartridge
· Deep vacuum level (-94 kPa) with large vacuum flow (113Nl/min)
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC252
Max. Vacuum level	-94 kPa
Open Vacuum flow	113 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	8.66 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC252	90	5	112	85	63	43	37	27	22	17	11	3.1
	94	5.5	113	91	69	48	30	26	22	17	11	2.8
	93.5	6	111	97	76.5	54	34	25	21	16	9.5	2.3

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC252	5.0	70.5	0.039	0.15	0.27	0.49	0.60	0.94	2.09	2.82	4.83
	5.5	77.0	0.037	0.13	0.26	0.41	0.54	0.86	1.2	1.6	5.0
	6.0	83.5	0.035	0.078	0.12	0.13	0.33	0.83	1.15	1.76	5.8

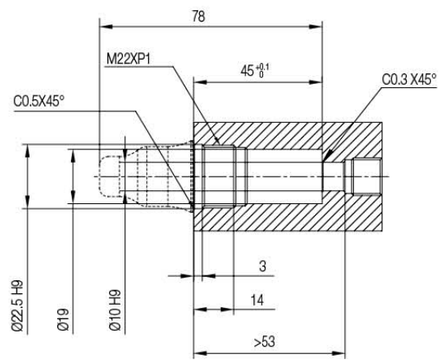
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Mini premium vacuum cartridge, 2-stage	VC252
	Mini premium vacuum cartridge, 2-stage, Non-return valve	VC252-N
	Mini premium vacuum cartridge, 2-stage, Holding plug	VC252P
	Mini premium vacuum cartridge, 2-stage, Holding plug, Non-return valve	VC252P-N
	Mini premium vacuum cartridge, 2-stage, Silencer	VC252S
	Mini premium vacuum cartridge, 2-stage, Silencer, Non-return valve	VC252S-N
	Mini premium vacuum cartridge, 2-stage with vacuum filter, M16 silencer	VC252PS
	Mini premium vacuum cartridge, 2-stage with vacuum filter, M16 silencer, Non-return valve	VC252PS-N

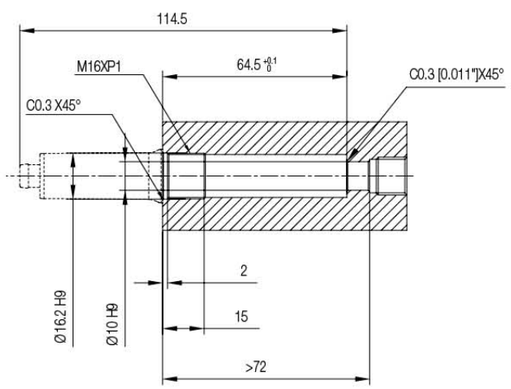
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M16-252	Holding plug	6.62
VTS-M16-252	M16 silencer	6.62

Dimensions – Basic Pump



VC252



VC252PS

VMECA VACUUM CARTRIDGE

VC253

Features and Strengths

· Three stage – VMECA mini premium cartridge
· Deep vacuum level (-94.5 kPa) with large vacuum flow (146Nl/min)
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC253
Max. Vacuum level	-94 kPa
Open Vacuum flow	146 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	14.12 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC253	90	5.0	137	105	63	42	32.5	26	21	17	11	3.1
	94	5.5	141	109	71	51	32	26	22	17.5	11	2.8
	93.5	6.0	146	108	75	60	42	25	21	16	9.6	2.3

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC253	5.0	70.5	0.034	0.136	0.23	0.43	0.52	0.82	1.82	2.46	4.22
	5.5	77.0	0.034	0.125	0.24	0.37	0.5	0.8	1.1	1.5	4.75
	6.0	83.5	0.033	0.073	0.11	0.12	0.31	0.79	1.1	1.65	5.5

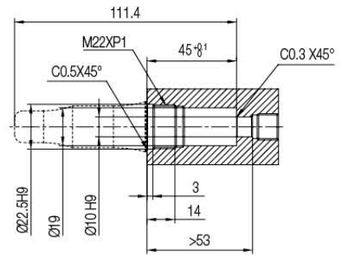
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Mini premium vacuum cartridge, 3-stage	VC253
	Mini premium vacuum cartridge, 3-stage, Non-return valve	VC253-N
	Mini premium vacuum cartridge, 3-stage, Holding plug	VC253P
	Mini premium vacuum cartridge, 3-stage, Holding plug, Non-return valve	VC253P-N
	Mini premium vacuum cartridge, 3-stage, Silencer	VC253S
	Mini premium vacuum cartridge, 3-stage, Silencer, Non-return valve	VC253S-N
	Mini premium vacuum cartridge, 3-stage with vacuum filter, M25 silencer	VC253FS1
	Mini premium vacuum cartridge, 3-stage with vacuum filter, M25 silencer, Non-return valve	VC253FS1-N

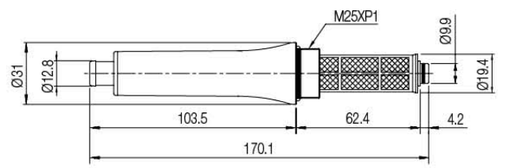
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M25-253	Holding plug	27.13
VTS-M25-253	M25 silencer	27.13

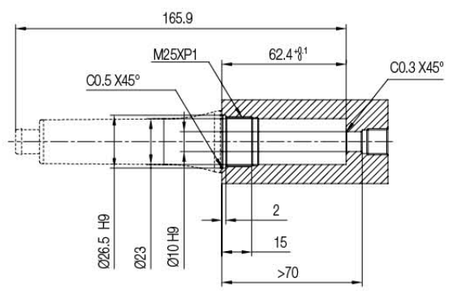
Dimensions – Basic Pump



VC203



VC203S



VC203DS

VMECA VACUUM CARTRIDGE

VC302

Features and Strengths

- Two stage – VMECA midi cartridge
- High vacuum level (-92 kPa) at low air pressure
- Efficient air consumption with high vacuum level and vacuum flow
- International patent
- Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC302
Max. Vacuum level	-92 kPa
Open Vacuum flow	171 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ºC
Material	PPS, POM, NBR, AL(Holding plug)
Weight	12.29 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC302	55	1.7	158	104	71	41.5	22.5	7.35	-	-	-	-
	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3	170	152	106	64	33	32	22	16.5	6.4	1.9
	92	4	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC302	1.7	82	0.025	0.15	0.25	0.47	0.8	-	-	-	-
	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-
	3	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8
	4	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5

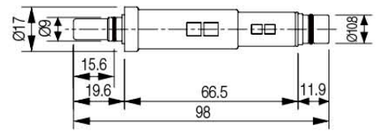
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Midi vacuum cartridge, 2-stage	VC302
	Midi vacuum cartridge, 2-stage, Non-return valve	VC302-N
	Midi vacuum cartridge, 2-stage, Holding plug	VC302P
	Midi vacuum cartridge, 2-stage, Holding plug, Non-return valve	VC302P-N

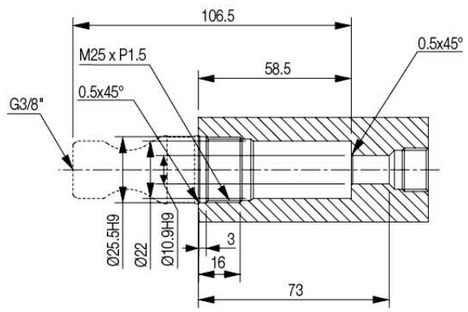
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M25-302	Holding plug	31.04

Dimensions – Basic Pump



VC302P



VC302P

VMECA VACUUM CARTRIDGE

VCL302

Features and Strengths

· Two stage – VMECA midi cartridge
· Large vacuum flow in efficient air consumption
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VCL302
Max. Vacuum level	-75 kPa
Open Vacuum flow	200 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	12.14 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCL302	60	4	188	158	110	70	46	28	6.8	-	-	-
	70	5	195	176	130	82	50	37.5	23	11.3	-	-
	75	6	200	183	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCL302	4	70	0.035	0.084	0.17	0.29	0.38	0.8	-	-	-
	5	85	0.027	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6	104	0.028	0.08	0.12	0.2	0.28	0.36	0.6	-	-

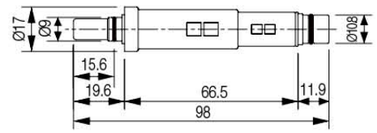
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Midi vacuum “L” cartridge, 3-stage	VCL302
	Midi vacuum “L” cartridge, 3-stage, Non-return valve	VCL302-N
	Midi vacuum “L” cartridge, 3-stage, Holding plug	VCL302P
	Midi vacuum “L” cartridge, 3-stage, Holding plug, Non-return valve	VCL302P-N

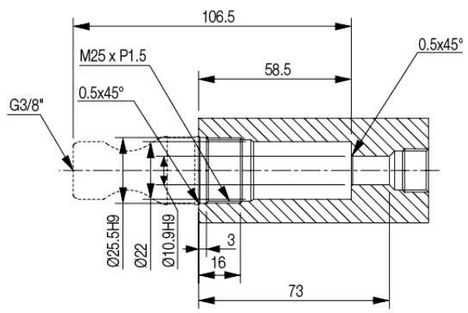
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M25-302	Holding plug	31.04

Dimensions – Basic Pump



VCL302P



VCL302P

VMECA VACUUM CARTRIDGE

VC303

Features and Strengths

· Three stage – VMECA midi cartridge
· High vacuum level (-92 kPa) at low air pressure
· Efficient air consumption with high vacuum level and vacuum flow
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VC303
Max. Vacuum level	-92 kPa
Open Vacuum flow	341 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	24.63 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VC303	55	1.7	243	104	71	41.5	22.5	7.35	-	-	-	-
	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3	338	152	106	64	33	32	22	16.5	6.4	1.9
	92	4	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VC303	1.7	82	0.021	0.15	0.25	0.47	0.8	-	-	-	-
	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8
	4	152	0.01	0.048	0.07	0.09	0.2	0.42	0.6	1	3.4

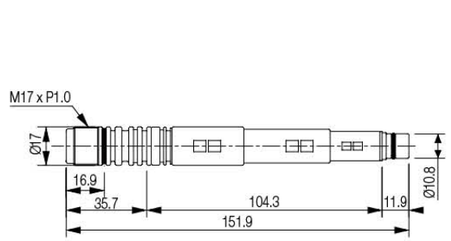
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Midi vacuum cartridge, 3-stage	VC303
	Midi vacuum cartridge, 3-stage, Non-return valve	VC303-N
	Midi vacuum cartridge, 3-stage, Holding plug	VC303P
	Midi vacuum cartridge, 3-stage, Holding plug, Non-return valve	VC303P-N
	Midi vacuum cartridge, 3-stage, M25 Two-fold silencer	VC303S
	Midi vacuum cartridge, 3-stage, M25 Two-fold silencer, Non-return valve	VC303S-N

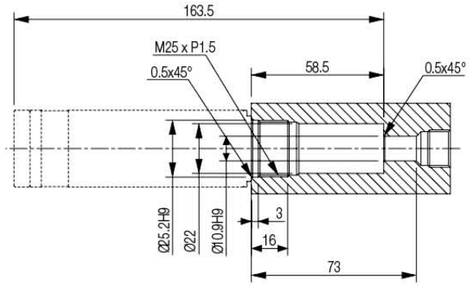
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M25-303	Holding plug	59.32
VTTS-M25	M25 Two-fold silencer	78.34

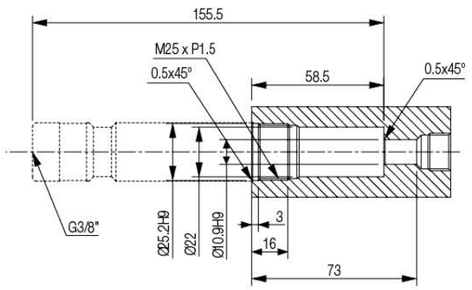
Dimensions – Basic Pump



VC303



VC303S



VC303P

VMECA VACUUM CARTRIDGE

VCL303

Features and Strengths

· Three stage – VMECA midi cartridge
· Large vacuum flow in efficient air consumption
· International patent
· Reliable performance despite inconsistent compressed air pressure

Specifications

Description	VCL303
Max. Vacuum level	-75 kPa
Open Vacuum flow	362 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Material	PPS, POM, NBR, AL(Holding plug)
Weight	24.12 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCL303	60	4	302	176	110	70	46	28	6.8	-	-	-
	70	5	344	200	130	82	50	37.5	23	11.9	-	-
	75	6	362	215	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCL303	4	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-
	5	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-

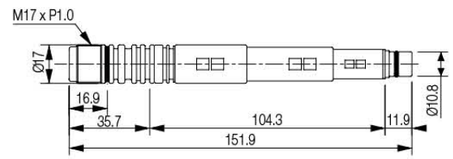
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Midi vacuum “L” cartridge, 3-stage	VCL303
	Midi vacuum “L” cartridge, 3-stage, Non-return valve	VCL303-N
	Midi vacuum “L” cartridge, 3-stage, Holding plug	VCL303P
	Midi vacuum “L” cartridge, 3-stage, Holding plug, Non-return valve	VCL303P-N
	Midi vacuum “L” cartridge, 3-stage, M25 Two-fold silencer	VCL303S
	Midi vacuum “L” cartridge, 3-stage, M25 Two-fold silencer, Non-return valve	VCL303S-N

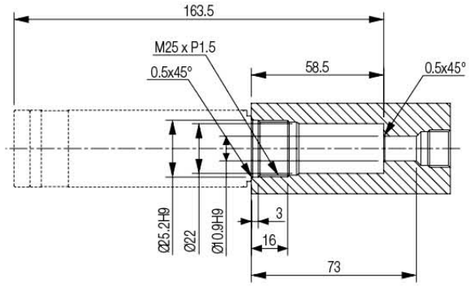
Spare Parts – Plug

Model	Description	Weight (g)
VCP-M25-303	Holding plug	59.32
VTTS-M25	M25 Two-fold silencer	78.34

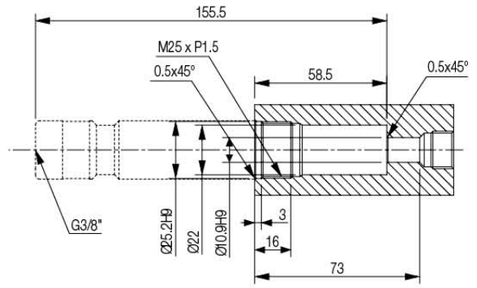
Dimensions – Basic Pump



VCL303



VCL303S



VCL303P

VMECA VACUUM CARTRIDGE

VCX303

Features and Strengths

- Three stage – VMECA midi cartridge
- Deep end vacuum level upto -95kpa
- Available for customized plug
- International patent - Reliable performance despite inconsistent compressed air pressure
- Quick response time when deep vacuum is needed

Specifications

Description	VCX303
Max. Vacuum level	-95 kPa
Open Vacuum flow	310 Nl/min
Max. Feed pressure	6 bar
Temperature	-20 ~ 80 ℃
Material	PPS,POM,NBR,AL(Holding plug)
Weight	24.12 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCX303	95	4.5	266	192	130	82	52	43	31	20	12	1
	94.8	5	282	203	133	116	70	42	30	20	12	1
	94.5	6	310	223	132	122	101	60	27	19	9	1

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCX303	4.5	124	0.013	0.071	0.144	0.25	0.33	0.61	0.8	1.3	3.1
	5	126	0.013	0.07	0.129	0.23	0.3	0.57	0.75	1.2	3.1
	6	140	0.011	0.058	0.1	0.18	0.24	0.48	0.62	1.1	3

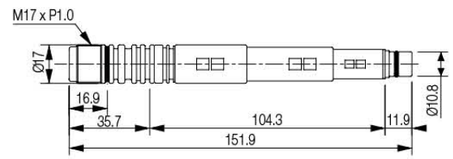
Build an Ordering No.

1. Cartridge	Description	Ordering No.
	Midi vacuum “X” cartridge, 3-stage	VCX303
	Midi vacuum “X” cartridge, 3-stage , Non-return valve	VCX303-N
	Midi vacuum “X” cartridge, 3-stage, Holding plug	VCX303P
	Midi vacuum “X” cartridge, 3-stage, Holding plug, Non-return valve	VCX303P-N
	Midi vacuum “X” cartridge, 3-stage, M25 Two-fold silencer	VCX303S
	Midi vacuum “X” cartridge, 3-stage, M25 Two-fold silencer, Non-return valve	VCX303S-N

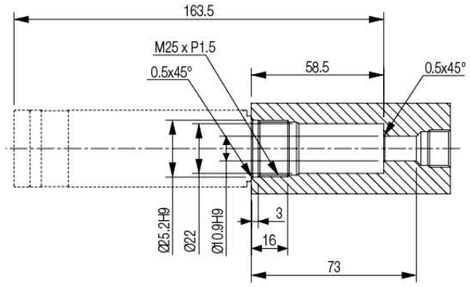
Spare Parts – Plug

Model	Description	Weight (g)
VC-M25-303	Holding plug	59.32
VTTS-M25	M25 Two-fold silencer	78.34

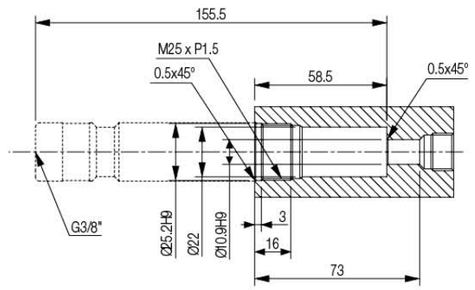
Dimensions – Basic Pump



VCX303

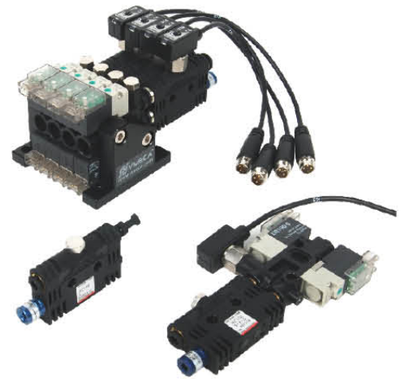


VCX303S



VCX303P

Micro pump



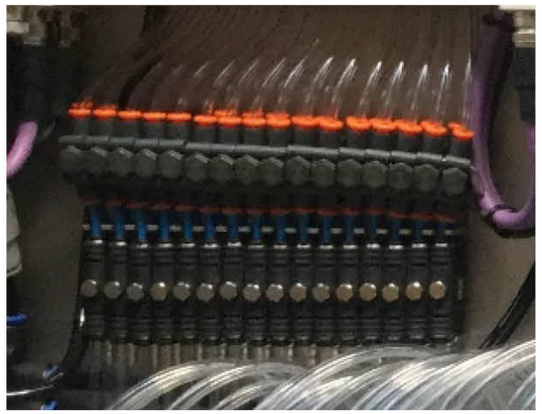
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Extremely compact size and low air consumption
Push-in type direct hose fitting

Advantages

Available for air control / vacuum release valve and vacuum switch option in compact size Reliable and stable operation - High vacuum level and vacuum flow in low air consumption

Application



Overall of specification

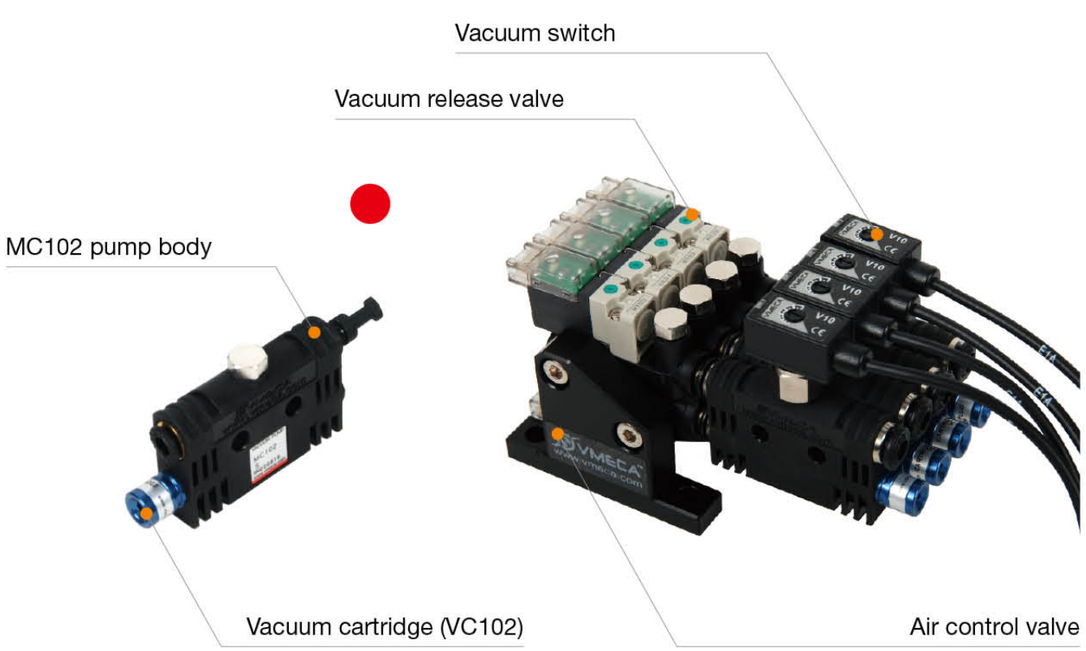
Model	Max. Vacuum	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
MC102	83	6	16	10	50 ~ 60

Micro pump

VMECA Micro pump can be combined with the optional vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for various industry such as packaging, semicon and etc.
It can build individual vacuum system with manifold type and it contributes reliable and safe performance in operation.
Also VMECA Micro pump has highly efficient energy consumption,
but high vacuum level and vacuum flow.

Key advantages

· VMECA vacuum cartridge integrated
· Low air consumption
· Compact size & Light weight



Single type **Stack type**

MC102

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Low energy consumption
· Compact size and light weight
· Push-in type direct hose fitting

Specifications

Description	MC102
Max. Vacuum level	-83 kPa
Open Vacuum flow	16.5 Nl/min
Max. Feed pressure	6 bar
Temperature	-20 ~ 80 ℃
Noise level	50 ~ 60 dBA
Weight	0.7 g

Vacuum Flow

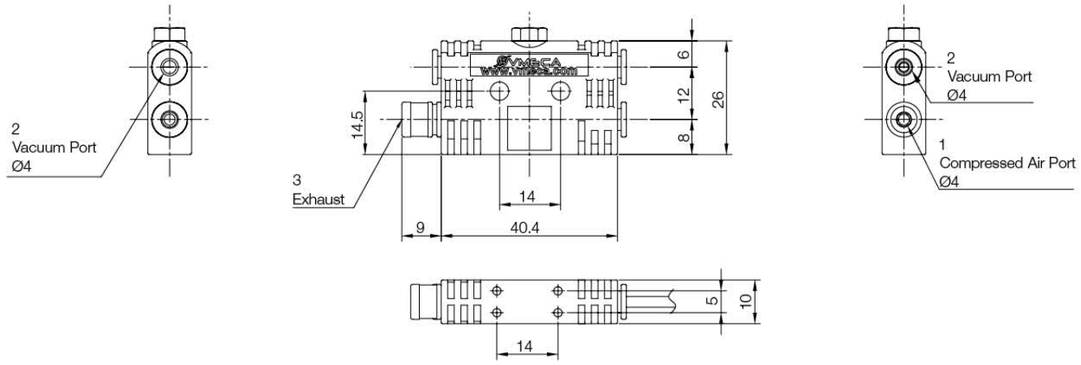
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MC102	50	1.2	11.5	6.3	2.2	1.6	0.7	-	-	-	-	-
	83	2.2	14.2	9.4	3.3	2.2	2	1.4	0.8	0.4	0.18	-
	80	2.6	16.5	11.9	5.1	2.3	1.4	1.3	0.9	0.3	0.12	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MC102	1.2	6.8	0.68	3	6.1	11.8	27.2	-	-	-	-
	2.2	9.6	0.4	1.48	4.3	6.9	9.1	15.3	27.4	50.2	-
	2.6	10.6	0.34	1.6	3.9	7	10.4	17.5	30.9	61.4	-

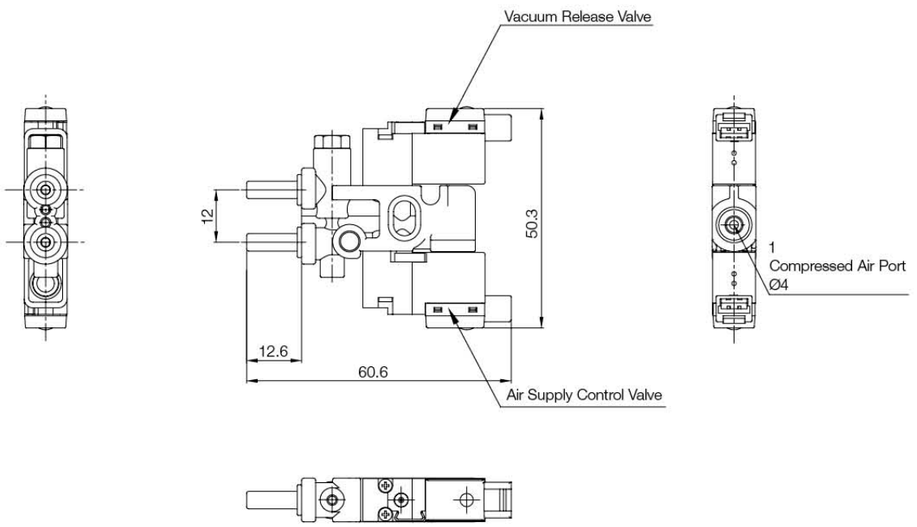
Dimensions – Basic Pump

[Unit : mm]



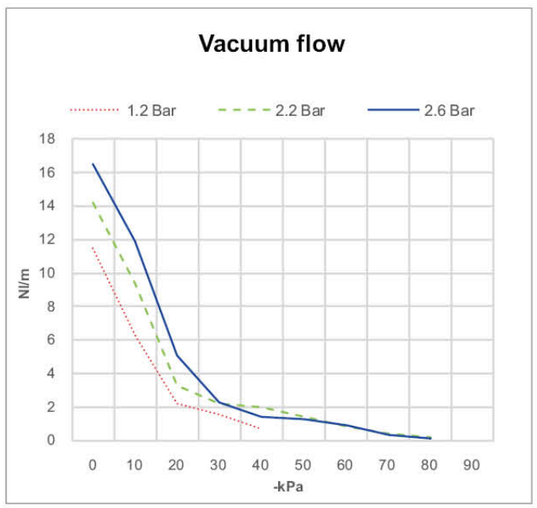
Dimensions – with Accessories

[Unit : mm]

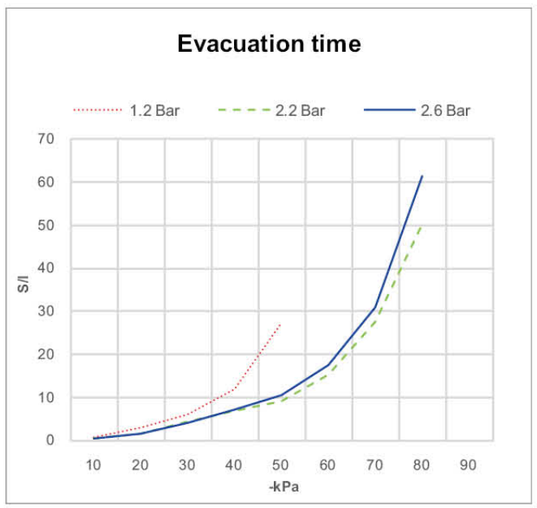


Performance data

MC102

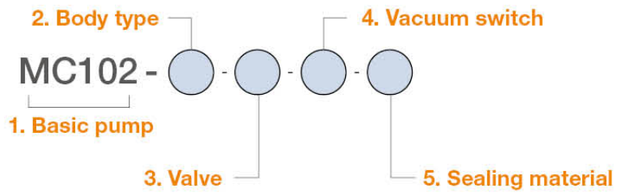


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	Micro pump, 2-stage cartridge, Plug	MC102

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit - 2 stacks	M2
	Manifold unit - 4 stacks	M4
	Manifold unit - 6 stacks	M6
	Manifold unit - 8 stacks	M8
	Manifold unit - 10 stacks	M10

3. Valve	Description	Symbol
	No valves: Only available with Single unit	Blank
	Air control valve : N.C.(Normal Closed) / Vacuum release valve : N.C.(Normal Closed)	A
	Air control valve : N.C.(Normal Closed)	B
	- The valve for Micro pump is available only DC24V	

4. Vacuum switch	Description	Symbol
	No switch	Blank
	Vacuum switch, No analog supply, M8-3pins, NPN	C
	Vacuum switch, No analog supply, M8-3pins, PNP	PC
	Vacuum switch, No analog supply, 3m lead wire, NPN	G
	Vacuum switch, No analog supply, 3m lead wire, PNP	PG

5. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
MC102-S	Micro pump, 2-stage cartridge, Plug, Single unit	14.1

Spare Parts – Cartridge

Part No.	Description	Weight (g)
VC102	Micro vacuum cartridge, 2-Stage for MC102	0.7

Spare Parts – Plug

Part No.	Description
VCP-M7	Holding plug for MC102

CU102

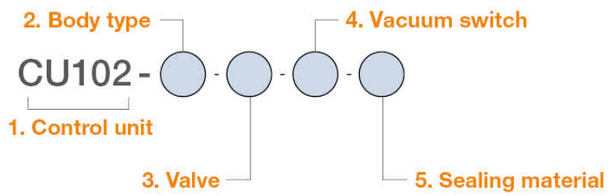
Features and Strengths

· Excellent performance in High pressure
· Compact size and light weight
· Push-in type direct hose fitting
· E/Plastic for Minimizing thermal stress
· Low electronic consumption (Power-saving option)

Specifications

Description	CU102
Max. Feed pressure	7 bar
Inner shock / Vibration	300 / 50 m/s²
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 °C
Electrical power consumption	Standard - 0.85 (Lamp, rated voltage approval) Power saving mode : 0.45
Weight	30.9 g

Build an Ordering No.



1. Control unit	Description	Symbol
	Control unit for Micro pump	CU102

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit - 2 stacks	M2
	Manifold unit - 4 stacks	M4
	Manifold unit - 6 stacks	M6
	Manifold unit - 8 stacks	M8
	Manifold unit - 10 stacks	M10

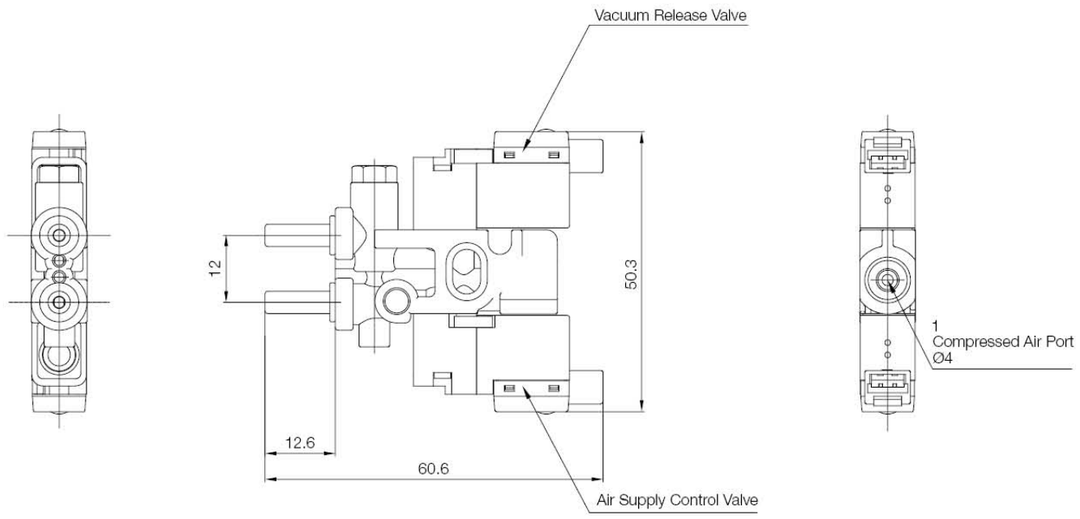
3. Valve	Description	Symbol
	No valves: Only available with Single unit	Blank
	Air control valve : N.C.(Normal Closed) / Vacuum release valve : N.C.(Normal Closed)	A
	Air control valve : N.C.(Normal Closed)	B
	- The valve for Micro pump is available only DC24V	

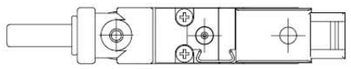
4. Vacuum switch	Description	Symbol
	No switch	Blank
	Vacuum switch, No analog supply, M8-3pins, NPN	C
	Vacuum switch, No analog supply, M8-3pins, PNP	PC
	Vacuum switch, No analog supply, 3m lead wire, NPN	G
	Vacuum switch, No analog supply, 3m lead wire, PNP	PG

5. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Dimensions – Basic Pump

[Unit : mm]





Mini pump

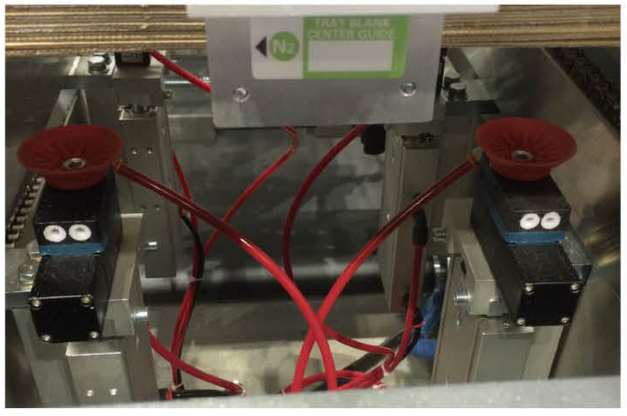
Features and Strengths

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

Advantages

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

Application



Overall of specification

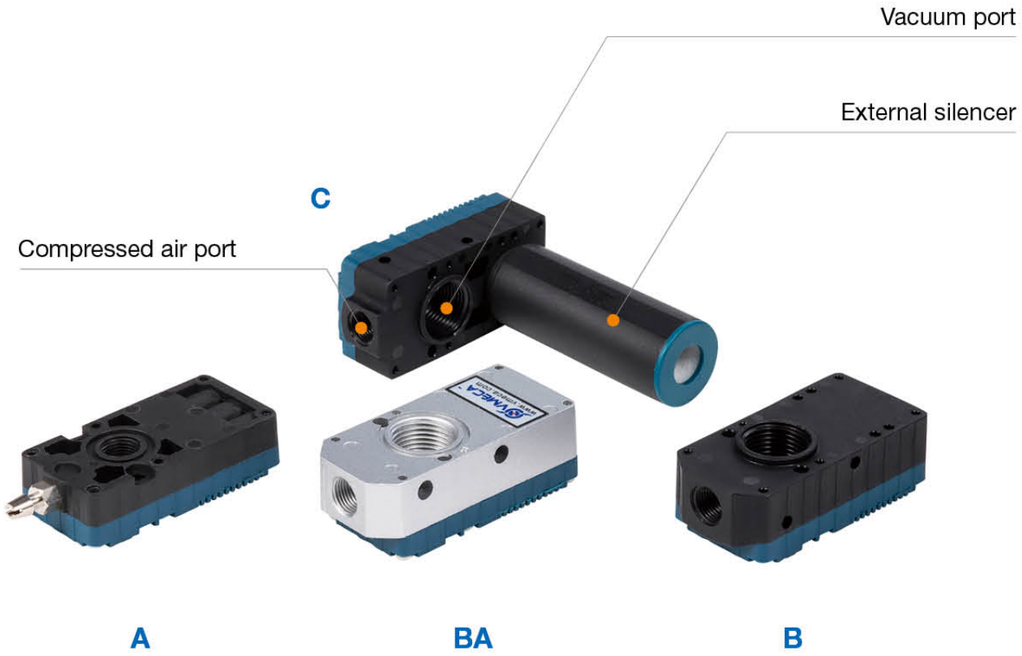
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VTM5	85	7	37	15 ~ 21
VTM10	85	7	74	30 ~ 42
VTM20	85	7	149	60 ~ 84
VTM30	85	7	220	90 ~ 126
VTX5	92	7	32	21.6 ~ 24
VTX10	92	7	62	43.2 ~ 48
VTX20	92	7	124	86.4 ~ 96
VTX30	92	7	185	129.6 ~ 144

Mini pump

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

Key advantages

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



VTM5 / VTX5

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Various port options
- Quick response time

Specifications

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

Vacuum Flow

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

Evacuation Time

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

VTM10 / VTX10

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Various port options
- Quick response time

Specifications

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

Vacuum Flow

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

Evacuation Time

Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VTM10	30 ~ 42	0.109	0.278	0..5	0.788	1.178	1.72	2.635	5.158	-
VTX10	43.2 ~ 48	0.129	0.398	0.758	1.2	1.78	2.455	3.445	5.08	9.594

VTM20 / VTX20

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Various port options
- Quick response time

Specifications

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

Vacuum Flow

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

Evacuation Time

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

VTM30 / VTX30

Features and Strengths

- Multi-stage ejector
- Compact size and light weight
- Various port options
- Quick response time

Specifications

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

Vacuum Flow

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

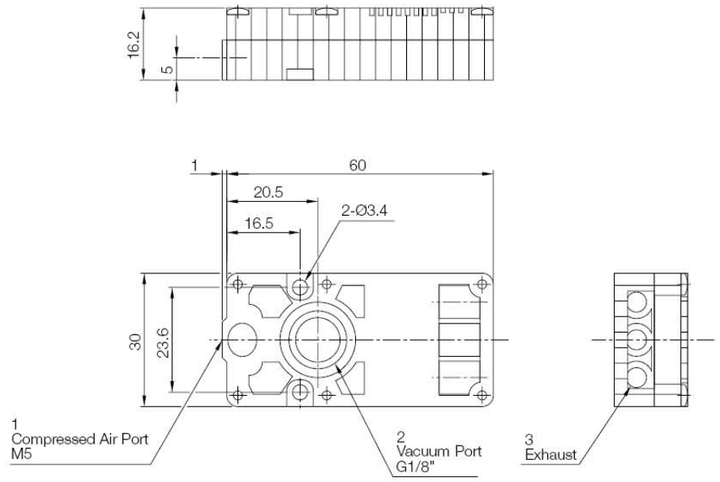
Evacuation Time

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

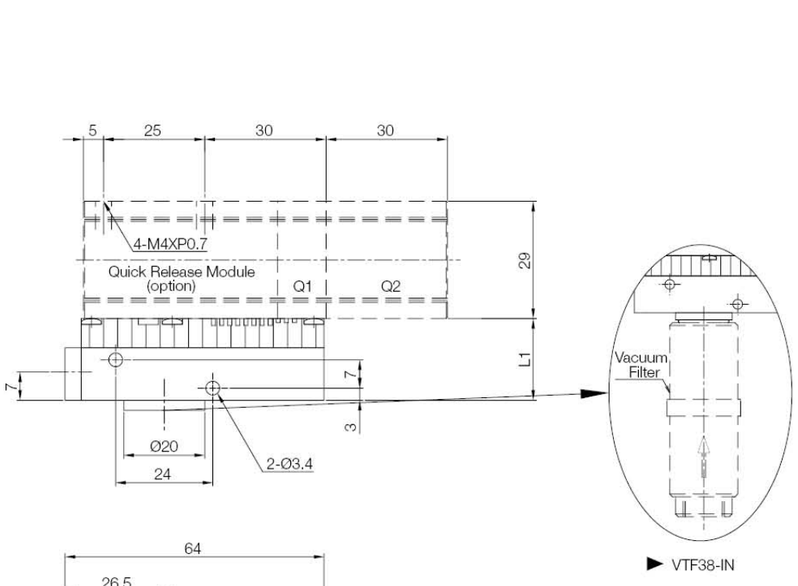
Dimensions – Basic Pump

[Unit : mm]

VTM(5) / VTX(10) – A



VTM(5/10/20/30) -B(BA, NB)



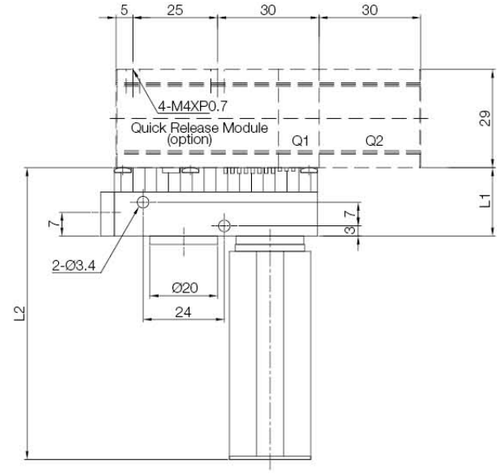
Model	L1
VTM(X)5	20.2
VTM(X)10	20.2
VTM(X)20	27.4
VTM(X)30	34.6

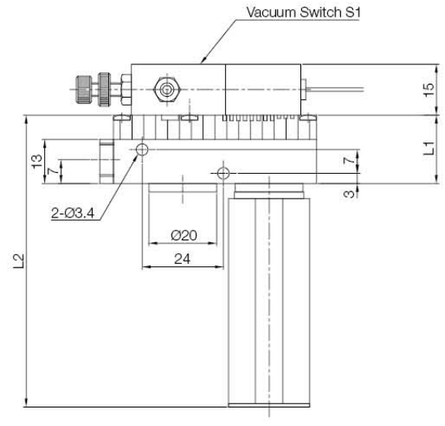
Dimensions – Basic Pump

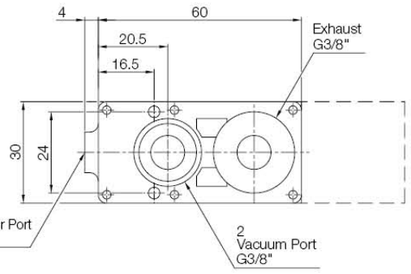
[Unit : mm]

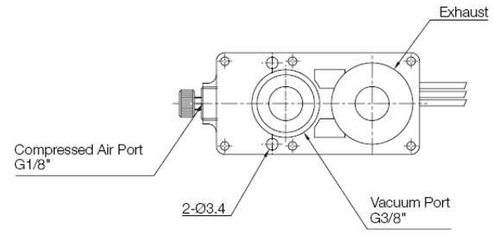
VTM(5/10/20/30) VTX -C

With switch S1



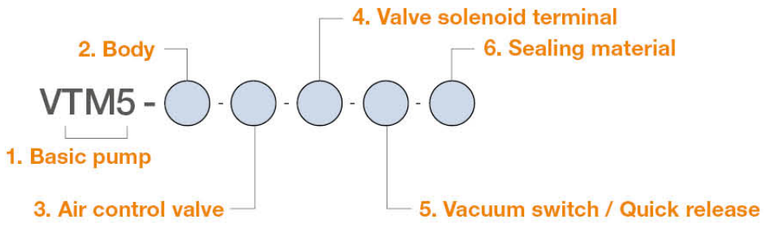






Model	L1	L2
VTM(X)5	20.2	86.2
VTM(X)10	20.2	86.2
VTM(X)20	27.4	93.4
VTM(X)30	34.6	100.6

Build an Ordering No.



1. Basic pump	Description	Symbol
	Mini pump – M type	VTM5
	Mini pump – M type	VTM10
	Mini pump – M type	VTM20
	Mini pump – M type	VTM30
	Mini pump – X type	VTX5
	Mini pump – X type	VTX10
	Mini pump – X type	VTX20
	Mini pump – X type	VTX30

2. Body	Description	Symbol
	Air port M5, Vacuum port G1/8", Internal silencer: Not available with VTM20, VTX20, VTM30 & VTX30	A
	Air port G1/8", Vacuum port G3/8", Internal silencer	B
	Air port G1/8", Vacuum port G3/8", Internal silencer, Aluminum body	BA
	Air port G1/8", Vacuum port G3/8", External silencer	C

3. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Air control valve is not available with "A" body type	

4. Valve terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL

5. Vacuum switch / Quick release	Description	Symbol
	Mechanical vacuum switch	S1
	Quick Release Module : 12㎤	Q1
	Quick Release Module : 30㎤	Q2

6. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

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

Spare Parts – Silencer

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

Minimultiple pump

Features and Strengths

Individual vacuum operation
Compact size and light weight

Advantages

Reliable performance with Individual vacuum operation
Long-life time
Compact size and light weight

Application

Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VTM5	85	7	27	15 ~ 21
VTM10	85	7	35	30 ~ 42
VTX5	92	7	24	21.6 ~ 24
VTX10	92	7	32	43.2 ~ 48

VTX5 / VTM5

Features and Strengths

- Individual vacuum operation
- Multi-stage ejector
- Manifold type - Maximum 16stacks
- Quick response time
- Compact size and light weight

Specifications

Description	VTX5	VTM5
Max. Vacuum level	-92 kPa	-85 kPa
Open Vacuum flow	24 Nl/min	27 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	37g	37g

Vacuum Flow

Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTX5	92	24	13	9	8	7	5	4	2.7	1.2	0.45
VTM5	85	27	16	13	12	11	8	6	2.4	0.66	-

Evacuation Time

Model	Air Consumption (Nl/min)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTX5	21.6 ~ 24	0.258	0.796	1.516	2.4	3.38	4.91	6.896	10.16	19.19	
VTM5	15 ~ 21	0.218	0.556	1.00	1.576	2.356	3.44	5.27	10.216	-	

VTX10 / VTM10

Features and Strengths

- Individual vacuum operation
- Multi-stage ejector
- Manifold type - Maximum 16stacks
- Quick response time
- Compact size and light weight

Specifications

Description	VTX10	VTM10
Max. Vacuum level	-92 kPa	-85 kPa
Open Vacuum flow	32 Nl/min	35 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	37g	37g

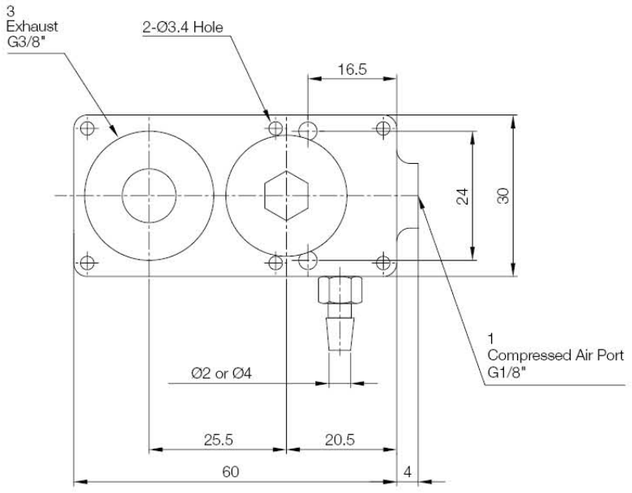
Vacuum Flow

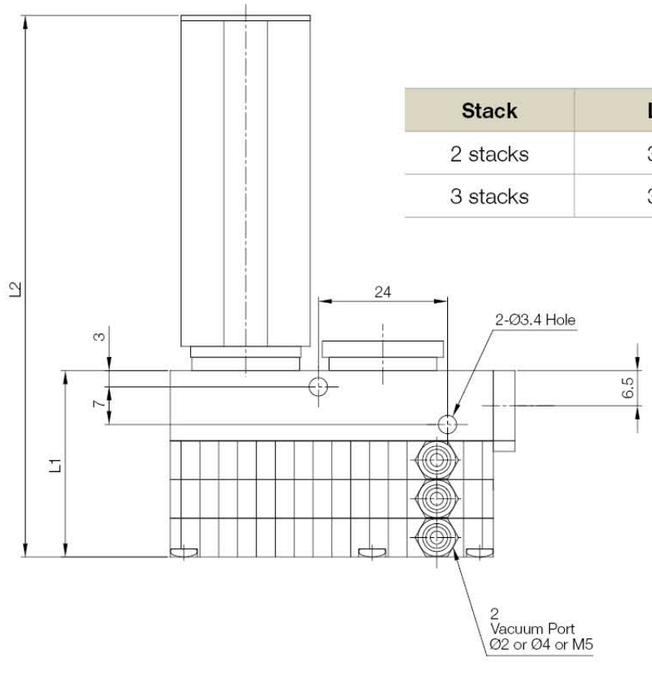
Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTX10	92	32	21	17	15	14	11	9	5.4	2.4	0.9
VTM10	85	35	29	25	23	19	16	12	4.8	1.32	-

Evacuation Time

Model	Air Consumption (Nl/min)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTX10	43.2 ~ 48	0.129	0.398	0.758	1.2	1.78	2.455	3.455	5.08	9.594	
VTM10	30 ~ 42	0.109	0.278	0.50	0.788	1.178	1.72	2.635	5.158	-	

Dimensions

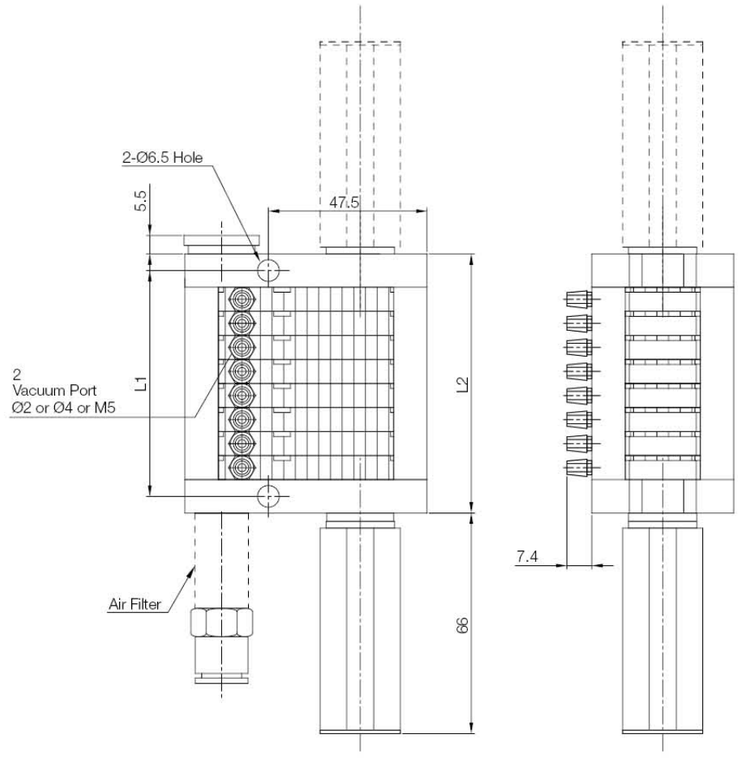


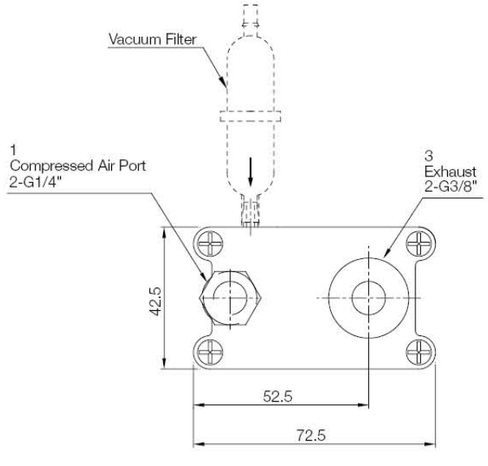


[Unit : mm]

Stack	L1	L2
2 stacks	38	94
3 stacks	35	101

Dimensions

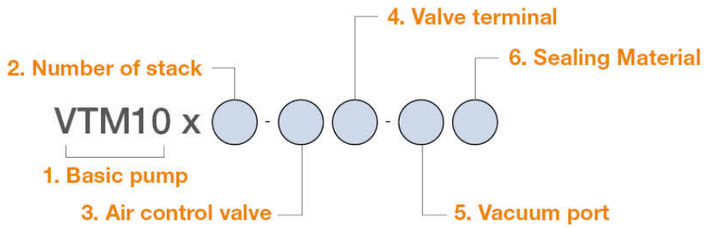




[Unit : mm]

Stack	L1	L2
4 stacks	38.3	48.3
6 stacks	53	63
8 stacks	67.5	77.5
10 stacks	82	92
12 stacks	96	106
14 stacks	111	121
16 stacks	125.2	135.2

Build an Ordering No.



1. Basic pump	Description	Symbol
	Minimultiple Vacuum Pump - VTX5 series	VTX5
	Minimultiple Vacuum Pump - VTX10 series: Maximum stack up to 12 stacks	VTX10
	Minimultiple Vacuum Pump - VTM5 series	VTM5
	Minimultiple Vacuum Pump - VTM10 series: Maximum stack up to 12 stacks	VTM10

2. Number of stack	Description	Symbol
	2 stacks	2
	4 stacks	4
	6 stacks	6
	8 stacks	8
	10 stacks	10
	12 stacks	12
	14 stacks	14
	16 stacks	16
	- VTX5 and VTM5 with 12~16 stacks includes 2 silencers	
	- VTX10 and VTM10 with above 6~12 stacks includes 2 silencers	

3. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3

4. Valve terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B

5. Vacuum port	Description	Symbol
	Ø2 Inner diameter of tube	2
	Ø4 Inner diameter of tube	4

6. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

One line pump

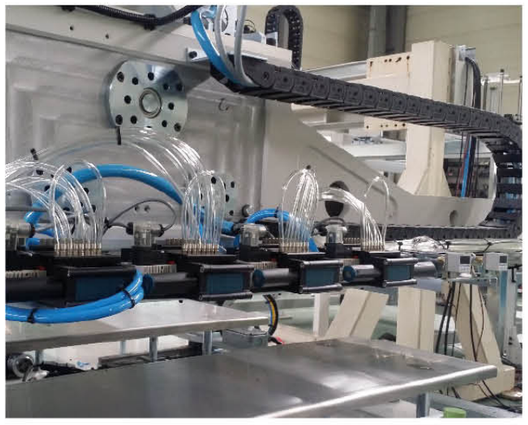
Features and Strengths

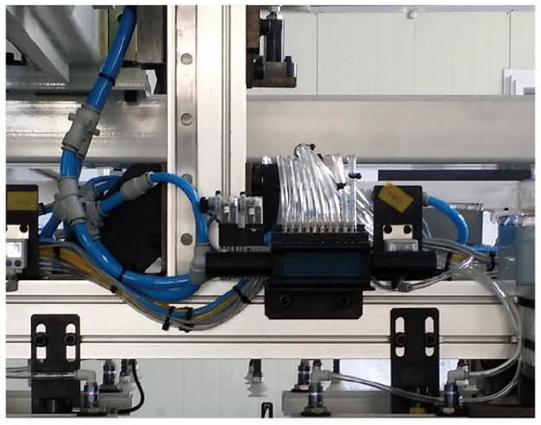
Multi-stage vacuum ejector
Available to multi with individual vacuum system

Advantages

Excellent performance in dust environment application
Individual vacuum operation
Long-life time
Compact size and light weight

Application



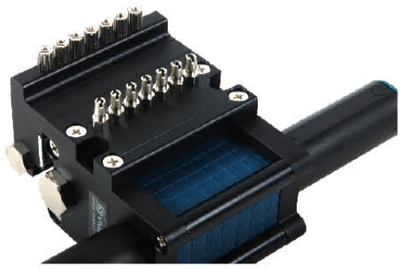


Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VTOM5	85	7	27	15 ~ 21
VTOM10	85	7	35	30 ~ 42
VTOX5	92	7	24	21.6 ~ 24
VTOX10	92	7	32	43.2 ~ 48

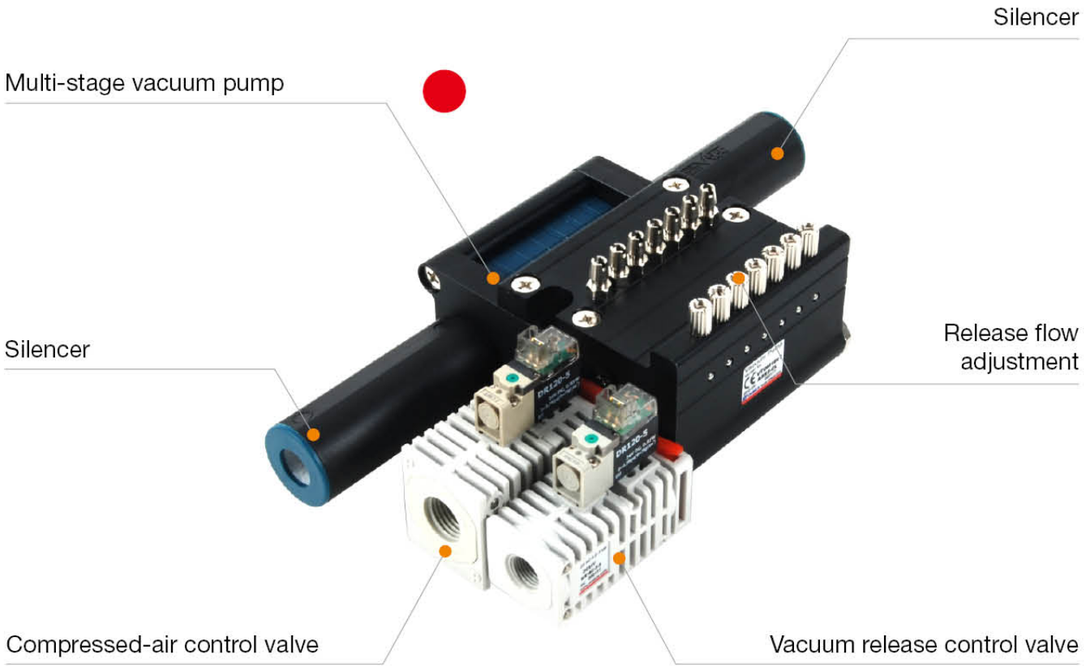
One line pump

VMECA One line pump is multi stage vacuum ejector and uses individual pumps to make up the complete unit.
Each individual pump can be stacked for creating a modular manifold based system – Also it can be controlled with only two control valves for compressed-air and vacuum release.
From 4 to 16 units, the pump can be made depending upon requirements and individual system can increase the safety during operation.



Key advantages

· Multi-stage vacuum pump
· Individual vacuum system
· Only two control valves are needed to control compressed-air and vacuum release



VTOX5 / VTOM5

Features and Strengths

- Individual vacuum operation with two control valves
- Multi-stage ejector
- Manifold type - Maximum 16stacks
- Quick response time
- Compact size and light weight

Specifications

Description	VTOX5	VTOM5
Max. Vacuum level	-92 kPa	-85 kPa
Open Vacuum flow	24 Nl/min	27 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	37g	37g

Vacuum Flow

Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTOX5	92	24	13	9	8	7	5	4	2.7	1.2	0.45
VTOM5	85	27	16	13	12	11	8	6	2.4	0.66	-

Evacuation Time

Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VTOX5	21.6 ~ 24	0.258	0.796	1.516	2.4	3.38	4.91	6.896	10.16	19.19
VTOM5	15 ~ 21	0.218	0.556	1.00	1.576	2.356	3.44	5.27	10.216	-

VTOX10 / VTOM10

Features and Strengths

- Individual vacuum operation with two control valves
- Multi-stage ejector
- Manifold type - Maximum 16stacks
- Quick response time
- Compact size and light weight

Specifications

Description	VTOX10	VTOM10
Max. Vacuum level	-92 kPa	-85 kPa
Open Vacuum flow	32 Nl/min	35 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	37g	37g

Vacuum Flow

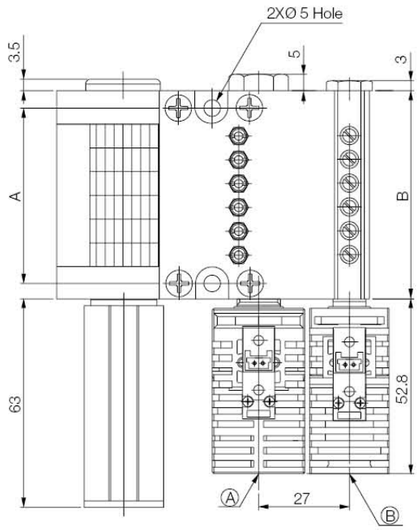
Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VTOX10	92	32	21	17	15	14	11	9	5.4	2.4	0.9
VTOM10	85	35	29	25	23	19	16	12	4.8	1.32	-

Evacuation Time

Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VTOX10	43.2 ~ 48	0.129	0.398	0.758	1.2	1.78	2.455	3.455	5.08	9.594
VTOM10	30 ~ 42	0.109	0.278	0.50	0.788	1.178	1.72	2.635	5.158	-

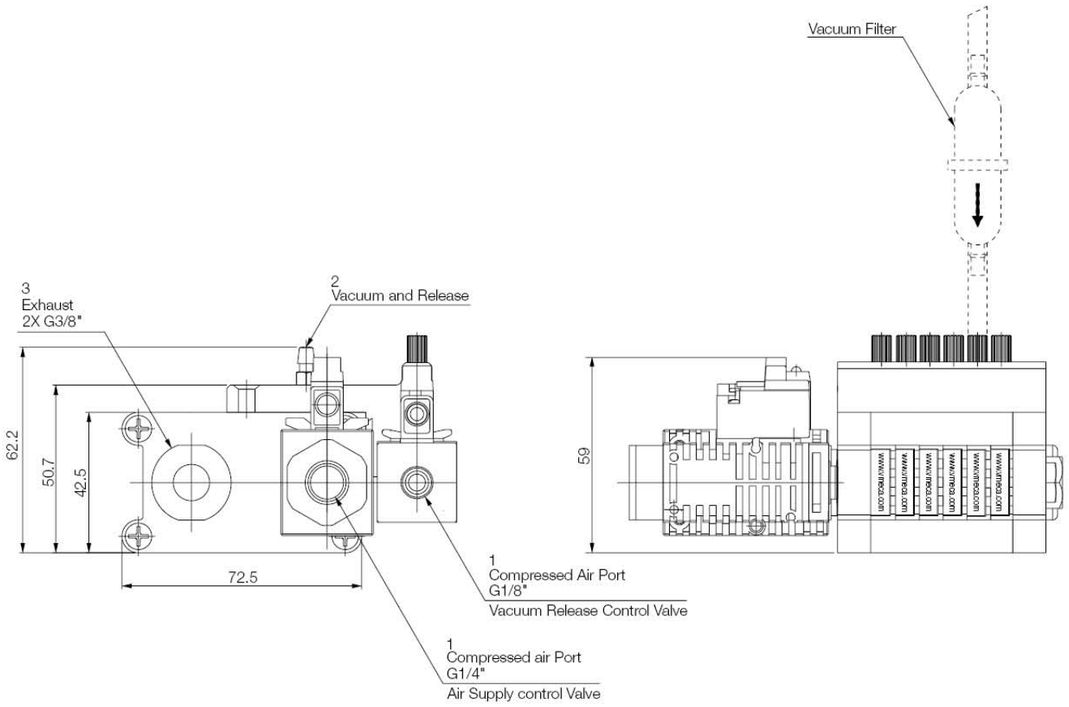
Dimensions – VTOX5 / VTOM5 / VTOX10 / VTOM10

[Unit : mm]

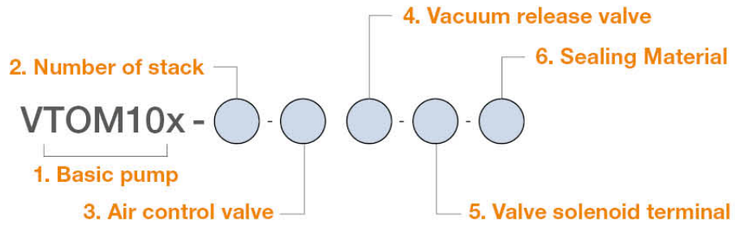


Stack	A	B
4 stacks	38.3	48.3
5 stacks	45.5	55.5
6 stacks	53	63
7 stacks	60	70
8 stacks	67.5	77.5
9 stacks	74.8	84.8
10 stacks	82	92
11 stacks	88.5	98.5
12 stacks	96	106
13 stacks	103.2	113.2
14 stacks	111	121
15 stacks	118	128
16 stacks	125.2	135.8

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



Build an Ordering No.



1. Basic pump	Description	Symbol
	One-Line Vacuum Pump - VTOX5 series	VTOX5
	One-Line Vacuum Pump - VTOX10 series: Maximum stack up to 12 stacks	VTOX10
	One-Line Vacuum Pump - VTOM5 series	VTOM5
	One-Line Vacuum Pump - VTOM10 series: Maximum stack up to 12 stacks	VTOM10

2. Number of stack	Description	Symbol
	4 stacks	4
	5 stacks	5
	6 stacks	6
	7 stacks	7
	8 stacks	8
	9 stacks	9
	10 stacks	10
	11 stacks	11
	12 stacks	12
	13 stacks	13
	14 stacks	14
	15 stacks	15
	16 stacks	16
	- VTOX5 and VTOM5 with above 12stacks includes 2 silencers	
	- VTOX10 and VTOM10 with above 6stacks includes 2 silencers	

3. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3

4. Vacuum release valve	Description	Symbol
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

5. Valve terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B

6. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Keyboard pump

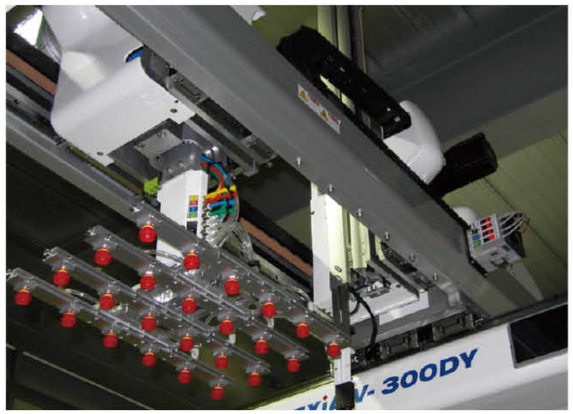
Features and Strengths

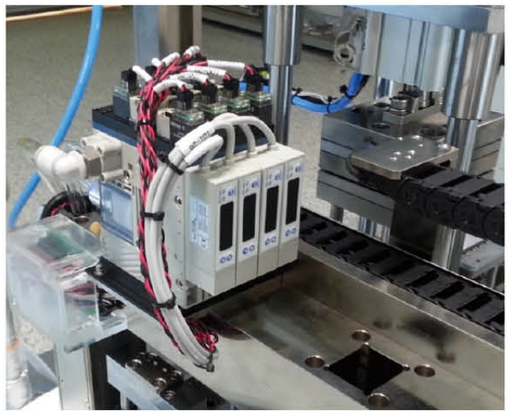
Multi stage ejector
Integrated filter with high dirt capacity & Auto-cleaning system
Available up to 8 multi-stack vacuum system

Advantages

Excellent performance in dust environment application
Individual vacuum operation
Long-life time
Compact size and light weight

Application





Overall of specification

Model	Max. Vacuum	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VKM5	85	7	26	12 ~ 21
VKM61	85	7	37	15 ~ 21
VKM62	85	7	74	30 ~ 42
VKM73	85	7	111	40 ~ 58
VKM74	85	7	135	54 ~ 78
VKX5	92	7	23	13 ~ 22
VKX61	92	7	31	21 ~ 24
VKX62	92	7	62	43 ~ 48
VKX73	92	7	94	49 ~ 66
VKX74	92	7	109	66 ~ 88

Keyboard pump

VMECA Keyboard pump can be combined with the optional vacuum On/Off control valve, vacuum release Valve and vacuum switch to create an optimal vacuum solution for various industry such as packaging, semicon and etc.
It can control both vacuum and release in individual system and it contributes more efficient and reliable performance in operation. Also VMECA Keyboard pump has filters on air port and vacuum port and features auto filter cleaning system.

Key advantages

· Multi-stage vacuum pump
· Vacuum filter self cleaning system – Filters on both air and vacuum port
· Fast response time and long life time

Structure

Vacuum pump
+
Silencer

Vacuum Filter

Air Control V/V
+
Release V/V

Vacuum Switch

Mini Keyboard		
Model	**Vacuum level**	**Vacuum flow**
VKX5	-92 kPa	23 Nl/min
VKM5	-85 kPa	26 Nl/min

Midi Keyboard		
Model	**Vacuum level**	**Vacuum flow**
VKX61	-92 kPa	31 Nl/min
VKX62	-92 kPa	62 Nl/min
VKM61	-85 kPa	37 Nl/min
VKM62	-85 kPa	74 Nl/min

Mega Keyboard		
Model	**Vacuum level**	**Vacuum flow**
VKX73	-92 kPa	94 Nl/min
VKX74	-92 kPa	109 Nl/min
VKM73	-85 kPa	111 Nl/min
VKM74	-85 kPa	135 Nl/min

VKM5 / VKX5

Features and Strengths

- Multi-stage vacuum ejector
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Quick response time
- Long life time
- Compact size and light weight

Specifications

Description	VKM5	VKX5
Max. Vacuum level	-85 kPa	-92 kPa
Open Vacuum flow	26 Nl/min	23 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	96g	96g

Vacuum Flow

Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VKM5	85	26	15	12	11	10	8	5.5	2.8	0.7	-
VKX5	92	23	12	8	7	6	5	4	2.7	1.2	0.45

Evacuation Time

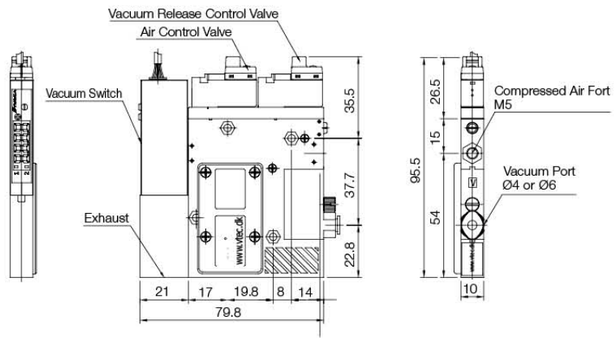
Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VKM5	21	0.22	0.56	1.18	1.58	2.36	3.44	5.27	10.22	-
VKX5	22	0.26	0.80	1.52	2.4	3.38	4.91	6.89	10.16	19

Dimensions – VKM5 / VKX5 series

[Unit : mm]

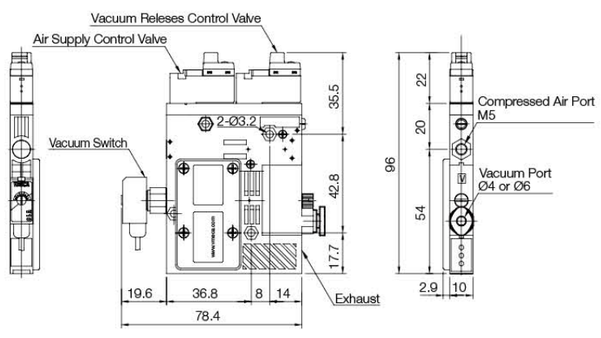
Single unit

Control valve Connector type / Flashing lamp display vacuum switch



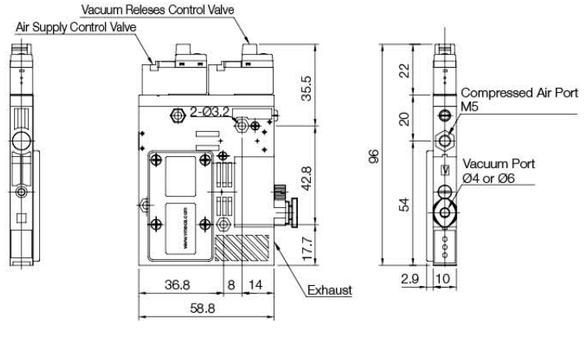
Single unit

Control valve Connector type / Digital vacuum switch



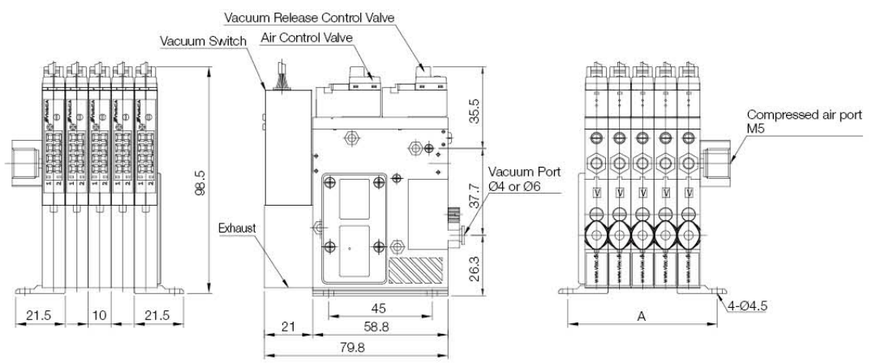
Single unit

Control valve Connector type / Basic



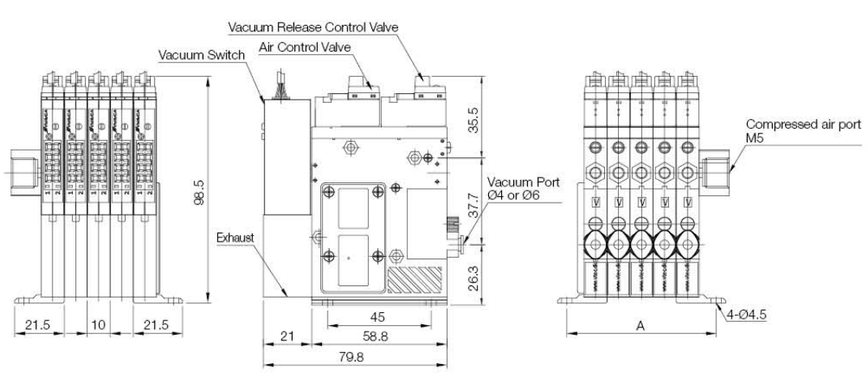
Manifold unit

Control valve Connector type / Flashing lamp display vacuum switch

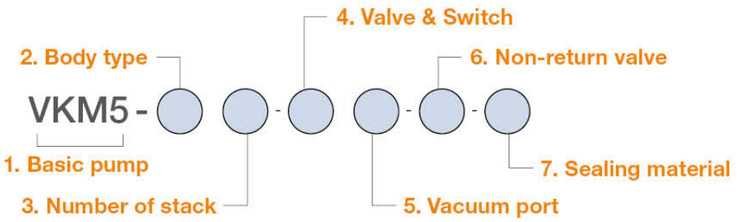


Manifold Unit with central exhaust unit

Control valve Connector type / Flashing lamp display vacuum switch



Build an Ordering No.



1. Basic pump	Description	Symbol
	Mini Keyboard pump – "X" type	VKX5
	Mini Keyboard pump – "M" type	VKM5

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit	M
	Manifold unit with central exhaust type	E

3. Number of stack	Description	Symbol
	Single stack	1
	2 stacks	2
	3 stacks	3
	4 stacks	4
	5 stacks	5
	6 stacks	6
	7 stacks	7
	8 stacks	8
	9 stacks	9
	10 stacks	10

4. Valve & Switch	Description	Symbol
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed), Vacuum switch, NPN	AL
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed), Vacuum switch, NPN	BL
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed), Vacuum switch, PNP	ALP
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed), Vacuum switch, PNP	BLP
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, NPN	ALD
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, NPN	BLD
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, PNP	ALDP
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, PNP	BLDP
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed)	C
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed)	D
	Air control valve : N.C (Normal Closed), Vacuum switch, NPN	EL
	Air control valve : N.O (Normal Open), Vacuum switch, NPN	FL
	Air control valve : N.C (Normal Closed), Vacuum switch, PNP	ELP
	Air control valve : N.O (Normal Open), Vacuum switch, PNP	FLP
	Air control valve : N.C (Normal Closed), Digital vacuum switch, NPN	ELD
	Air control valve : N.O (Normal Open), Digital vacuum switch, NPN	FLD
	Air control valve : N.C (Normal Closed), Digital vacuum switch, PNP	ELDP
	Air control valve : N.O (Normal Open), Digital vacuum switch, PNP	FLDP
	Air control valve : N.C (Normal Closed)	G
	Air control valve : N.O (Normal Open)	H
	Vacuum release valve : N.C (Normal Closed), Vacuum switch, NPN	IL
	Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, NPN	ILD
	Vacuum switch, NPN	JL
	Digital vacuum switch, NPN	JLD
	Vacuum release valve : N.C (Normal Closed), Vacuum switch, PNP	ILP
	Vacuum release valve : N.C (Normal Closed), Digital vacuum switch, PNP	ILDP
	Vacuum switch, PNP	JLP
	Digital vacuum switch, PNP	JLDP
	Vacuum release valve : N.C (Normal Closed)	K
	- The valves are available only with DC24V	
	- The valves are connector type with 0.3m lead wire & lamp	

Build an Ordering No.

5. Vacuum port	Description	Symbol
	Ø4 hose fitting	4
	Ø6 hose fitting	6

6. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve	N

7. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Filter

Part No.	Description
FCK05-A3-4-N	Filter cover case for Ø4 hose fitting, Fix bolt, Gasket
FCK05-A3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket
FCK05-F3-4-N	Filter cover case for Ø4 hose fitting, Fix bolt, Gasket, Filter element
FCK05-F3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket, Filter element
VTFE-K05	Vacuum filter element

VKM61 / VKX61

Features and Strengths

- Multi-stage vacuum ejector
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Quick response time
- Long life time
- Compact size and light weight

Specifications

Description	VKM61	VKX61
Max. Vacuum level	-85 kPa	-92 kPa
Open Vacuum flow	37 Nl/min	31 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	213.5 g	213.5 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VKM61	85	37	26	16	14	10	8	6	2.7	0.66	-
VKX61	92	31	18	9	8	7	5	4	2.7	1.2	0.46

Evacuation Time

Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VKM61	15 ~ 21	0.218	0.556	1	1.576	2.356	3.44	5.27	10.216	-
VKX61	21 ~ 24	0.258	0.796	1.516	2.4	3.56	4.91	6.896	10.16	19.19

VKM62 / VKX62

Features and Strengths

- Multi-stage vacuum ejector
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Quick response time
- Long life time
- Compact size and light weight

Specifications

Description	VKM62	VKX62
Max. Vacuum level	-85 kPa	-92 kPa
Open Vacuum flow	74 Nl/min	62 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	213.5 g	213.5 g

Vacuum Flow

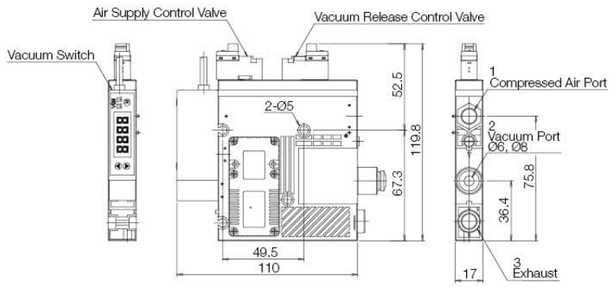
Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VKM62	85	74	52	31	28	20	16	12	4.8	1.32	-
VKX62	92	62	36	18	16	13	11	9.0	5.4	2.4	0.9

Evacuation Time

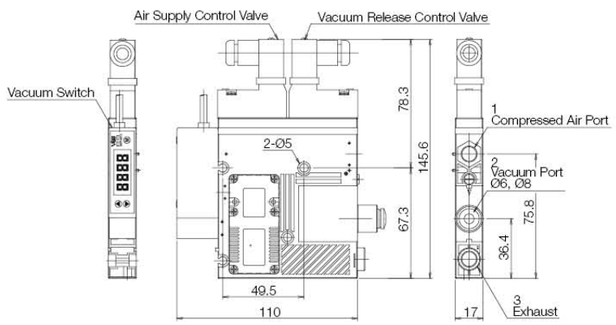
Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VKM62	30 ~ 42	0.109	0.278	0.5	0.788	1.178	1.72	2.635	5.158	-
VKX62	43 ~ 48	0.129	0.398	0.758	1.2	1.78	2.455	3.445	5.08	9.549

Dimensions – VKM61 / VKX61 series

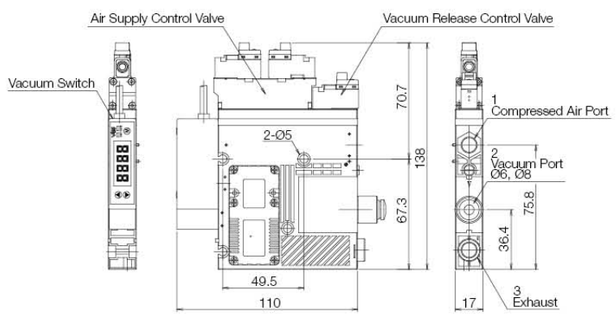
Single unit
Control valve Connector type / Digital vacuum switch



Single unit
Control valve DIN type / Digital vacuum switch

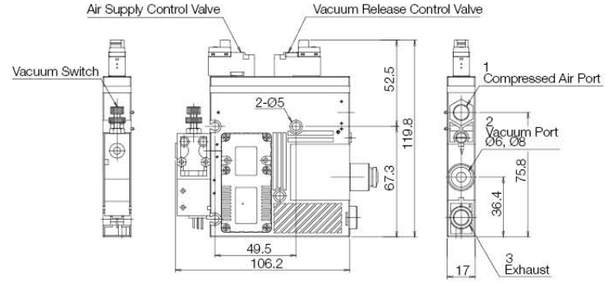


Single unit
Control valve double solenoid type / Digital vacuum switch

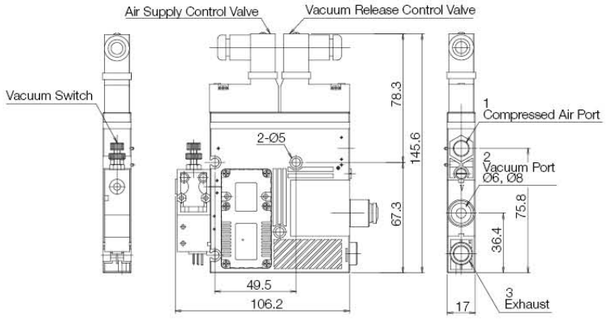


Dimensions – VKM62 / VKX62 series

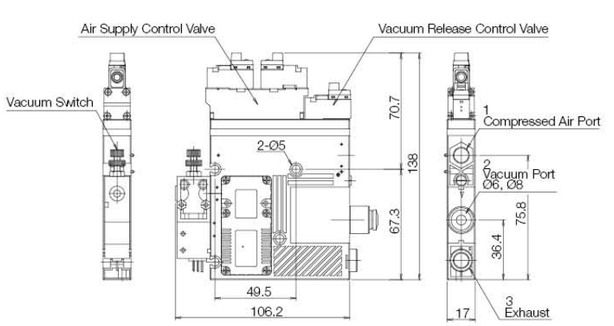
Single unit
Control valve Connector type / Mechanical vacuum switch



Single unit
Control valve DIN type / Mechanical vacuum switch

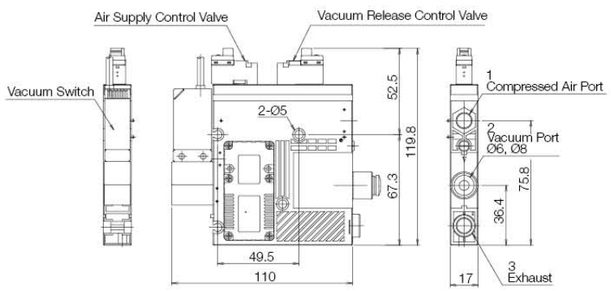


Single unit
Control valve double solenoid type / Mechanical vacuum switch



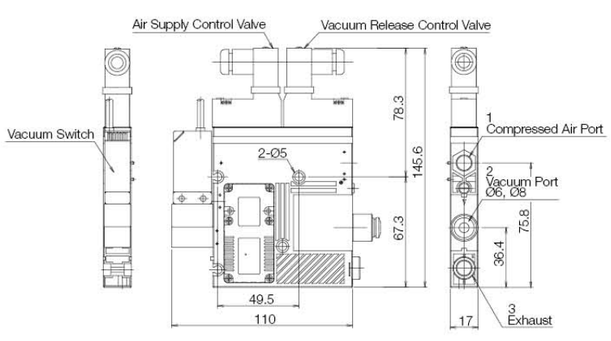
Single unit

Control valve Connector type / Flashing lamp display vacuum switch



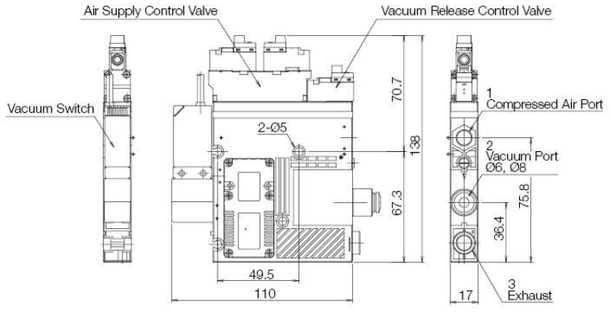
Single unit

Control valve DIN type / Flashing lamp display vacuum switch



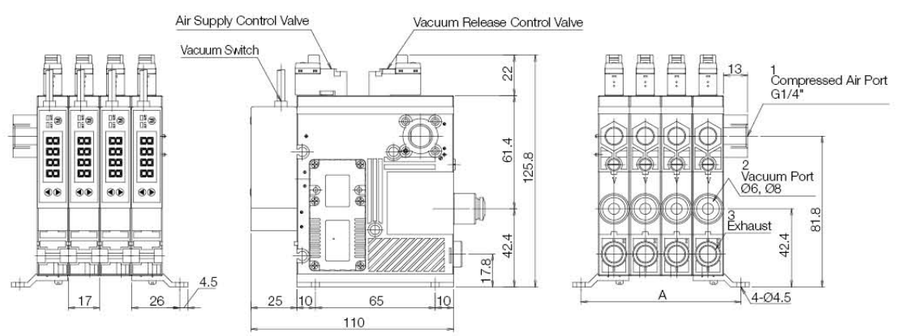
Single unit

Control valve double solenoid type / Flashing lamp display vacuum switch



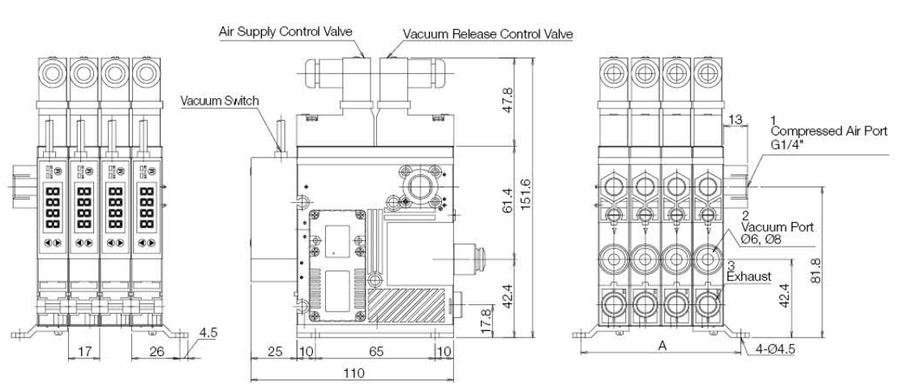
Manifold unit

Control valve Connector type / Digital vacuum switch



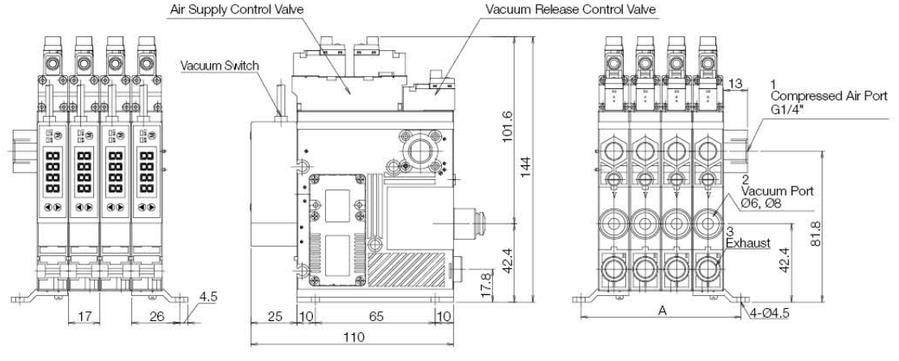
Manifold unit

Control valve DIN type / Digital vacuum switch



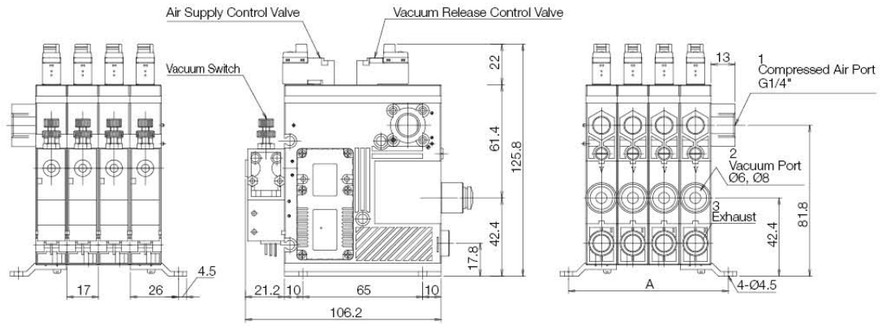
Manifold unit

Control valve double solenoid type / Digital vacuum switch



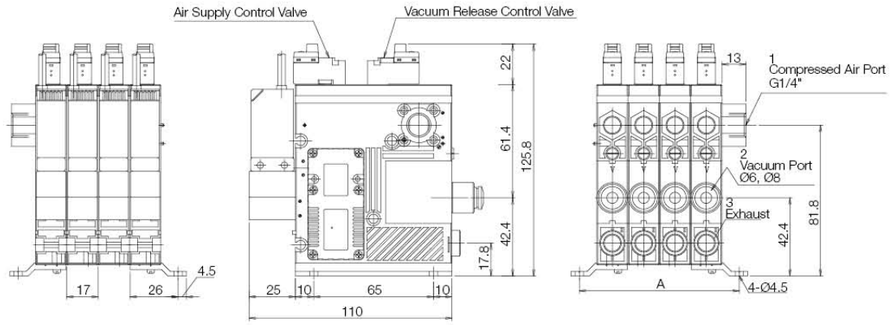
Manifold unit

Control valve Connector type / Mechanical vacuum switch



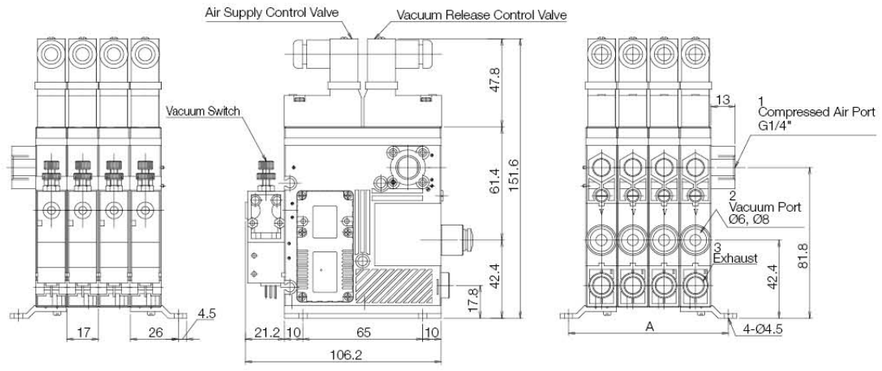
Manifold unit

Control valve Connector type / Flashing lamp display vacuum switch



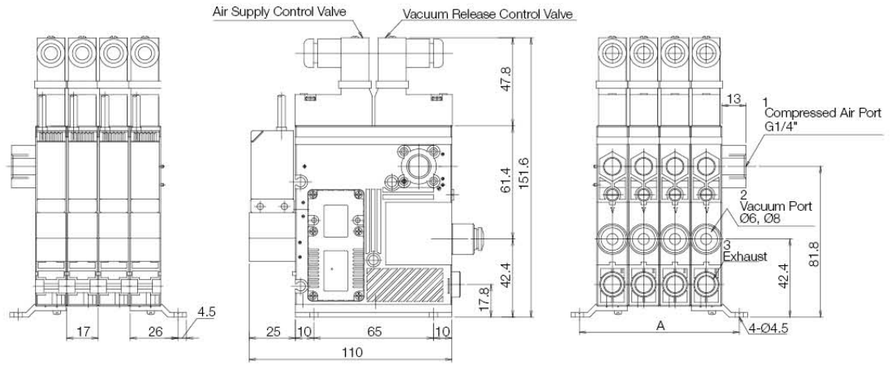
Manifold unit

Control valve DIN type / Mechanical vacuum switch



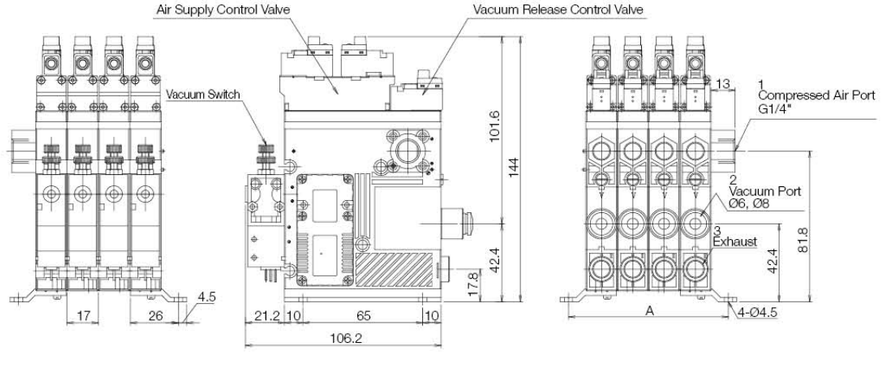
Manifold unit

Control valve DIN type / Flashing lamp display vacuum switch



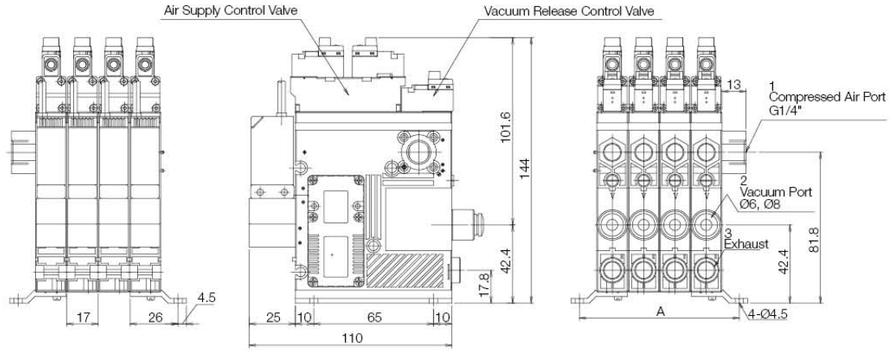
Manifold unit

Control valve double solenoid type / Mechanical vacuum switch



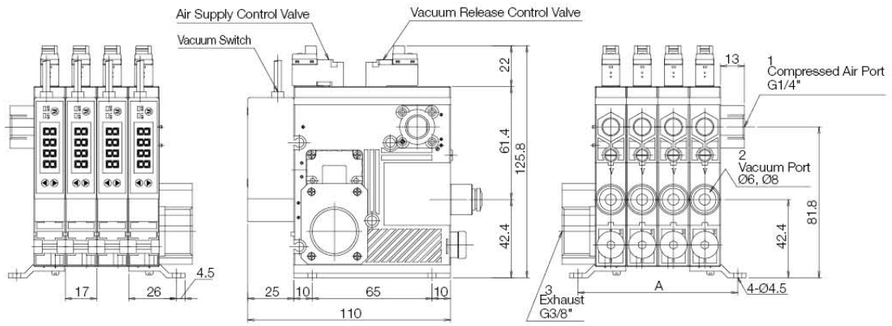
Manifold unit

Control valve double solenoid type / Flashing lamp display vacuum switch



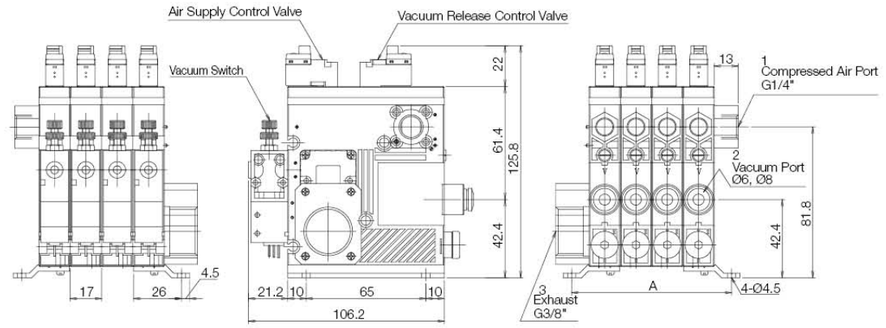
Manifold unit with central exhaust

Control valve Connector type / Digital vacuum switch



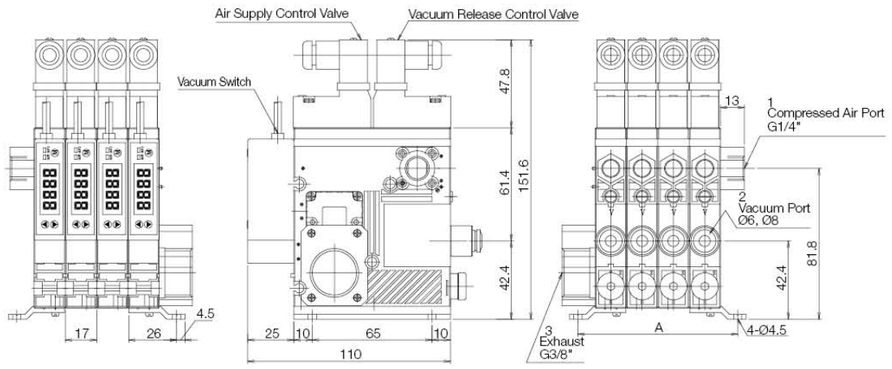
Manifold unit with central exhaust

Control valve Connector type / Mechanical vacuum switch



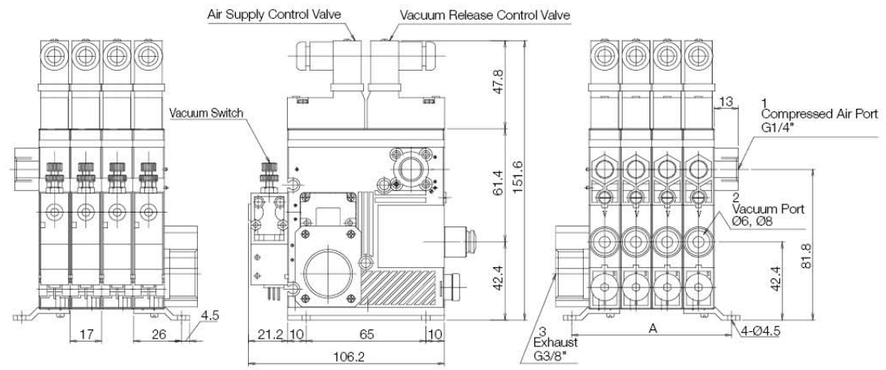
Manifold unit with central exhaust

Control valve DIN type / Digital vacuum switch



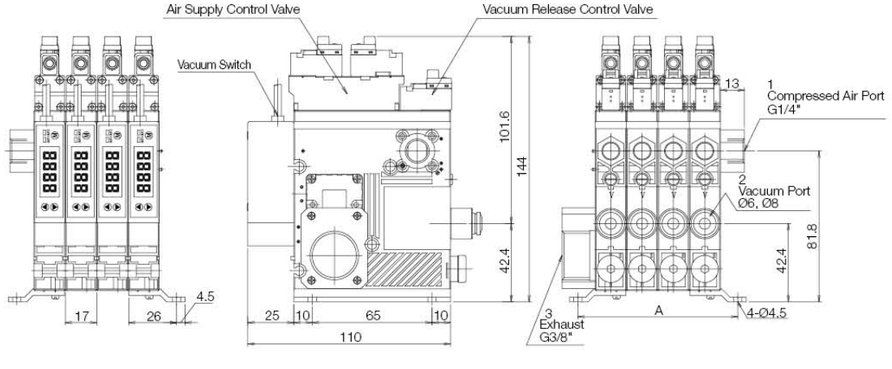
Manifold unit with central exhaust

Control valve DIN type / Mechanical vacuum switch



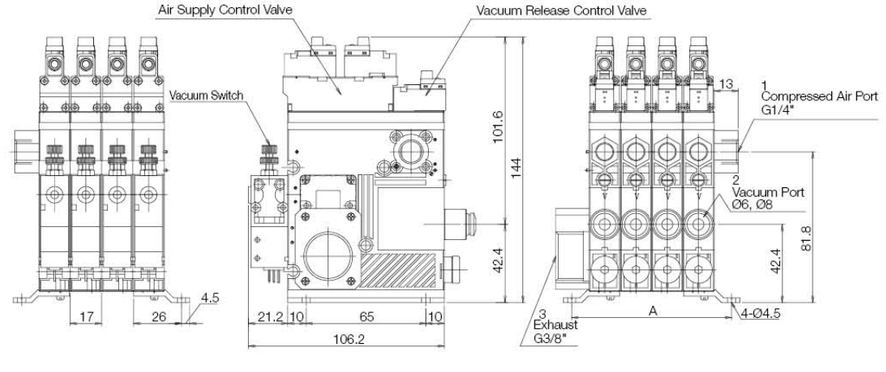
Manifold unit with central exhaust

Control valve double solenoid type / Digital vacuum switch



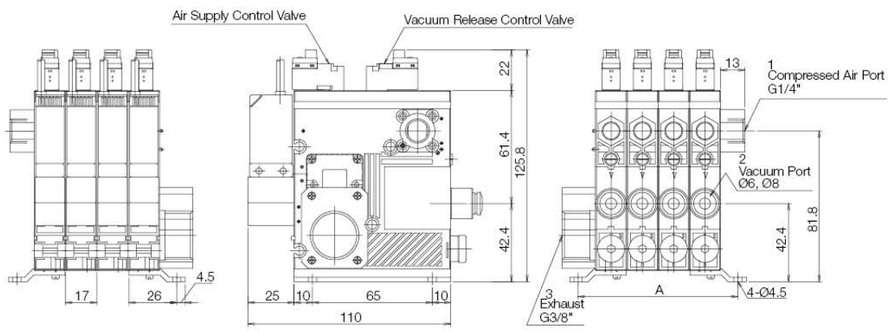
Manifold unit with central exhaust

Control valve double solenoid type / Mechanical vacuum switch



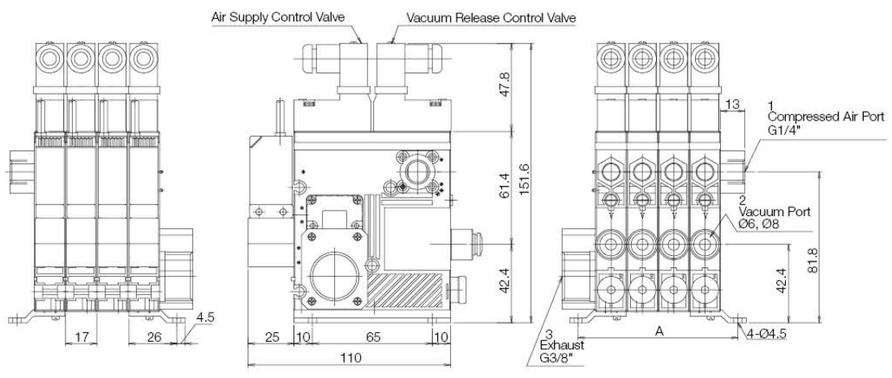
Manifold unit with central exhaust

Control valve Connector type / Flashing lamp display vacuum switch



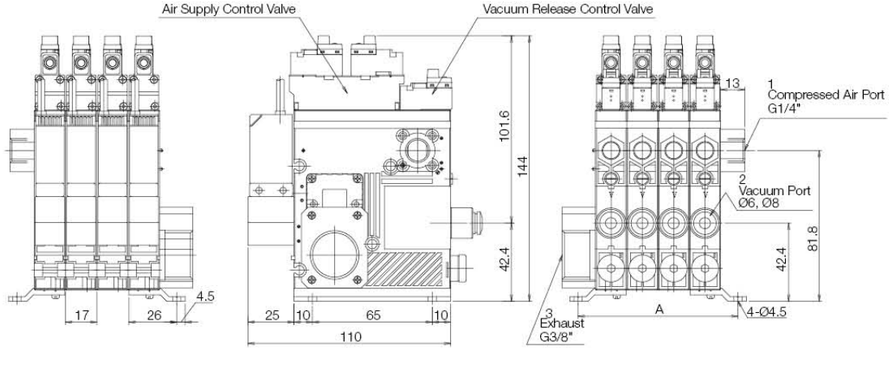
Manifold unit with central exhaust

Control valve DIN type / Flashing lamp display vacuum switch

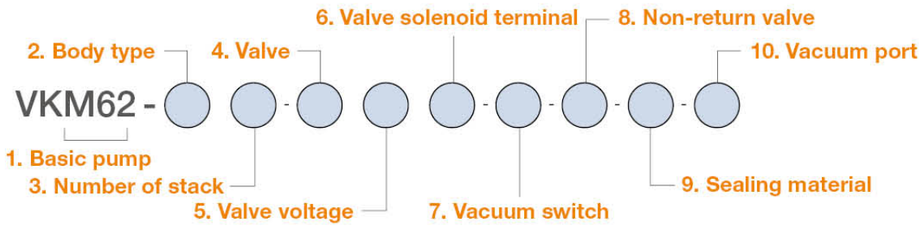


Manifold unit with central exhaust

Control valve double solenoid type / Flashing lamp display vacuum switch



Build an Ordering No.



1. Basic pump	Description	Symbol
	Midi Keyboard pump – "X" type	VKX61
	Midi Keyboard pump – "M" type	VKM61
	Midi Keyboard pump – "X" type	VKX62
	Midi Keyboard pump – "M" type	VKM62

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit	M
	Manifold unit with central exhaust type	E

3. Number of stack	Description	Symbol
	Single stack	1
	2 stacks	2
	3 stacks	3
	4 stacks	4
	5 stacks	5
	6 stacks	6
	7 stacks	7
	8 stacks	8

4. Valve	Description	Symbol
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed)	A
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed)	B
	Air control valve : N.C (Normal Closed)	C
	Air control valve : N.O (Normal Open)	D
	Vacuum release valve : N.C (Normal Closed)	E
	Air control valve : Double solenoid valve / Vacuum release valve : N.C (Normal Closed)	W
	- Double solenoid valve "W" is available only with DC24V and Connector type valve terminal	

5. Valve voltage	Description	Symbol
	AC110V	1
	AC220V	2
	DC24V	3

6. Valve terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	1
	Solenoid Terminal, DIN, Lamp, No LW	2
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	3
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: Available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and C or PC vacuum switch	

Build an Ordering No.

7. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	C
	Digital switch, No analog supply, M8-4pins, PNP	PC
	Digital switch, No analog supply, Grommet, NPN	G
	Digital switch, No analog supply, Grommet, PNP	PG
	Digital switch, Analog supply, Grommet, NPN	GA
	Digital switch, Analog supply, Grommet, PNP	PGA
	Mechanical switch	S1
	Flashing LED, No analog supply, 4-core 1m lead wire, NPN	S4
	Flashing LED, No analog supply, 3-core 1m lead wire, PNP	S5

8. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve	N

9. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

10. Vacuum port	Description	Symbol
	Ø6 hose fitting	6
	Ø8 hose fitting	8

Spare Parts – Filter

Part No.	Description
FCK62-A3-6	Filter cover case for Ø6 hose fitting, Fix bolt
FCK62-A3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket
FCK62-F3-6	Filter cover case for Ø6 hose fitting, Fix bolt, Filter element
FCK62-F3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket, Filter element
FCK62-A3-8	Filter cover case for Ø8 hose fitting, Fix bolt
FCK62-A3-8-N	Filter cover case for Ø8 hose fitting, Fix bolt, Gasket
FCK62-F3-8	Filter cover case for Ø8 hose fitting, Fix bolt, Filter element
FCK62-F3-8-N	Filter cover case for Ø8 hose fitting, Fix bolt, Gasket, Filter element
VTFE-K62	Filter element

VKM73 / VKX73

Features and Strengths

- Multi-stage vacuum ejector
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Quick response time
- Long life time
- Compact size and light weight

Specifications

Description	VKM73	VKX73
Max. Vacuum level	-85 kPa	-92 kPa
Open Vacuum flow	111 Nl/min	94 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	212 g	212 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VKM73	85	111	78	47	42	30	24	18	7.2	1.98	-
VKX73	92	94	54	27	24	21	17	13.5	9	3.6	1.35

Evacuation Time

Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VKM73	40 ~ 58	0.08	0.21	0.38	0.59	0.88	1.29	1.98	3.87	-
VKX73	49 ~ 66	0.1	0.3	0.57	0.9	1.34	1.84	2.58	3.81	7.2

VKM74 / VKX74

Features and Strengths

- Multi-stage vacuum ejector
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Quick response time
- Long life time
- Compact size and light weight

Specifications

Description	VKM74	VKX74
Max. Vacuum level	-85 kPa	-92 kPa
Open Vacuum flow	135 Nl/min	109 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 65 dbA	50 ~ 65 dbA
Weight	212 g	212 g

Vacuum Flow

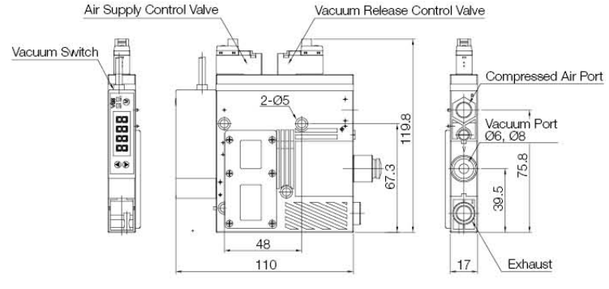
Model	Max. vacuum (-kPa)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
VKM74	85	135	99	62	54	40	32	24	9.6	2.64	-
VKX74	92	109	72	35	32	27	22	18	12	4.8	1.8

Evacuation Time

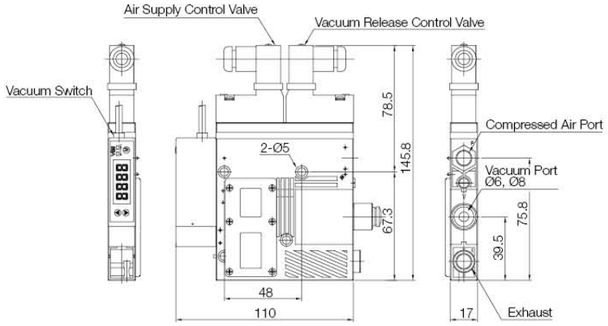
Model	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
VKM74	54 ~ 78	0.05	0.14	0.25	0.39	0.59	0.86	1.32	2.58	-
VKX74	66 ~ 88	0.06	0.2	0.38	0.6	0.89	1.23	1.72	2.54	4.8

Dimensions – VKM73 / VKX73 series

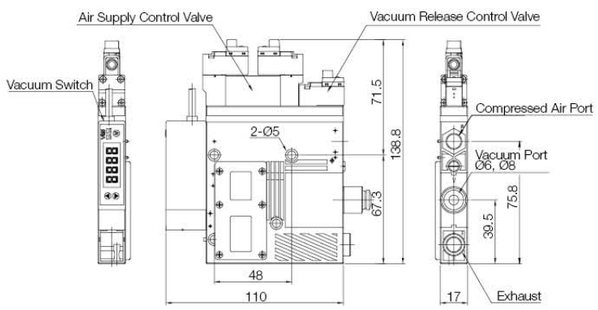
Single unit
Control valve Connector type / Digital vacuum switch



Single unit
Control valve DIN type / Digital vacuum switch

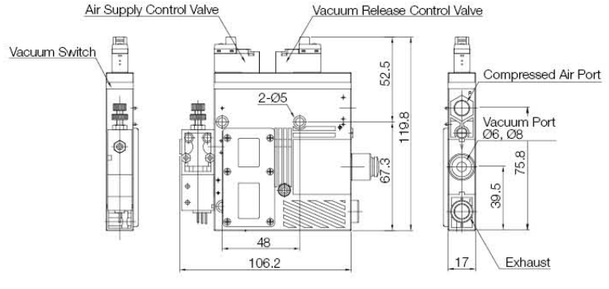


Single unit
Control valve double solenoid type / Digital vacuum switch

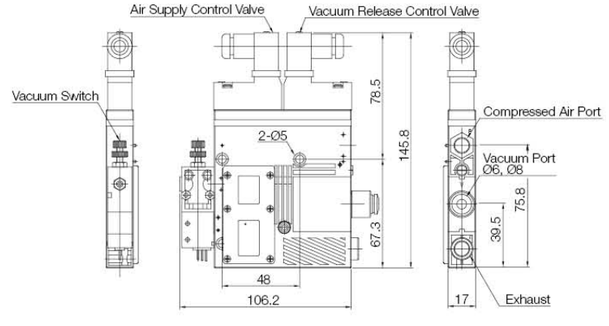


Dimensions – VKM74 / VKX74 series

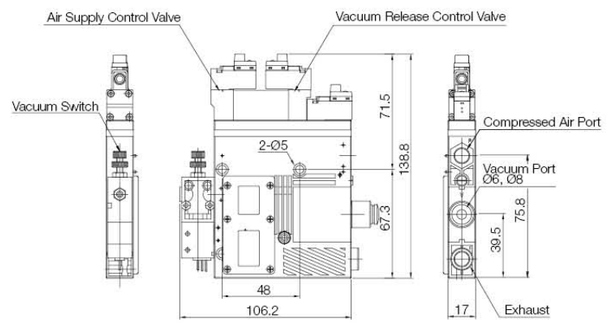
Single unit
Control valve Connector type / Mechanical vacuum switch



Single unit
Control valve DIN type / Mechanical vacuum switch

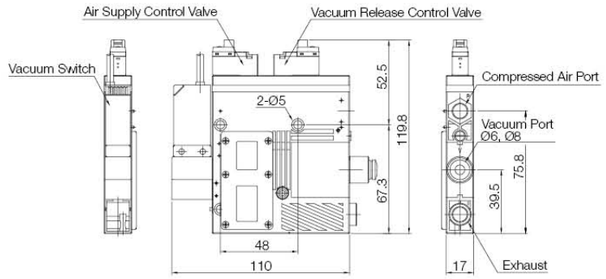


Single unit
Control valve double solenoid type / Mechanical vacuum switch



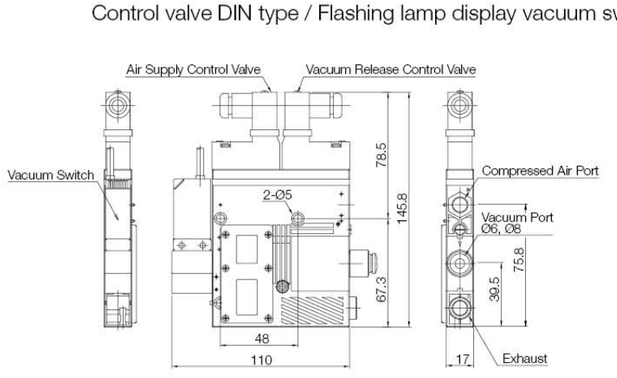
Single unit

Control valve Connector type / Flashing lamp display vacuum switch



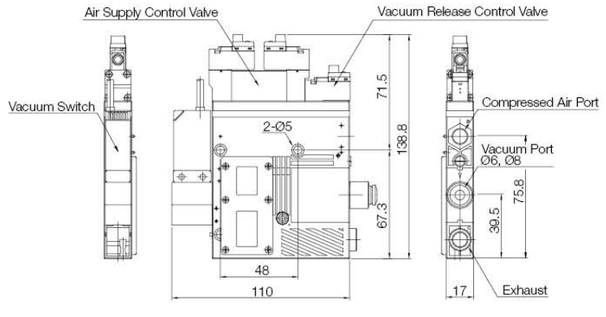
Single unit

Control valve DIN type / Flashing lamp display vacuum switch



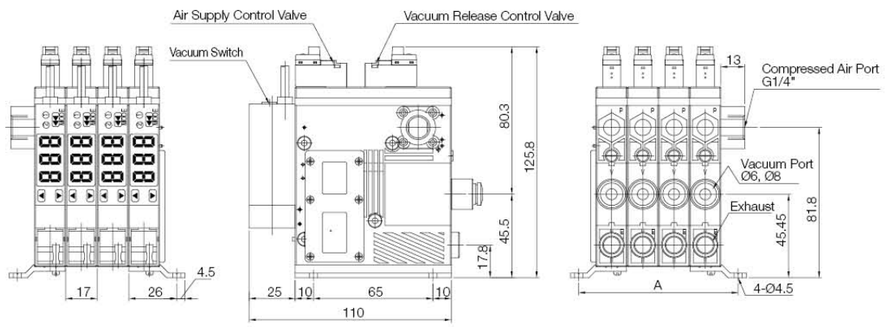
Single unit

Control valve double solenoid type / Flashing lamp display vacuum switch



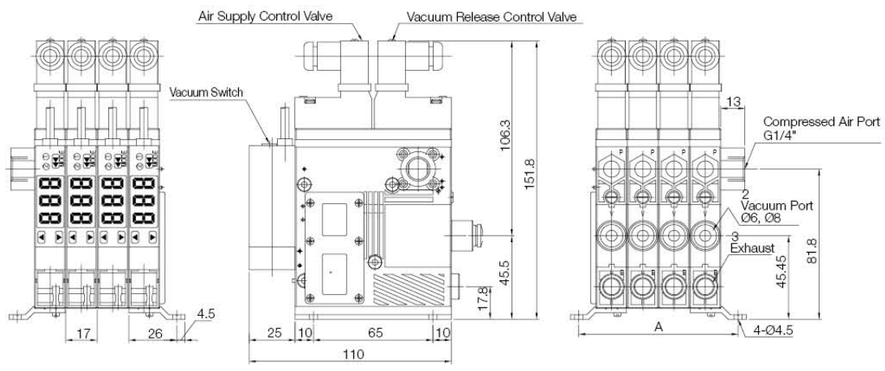
Manifold unit

Control valve Connector type / Digital vacuum switch



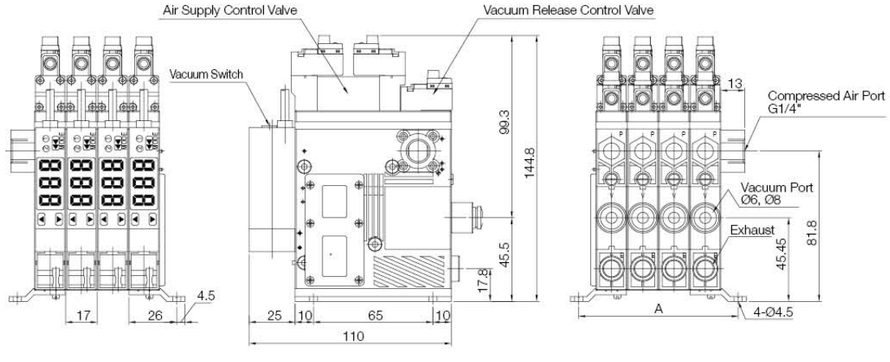
Manifold unit

Control valve DIN type / Digital vacuum switch



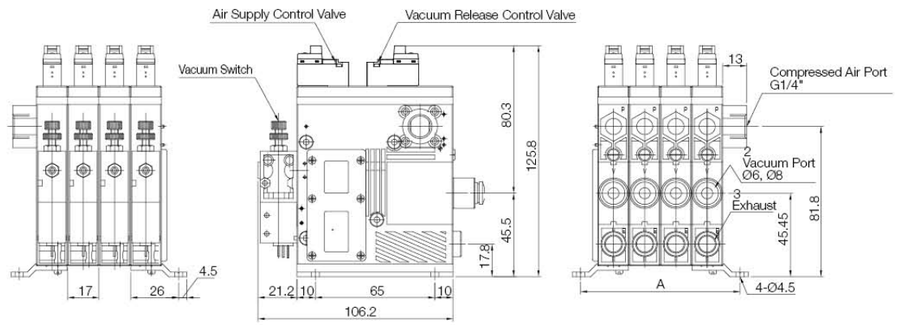
Manifold unit

Control valve double solenoid type / Digital vacuum switch



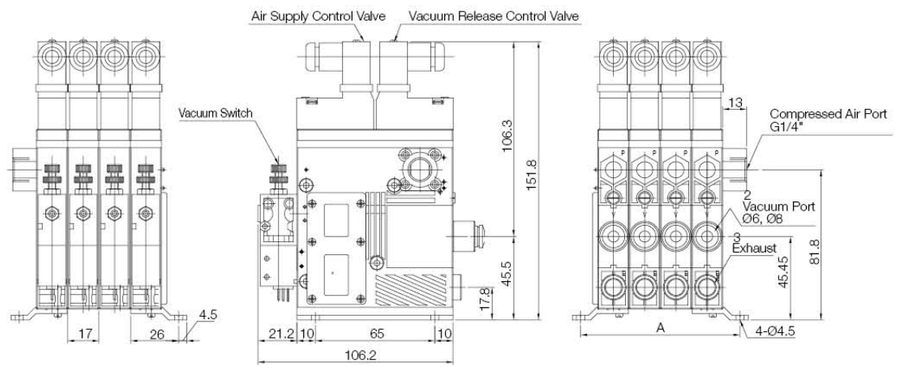
Manifold unit

Control valve Connector type / Mechanical vacuum switch



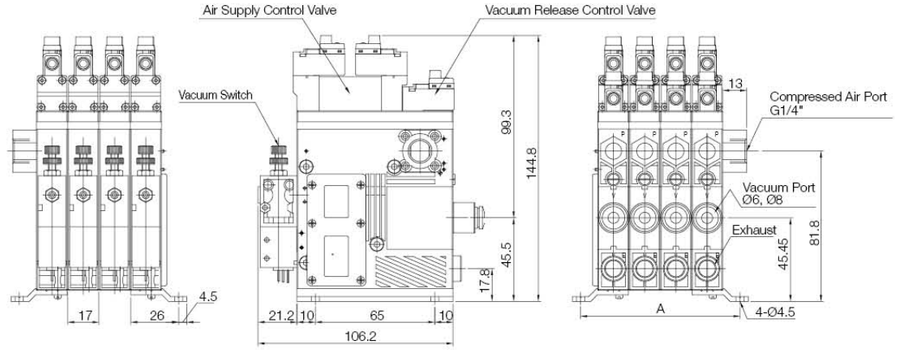
Manifold unit

Control valve DIN type / Mechanical vacuum switch



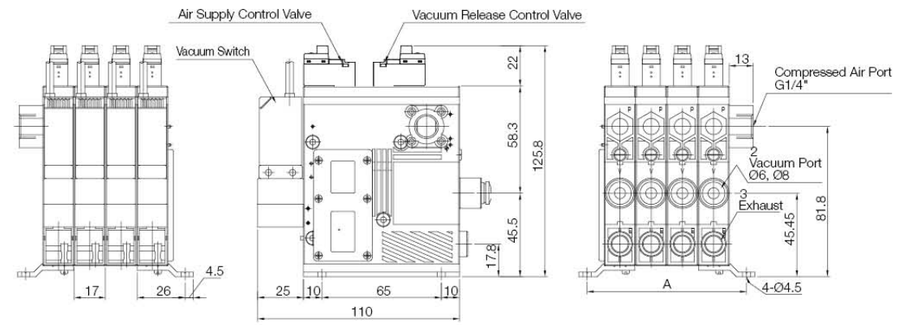
Manifold unit

Control valve double solenoid type / Mechanical vacuum switch



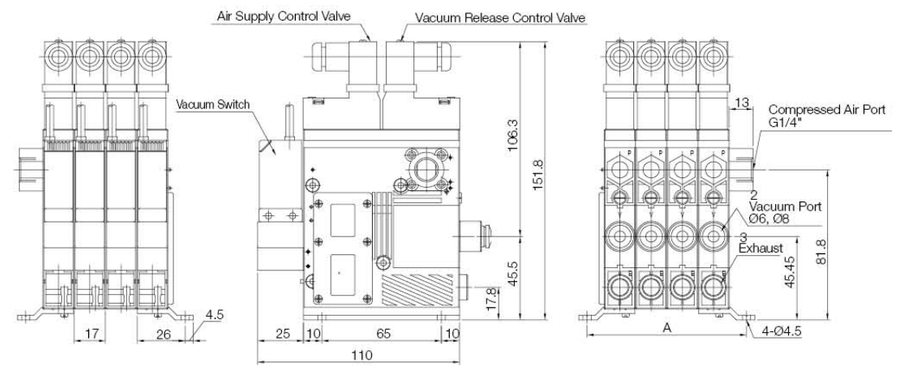
Manifold unit

Control valve Connector type / Flashing lamp display vacuum switch



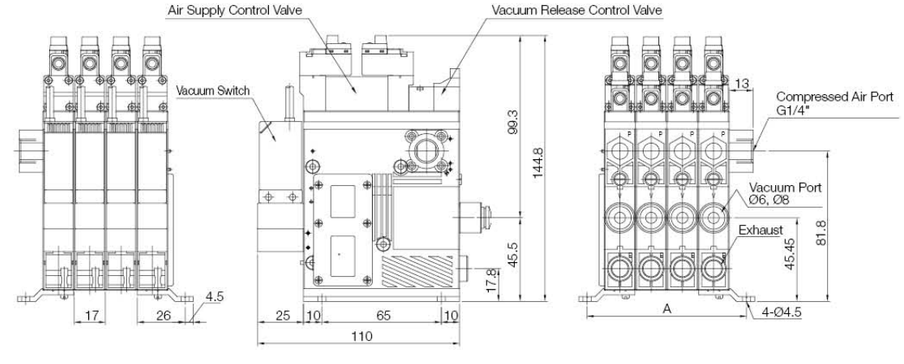
Manifold unit

Control valve DIN type / Flashing lamp display vacuum switch



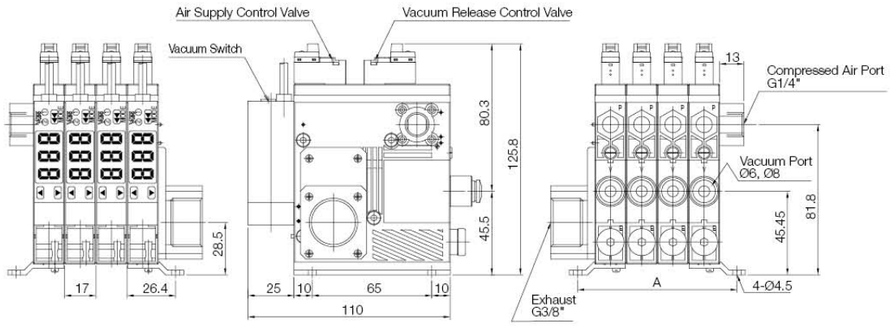
Manifold unit

Control valve double solenoid type / Flashing lamp display vacuum switch



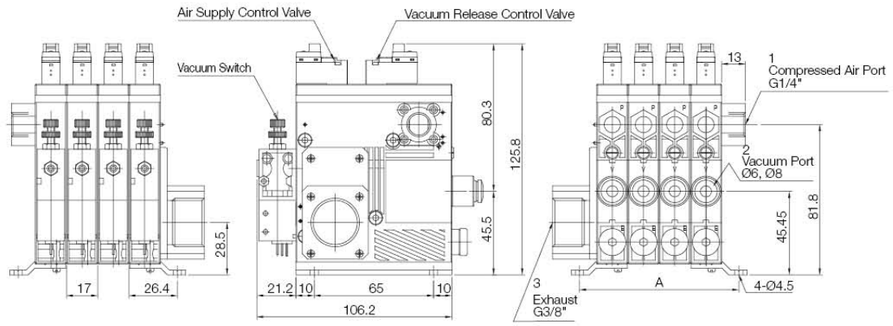
Manifold unit with central exhaust

Control valve Connector type / Digital vacuum switch



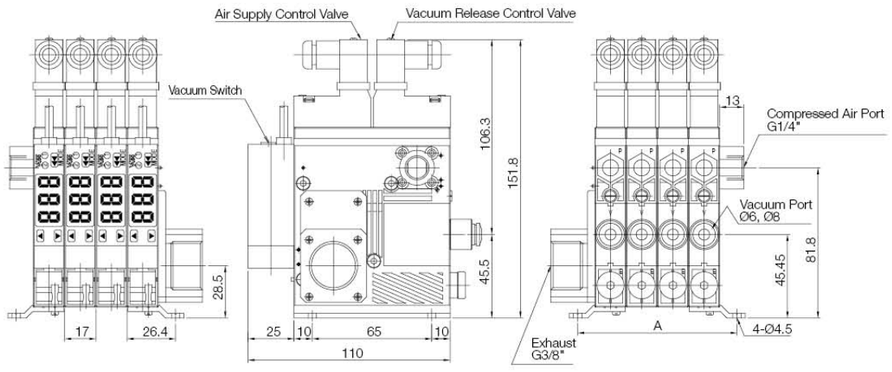
Manifold unit with central exhaust

Control valve Connector type / Mechanical vacuum switch



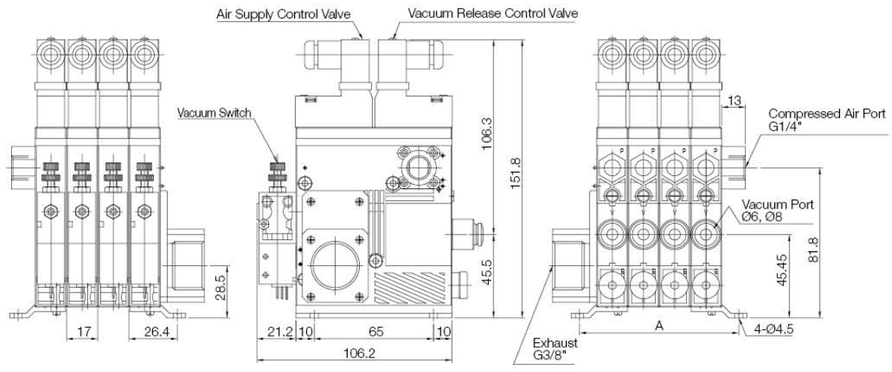
Manifold unit with central exhaust

Control valve DIN type / Digital vacuum switch



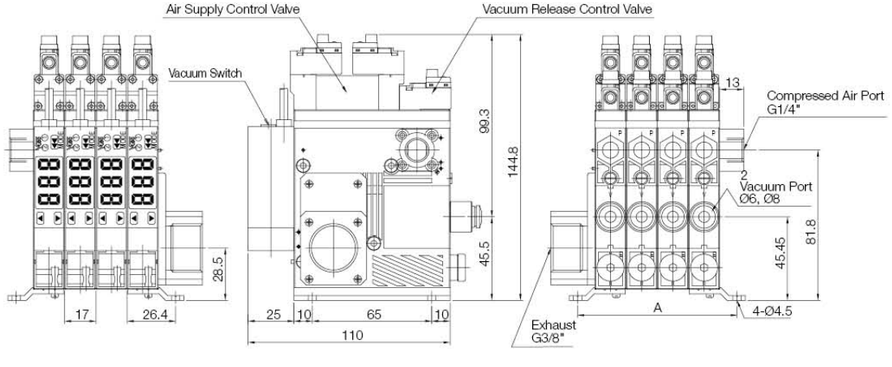
Manifold unit with central exhaust

Control valve DIN type / Mechanical vacuum switch



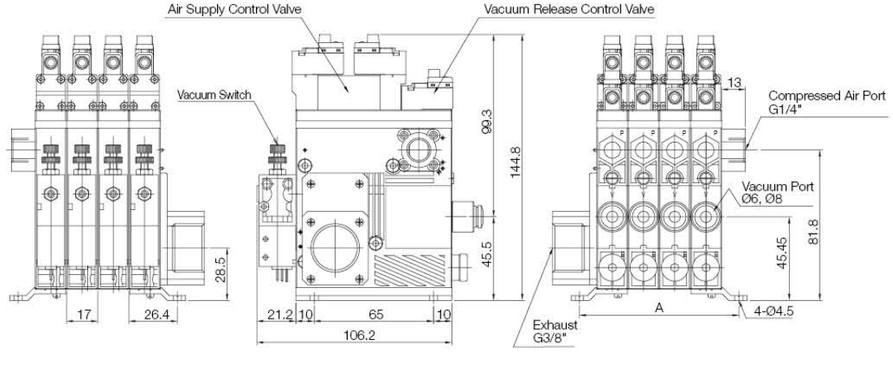
Manifold unit with central exhaust

Control valve double solenoid type / Digital vacuum switch



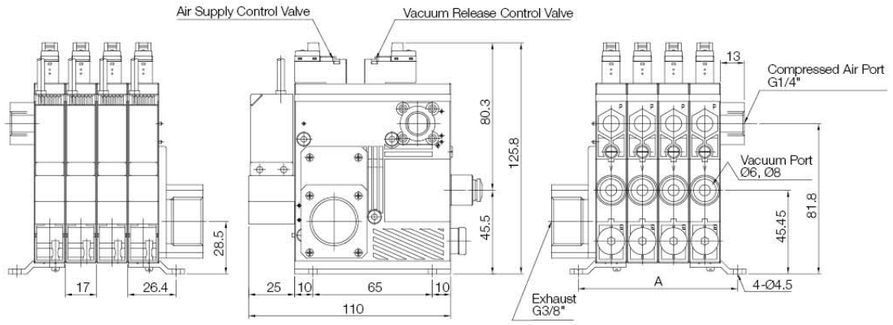
Manifold unit with central exhaust

Control valve double solenoid type / Mechanical vacuum switch



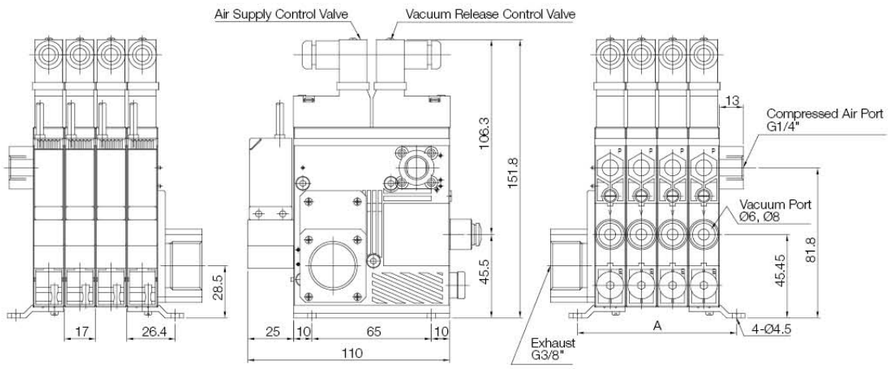
Manifold unit with central exhaust

Control valve Connector type / Flashing lamp display vacuum switch



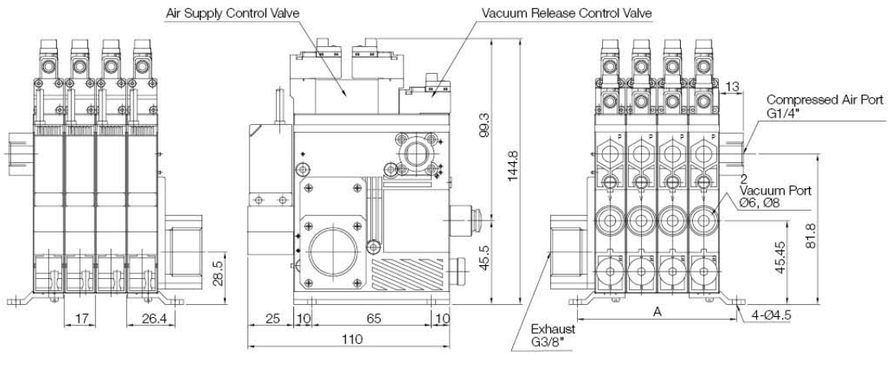
Manifold unit with central exhaust

Control valve DIN type / Flashing lamp display vacuum switch

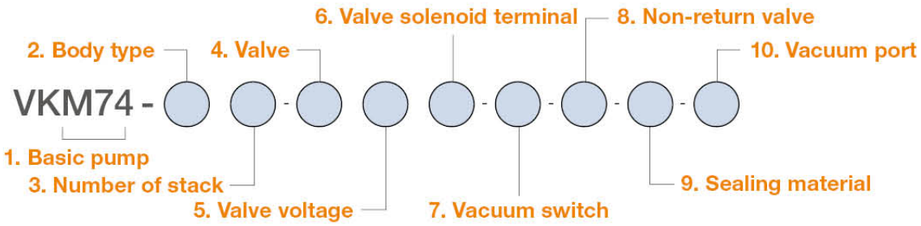


Manifold unit with central exhaust

Control valve double solenoid type / Flashing lamp display vacuum switch



Build an Ordering No.



1. Basic pump	Description	Symbol
	Mega Keyboard pump – "X" type	VKX73
	Mega Keyboard pump – "M" type	VKM73
	Mega Keyboard pump – "X" type	VKX74
	Mega Keyboard pump – "M" type	VKM74

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit	M
	Manifold unit with central exhaust type	E

3. Number of stack	Description	Symbol
	Single stack	1
	2 stacks	2
	3 stacks	3
	4 stacks	4
	5 stacks	5
	6 stacks	6
	7 stacks	7
	8 stacks	8

4. Valve	Description	Symbol
	Air control valve : N.C (Normal Closed) / Vacuum release valve : N.C (Normal Closed)	A
	Air control valve : N.O (Normal Open) / Vacuum release valve : N.C (Normal Closed)	B
	Air control valve : N.C (Normal Closed)	C
	Air control valve : N.O (Normal Open)	D
	Vacuum release valve : N.C (Normal Closed)	E
	Air control valve : Double solenoid valve / Vacuum release valve : N.C (Normal Closed)	W
	- Double solenoid valve "W" is available only with DC24V and Connector type valve terminal	

5. Valve voltage	Description	Symbol
	AC110V	1
	AC220V	2
	DC24V	3

6. Valve terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	1
	Solenoid Terminal, DIN, Lamp, No LW	2
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	3
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: Available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and C or PC vacuum switch	

Build an Ordering No.

7. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	C
	Digital switch, No analog supply, M8-4pins, PNP	PC
	Digital switch, No analog supply, Grommet, NPN	G
	Digital switch, No analog supply, Grommet, PNP	PG
	Digital switch, Analog supply, Grommet, NPN	GA
	Digital switch, Analog supply, Grommet, PNP	PGA
	Mechanical switch	S1
	Flashing LED, No analog supply, 4-core 1m lead wire, NPN	S4
	Flashing LED, No analog supply, 3-core 1m lead wire, PNP	S5

8. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve	N

9. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

10. Vacuum port	Description	Symbol
	Ø6 hose fitting	6
	Ø8 hose fitting	8

Spare Parts – Filters

Part No.	Description
FCK72-A3-6	Filter cover case for Ø6 hose fitting, Fix bolt
FCK72-A3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket
FCK72-F3-6	Filter cover case for Ø6 hose fitting, Fix bolt, Filter element
FCK72-F3-6-N	Filter cover case for Ø6 hose fitting, Fix bolt, Gasket, Filter element
FCK72-A3-8	Filter cover case for Ø8 hose fitting, Fix bolt
FCK72-A3-8-N	Filter cover case for Ø8 hose fitting, Fix bolt, Gasket
FCK72-F3-8	Filter cover case for Ø8 hose fitting, Fix bolt, Filter element
FCK72-F3-8-N	Filter cover case for Ø8 hose fitting, Fix bolt, Gasket, Filter element
VTFE-K72	Filter element

SKC pump

Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Auto filter cleaning system
Display digital sensor & M8 pin connector wire

Advantages

Fast response time – Especially, in vacuum release time due to QR (Quick release) valve integrated
Excellent performance in most of every automation application – Especially, dust environment application
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Two vacuum port for flexible selection

Application

Overall of specification

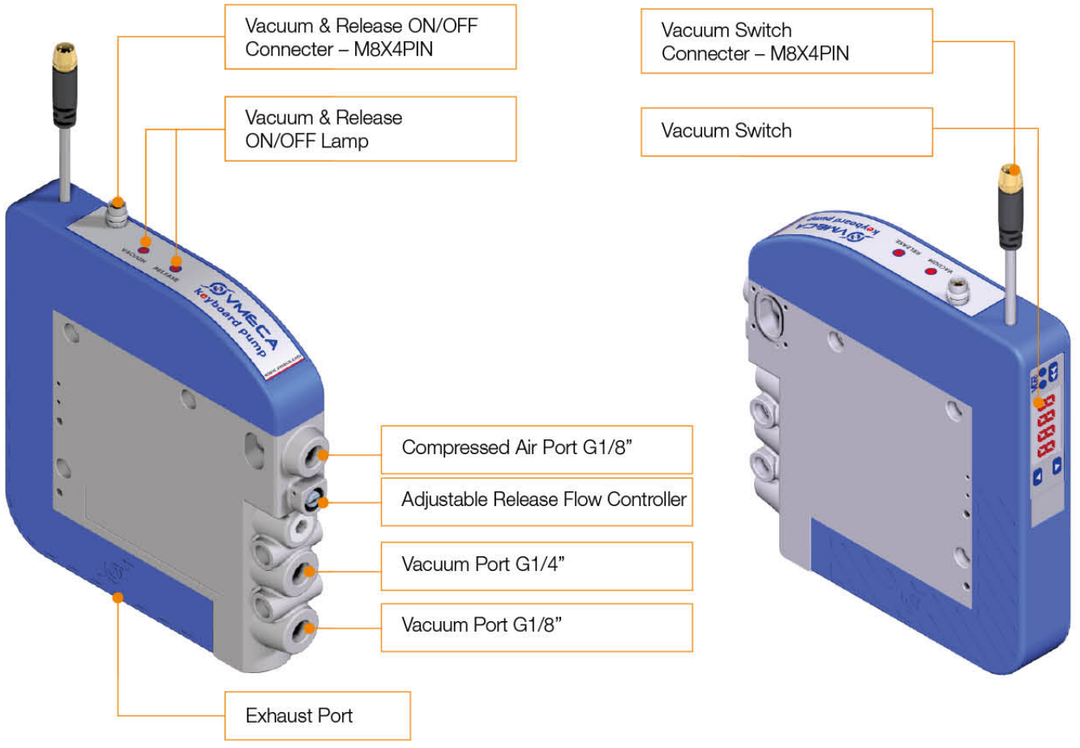
Model	Max. Vacuum	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
SKC203	90	7	171.6	64

SKC pump

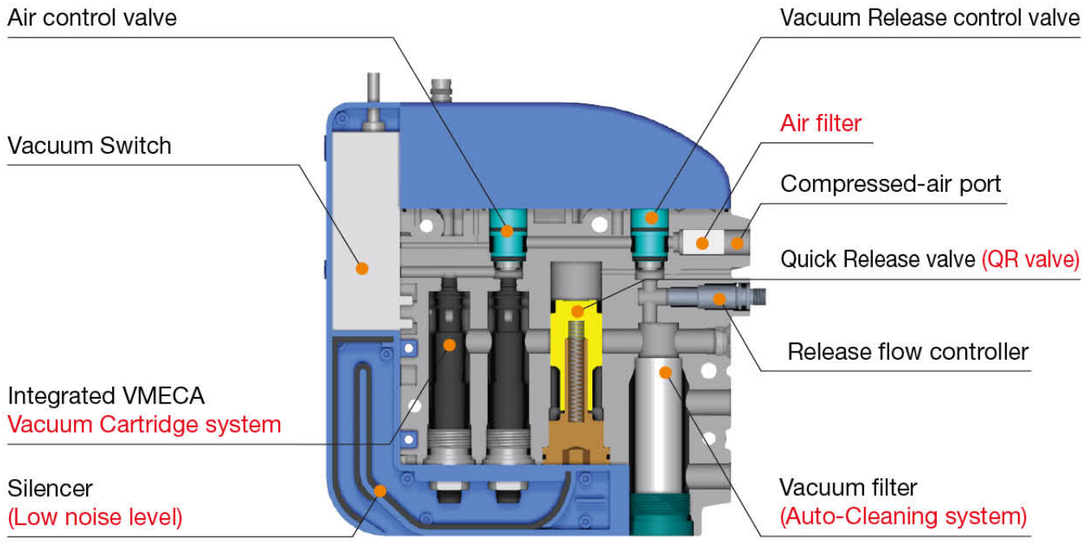
VMECA SKC pump is integrated with vacuum On/Off control Valve, vacuum release valve and vacuum switch with M8 pin connector wire.
It has vacuum filter in body with auto filter cleaning function so that It can be performed well in dust application. Also QR valve (Quick release valve) is integrated to make the release time faster to be suitable in high speed operation.

Key advantages

· VMECA vacuum cartridge integrated
· Fast response time – Quick release valve integrated
· Display digital sensor & M8 pin connector wire



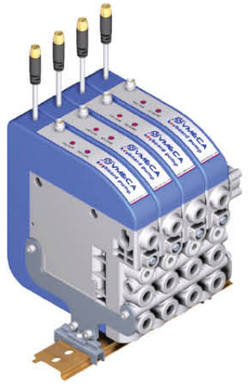
QR valve



Mounting

Direct Mounting

Bracket Mounting



Din rail Mounting

SKC203

Features and Strengths

- Integrated VMECA Vacuum Cartridge technology
- Integrated QR (Quick Release) valve
- Auto Filter Cleaning system
- Two vacuum ports
- Fast response time & Long life time
- Display Digital Sensor & M8 pin Connector wire
- Available up to 8 multi-stack vacuum system

Specifications

Description	SKC203
Max. Vacuum level	-90 kPa
Open Vacuum flow	171.6 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	50 ~ 60 dBA
Weight	456g

Vacuum Flow

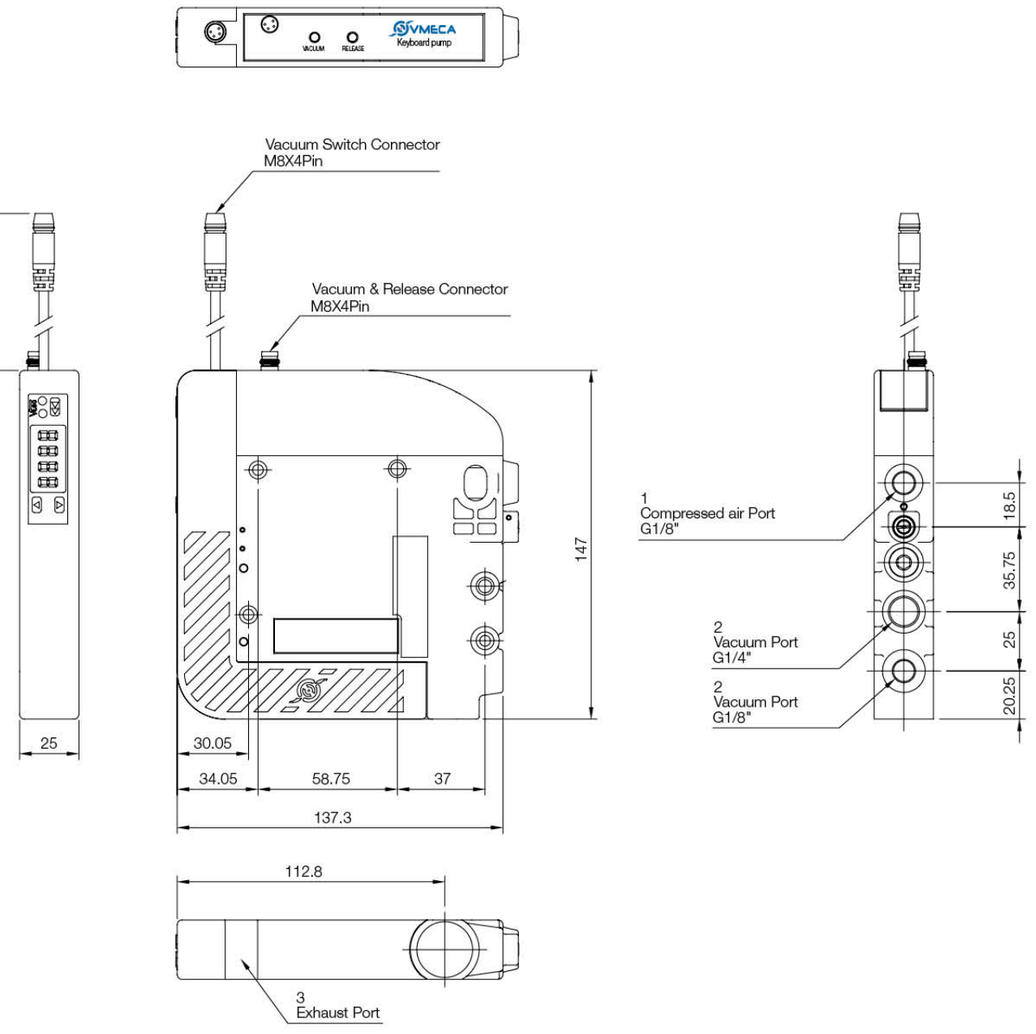
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
SKC203	50	1.7	11.2	50.8	25.6	16.6	8.0	-	-	-	-	-
	60	2.2	134.4	59.0	34.0	23.0	16.0	10.4	2.8	-	-	-
	90	3.14	171.2	73.8	52.0	31.6	22.0	17.8	13.2	7.8	4.0	-
	85	4.0	171.6	85.4	62.0	46.0	28.2	15.2	12.8	7.8	2.6	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
SKC203	1.7	34	0.06	0.25	0.6	1.2	-	-	-	-	-
	2.2	40	0.04	0.19	0.4	0.75	0.95	1.2	-	-	-
	3.14	52	0.03	0.14	0.26	0.7	0.7	1.0	1.6	3.0	-
	4.0	64	0.035	0.13	0.25	0.4	0.5	0.9	1.5	3.4	-

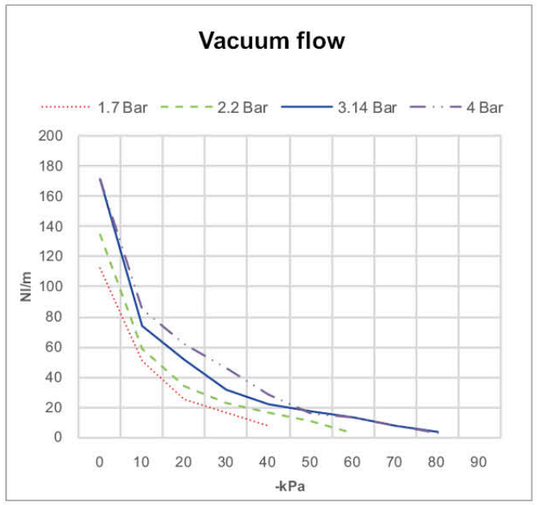
Dimensions – Basic Pump

[Unit : mm]

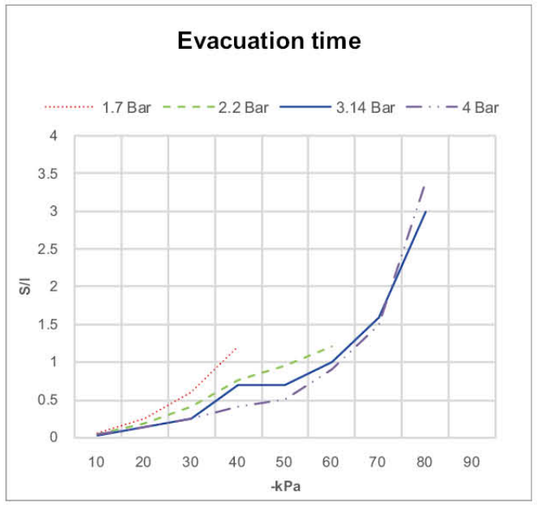


Performance data

SKC203

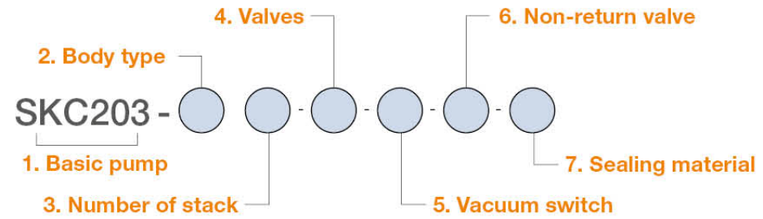


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	Smart Keyboard pump, 3-stage, 2-vacuum cartridges, Vacuum filter	SKC203

2. Body type	Description	Symbol
	Single unit	S
	Manifold unit	M

3. Number of stack	Description	Symbol
	Single stack: Only available with Single unit	1
	2 stacks	2
	4 stacks	4
	6 stacks	6
	8 stacks	8

4. Valves	Description	Symbol
	Air control valve : N.C.(Normal Closed) / Vacuum release valve : N.C.(Normal Closed)	A

5. Vacuum switch	Description	Symbol
	Digital switch, No analog supply, M8-4pins, NPN	C
	Digital switch, No analog supply, M8-4pins, PNP	PC
	Digital switch, Analog supply, Grommet, NPN	GA
	Digital switch, Analog supply, Grommet, PNP	PGA

6. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve	N

7. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Cartridges

Part No.	Description
VC203	Mini Vacuum Cartridge, 3-Stage

Green pump

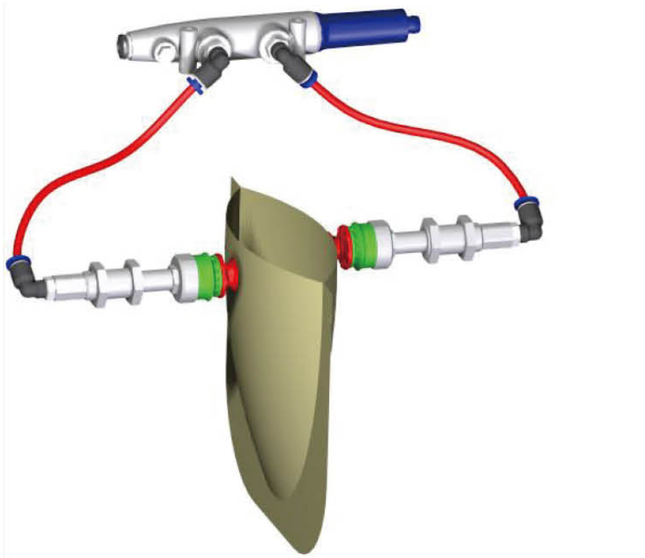
Features and Strengths

Excellent hygiene products for food, pharma and chemical industry
Integrated vacuum filter with high dirt capacity
Single/Dual cartridge option selectable
Compact size and light weight

Advantages

Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Suitable in application where high level hygiene standard is needed in
Compact size and easy installation

Application



Recommended Lifting Force (Max.)

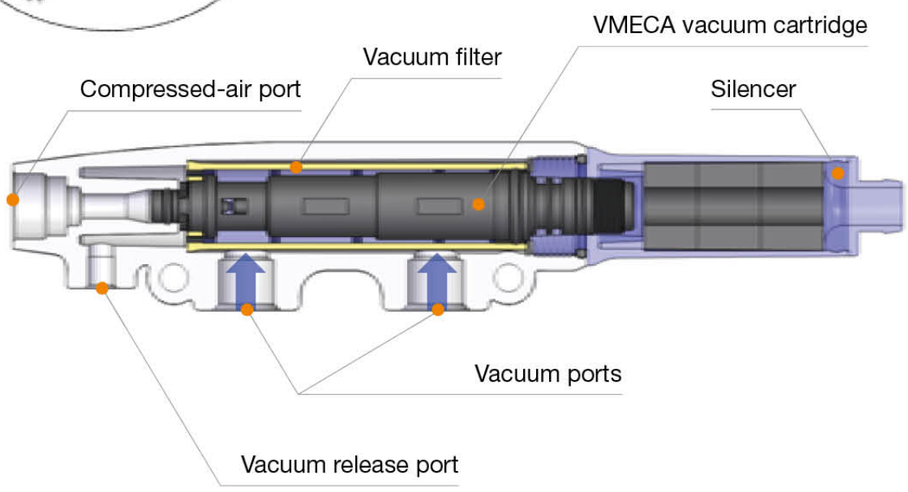
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
GS203F	-90 kPa	4 bar	85 Nl/min	32 Nl/min
GS252	-94 kPa	6 bar	113 Nl/min	83.5 Nl/min
GS253F	-94 kPa	6 bar	146 Nl/min	83.5 Nl/min
GS302	-92 kPa	4 bar	171 Nl/min	152 Nl/min
GSL302	-75 kPa	6 bar	200 Nl/min	104 Nl/min
GH203F	-90 kPa	4 bar	172 Nl/min	56 Nl/min
GH252	-94 kPa	6 bar	222 Nl/min	167 Nl/min
GH253F	-94 kPa	6 bar	292 Nl/min	167 Nl/min
GH302	-92 kPa	4 bar	343 Nl/min	304 Nl/min
GHL302	-75 kPa	6 bar	400 Nl/min	208 Nl/min

Green pump

VMECA Green pump with VMECA vacuum cartridge technology
and integral vacuum filter is highly regarded as vacuum pump suitable for industries where high hygiene level standard such as food, pharma and chemical, etc.
It has wide selection with various vacuum flow according to application with vacuum filter inside.
Also size is compact so that it can be easily installed on limited space on machines.

Key advantages

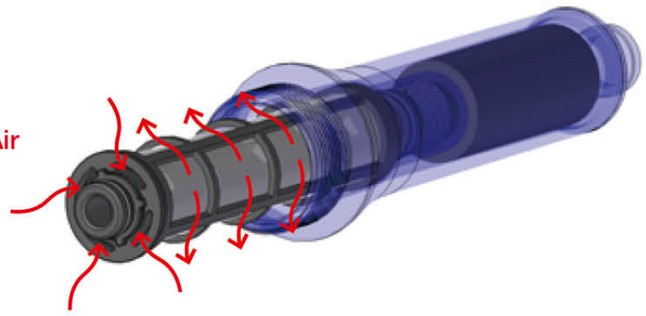
· VMECA vacuum cartridge integrated with auto filter cleaning system
· Vacuum filter integrated
· High level hygiene level



Auto filter cleaning system

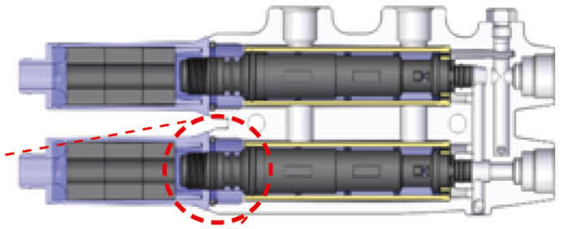
Patent & Patent pending

Vacuum Release Air



- ✓ Prevent dust coming into the pump
- ✓ Use release flow, filtered dust can be cleaned every cycle automatically

Filter window



- ✓ Available to check statement of cartridge filter inside

GS series

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated vacuum filter with high dirt capacity & Auto-cleaning system
· High polished clean surface for food, pharma and chemical industry
· Easy to install in limited space due to compact size
· Quick response time

Specifications

Description	GS203	GS252	GS253	GS302	GSL302
Max. Vacuum level	-90kPa	-94kPa	-94kPa	-92kPa	-75kPa
Open Vacuum flow	85 Nl/min	113 Nl/min	146 Nl/min	171 Nl/min	200 Nl/min
Max. Feed pressure	4 bar	6 bar	6 bar	4 bar	6 bar
Temperature	-20 ~ 80	-20 ~ 80	-20 ~ 80	-20 ~ 80	-20 ~ 80
Noise level	52 ~ 58 dBA	60 ~ 68 dBA	60 ~ 68 dBA	60 ~ 68 dBA	60 ~ 68 dBA
Weight	0.05Kg	0.055Kg	0.100Kg	0.105Kg	0.105Kg

Vacuum Flow

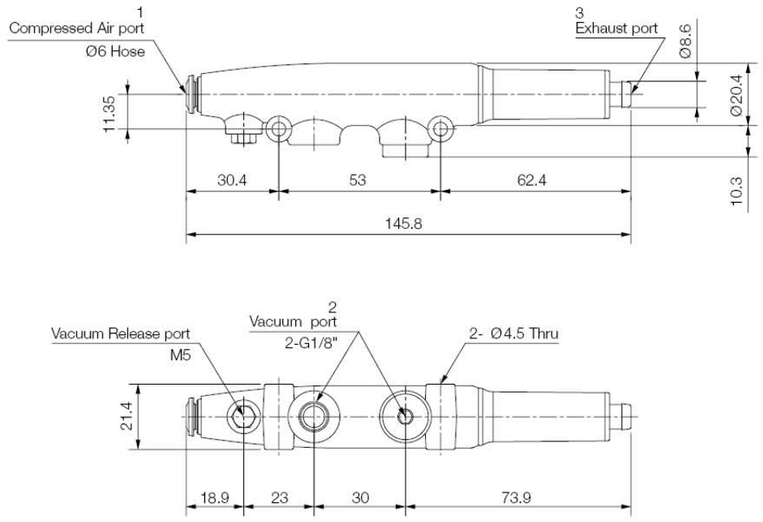
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
GS203	65	2.2	67.2	29.5	17	11.2	8	5.2	1.4	-	-	-
	90	3.2	85.6	36.9	26	15.8	11	8.9	6.6	3.9	2	-
	85	4.0	85.8	42.7	31	23	14.1	7.6	6.4	3.9	1.3	-
GS252	90	5.0	112	85	63	43	37	27	22	17	11	3.1
	94	5.5	113	91	69	48	30	26	22	17	11	2.8
	93.5	6.0	111	97	76.5	54	34	25	21	16	9.5	2.3
GS253	90	5.0	137	105	63	42	32.5	26	21	17	11	3.1
	94	5.5	141	109	71	51	32	26	22	17.5	11	2.8
	93.5	6.0	146	108	75	60	42	25	21	16	9.6	2.3
GS302	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3.0	170	152	106	64	31.5	32	22	16.5	6.4	1.9
	92	4.0	171	154	127	94	69	43	23	17	6.9	2.1
GSL302	60	4.0	188	158	110	70	46	28	6.8	-	-	-
	70	5.0	195	176	130	82	50	37	23	11.9	-	-
	75	6.0	200	183	154	100	52	38	32	22	-	-

Evacuation Time

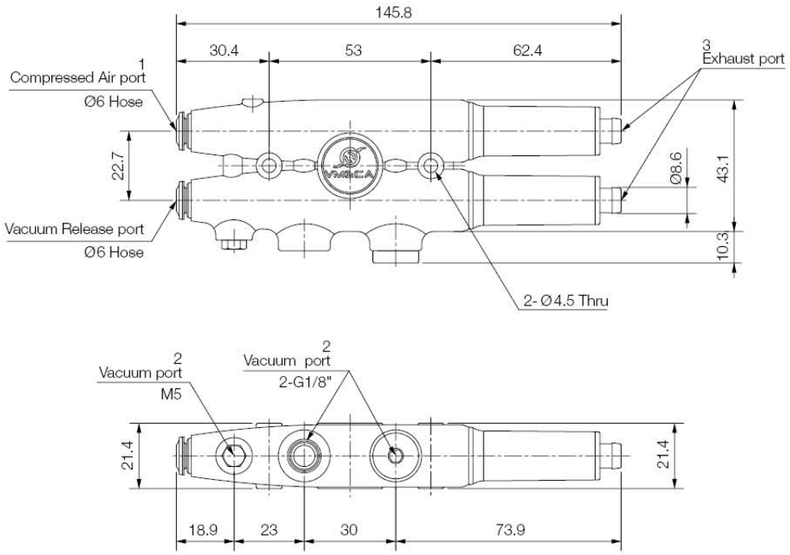
Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
GS203	2.2	21	0.08	0.38	0.8	1.47	1.9	2.4	-	-	-	-
	3.3	27	0.06	0.28	0.52	1.4	1.4	2	3.2	6	-	-
	4.0	32	0.075	0.26	0.49	0.8	1	1.8	3	6.8	-	-
GS252	5.0	70.5	0.039	0.15	0.27	0.49	0.60	0.94	2.09	2.82	4.83	3.1
	5.5	77	0.037	0.13	0.26	0.41	0.54	0.86	1.2	1.6	5	2.8
	6.0	83.5	0.035	0.078	0.12	0.13	0.33	0.83	1.15	1.76	5.8	2.3
GS253	5.0	70.5	0.034	0.136	0.23	0.43	0.52	0.82	1.82	2.46	4.22	3.1
	5.5	77	0.034	0.125	0.24	0.37	0.5	0.8	1.1	1.5	4.75	2.8
	6.0	83.5	0.033	0.073	0.11	0.12	0.31	0.79	1.1	1.65	5.5	2.3
GS302	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-	-
	3.0	118	0.027	0.1	0.19	0.3	0.4	0.64	0.9	1.2	3.8	1.9
	4.0	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5	2.1
GSL302	4.0	70	0.035	0.084	0.17	0.29	0.38	0.8	-	-	-	-
	5.0	85	0.027	0.08	0.15	0.25	0.3	0.4	0.8	-	-	-
	6.0	104	0.028	0.08	0.12	0.2	0.28	0.36	0.6	-	-	-

Dimensions

GS203 / GS252 series



GS253 / GS302 / GSL302 series



GH series

Features and Strengths

- Dual vacuum cartridge structure
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated vacuum filter with high dirt capacity & Auto-cleaning system
- High polished clean surface for food, pharma and chemical industry
- Easy to install in limited space due to compact size
- Quick response time

Specifications

Description	GH203	GH252	GH253	GH302	GHL302
Max. Vacuum level	-90kPa	-94kPa	-94kPa	-92kPa	-75kPa
Open Vacuum flow	172 Nl/min	222 Nl/min	292 Nl/min	343 Nl/min	400 Nl/min
Max. Feed pressure	4 bar	6 bar	6 bar	4 bar	6 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃	-20 ~ 80 ℃	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	52 ~ 58 dBA	60 ~ 68 dBA	60 ~ 68 dBA	60 ~ 68 dBA	60 ~ 68 dBA
Weight	0.09Kg	0.095Kg	0.10Kg	0.210Kg	0.210Kg

Vacuum Flow

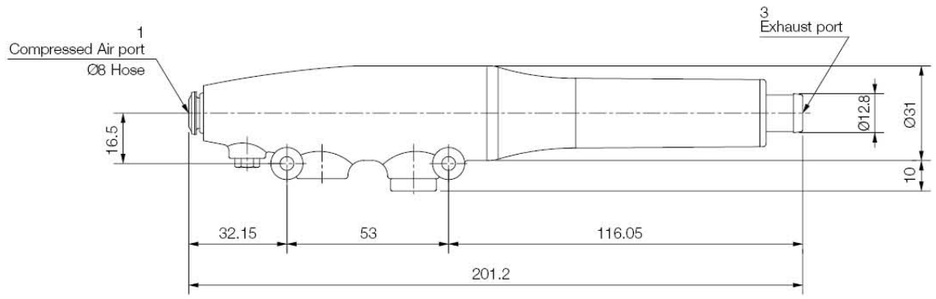
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
GH203	65	2.2	134	59	34	22.4	16	10.4	2.8	-	-	-
	90	3.3	171	73.8	52	31.6	22	17.8	13.2	7.8	4	-
	85	4.0	171	85.4	62	46	28.2	15.2	12.8	7.8	2.6	-
GH252	90	5.0	224	170	126	86	74	54	44	34	22	6.2
	94	5.5	226	182	138	96	60	52	44	34	22	5.6
	94	6.0	222	194	153	108	64	50	42	32	19	4.6
GH253	90	5.0	274	210	126	84	65	52	42	34	22	6.2
	94	5.5	282	218	142	102	64	52	44	35	22	5.6
	94	6.0	292	216	150	120	84	50	42	32	19.2	4.6
GH302	75	2.2	328	245	176	106	63	57	33	9.2	-	-
	92	3.0	340	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	342	308	255	188	138	86	47	34.5	13.8	4.2
GHL302	60	4.0	376	316	220	140	92	56	13	-	-	-
	70	5.0	390	352	260	164	100	75	46	24	-	-
	75	6.0	400	366	308	200	104	76	64	44	-	-

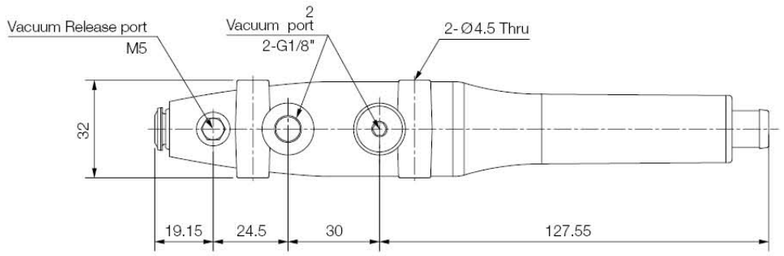
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
GH203	2.2	40	0.04	0.19	0.4	0.74	0.95	1.2	-	-	-	-
	3.2	55	0.03	0.14	0.26	0.7	0.7	1	1.6	3	-	-
	4.0	56	0.037	0.13	0.24	0.4	0.5	0.9	1.5	3.4	-	-
GH252	5.0	141	0.019	0.075	0.14	0.24	0.30	0.08	1.04	1.41	2.42	3.1
	5.5	154	0.018	0.065	0.12	0.20	0.27	0.43	0.60	0.80	2.50	2.8
	6.0	167	0.017	0.04	0.06	0.06	0.16	0.41	0.58	0.88	2.90	2.3
GH253	5.0	141	0.017	0.068	0.115	0.21	0.26	0.41	0.91	1.23	2.11	3.1
	5.5	154	0.017	0.062	0.11	0.18	0.25	0.40	0.55	0.75	2.37	2.8
	6.0	167	0.016	0.036	0.05	0.06	0.16	0.39	0.55	0.82	2.75	2.3
GH302	2.2	194	0.018	0.065	0.108	0.2	0.25	0.395	0.81	-	-	-
	3.0	236	0.016	0.05	0.07	0.16	0.23	0.34	0.5	0.795	2.01	1.9
	4.0	304	0.014	0.029	0.043	0.05	0.13	0.25	0.355	0.71	1.75	2.1
GHL302	4.0	140	0.018	0.04	0.08	0.145	0.195	0.5	-	-	-	-
	5.0	170	0.014	0.036	0.075	0.125	0.16	0.25	0.45	-	-	-
	6.0	208	0.013	0.032	0.06	0.1	0.155	0.2	0.35	-	-	-

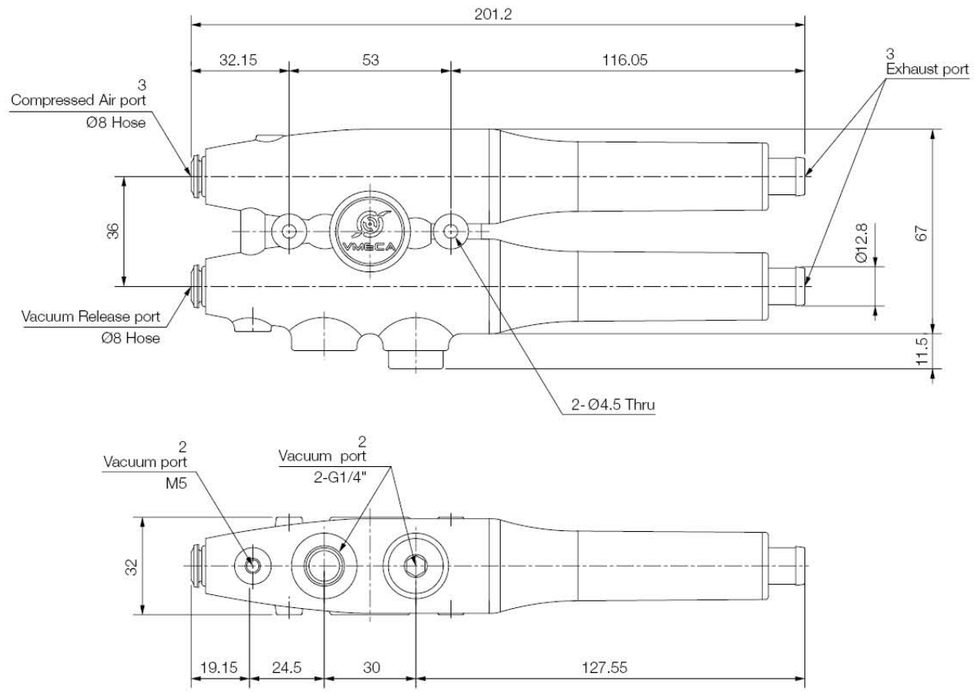
Dimensions

GH203 / GH252 series

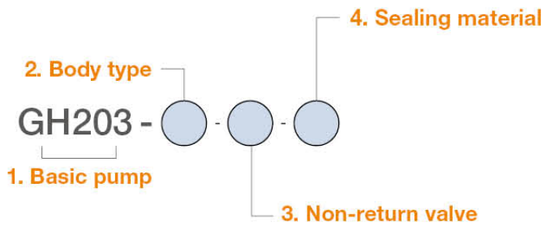




GH253 / GH302 / GHL302 series



Build an Ordering No.



1. Basic pump	Description	Symbol
	Green pump, Mini 3-stage with vacuum filter	GS203F
	Green pump, Mini premium 2-stage without vacuum filter	GS252
	Green pump, Mini premium 3-stage with vacuum filter	GS253F
	Green pump, Midi 2-stage without vacuum filter	GS302
	Green pump, Midi “L” type 2-stage without vacuum filter	GSL302
	Green pump, Dual cartridge, Mini 3-stage with vacuum filter	GH203F
	Green pump, Dual cartridge, Mini premium 2-stage without vacuum filter	GH252
	Green pump, Dual cartridge, Mini premium 3-stage with vacuum filter	GH253F
	Green pump, Dual cartridge, Midi 2-stage without vacuum filter	GH302
	Green pump, Dual cartridge, Midi “L” type 2-stage without vacuum filter	GHL302

2. Body type	Description	Symbol
	Opaque body	A
	Transparent body	B

3. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve	N

4. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Model	Description	Weight (g)
GS203F-A	Green pump, Mini 3-stage with vacuum filter, Opaque body	60.3
GS252-A	Green pump, Mini premium 2-stage without vacuum filter, Opaque body	67
GS253F-A	Green pump, Mini premium 3-stage with vacuum filter, Opaque body	111.5
GS302-A	Green pump, Midi 2-stage without vacuum filter, Opaque body	119.5
GSL302-A	Green pump, Midi “L” type 2-stage without vacuum filter, Opaque body	118
GH203F-A	Green pump, Dual cartridge, Mini 3-stage with vacuum filter, Opaque body	122.6
GH252-A	Green pump, Dual cartridge, Mini premium 2-stage without vacuum filter, Opaque body	135.1
GH253F-A	Green pump, Dual cartridge, Mini premium 3-stage with vacuum filter, Opaque body	123.9
GH302-A	Green pump, Dual cartridge, Midi 2-stage without vacuum filter, Opaque body	205
GHL302-A	Green pump, Dual cartridge, Midi “L” type 2-stage without vacuum filter, Opaque body	204
GS203F-B	Green pump, Mini 3-stage with vacuum filter, Transparent body	60.3
GS252-B	Green pump, Mini premium 2-stage without vacuum filter, Transparent body	67
GS253F-B	Green pump, Mini premium 3-stage with vacuum filter, Transparent body	111.5
GS302-B	Green pump, Midi 2-stage without vacuum filter, Transparent body	119.5
GSL302-B	Green pump, Midi “L” type 2-stage without vacuum filter, Transparent body	118
GH203F-B	Green pump, Dual cartridge, Mini 3-stage with vacuum filter, Transparent body	122.6
GH252-B	Green pump, Dual cartridge, Mini premium 2-stage without vacuum filter, Transparent body	135.1
GH253F-B	Green pump, Dual cartridge, Mini premium 3-stage with vacuum filter, Transparent body	123.9
GH302-B	Green pump, Dual cartridge, Midi 2-stage without vacuum filter, Transparent body	205
GHL302-B	Green pump, Dual cartridge, Midi “L” type 2-stage without vacuum filter, Transparent body	204

Spare Parts – Cartridges

Model	Description	Available model
VC203FS1	Mini vacuum cartridge, 3-stage with vacuum filter	GS203F, GH203F
VC252	Mini premium vacuum cartridge, 2-stage without vacuum filter	GS252. GH252
VC253FS1	Mini premium vacuum cartridge, 3-stage with vacuum filter	GS253F, GH253F
VC302	Midi vacuum cartridge, 2-Stage without vacuum filter	GS302, GH302
VCL302	Midi “L’ type vacuum cartridge, 2-Stage without vacuum filter	GSL302, GHL302

Spare Parts – Filters

Model	Description
F203	Vacuum filter for VC203FS
F253	Vacuum filter for VC253FS

Spare Parts – Silencers

Model	Description	Available model
VTS-M16-203	Silencer, M16 male	GS203, GH203
VTS-M16-252	Silencer, M16 male	GS252, GH252
VTS-M25-253	Silencer, M25 male	GS253, GH253
VTS-M25-302	Silencer, M25 male	GS302, GSL302, GH302, GHL302

V pump

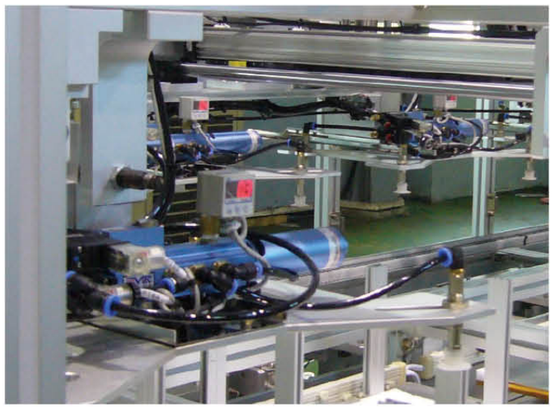
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Multiple vacuum connection ports available

Advantages

Easy to distribute vacuum connections
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application



Overall of specification

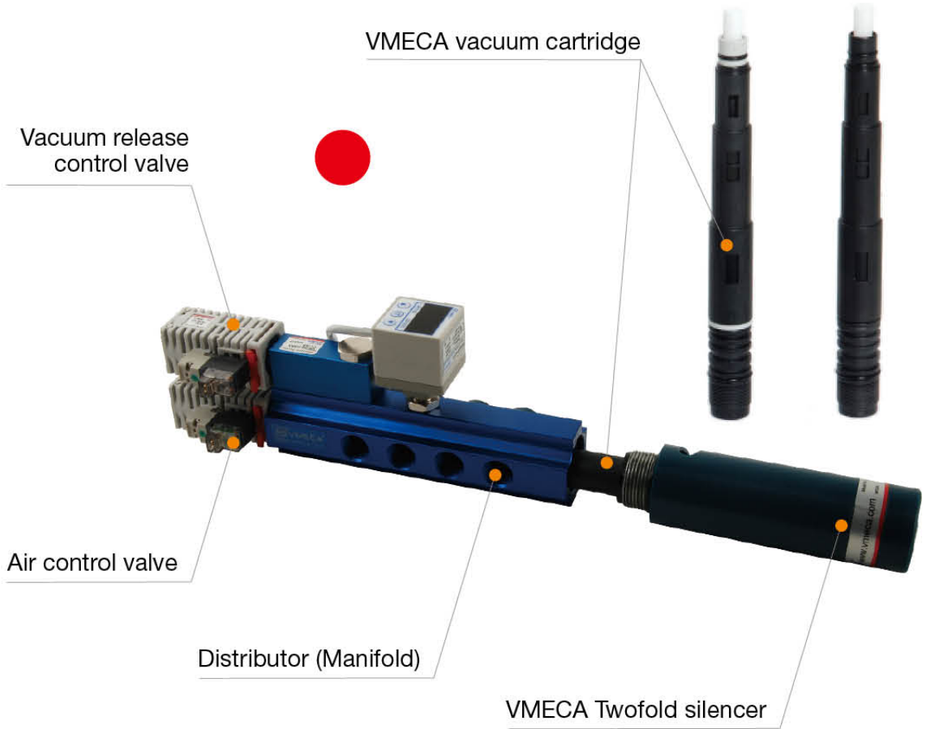
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VS144	92	7	341	152
VS146	92	7	341	152
VS148	92	7	341	152
VLS144	75	7	362	104
VLS146	75	7	362	104
VLS148	75	7	362	104

V pump

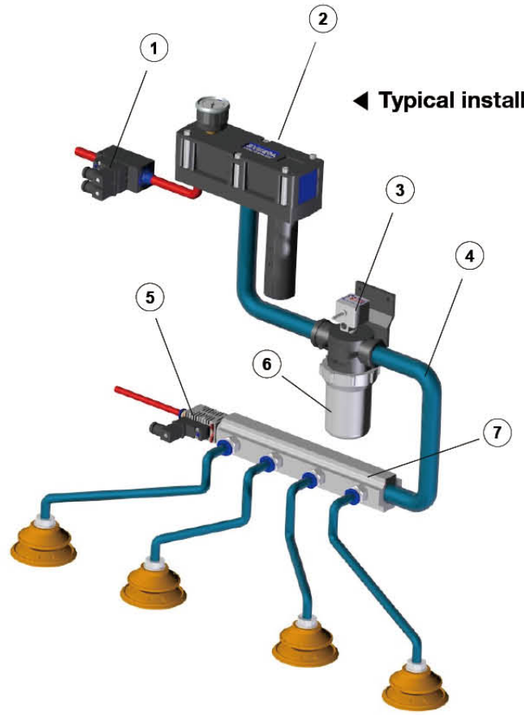
VMECA V pump with integral vacuum distributors can be combined with the optional vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for various applications.
VMECA V pump and optional components, due to distributor integrated, can be suitable for applications which needs to share vacuum lines with single vacuum pump.

Key advantages

· VMECA vacuum cartridge integrated
· Vacuum distributor in one body
· Flow adjustment for vacuum release



Comparison with typical installation

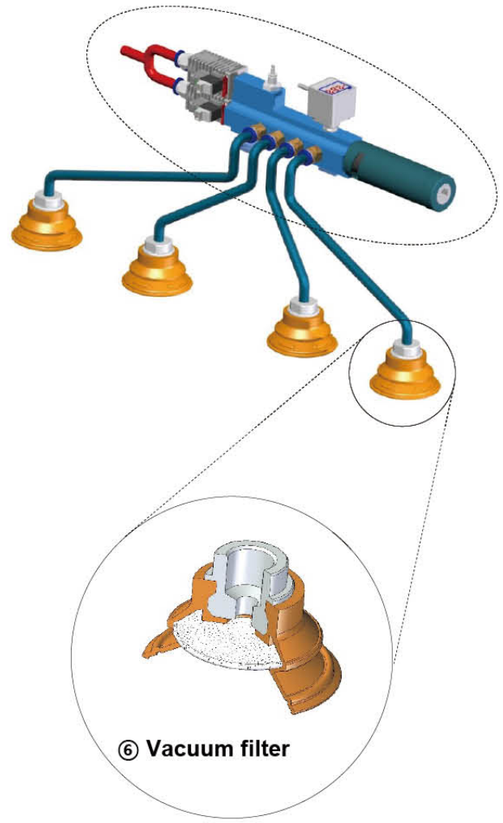


◀ Typical installation

① Air control valve
② Vacuum pump
③ Digital vacuum switch
④ Main vacuum pipe line
⑤ Vacuum release control valve
⑥ Vacuum filter
⑦ Distributor (Manifold)

▼ New solution with VMECA V-PUMP

①+②+③+④+⑤+⑥+⑦



⑥ Vacuum filter

VS / VLS

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Easy to distribute vacuum connections with integrated distribution body module
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- VMECA TWOFOLD Silencer – Low noise levels

Specifications

Description	VS	VLS
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	341 Nl/min	362 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	293 g	292 g

Vacuum Flow

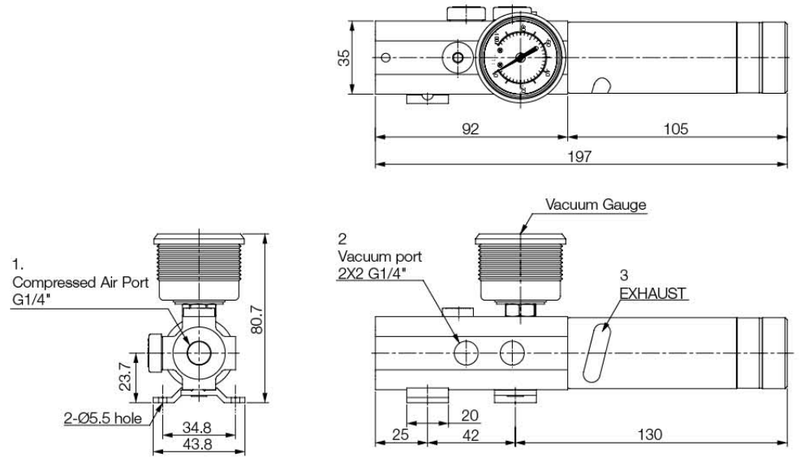
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VS	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3.0	338	152	106	64	33	32	22	16.5	6.4	1.9
	92	4.0	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VLS	60	4.0	302	176	110	70	46	28	6.8	-	-	-
	70	5.0	344	200	130	82	50	37.5	23	11.3	-	-
	75	6.0	362	194	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VS	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3.0	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	12	3.8
	4.0	152	0.01	0.48	0.07	0.09	0.2	0.42	0.8	1	3.4
VLS	4.0	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-
	5.0	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6.0	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-

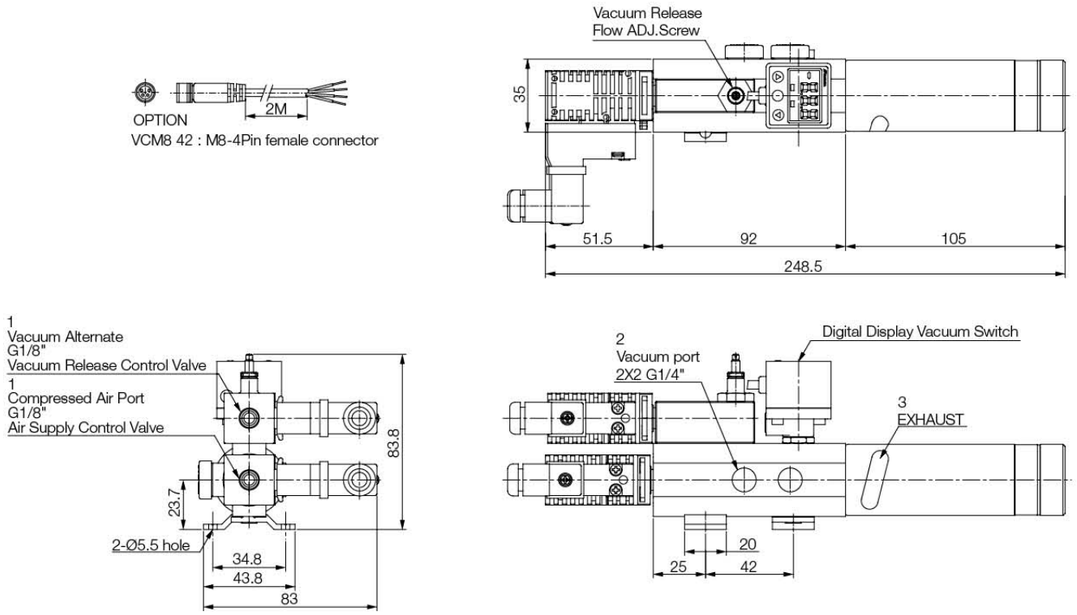
Dimensions – Basic Pump

[Unit : mm]



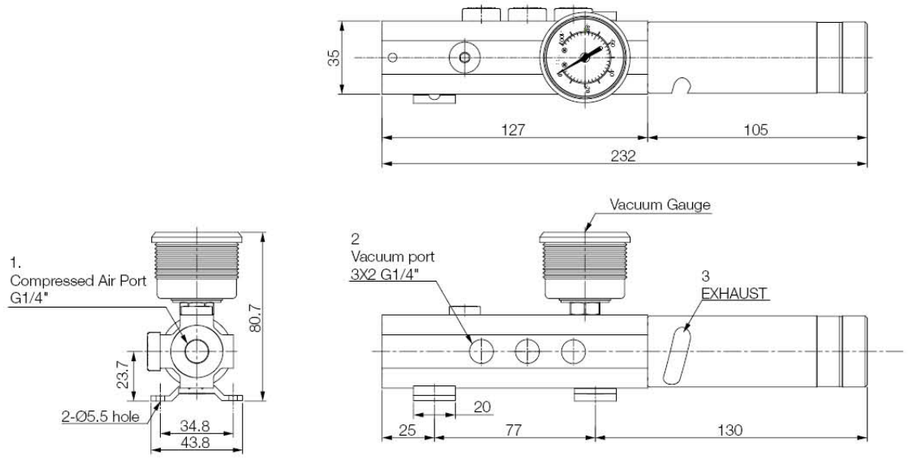
Dimensions – with Accessories

[Unit : mm]



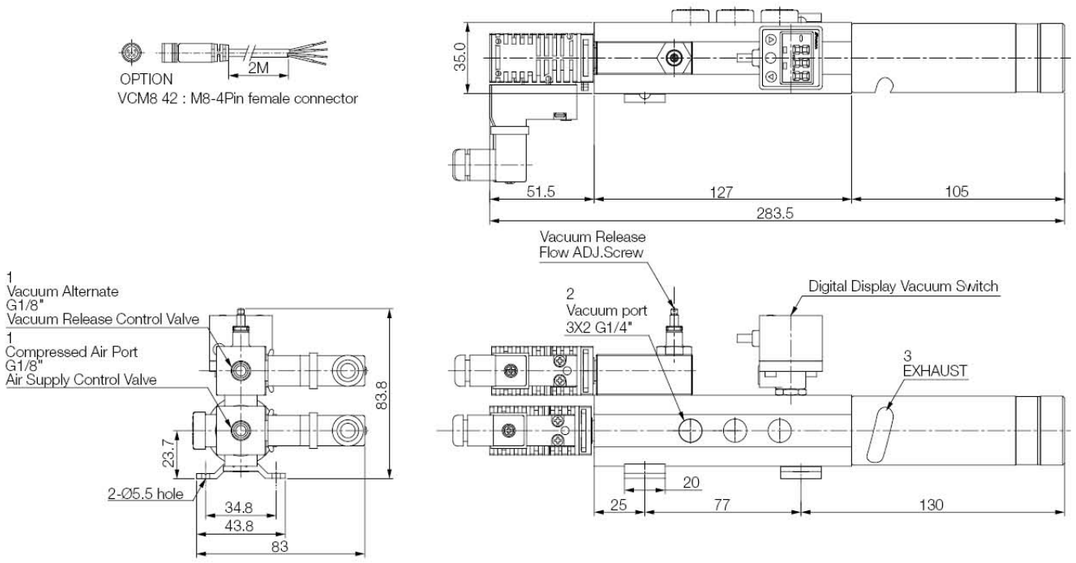
Dimensions – Basic Pump

[Unit : mm]



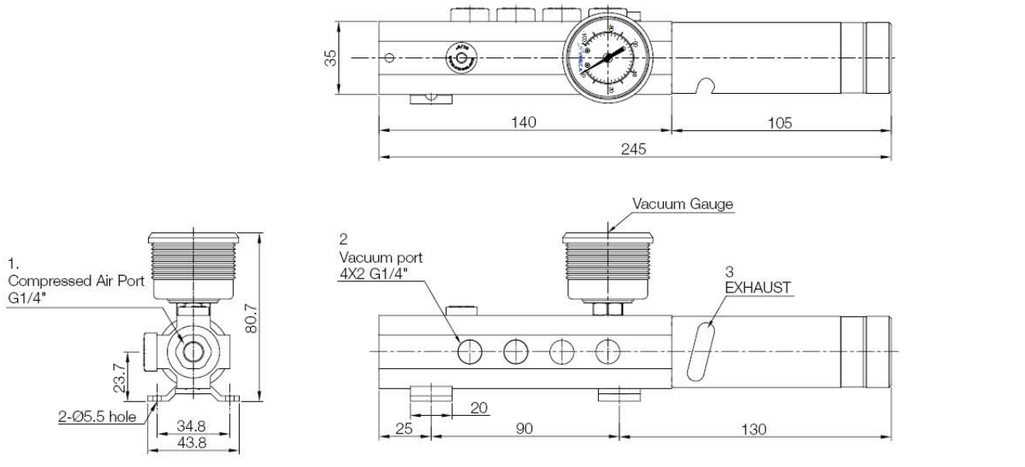
Dimensions – with Accessories

[Unit : mm]



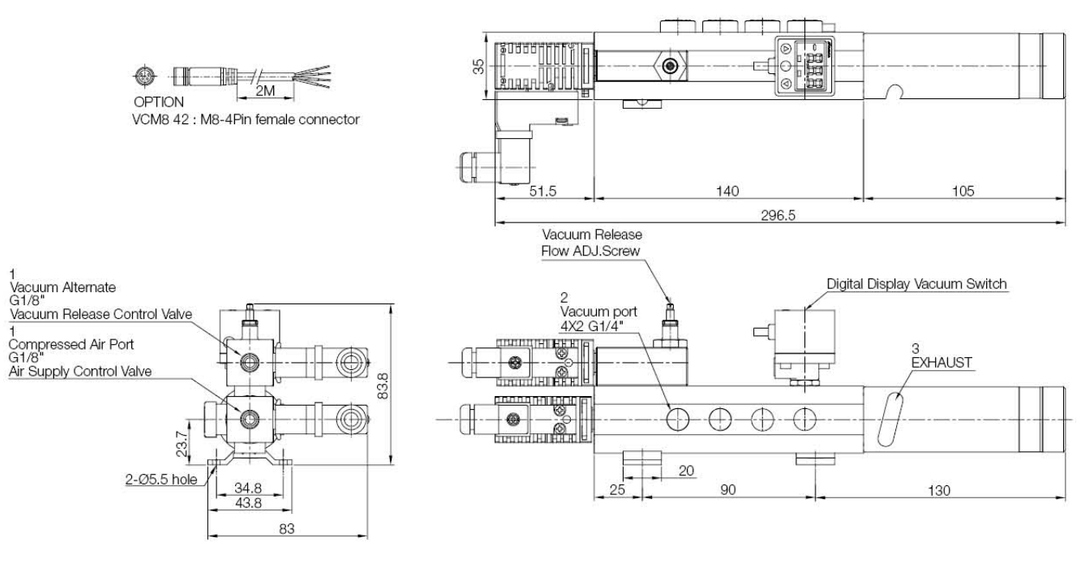
Dimensions – Basic Pump

[Unit : mm]



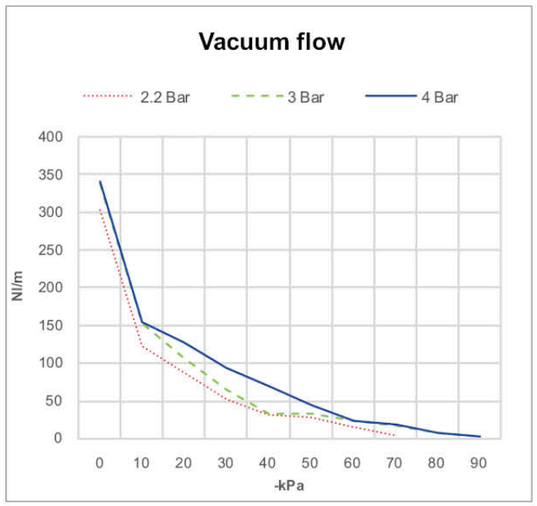
Dimensions – with Accessories

[Unit : mm]

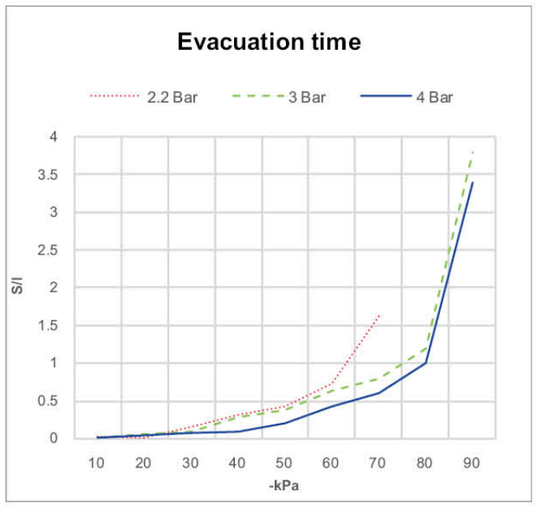


Performance data

VS

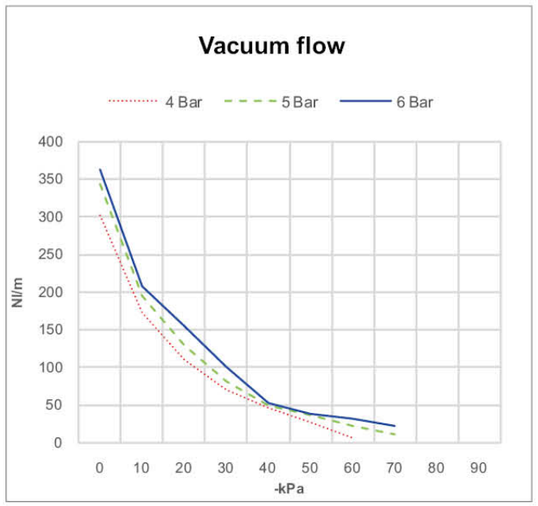


※ Vacuum flow at different vacuum level

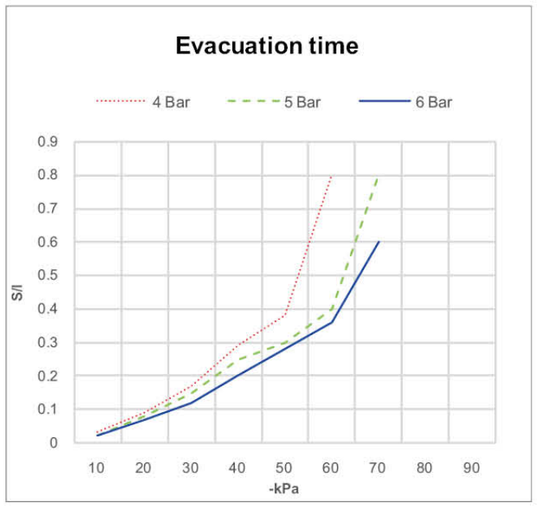


※ Time to evacuate a volume at different vacuum level

VLS

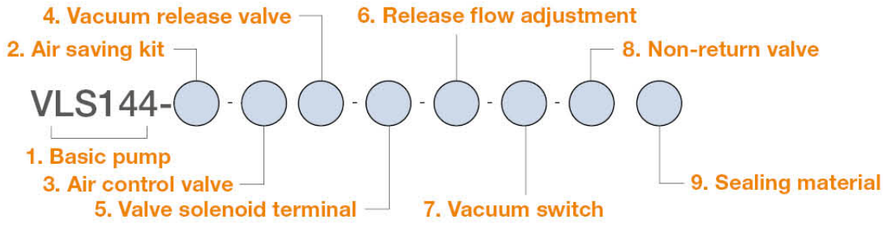


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 4-port, Two-fold silencer	VS144
	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 6-port, Two-fold silencer	VS146
	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 8-port, Two-fold silencer	VS148
	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 4-port, Two-fold silencer	VLS144
	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 6-port, Two-fold silencer	VLS146
	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 8-port, Two-fold silencer	VLS148

2. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

3. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double solenoid valve, AC110V	D1
	Double solenoid valve, AC220V	D2
	Double solenoid valve, DC24V	D3

4. Vacuum release valve	Description	Symbol
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

5. Valve solenoid terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

6. Release flow adjustment	Description	Symbol
	No release flow adjustment	Blank
	Release flow adjustment	A
	Valve fixture only: Not available with vacuum release valve	R

7. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

8. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

9. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VS144	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 4-port, Two-fold silencer	293
VS146	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 6-port, Two-fold silencer	355
VS148	V Pump, 3-Stage Cartridge, Integrated Manifold, G1/4 Female 8-port, Two-fold silencer	370
VLS144	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 4-port, Two-fold silencer	292
VLS146	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 6-port, Two-fold silencer	354
VLS148	V Pump, 3-Stage "L" Cartridge, Integrated Manifold, G1/4 Female 8-port, Two-fold silencer	368

Spare Parts – Cartridges

Part No.	Description	Available model
VC303	Midi Vacuum Cartridge, 3-Stage	VS144, VS146, VS148
VCL303	Midi Vacuum Cartridge, "L" Series, 3-Stage	VLS144, VLS146, VLS148

Spare Parts – Silencer

Part No.	Description	Weight (g)
VTTS-M25	Two-Fold Silencer for VS / VLS vacuum pumps	78.34

VD pump

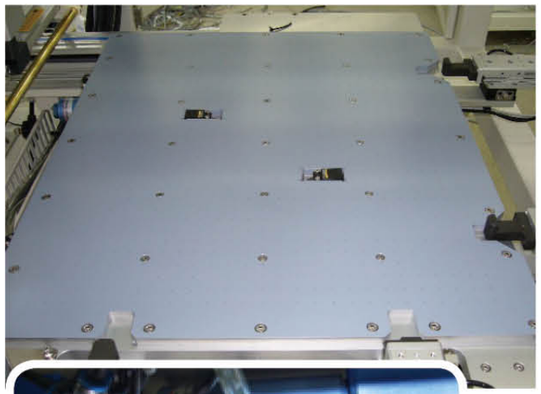
Features and Strengths

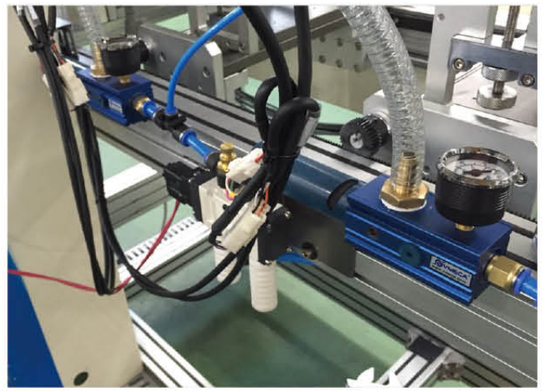
Highly operational reliability despite fluctuating or low compressed-air pressure
Easy to install on plate with H22 - Vacuum port option for holding plate

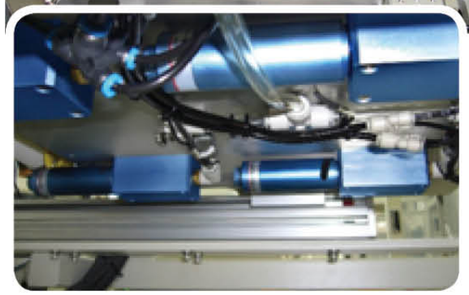
Advantages

Excellent performance in most of every automation application
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application







Overall of specification

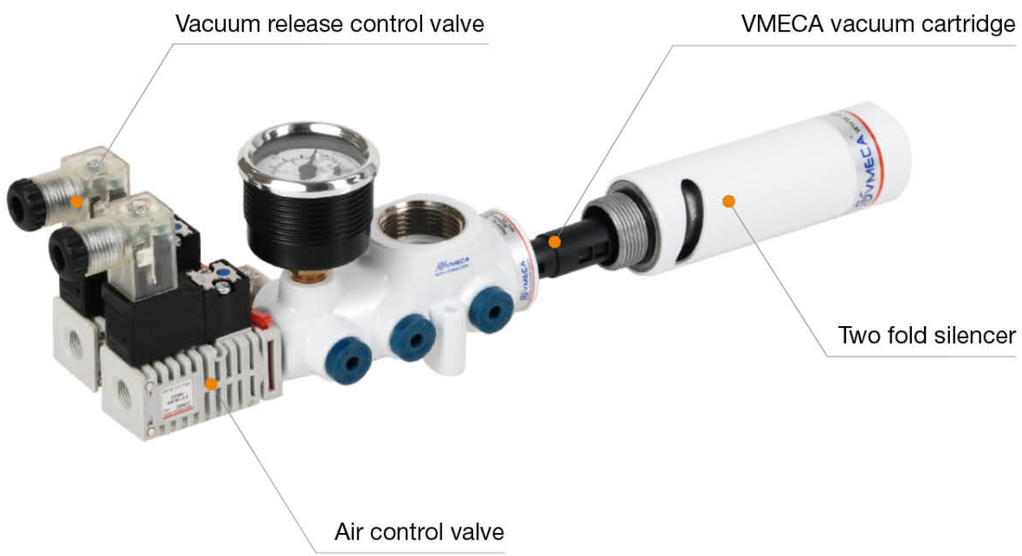
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VD303	93	7	341	152
VD302	93	7	171	152
VDL303	75	7	362	104
VDL302	75	7	200	104

VD pump

VMECA VD pump can be combined with the optional Vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for many applications. VMECA VD pump and optional components, due to the compact design and size, can be mounted close to the point of use reducing system volume and maintenance while improving cycle time.

Key advantages

· VMECA vacuum cartridge integrated
· Available for quick release without vacuum release valve
· Auto filter cleaning system



VD303 / VDL303

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Located at
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· VMECA TWOFOLD Silencer – Low noise levels

Specifications

Description	MD303	MDL303
Max. Vacuum level	-93 kPa	-75 kPa
Open Vacuum flow	341 Nl/min	362 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	446 g	445 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VD303	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	3.0	338	152	106	64	33	32	22	16.5	6.4	1.9
	93	4.0	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VDL303	60	4.0	302	176	110	70	46	28	6.8	-	-	-
	70	5.0	344	200	130	82	50	37.5	23	11.3	-	-
	75	6.0	362	194	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VD303	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3.0	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8
	4.0	152	0.01	0.048	0.07	0.09	0.2	0.42	1.6	1	3.4
VDL303	4.0	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-
	5.0	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6.0	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-

VD302 / VDL302

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Located at
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· VMECA TWOFOLD Silencer – Low noise levels

Specifications

Description	MD302	MDL302
Max. Vacuum level	-93 kPa	-75 kPa
Open Vacuum flow	171 Nl/min	200 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	427 g	426 g

Vacuum Flow

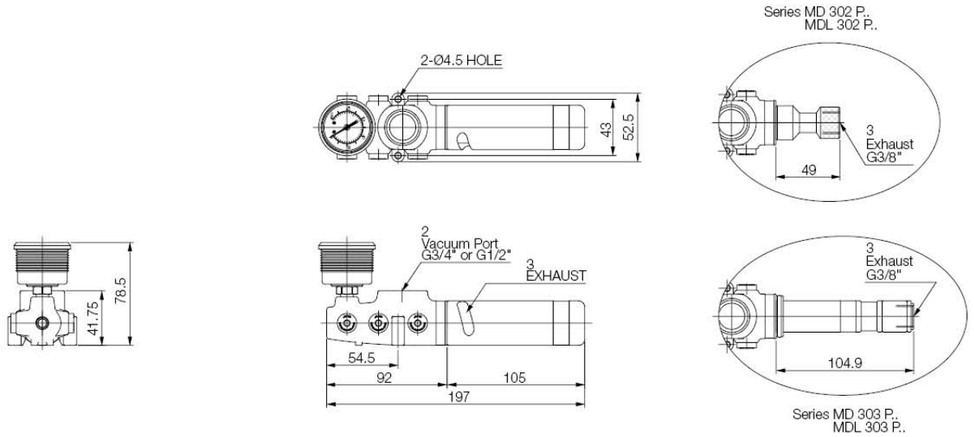
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VD302	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	3.0	170	152	106	64	33	32	22	16.5	6.4	1.9
	93	4.0	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VDL302	60	4.0	188	158	110	70	46	28	6.8	-	-	-
	70	5.0	195	176	130	82	50	37.5	23	11.3	-	-
	75	6.0	200	183	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VD302	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-
	3.0	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8
	4.0	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5
VDL302	4.0	70	0.035	0.084	0.17	0.29	0.38	0..8	-	-	-
	5.0	85	0.027	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6.0	104	0.028	0.08	0.12	0.2	0.28	0.36	0.6	-	-

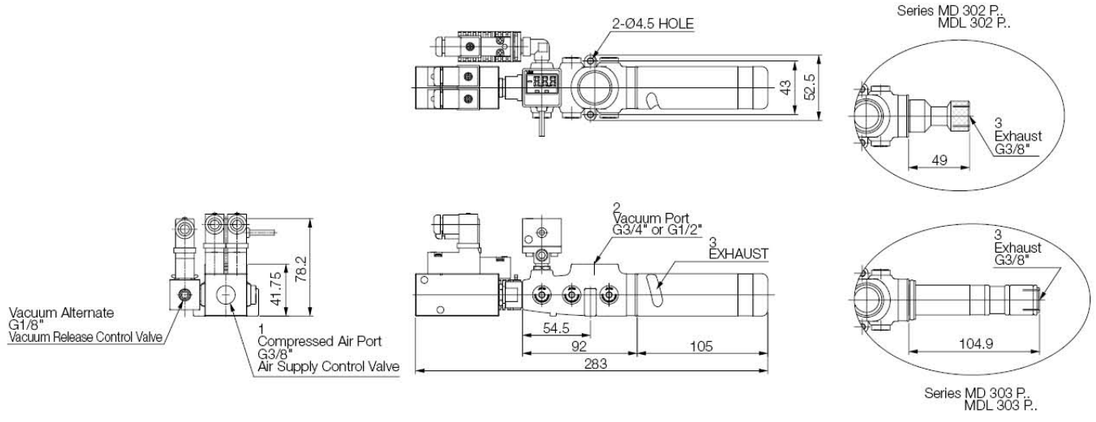
Dimensions – Basic Pump

[Unit : mm[in]]



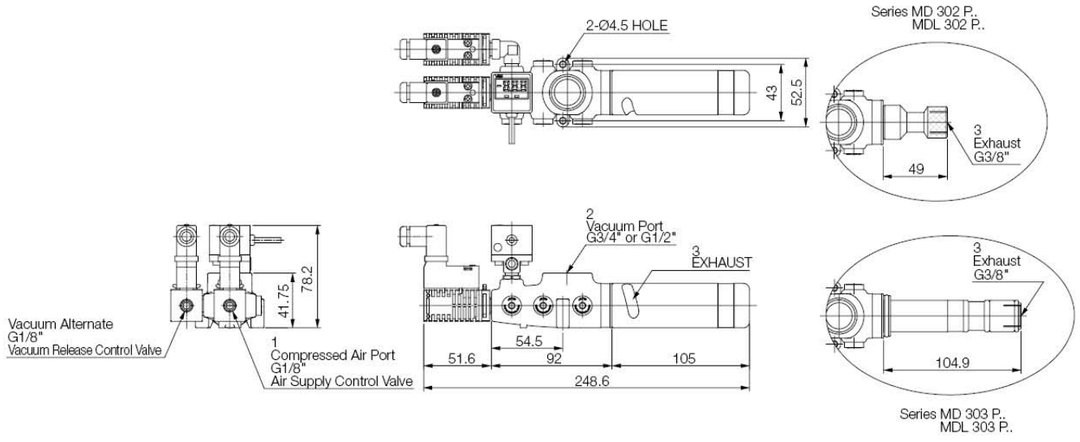
Dimensions – With accessories

[Unit : mm[in]]

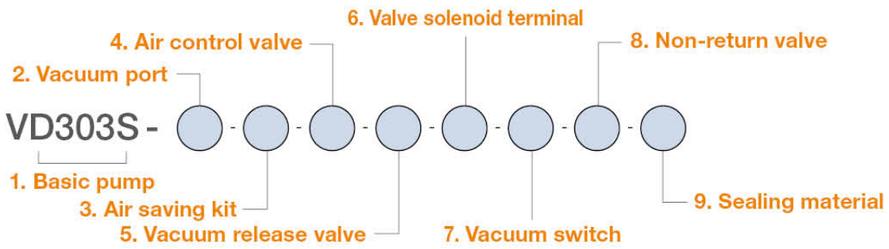


Dimensions – With accessories

[Unit : mm[in]]



Build an Ordering No.



1. Basic pump	Description	Ordering No.
	VD pump, 3-Stage Cartridge, Two-fold silencer	VD303S
	VD pump, 3-Stage Cartridge, Plug	VD303P
	VD pump, 2-Stage Cartridge, Plug	VD302P
	VD pump, 3-Stage "L" Cartridge, Two-fold silencer	VDL303S
	VD pump, 3-Stage "L" Cartridge, Plug	VDL303P
	VD pump, 2-Stage "L" Cartridge, Plug	VDL302P

2. Vacuum port	Description	Ordering No.
	Vacuum port G3/4"	34
	Vacuum port G1/2"	12

3. Air saving kit	Description	Ordering No.
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

4. Air control valve	Description	Ordering No.
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double air control valve, AC110V	D1
	Double air control valve, AC220V	D2
	Double air control valve, DC24V	D3

5. Vacuum release valve	Description	Ordering No.
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

6. Valve solenoid terminal	Description	Ordering No.
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

7. Vacuum switch	Description	Ordering No.
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

Build an Ordering No.

8. Non-return valve	Description	Ordering No.
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

9. Sealing material	Description	Ordering No.
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Model	Description	Weight (g)
VD302P-34	VD pump, 2-Stage Cartridge, Plug, Vacuum port : G3/4"	
VD302P-12	VD pump, 2-Stage Cartridge, Plug, Vacuum port : G1/2"	
VD303P-34	VD pump, 3-Stage Cartridge, Plug, Vacuum port : G3/4"	
VD303P-12	VD pump, 3-Stage Cartridge, Plug, Vacuum port : G1/2"	
VD303S-34	VD pump, 3-Stage Cartridge, Two-fold silencer, Vacuum port : G3/4"	
VD303S-12	VD pump, 3-Stage Cartridge, Two-fold silencer, Vacuum port : G1/2"	
VDL302P-34	VD pump, 2-Stage "L" Cartridge, Plug, Vacuum port : G3/4"	
VDL302P-12	VD pump, 2-Stage "L" Cartridge, Plug, Vacuum port : G1/2"	
VDL303P-34	VD pump, 3-Stage "L" Cartridge, Plug, Vacuum port : G3/4"	
VDL303P-12	VD pump, 3-Stage "L" Cartridge, Plug, Vacuum port : G1/2"	
VDL303S-34	VD pump, 3-Stage "L" Cartridge, Two-fold silencer, Vacuum port : G3/4"	
VDL303S-12	VD pump, 3-Stage "L" Cartridge, Two-fold silencer, Vacuum port : G1/2"	

Spare Parts – Plug & Silencer

Model	Description	Weight (g)
VCP-M25-302	Holding plug for MD302 / MDL302 vacuum pumps	31.04
VCP-M25-303	Holding plug for MD303 / MDL303 vacuum pumps	59.32
VTTS-M25	Two-Fold Silencer for MD303 / MDL303 vacuum pumps	78.34

Turtle pump

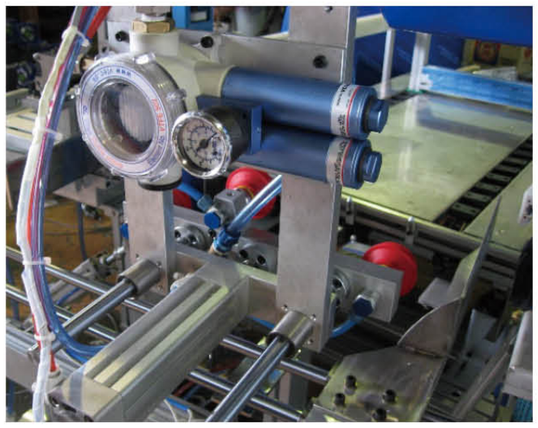
Features and Strengths

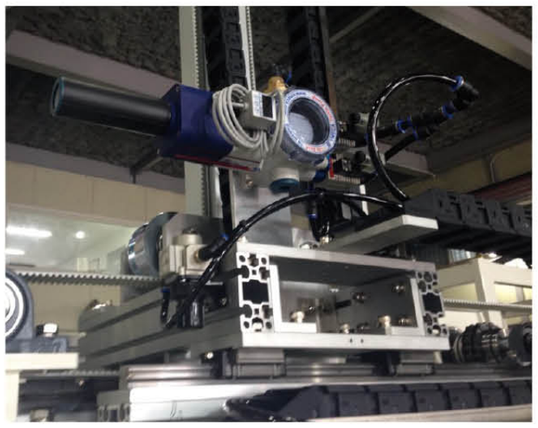
Highly operational reliability despite fluctuating or low compressed-air pressure
Integrated pleated filter with high dirt capacity & Auto-cleaning system

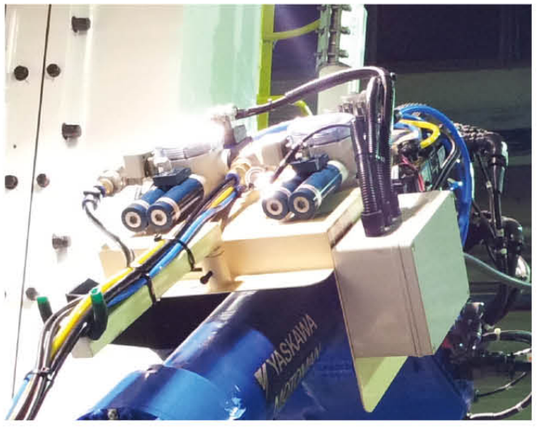
Advantages

Excellent performance in most of every automation application – Especially, dust environment application
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application







Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VTC3021	92	7	171	152
VTC3031	92	7	341	152
VTCL3021	75	7	200	104
VTCL3031	75	7	362	104
VTC3022	92	7	342	304
VTC3032	92	7	682	304
VTCL3022	75	7	400	208
VTCL3032	75	7	724	208
VTC3122	92	7	342	304
VTC3123	92	7	513	456
VTC3124	92	7	684	608
VTC3132	92	7	682	304
VTC3133	92	7	1023	456
VTC3134	92	7	1364	608
VTCL3122	75	7	400	208
VTCL3123	75	7	600	312
VTCL3124	75	7	800	416
VTCL3132	75	7	724	208
VTCL3133	75	7	1086	312
VTCL3134	75	7	1448	416

Turtle pump

Air Saving

VMECA Turtle pump with integral vacuum filter and silencer can be combined with the optional vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for many applications. VMECA Turtle pump and optional components, due to the compact design and size, can be mounted close to the point of use reducing system volume and maintenance while improving cycle time.

Key advantages

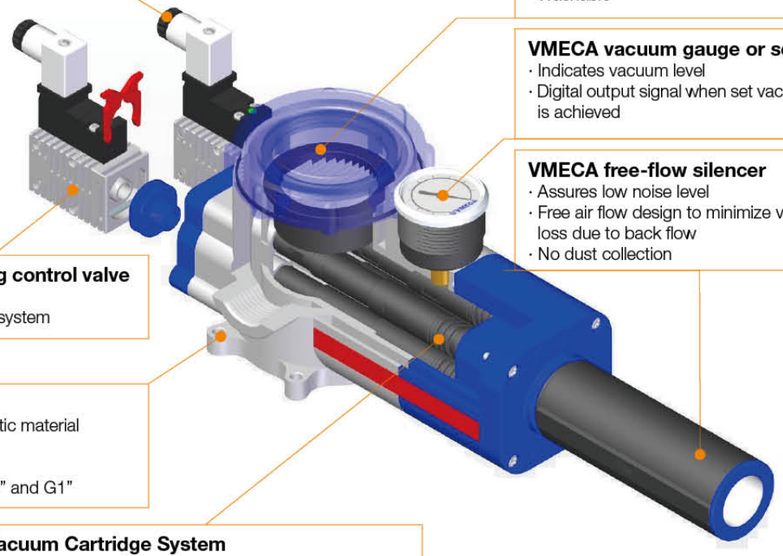
· VMECA vacuum cartridge integrated
· Vacuum filter self cleaning system
· All-in-one in compact design

VMECA air control valve
· Single or Double solenoid valve

VMECA vacuum filter
· Prevents dust coming into the pump
· Pleated media for high dirt holding capacity
· Moisture, oil resistant
· Washable

VMECA vacuum gauge or sensor
· Indicates vacuum level
· Digital output signal when set vacuum level is achieved

VMECA free-flow silencer
· Assures low noise level
· Free air flow design to minimize vacuum loss due to back flow
· No dust collection

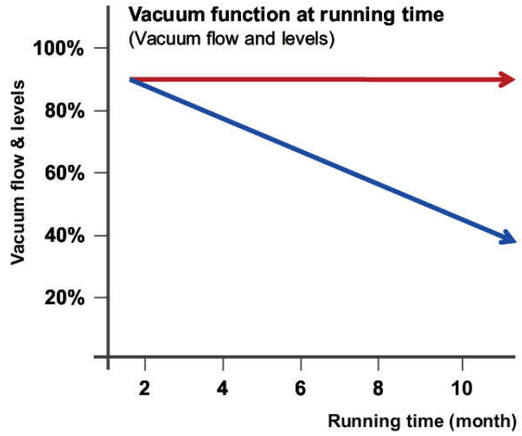


VMECA Auto cleaning control valve
· Quick vacuum release
· Automatic filter cleaning system

Body
· Durable engineering plastic material
· Corrosion resistant
· Light weight
· Two vacuum ports: G3/4" and G1"

VMECA® patented Vacuum Cartridge System
· Multiple Vacuum cartridge available up to 4pcs
· High operational reliability despite fluctuating or low compressed air pressure
· Air-Saving(AS) kit available to minimize energy consumption (about 20times less)
· Easily mountable and interchangeable vacuum cartridge

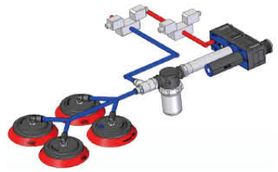
Comparison of vacuum flow & level at running time



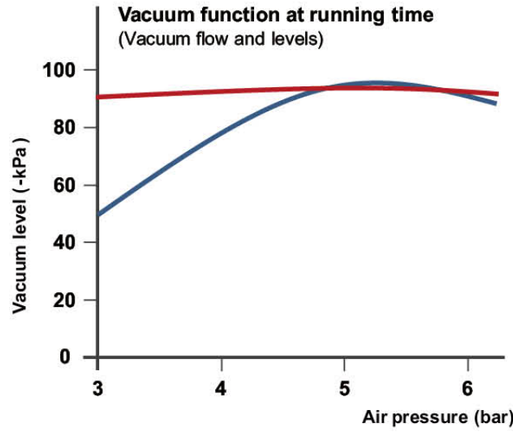
- Automatic filter cleaning system eliminates drop of vacuum flow and vacuum level
- Reduce the down time and save cost with reliable performance
- Drop of vacuum flow and level easily due to filter surface blocked by dust according as the running time
- Periodic filter cleaning required

VMECA Improved system

Typical installation (Old system)



Comparison of vacuum level at different feed pressure



- High operational reliability despite fluctuating or low compressed air pressure(Vacuum level ±2%)

VMECA Improved system

Typical installation (Old system)

VTC3031 / VTCL3031

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3031	VTCL3031
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	341 Nl/min	362 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	412 g	411 g

Vacuum Flow

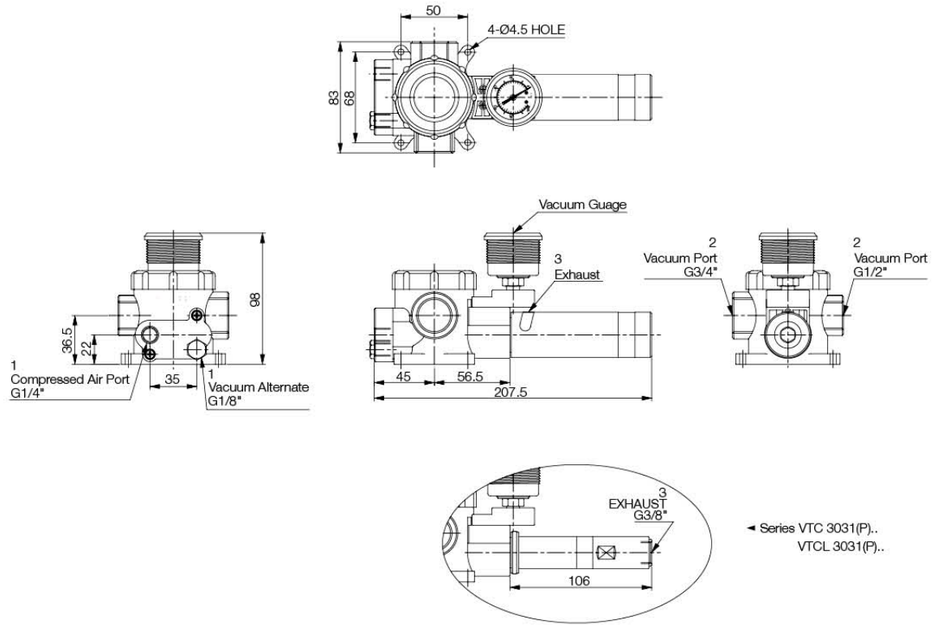
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3031	75	2.2	302	123	88	53	31	29	17	5	-	-
	92	3.0	338	152	106	64	33	32	22	17	6	2
	92	4.0	341	154	128	94	69	43	23	17	7	2
VTCL3031	60	4.0	302	176	110	70	46	28	7	-	-	-
	70	5.0	344	200	130	82	50	38	23	11	-	-
	75	6.0	362	194	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3031	2.2	97	0.02	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3	118	0.02	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8
	4	152	0.01	0.05	0.07	0.09	0.2	0.42	0.6	1	3.4
VTCL3031	4	70	0.03	0.09	0.17	0.29	0.38	0.8	-	-	-
	5	85	0.01	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6	104	0.01	0.07	0.12	0.2	0.28	0.36	0.6	-	-

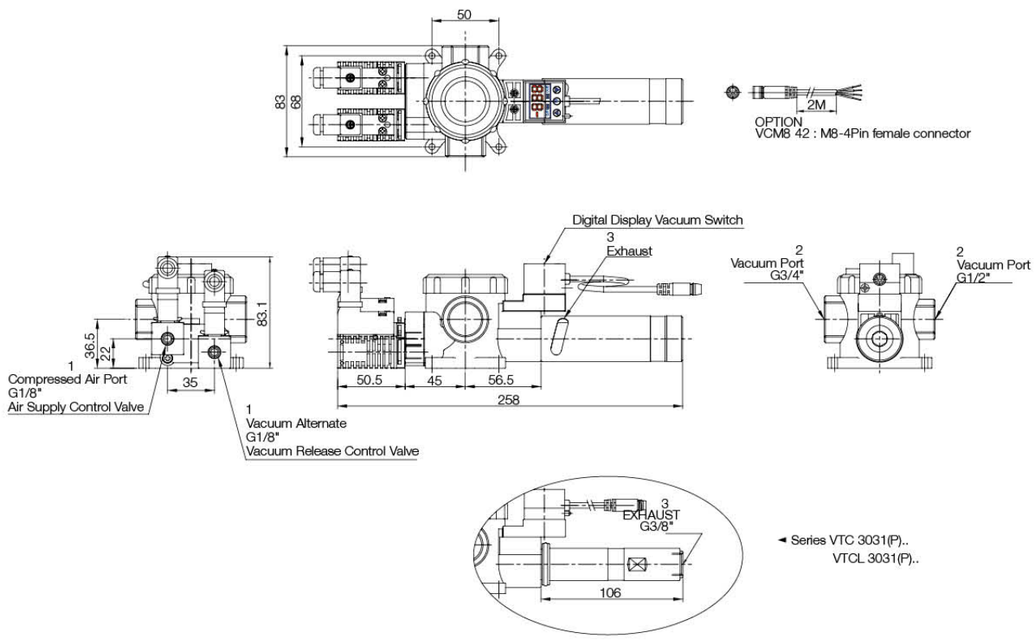
Dimensions – Basic Pump

[Unit : mm]



Dimensions – with Accessories

[Unit : mm]



VTC3021 / VTCL3021

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3021	VTCL3021
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	171 Nl/min	200 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	317 g	316 g

Vacuum Flow

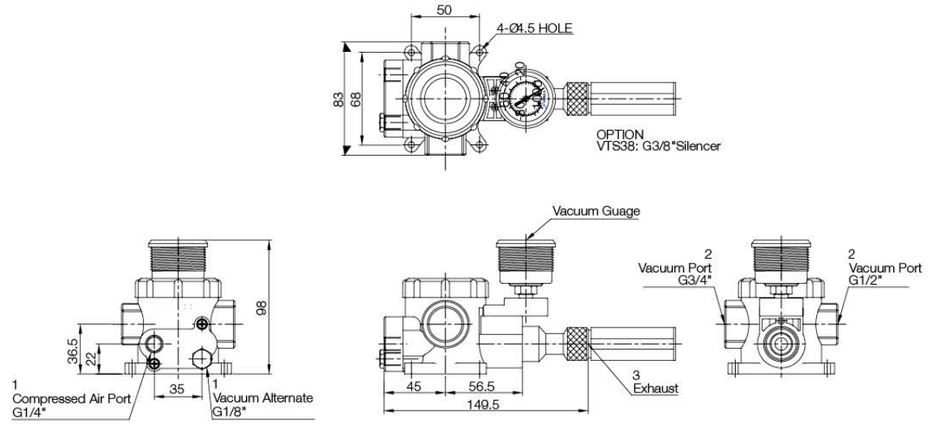
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3021	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3.0	170	152	106	64	33	32	22	16.5	6.4	1.9
	92	4.0	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VTCL3021	60	4.0	188	158	110	70	46	28	6.8	-	-	-
	70	5.0	195	176	130	82	50	37.5	23	11.3	-	-
	75	6.0	200	183	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3021	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-
	3.0	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8
	4.0	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5
VTCL3021	4.0	70	0.035	0.009	0.17	0.29	0.38	0.85	-	-	-
	5.0	85	0.027	0.088	0.15	0.25	0.3	0.4	0.82	-	-
	6.0	104	0.028	0.08	0.12	0.2	0.28	0.36	0.63	-	-

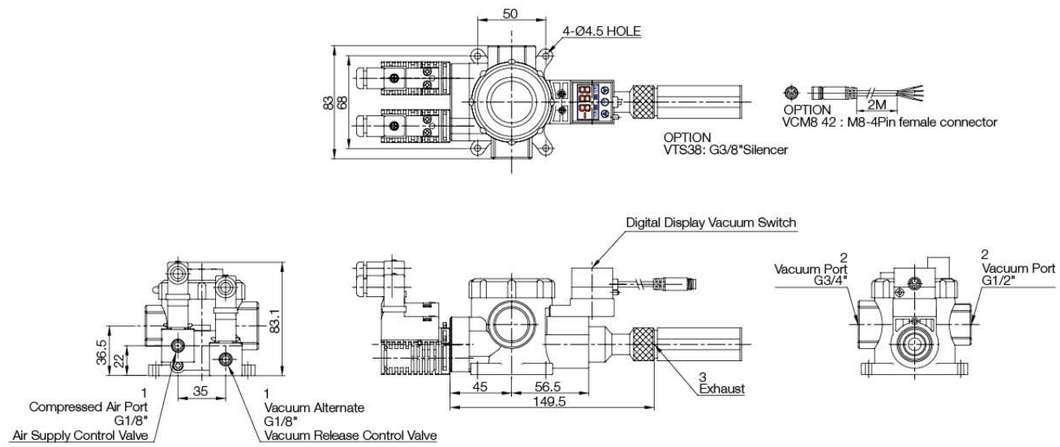
Dimensions – Basic Pump

[Unit : mm]



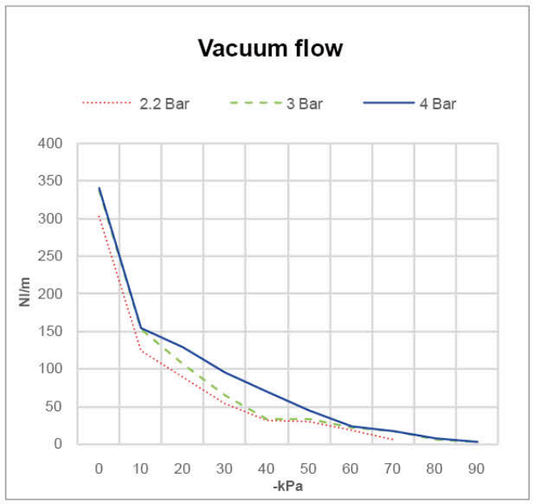
Dimensions – with Accessories

[Unit : mm]

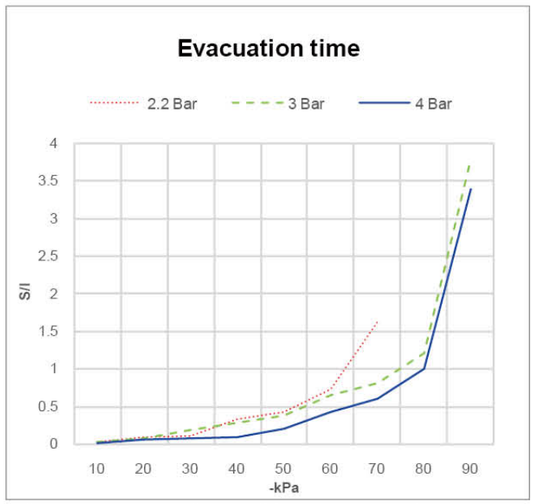


Performance data

VTC3031

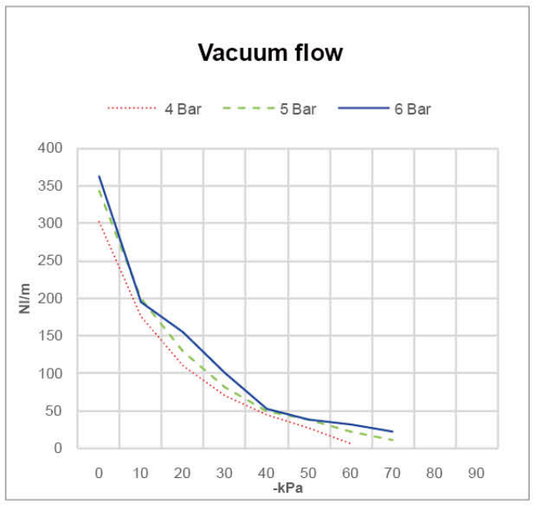


※ Vacuum flow at different vacuum level

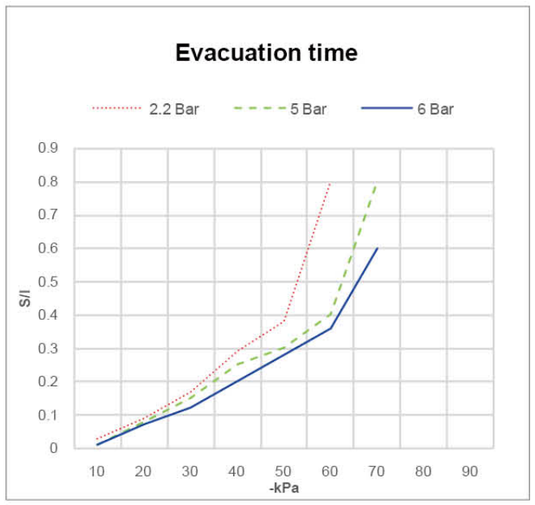


※ Time to evacuate a volume at different vacuum level

VTCL3031



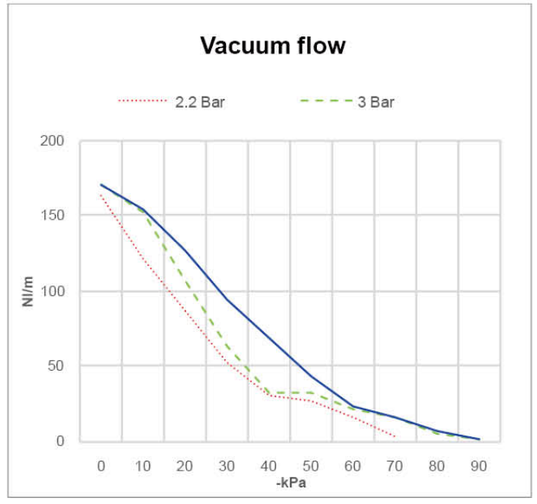
※ Vacuum flow at different vacuum level



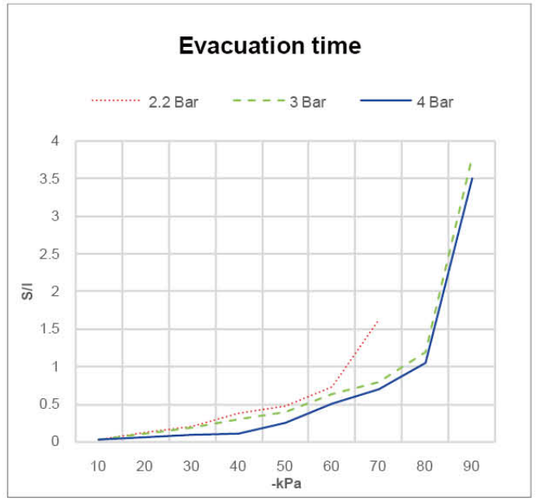
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3021

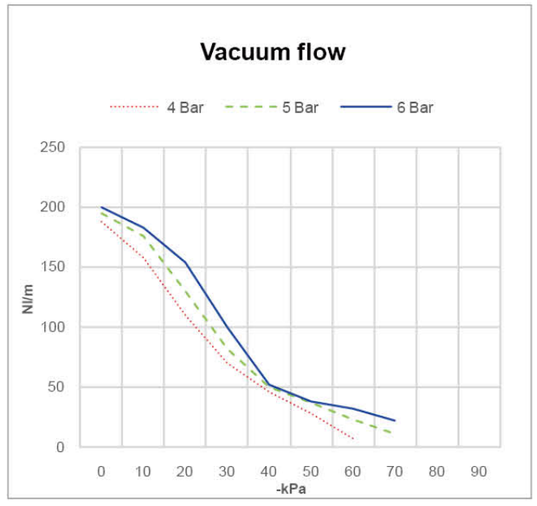


※ Vacuum flow at different vacuum level

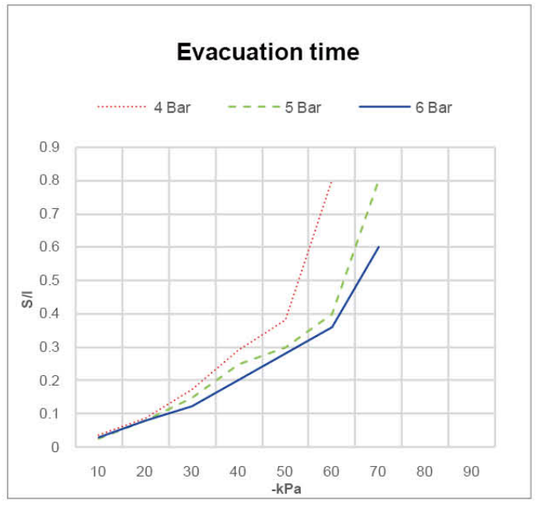


※ Time to evacuate a volume at different vacuum level

VTCL3021



※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

VTC3032 / VTCL3032

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3032	VTCL3032
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	682 Nl/min	724 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	671 g	670 g

Vacuum Flow

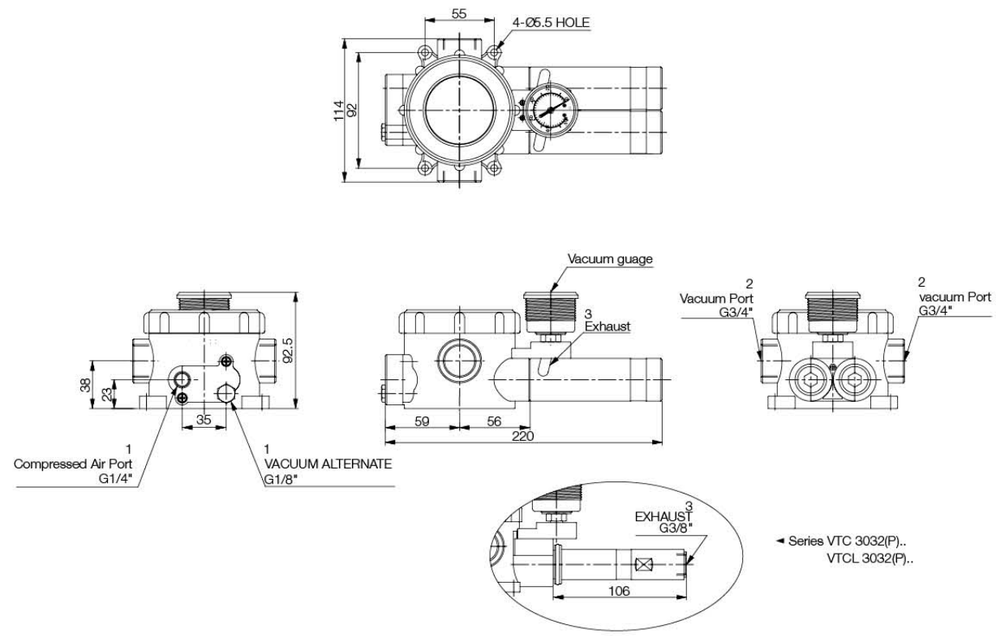
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3032	75	2.2	604	245	176	106	62.8	57	33	92	-	-
	92	3.0	676	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	682	308	255	188	138	86	46.6	34.6	13.8	4.2
VTCL3032	60	4.0	604	352	220	140	92	56	13.6	-	-	-
	70	5.0	688	392	260	164	100	75	46	23.8	-	-
	75	6.0	724	415	308	200	104	76	64	44	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3032	2.2	97	0.02	0.09	0.10	0.32	0.42	0.73	1.62	-	-
	3.0	118	0.02	0.07	0.18	0.28	0.38	0.64	0.80	1.20	3.80
	4.0	152	0.01	0.05	0.07	0.09	0.20	0.42	0.60	1.00	3.40
VTCL3032	4.0	70	0.03	0.084	0.167	0.24	0.35	0.43	-	-	-
	5.0	85	0.01	0.08	0.14	0.20	0.27	0.43	0.80	-	-
	6.0	104	0.01	0.07	0.10	0.198	0.21	0.32	0.60	-	-

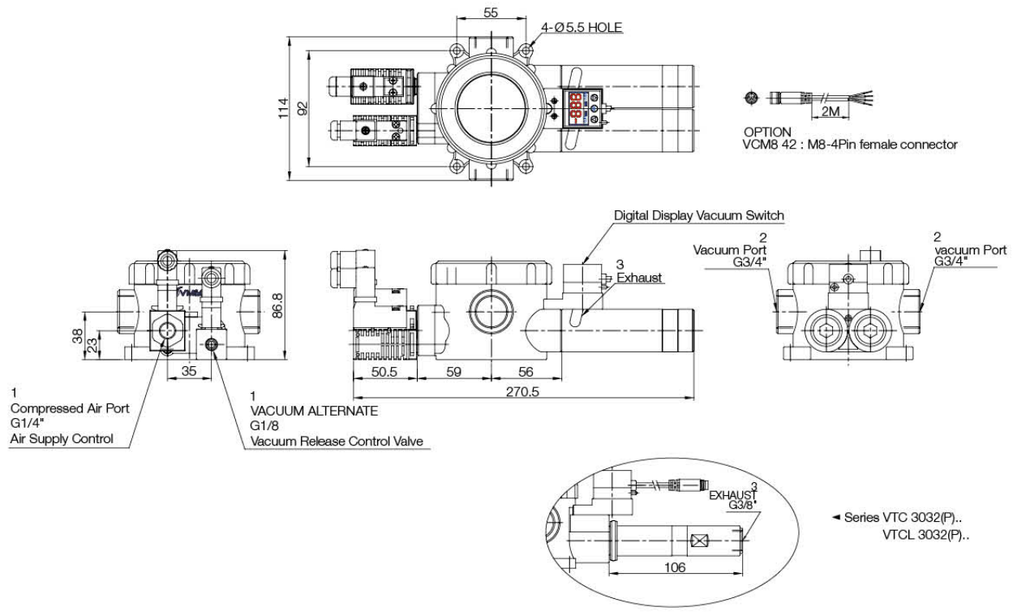
Dimensions – Basic Pump

[Unit : mm]



Dimensions – with Accessories

[Unit : mm]



VTC3022 / VTCL3022

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· Patented design

Specifications

Description	VTC3022	VTCL3022
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	342 Nl/min	400 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	555 g	555 g

Vacuum Flow

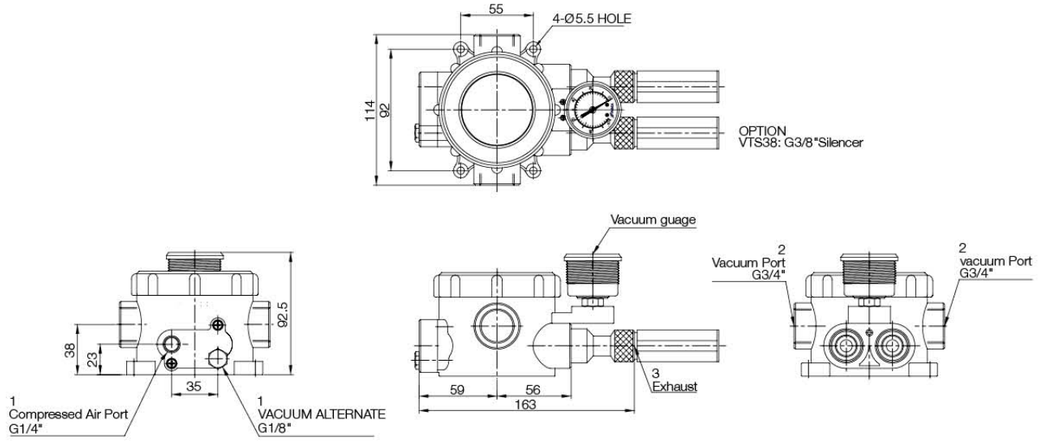
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3022	75	2.2	328	245	176	106	62.8	57	33	9.2	-	-
	92	3.0	340	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	342	308	255	188	138	86	46.6	34.6	13.8	4.2
VTCL3022	60	4.0	376	316	220	140	92	56	13.6	-	-	-
	70	5.0	390	352	260	164	100	75	46	23.8	-	-
	75	6.0	400	366	308	200	104	76	64	44	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3022	2.2	194	0.011	0.043	0.050	0.170	0.230	0.380	0.810	-	-
	3	236	0.010	0.032	0.055	0.150	0.220	0.330	0.480	0.780	1.980
	4	304	0.010	0.026	0.037	0.047	0.120	0.230	0.350	0.700	1.720
VTCL3022	4	140	0.013	0.037	0.073	0.140	0.190	0.450	-	-	-
	5	170	0.009	0.032	0.060	0.128	0.160	0.250	0.430	-	-
	6	208	0.006	0.030	0.047	0.098	0.150	0.200	0.320	-	-

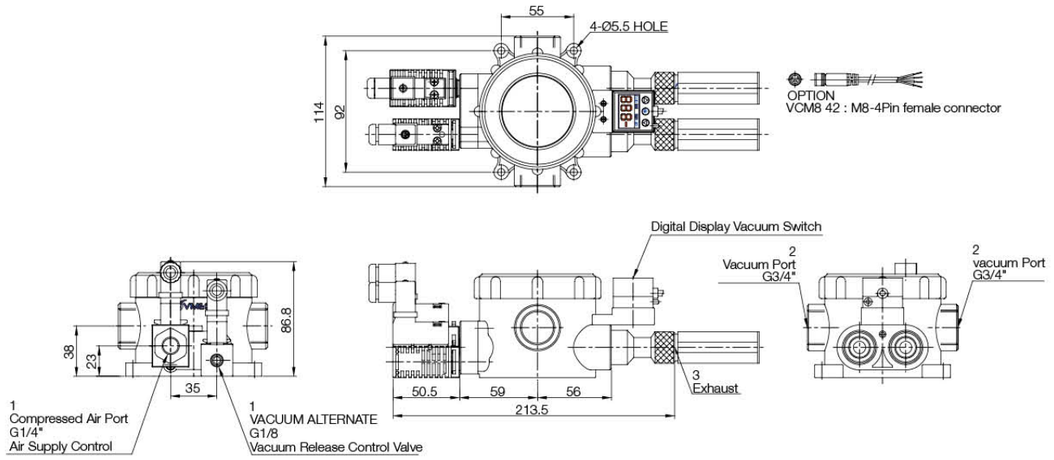
Dimensions – Basic Pump

[Unit : mm]



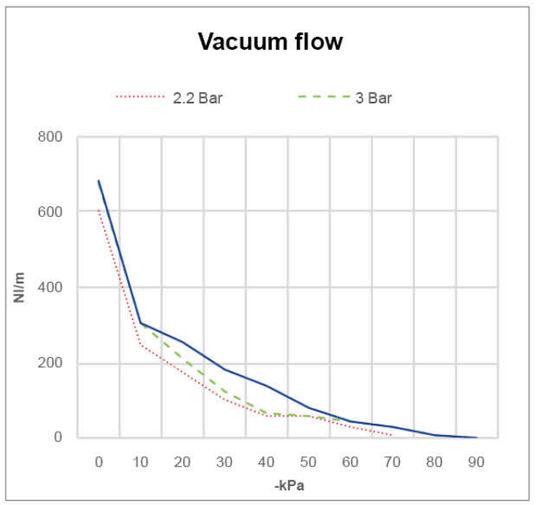
Dimensions – with Accessories

[Unit : mm]

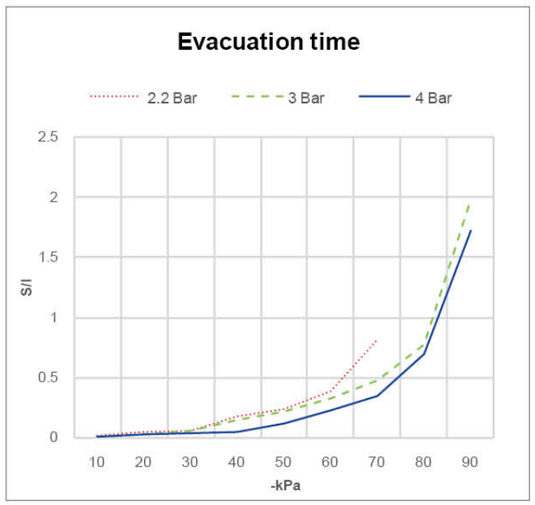


Performance data

VTC3032

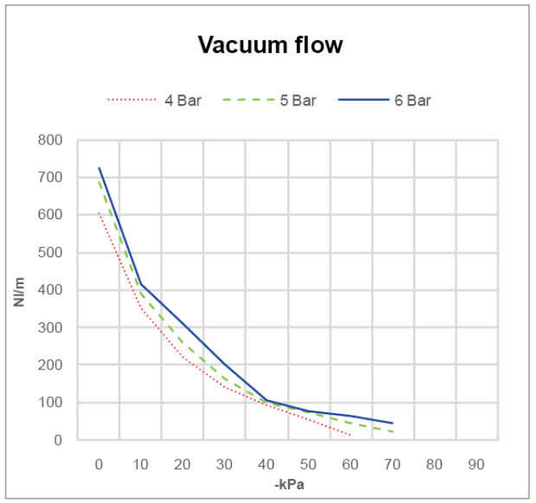


※ Vacuum flow at different vacuum level

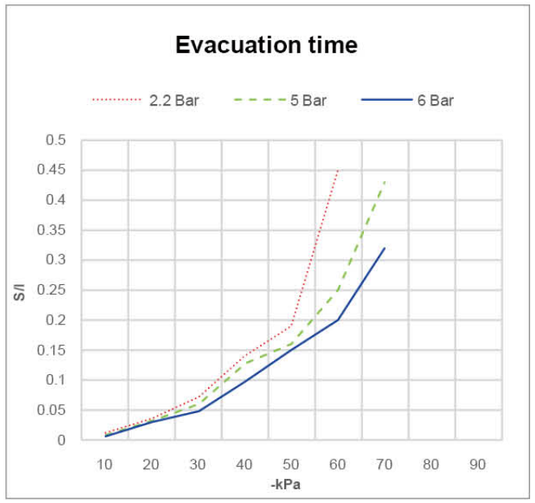


※ Time to evacuate a volume at different vacuum level

VTCL3032



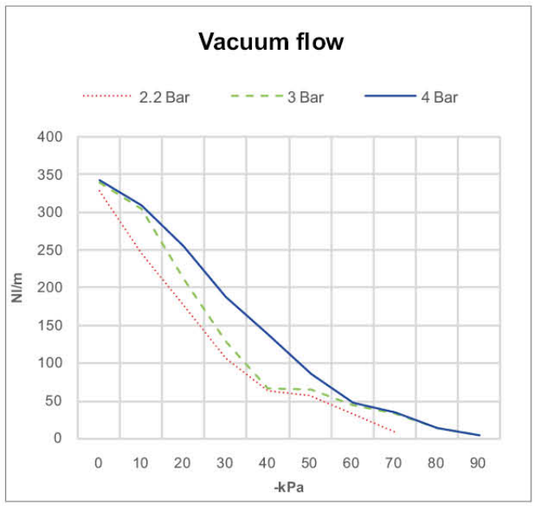
※ Vacuum flow at different vacuum level



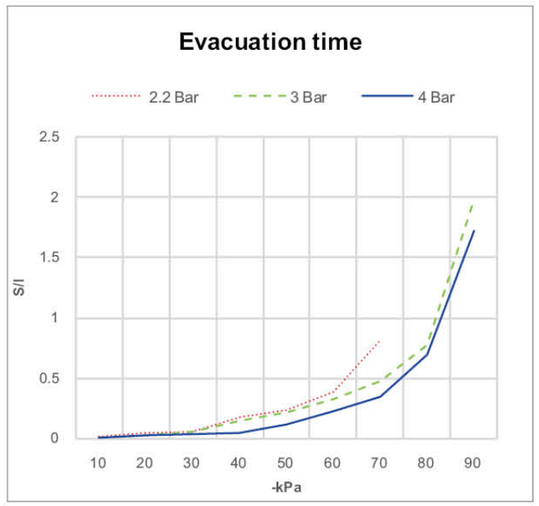
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3022

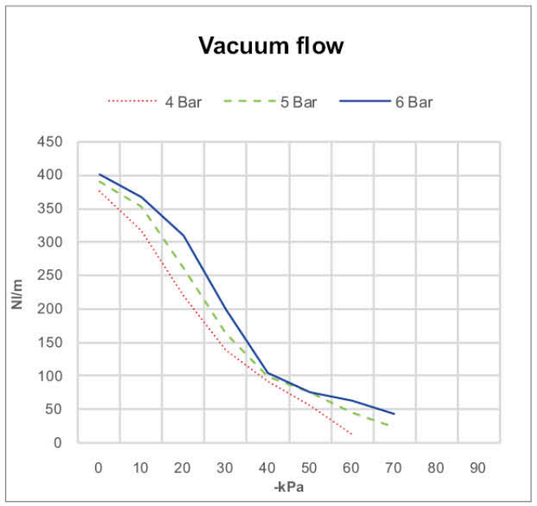


※ Vacuum flow at different vacuum level

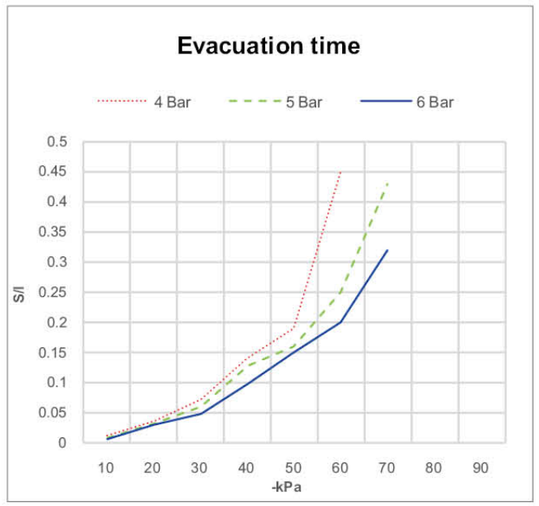


※ Time to evacuate a volume at different vacuum level

VTCL3022



※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

VTC3134 / VTCL3134

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3134	VTCL3134
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1364 Nl/min	1448 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	1,113 g	1,111 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3134	75	2.2	1208	490	352	212	126	114	66	18	-	-
	92	3.0	1352	608	424	256	132	128	88	66	26	7.6
	92	4.0	1364	616	510	376	276	172	93	69	28	8.4
VTCL3134	60	4.0	1208	688	440	280	184	112	27	-	-	-
	70	5.0	1376	784	520	328	200	150	92	45	-	-
	75	6.0	1448	828	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3134	2.2	388	0.005	0.02	0.027	0.08	0.1	0.18	0.4	-	-
	3.0	472	0.004	0.018	0.02	0.07	0.09	0.16	0.2	0.3	0.95
	4.0	608	0.003	0.01	0.01	0.02	0.05	0.1	0.15	0.25	0.85
VTCL3134	4.0	280	0.0089	0.023	0.04	0.07	0.09	0.2	-	-	-
	5.0	340	0.0057	0.018	0.03	0.063	0.075	0.1	0.2	-	-
	6.0	416	0.0053	0.015	0.029	0.052	0.071	0.09	0.15	-	-

VTC3133 / VTCL3133

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3133	VTCL3133
Max. Vacuum level	-93 kPa	-75 kPa
Open Vacuum flow	1023 Nl/min	1086 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	1,117 g	1,115 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3133	75	2.2	902	368	264	159	94	86	50	14	-	-
	92	3.0	1014	456	318	192	99	96	66	50	19	6
	92	4.0	1023	462	383	282	207	129	70	52	21	6.3
VTCL3133	60	4.0	906	516	330	210	138	84	20.4	-	-	-
	70	5.0	1032	588	390	246	150	112.5	69	34	-	-
	75	6.0	1086	621	462	300	156	114	96	66	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3133	2.2	291	0.006	0.03	0.038	0.1	0.14	0.24	0.54	-	-
	3.0	354	0.005	0.02	0.03	0.09	0.12	0.21	0.24	0.4	1.27
	4.0	456	0.004	0.01	0.02	0.03	0.06	0.14	0.2	0.33	1.13
VTCL3133	4.0	210	0.016	0.03	0.05	0.09	0.12	0.26	-	-	-
	5.0	255	0.0085	0.028	0.05	0.08	0.1	0.13	0.26	-	-
	6.0	312	0.0079	0.02	0.04	0.06	0.09	0.12	0.2	-	-

VTC3132 / VTCL3132

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3132	VTCL3132
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	682 Nl/min	724 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	1,121 g	1,120 g

Vacuum Flow

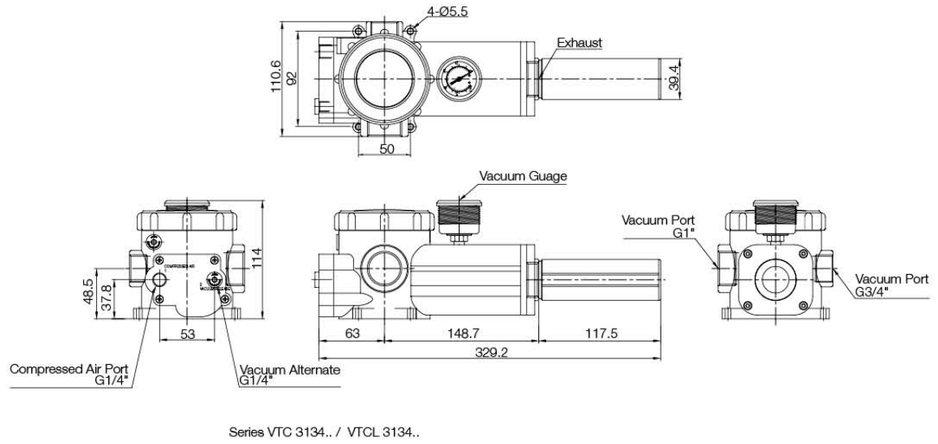
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3132	75	2.2	604	245	176	106	62.8	57	33	9.2	-	-
	92	3.0	676	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	682	308	255	188	138	86	46.6	34.6	13.8	4.2
VTCL3132	60	4.0	604	344	220	140	92	56	13.6	-	-	-
	70	5.0	688	392	260	164	100	75	46	23.8	-	-
	75	6.0	724	415	308	200	104	76	64	44	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3132	2.2	194	0.011	0.043	0.050	0.170	0.230	0.380	0.810	-	-
	3.0	236	0.010	0.032	0.055	0.150	0.220	0.330	0.480	0.780	1.980
	4.0	304	0.010	0.026	0.037	0.047	0.120	0.230	0.350	0.700	1.720
VTCL3132	4.0	140	0.017	0.037	0.073	0.14	0.19	0.45	-	-	-
	5.0	170	0.014	0.032	0.06	0.128	0.16	0.25	0.43	-	-
	6.0	208	0.012	0.03	0.047	0.098	0.15	0.2	0.32	-	-

Dimensions – Basic Pump

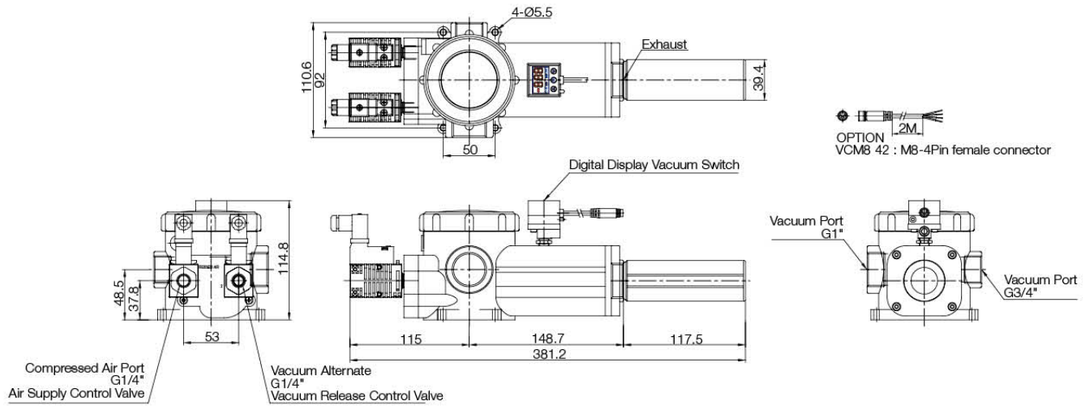
[Unit : mm]



Series VTC 3134.. / VTCL 3134..

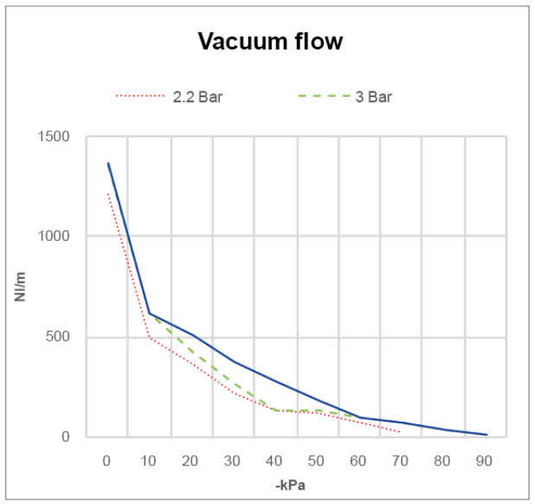
Dimensions – with Accessories

[Unit : mm]

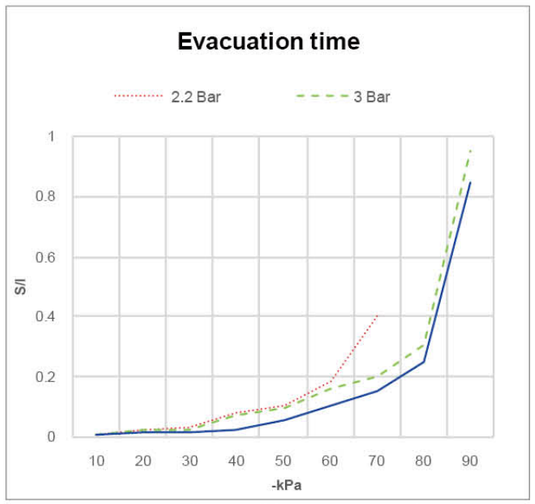


Performance data

VTC3134

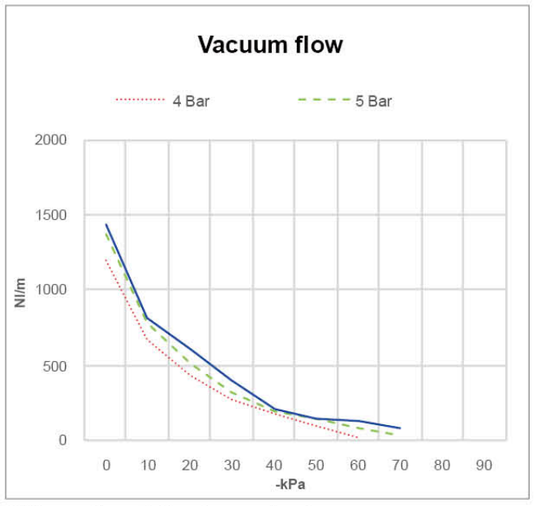


※ Vacuum flow at different vacuum level

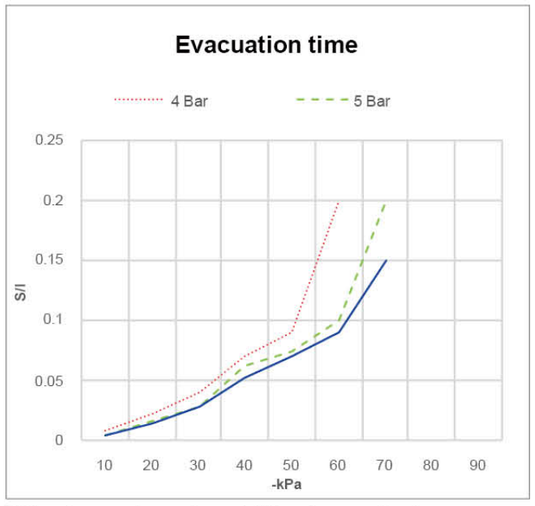


※ Time to evacuate a volume at different vacuum level

VTCL3134



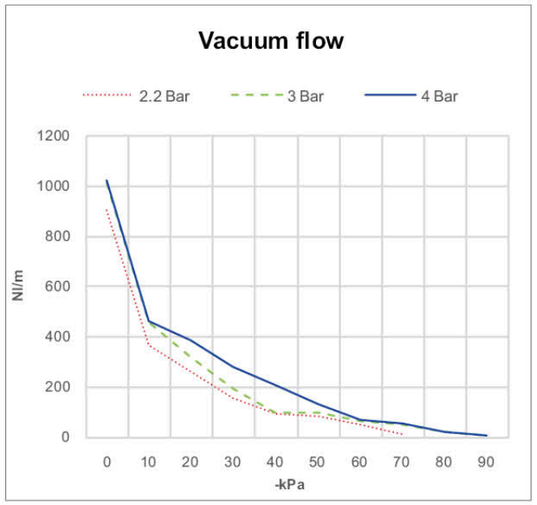
※ Vacuum flow at different vacuum level



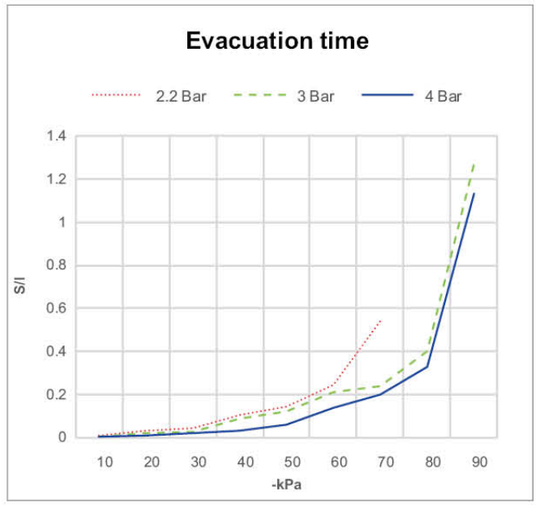
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3133

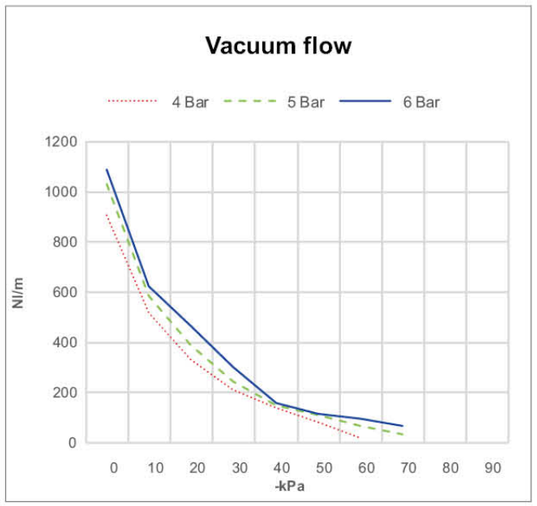


※ Vacuum flow at different vacuum level

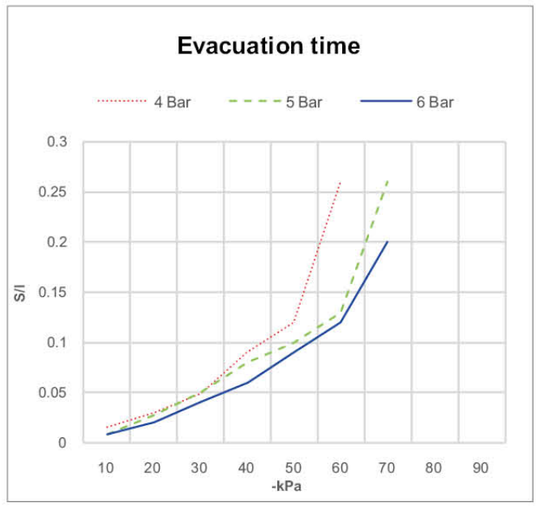


※ Time to evacuate a volume at different vacuum level

VTCL3133



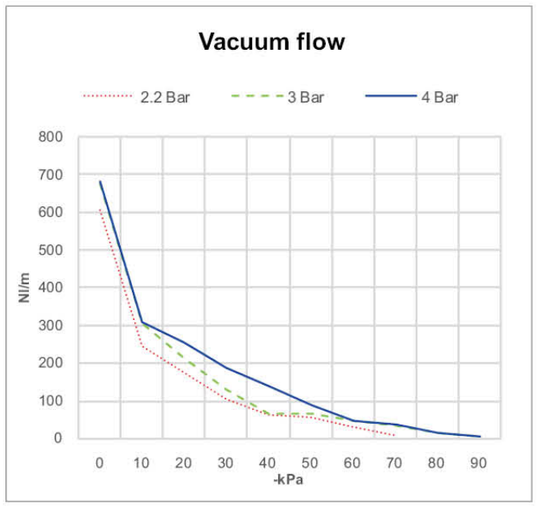
※ Vacuum flow at different vacuum level



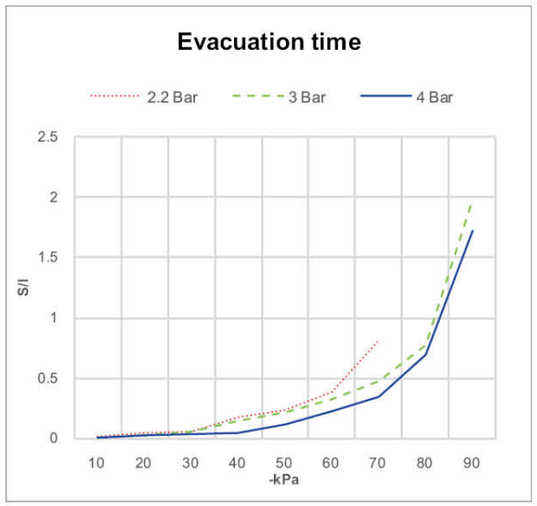
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3132

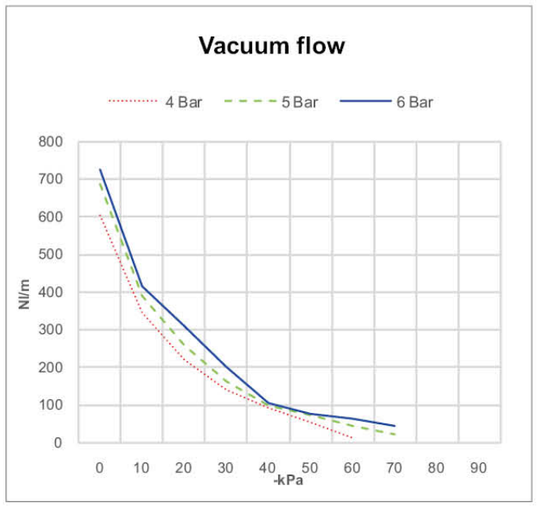


※ Vacuum flow at different vacuum level

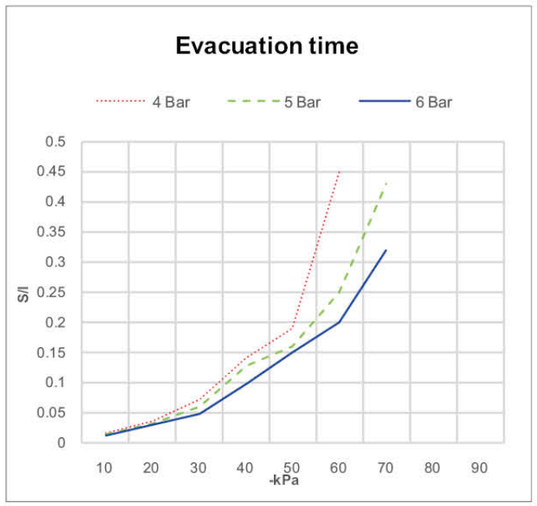


※ Time to evacuate a volume at different vacuum level

VTCL3132



※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

VTC3124 / VTCL3124

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3124	VTCL3124
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	684 Nl/min	800 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	957 g	956 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3124	75	2.2	656	490	352	212	126	114	66	18	-	-
	92	3.0	680	608	424	256	132	128	88	66	26	7.6
	92	4.0	684	616	510	376	276	172	93	69	28	8.4
VTCL3124	60	4.0	752	632	440	280	184	112	27.2	-	-	-
	70	5.0	780	704	520	328	200	150	92	45.2	-	-
	75	6.0	800	732	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3124	2.2	388	0.008	0.03	0.05	0.095	0.12	0.018	0.4	-	-
	3.0	472	0.007	0.025	0.048	0.08	0.1	0.016	0.2	0.3	0.95
	4.0	608	0.006	0.015	0.02	0.025	0.06	0.012	0.17	0.26	0.87
VTCL3124	4.0	280	0.01	0.025	0.04	0.07	0.09	0.2	-	-	-
	5.0	340	0.0067	0.02	0.037	0.065	0.075	0.1	0.2	-	-
	6.0	416	0.006	0.02	0.03	0.055	0.073	0.09	0.15	-	-

VTC3123 / VTCL3123

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3123	VTCL3123
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	513 Nl/min	600 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	946 g	945 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3123	75	2.2	492	367	264	159	94	86	50	14	-	-
	92	3.0	510	456	318	192	99	96	66	50	19	6
	92	4.0	513	462	383	282	207	129	70	52	21	6.3
VTCL3123	60	4.0	564	474	330	210	138	84	20.4	-	-	-
	70	5.0	585	528	390	246	150	112.5	69	33.9	-	-
	75	6.0	600	549	462	300	156	114	96	66	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3123	2.2	291	0.01	0.04	0.07	0.13	0.16	0.24	0.54	-	-
	3.0	354	0.009	0.03	0.06	0.1	0.13	0.21	0.26	0.4	1.27
	4.0	456	0.008	0.019	0.03	0.033	0.08	0.16	0.23	0.35	1.17
VTCL3123	4.0	210	0.012	0.029	0.057	0.097	0.127	0.27	-	-	-
	5.0	255	0.009	0.028	0.05	0.083	0.1	0.13	0.26	-	-
	6.0	312	0.009	0.027	0.04	0.06	0.09	0.12	0.2	-	-

VTC3122 / VTCL3122

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- Patented design

Specifications

Description	VTC3122	VTCL3122
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	342 Nl/min	400 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 °C	-20 ~ 80 °C
Noise level	50 ~ 60 dbA	50 ~ 60 dbA
Weight	933 g	933 g

Vacuum Flow

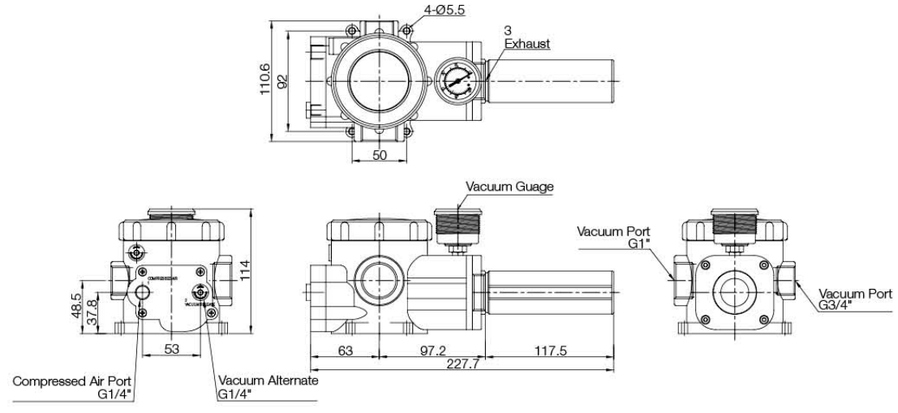
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VTC3122	75	2.2	328	245	176	106	62.8	57	33	9.2	-	-
	92	3.0	340	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	342	308	255	188	138	86	46.6	34.6	13.8	4.2
VTCL3122	60	4.0	376	316	220	140	92	56	13.6	-	-	-
	70	5.0	390	352	260	164	100	75	46	23.8	-	-
	75	6.0	400	366	308	200	104	76	64	44	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VTC3122	2.2	194	0.018	0.065	0.108	0.2	0.25	0.395	0.81	-	-
	3.0	236	0.016	0.05	0.07	0.16	0.23	0.34	0.5	0.795	2.01
	4.0	304	0.014	0.029	0.043	0.05	0.13	0.25	0.355	0.71	1.75
VTCL3122	4.0	140	0.018	0.04	0.08	0.145	0.195	0.5	-	-	-
	5.0	170	0.014	0.036	0.075	0.125	0.15	0.2	0.4	-	-
	6.0	208	0.013	0.032	0.06	0.1	0.155	0.18	0.35	-	-

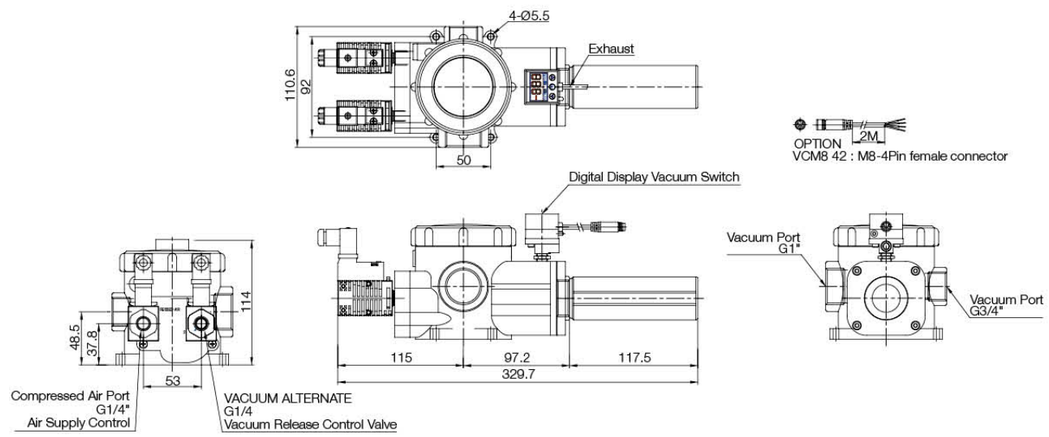
Dimensions – Basic Pump

[Unit : mm]



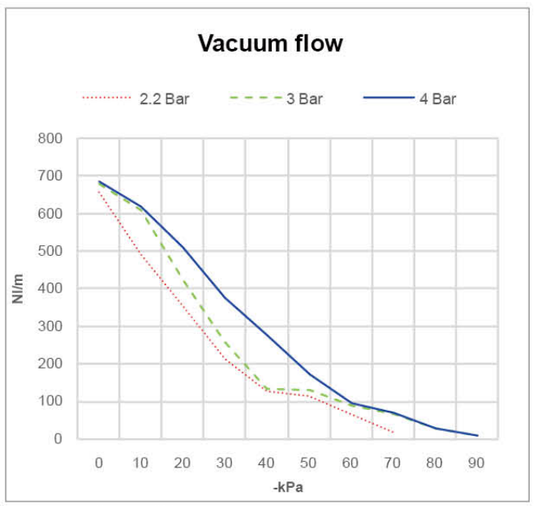
Dimensions – with Accessories

[Unit : mm]

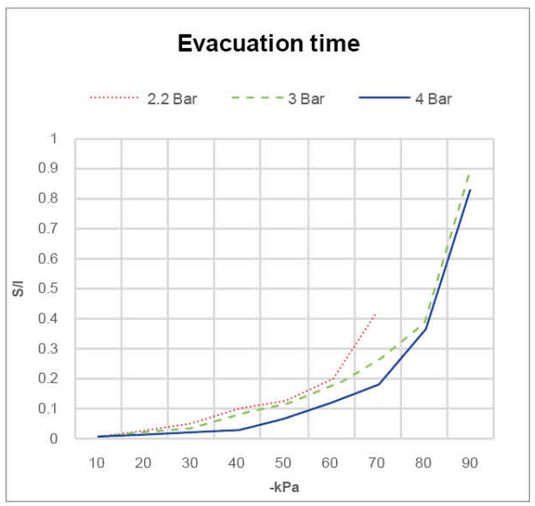


Performance data

VTC3124

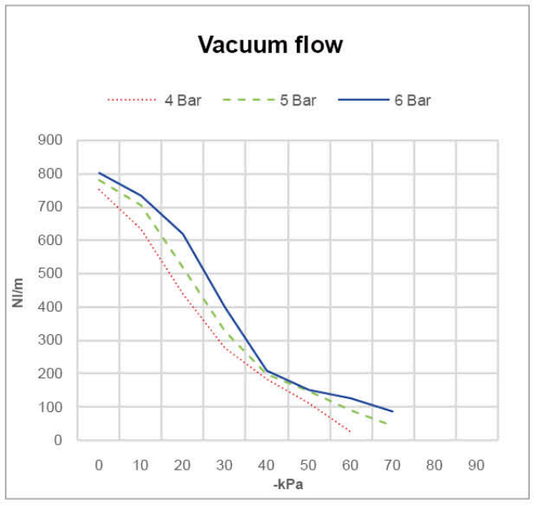


※ Vacuum flow at different vacuum level

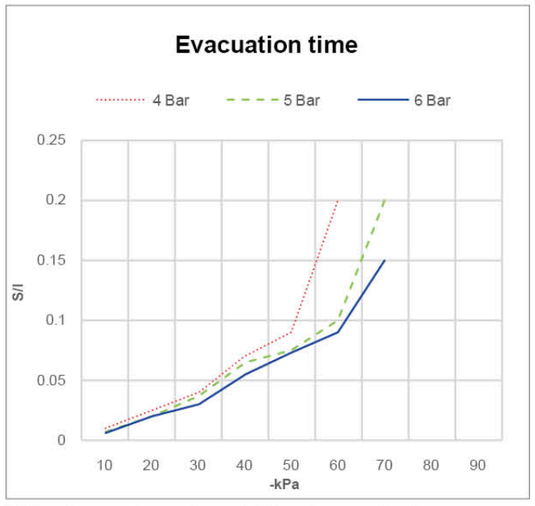


※ Time to evacuate a volume at different vacuum level

VTCL3124



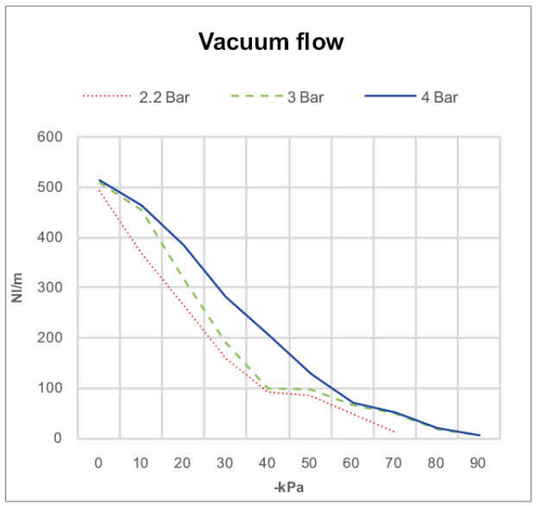
※ Vacuum flow at different vacuum level



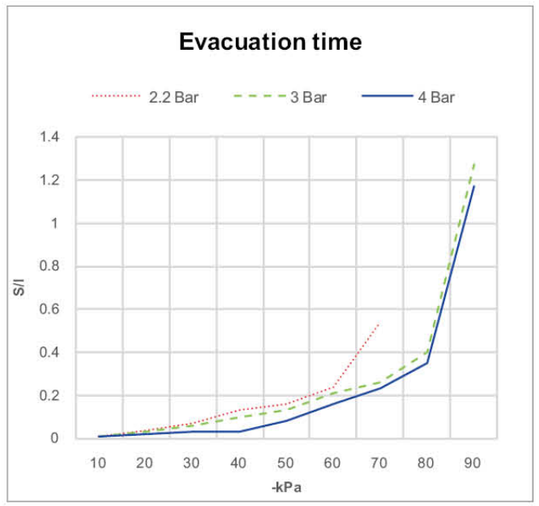
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3123

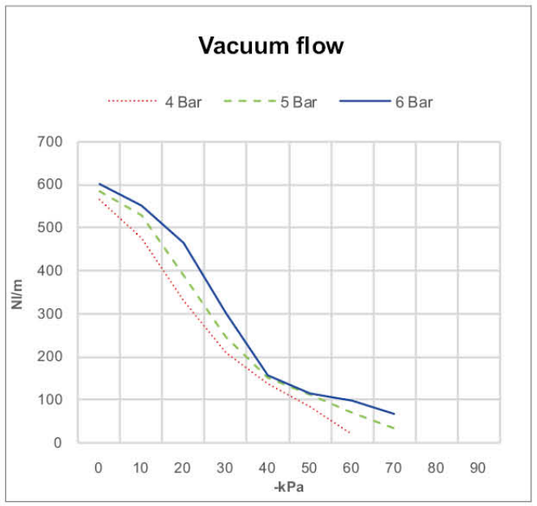


※ Vacuum flow at different vacuum level

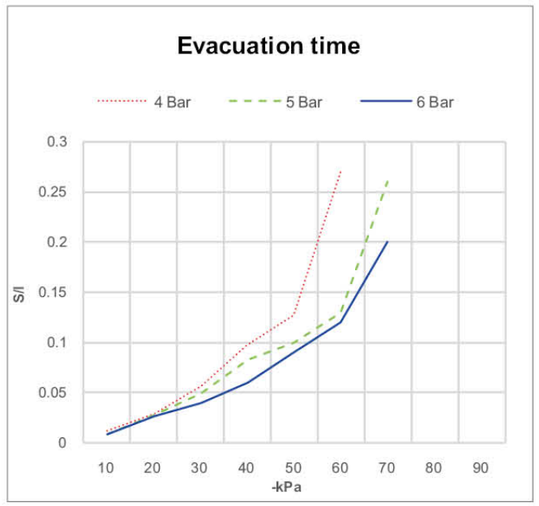


※ Time to evacuate a volume at different vacuum level

VTCL3123



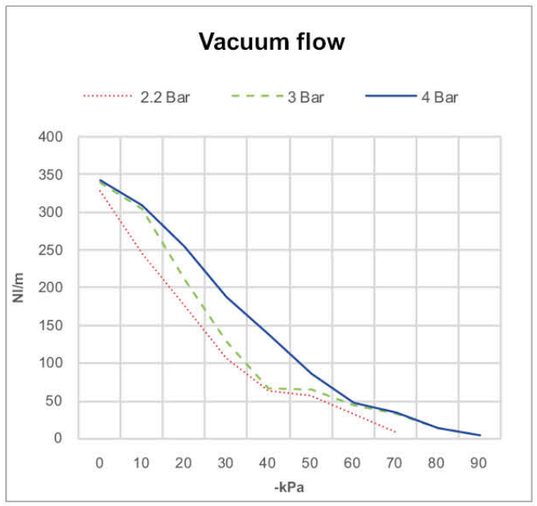
※ Vacuum flow at different vacuum level



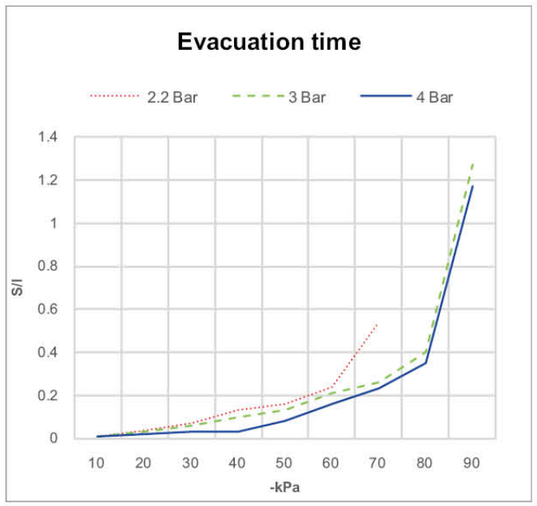
※ Time to evacuate a volume at different vacuum level

Performance data

VTC3122

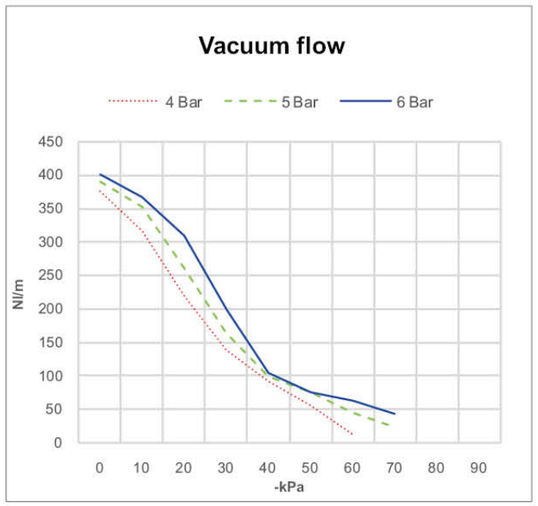


※ Vacuum flow at different vacuum level

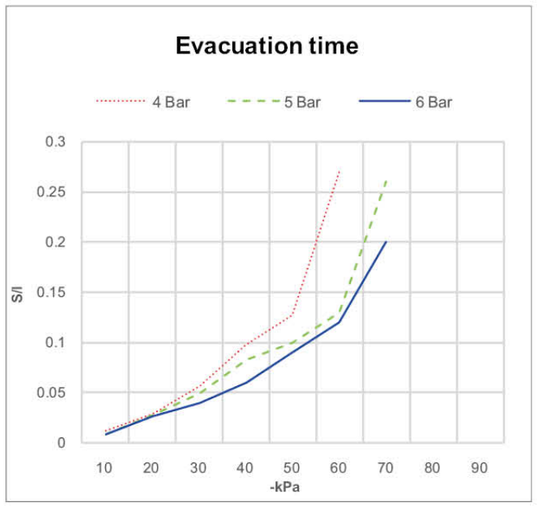


※ Time to evacuate a volume at different vacuum level

VTCL3122

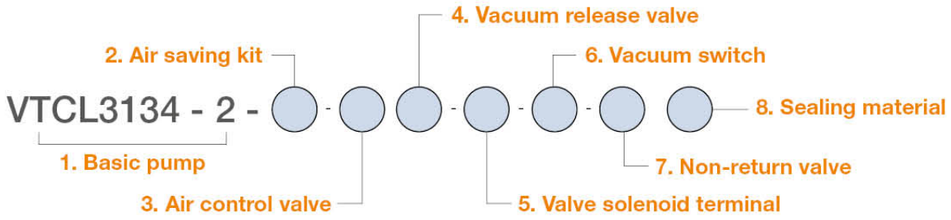


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Ordering No.
	VTC Midi pump, 3-stage, 1-cartridge, Vacuum filter, Two-fold silencer	VTC3031-2
	VTC Midi pump, 2-stage, 1-cartridge, Vacuum filter	VTC3021-2
	VTC Midi Pump, 3-stage, 2-cartridge, Vacuum filter, Two-fold silencer	VTC3032-2
	VTC Midi pump, 2-stage, 2-cartridge, Vacuum filter	VTC3022-2
	VTCL Midi pump, 3-stage "L" cartridge, 1-cartridge, Vacuum filter, Two-fold silencer	VTCL3031-2
	VTCL Midi pump, 2-stage "L" cartridge, 1-cartridge, Vacuum filter	VTCL3021-2
	VTCL Midi Pump, 3-stage "L" cartridge, 2-cartridge, Vacuum filter, , Two-fold silencer	VTCL3032-2
	VTCL Midi pump, 2-stage "L" cartridge, 2-cartridge, Vacuum filter	VTCL3022-2
	VTC Midi pump, 3-stage, 1-cartridge, Vacuum filter, Plug	VTC3031P-2
	VTC Midi pump, 3-stage, 2-cartridge, Vacuum filter, Plug	VTC3032P-2
	VTCL Midi pump, 3-stage "L" cartridge, 1-cartridge, Vacuum filter, Plug	VTCL3031P-2
	VTCL Midi pump, 3-stage "L" cartridge, 2-cartridge, Vacuum filter, Plug	VTCL3032P-2
	VTC Mega pump, 3-stage, 4-cartridge, Vacuum filter, Silencer	VTC3134-2
	VTC Mega pump, 3-stage, 3-cartridge, Vacuum filter, Silencer	VTC3133-2
	VTC Mega pump, 3-stage, 2-cartridge, Vacuum filter, Silencer	VTC3132-2
	VTC Mega pump, 2-stage, 4-cartridge, Vacuum filter, Silencer	VTC3124-2
	VTC Mega pump, 2-stage, 3-cartridge, Vacuum filter, Silencer	VTC3123-2
	VTC Mega pump, 2-stage, 2-cartridge, Vacuum filter, Silencer	VTC3122-2
	VTCL Mega pump, 3-stage "L" cartridge, 4-cartridge, Vacuum filter, Silencer	VTCL3134-2
	VTCL Mega pump, 3-stage "L" cartridge, 3-cartridge, Vacuum filter, Silencer	VTCL3133-2
	VTCL Mega pump, 3-stage "L" cartridge, 2-cartridge, Vacuum filter, Silencer	VTCL3132-2
	VTCL Mega pump, 2-stage "L" cartridge, 4-cartridge, Vacuum filter, Silencer	VTCL3124-2
	VTCL Mega pump, 2-stage "L" cartridge, 3-cartridge, Vacuum filter, Silencer	VTCL3123-2
	VTCL Mega pump, 2-stage "L" cartridge, 2-cartridge, Vacuum filter, Silencer	VTCL3122-2

2. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

3. Air control valve	Description	Ordering No.
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double solenoid valve, AC110V	D1
	Double solenoid valve, AC220V	D2
	Double solenoid valve, DC24V	D3

4. Vacuum release valve	Description	Ordering No.
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

5. Valve solenoid terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

Build an Ordering No.

6. Vacuum switch	Description	Ordering No.
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

7. Non-return valve	Description	Ordering No.
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

8. Sealing material	Description	Ordering No.
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Model	Description	Weight (g)
VTC3031-2	VTC Midi pump, 3-stage, 1-cartridge, Vacuum filter, Two-fold silencer	412
VTC3021-2	VTC Midi pump, 2-stage, 1-cartridge, Vacuum filter	317
VTC3032-2	VTC Midi Pump, 3-stage, 2-cartridge, Vacuum filter, Two-fold silencer	671
VTC3022-2	VTC Midi pump, 2-stage, 2-cartridge, Vacuum filter	555
VTCL3031-2	VTCL Midi pump, 3-stage, 1- "L" cartridge, Vacuum filter, Two-fold silencer	411
VTCL3021-2	VTCL Midi pump, 2-stage, 1- "L" cartridge, Vacuum filter	316
VTCL3032-2	VTCL Midi Pump, 3-stage, 2- "L" cartridge, Vacuum filter, , Two-fold silencer	670
VTCL3022-2	VTCL Midi pump, 2-stage, 2- "L" cartridge, Vacuum filter	555
VTC3031P-2	VTC Midi pump, 3-stage, 1-cartridge, Vacuum filter, Plug	392
VTC3032P-2	VTC Midi pump, 3-stage, 2-cartridge, Vacuum filter, Plug	631
VTCL3031P-2	VTCL Midi pump, 3-stage, 1-"L" cartridge, Vacuum filter, Plug	392
VTCL3032P-2	VTCL Midi pump, 3-stage, 2-"L" cartridge, Vacuum filter, Plug	630
VTC3134-2	VTC Mega pump, 3-stage, 4-cartridge, Vacuum filter, Silencer	1,113
VTC3133-2	VTC Mega pump, 3-stage, 3-cartridge, Vacuum filter, Silencer	1,117
VTC3132-2	VTC Mega pump, 3-stage, 2-cartridge, Vacuum filter, Silencer	1,121
VTC3124-2	VTC Mega pump, 2-stage, 4-cartridge, Vacuum filter, Silencer	957
VTC3123-2	VTC Mega pump, 2-stage, 3-, Vacuum filter, Silencer	946
VTC3122-2	VTC Mega pump, 2-stage, 2-, Vacuum filter, Silencer	933
VTCL3134-2	VTCL Mega pump, 3-stage, 4-"L" cartridge, Vacuum filter, Silencer	1,111
VTCL3133-2	VTCL Mega pump, 3-stage, 3-"L" cartridge, Vacuum filter, Silencer	1,115
VTCL3132-2	VTCL Mega pump, 3-stage, 2-"L" cartridge, Vacuum filter, Silencer	1,120
VTCL3124-2	VTCL Mega pump, 2-stage, 4-"L" cartridge, Vacuum filter, Silencer	956
VTCL3123-2	VTCL Mega pump, 2-stage, 3-"L" cartridge, Vacuum filter, Silencer	945
VTCL3122-2	VTCL Mega pump, 2-stage, 2-"L" cartridge, Vacuum filter, Silencer	933

Spare Parts – Cartridges

Model	Description	Available model
VC302	Midi Vacuum Cartridge, 2-Stage	VTC3021, VTC3022, VTC3122, VTC3123, VTC3124
VC303	Midi Vacuum Cartridge, 3-Stage	VTC3031, VTC3032, VTC3132, VTC3133, VTC3134
VCL302	Midi Vacuum Cartridge, "L" Series, 2-Stage	VTCL3021, VTCL3022, VTCL3122, VTCL3123, VTCL3124
VCL303	Midi Vacuum Cartridge, "L" Series, 3-Stage	VTCL3031, VTCL3032, VTCL3132, VTCL3133, VTCL3123

Spare Parts – Filter elements

Model	Description
VTFE342	Filter element, Polyester, 5 Micron for 1 cartridge Turtle pump
VTFE502	Filter element, Polyester, 5 Micron for 2~4 cartridges Turtle pump

Spare Parts – Plugs & Silencers

Model	Description	Weight (g)
VCP-M25-302	Holding plug for 2 stage Midi VTC / VTCL vacuum pumps	31.04
VCP-M25-303	Holding plug for 2 stage Midi VTC / VTCL vacuum pumps	59.32
VTTS-M25	Two-Fold Silencer for Midi VTC / VTCL vacuum pumps	78.34
VTS-10	Free flow silencer, G1" for Mega VTC / VTCL vacuum pumps	48.33
VTS-10-A	Free flow silencer, Low noise, G1" for Mega VTC / VTCL vacuum pumps	116.24

Magic pump

Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Available to select various port options and port position / direction
Integrated pleated filter with high dirt capacity & Auto-cleaning system

Advantages

Flexible structure to fit various application such as limited space, vacuum distribution, etc.
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application

Overall of specification

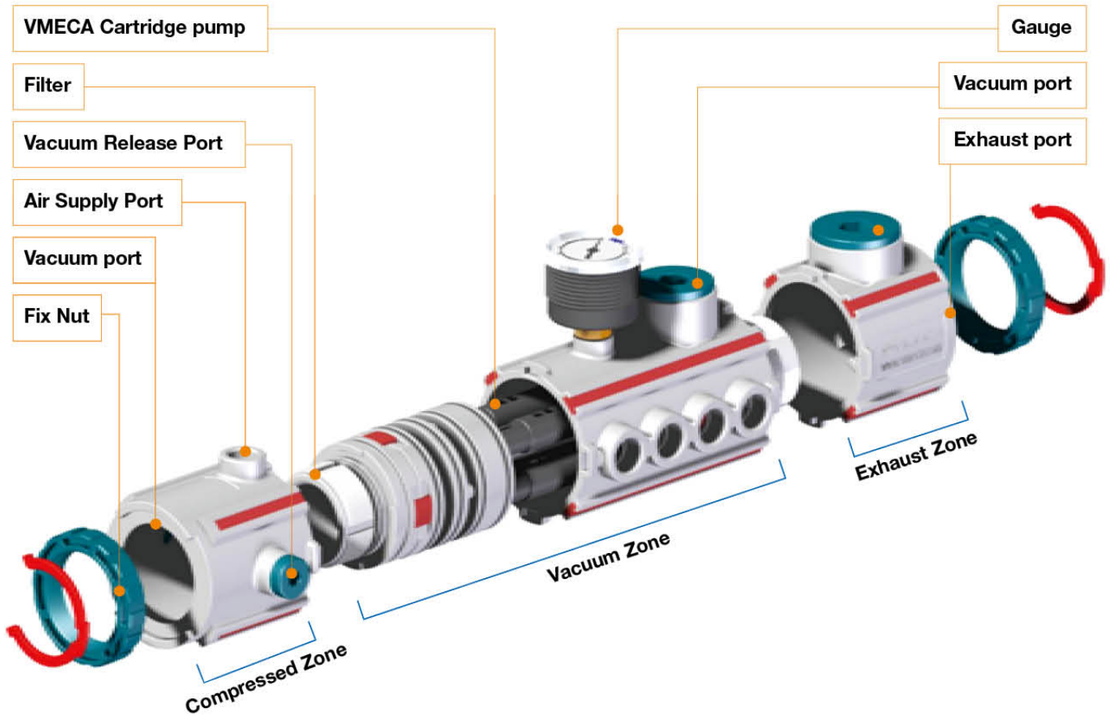
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
M3122	92	7	342	304
M3123	92	7	513	456
M3124	92	7	684	608
ML3122	75	7	362	208
ML3123	75	7	600	312
ML3124	75	7	800	416
M3132	92	7	682	304
M3133	92	7	1023	456
M3134	92	7	1364	608
ML3132	75	7	724	208
ML3133	75	7	1086	312
ML3134	75	7	1448	416

Magic pump

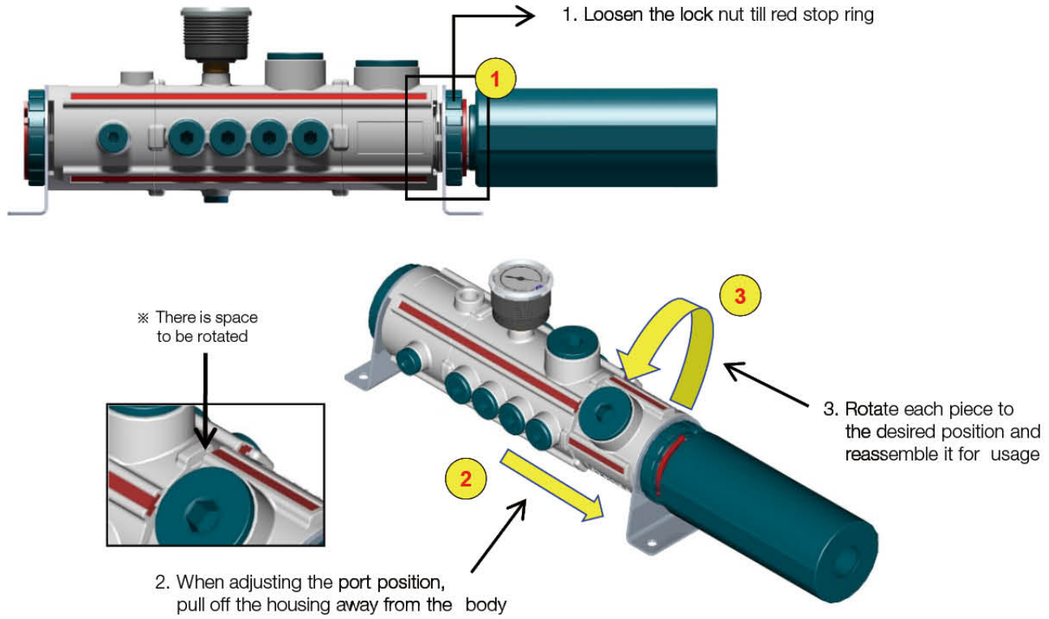
VMECA Magic pump with integral vacuum filter and rotatable structure can be combined with the optional vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for various applications. VMECA Magic pump and optional components, due to flexible structure, can be suitable for the case that is in limited space and needs distribution.

Key advantages

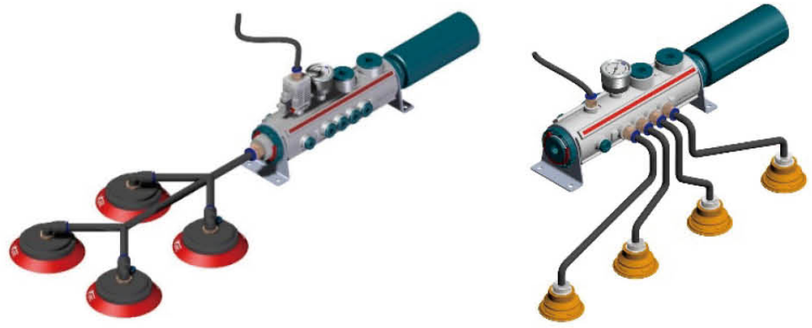
· VMECA vacuum cartridge integrated
· Vacuum filter self cleaning system
· Flexibly rotatable structure



Rotatable structure



Applications



M3134 / ML3134

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Flexible structure
  - Available to select various port options and port position / direction
· Easy to assemble and disassemble without any tools
· Quick response time
· Patented design

Specifications

Description	M3134	ML3134
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1,364 Nl/min	1,448 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	883 g	882 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3134	92	3.0	1352	608	424	256	132	128	88	66	26	7.5
	92	4.0	1364	616	510	376	276	172	93	69	28	8.5
ML3134	70	5.0	1376	784	520	328	200	150	92	45	-	-
	75	6.0	1448	828	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3134	3.0	472	0.004	0.018	0.02	0.07	0.09	0.16	0.2	0.3	0.95
	4.0	608	0.003	0.01	0.01	0.02	0.05	0.1	0.15	0.25	0.85
ML3134	5.0	340	0.0057	0.018	0.03	0.063	0.075	0.1	0.2	-	-
	6.0	416	0.0053	0.015	0.029	0.052	0.071	0.09	0.15	-	-

M3133 / ML3133

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Flexible structure
  - Available to select various port options and port position / direction
· Easy to assemble and disassemble without any tools
· Quick response time
· Patented design

Specifications

Description	M3133	ML3133
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1,023 Nl/min	1,086 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	887 g	887 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3133	92	3.0	1014	456	318	192	99	96	66	50	19	6
	92	4.0	1023	462	383	282	207	129	70	52	21	6.1
ML3133	70	5.0	1032	588	390	246	150	112.5	69	34	-	-
	75	6.0	1086	621	462	300	156	114	96	66	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3133	3.0	354	0.005	0.02	0.03	0.09	0.12	0.21	0.24	0.4	1.27
	4.0	456	0.004	0.01	0.02	0.03	0.06	0.14	0.2	0.33	1.13
ML3133	5.0	255	0.0085	0.028	0.05	0.08	0.1	0.13	0.26	-	-
	6.0	312	0.0079	0.02	0.04	0.06	0.09	0.12	0.2	-	-

M3132 / ML3132

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Flexible structure
  - Available to select various port options and port position / direction
· Easy to assemble and disassemble without any tools
· Quick response time
· Patented design

Specifications

Description	M3132	ML3132
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	682 Nl/min	724 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	891 g	890 g

Vacuum Flow

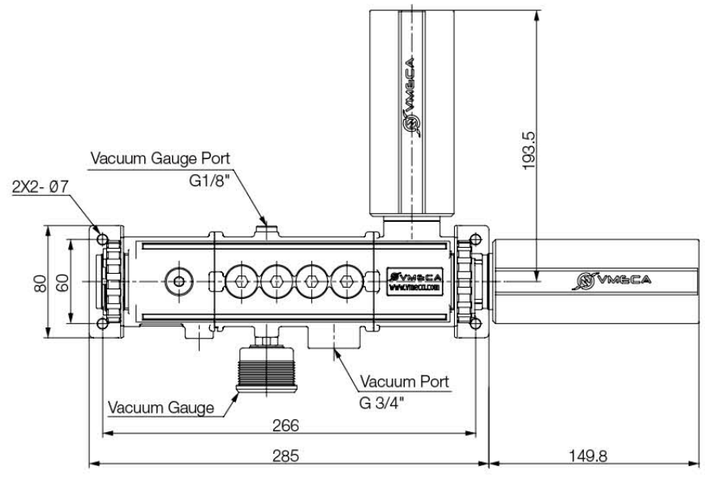
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3132	92	3.0	676	304	212	128	66	64	44	33	12.5	3.5
	92	4.0	682	308	255	188	138	86	46	34	13.5	4
ML3132	70	5.0	688	392	260	164	100	75	46	23.8	-	-
	75	6.0	724	415	308	200	104	76	64	44	-	-

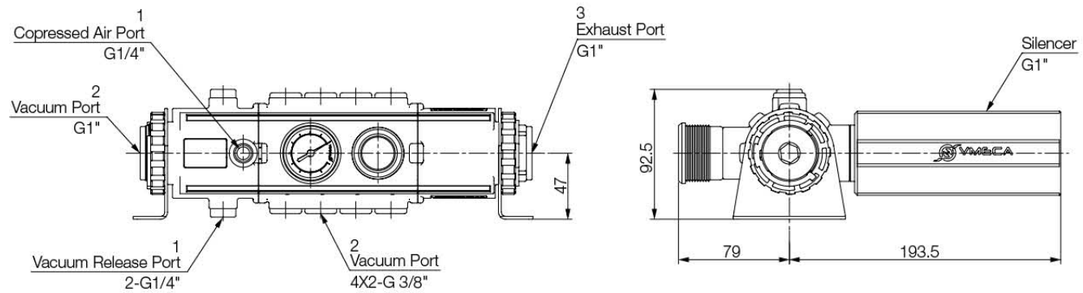
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3132	3.0	236	0.01	0.032	0.045	0.15	0.22	0.33	0.48	0.78	1.98
	4.0	304	0.01	0.026	0.037	0.047	0.12	0.23	0.35	0.7	1.72
ML3132	5.0	170	0.014	0.032	0.06	0.128	0.16	0.25	0.43	-	-
	6.0	208	0.012	0.03	0.047	0.098	0.15	0.2	0.32	-	-

Dimensions – Basic Pump

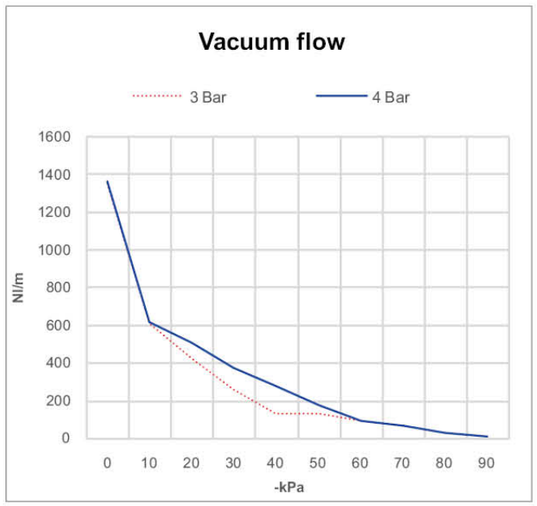
[Unit : mm]



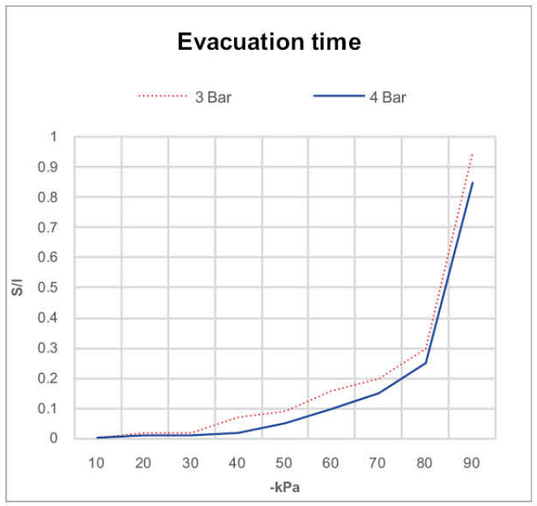


Performance data

M3134

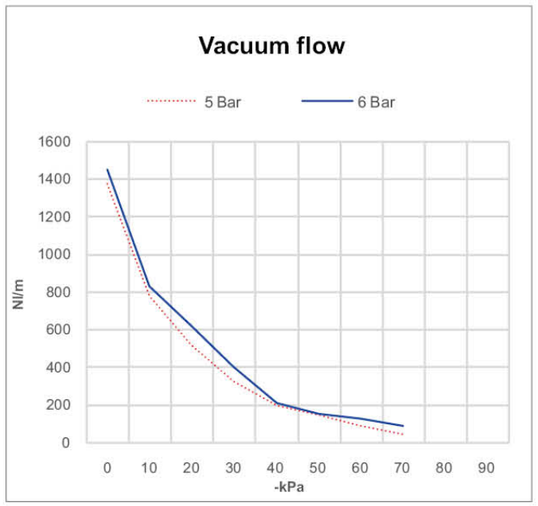


※ Vacuum flow at different vacuum level

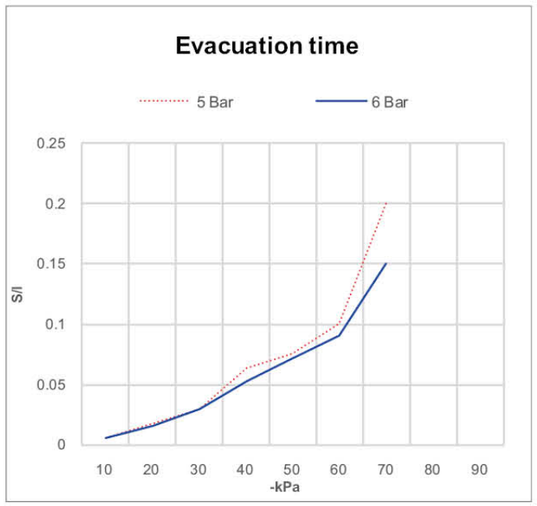


※ Time to evacuate a volume at different vacuum level

ML3134



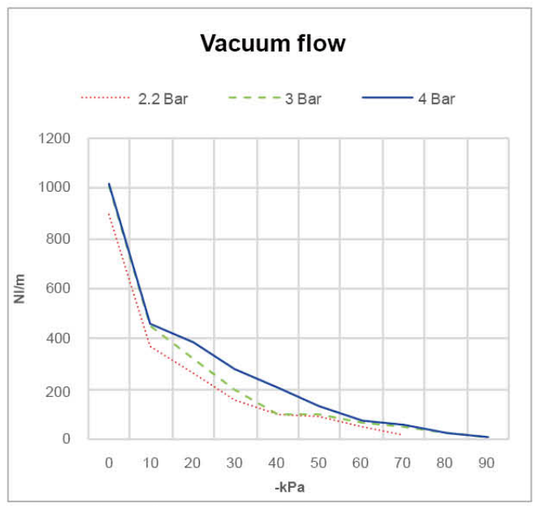
※ Vacuum flow at different vacuum level



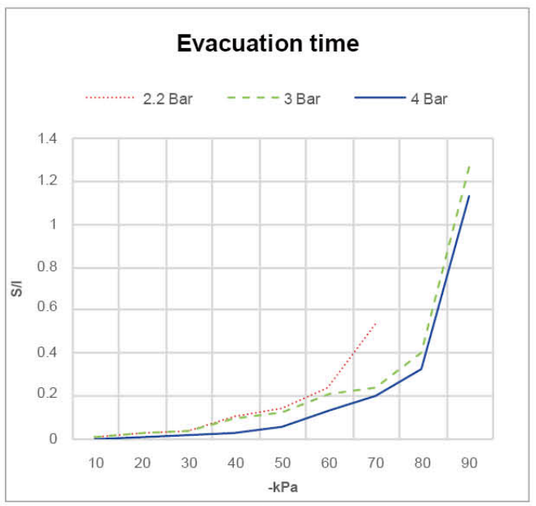
※ Time to evacuate a volume at different vacuum level

Performance data

M3133

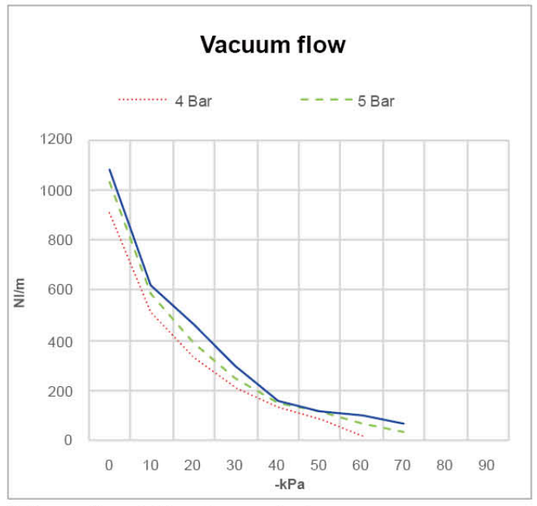


※ Vacuum flow at different vacuum level

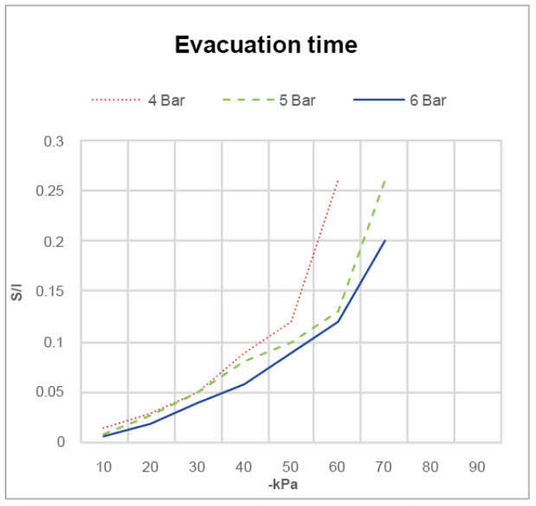


※ Time to evacuate a volume at different vacuum level

ML3133



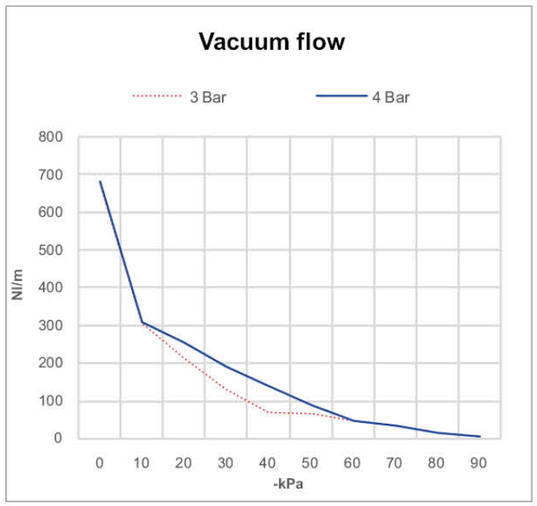
※ Vacuum flow at different vacuum level



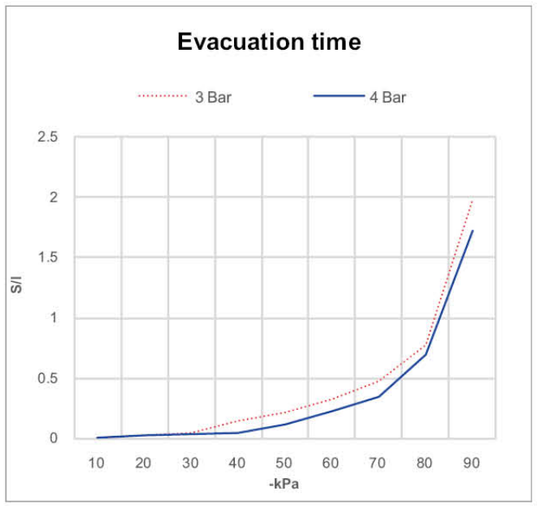
※ Time to evacuate a volume at different vacuum level

Performance data

M3132

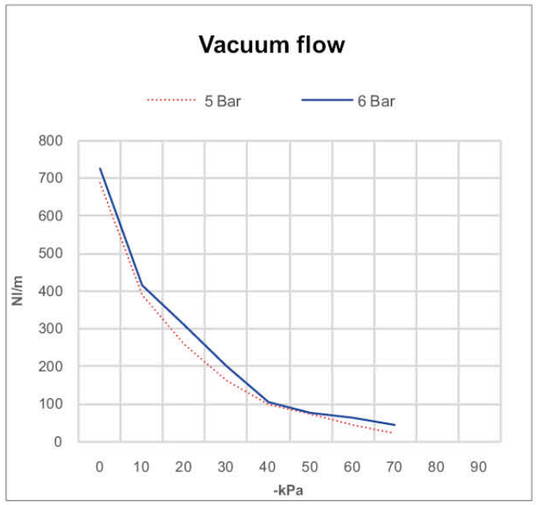


※ Vacuum flow at different vacuum level

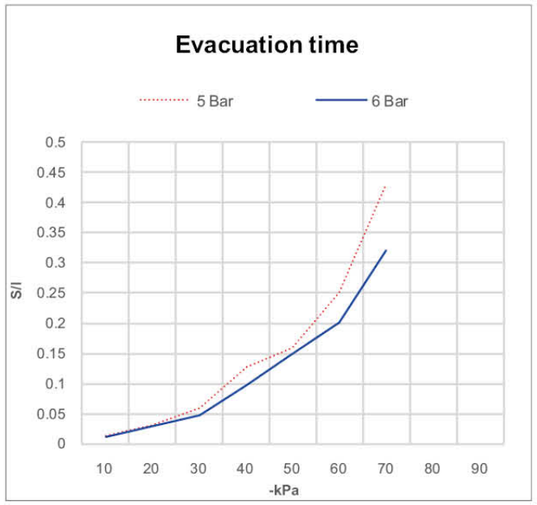


※ Time to evacuate a volume at different vacuum level

M3132



※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

M3124 / ML3124

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Flexible structure
  - Available to select various port options and port position / direction
· Easy to assemble and disassemble without any tools
· Quick response time
· Patented design

Specifications

Description	M3124	ML3124
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	684 Nl/min	800 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	788 g	788 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3124	92	3.0	680	608	424	256	132	128	88	66	26	7.6
	92	4.0	684	616	510	376	276	172	93	69	28	8.4
ML3124	70	5.0	780	704	520	328	200	150	92	45.2	-	-
	75	6.0	800	732	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3124	3.0	472	0.007	0.025	0.048	0.08	0.1	0.16	0.2	0.3	0.95
	4.0	608	0.006	0.015	0.02.	0.025	0.06	0.12	0.17	0.26	0.87
ML3124	5.0	340	0.0067	0.02	0.037	0.065	0.075	0.1	0.2	-	-
	6.0	416	0.006	0.02	0.03	0.055	0.073	0.09	0.15	-	-

M3123 / ML3123

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Integrated pleated filter with high dirt capacity & Auto-cleaning system
· Flexible structure
  - Available to select various port options and port position / direction
· Easy to assemble and disassemble without any tools
· Quick response time
· Patented design

Specifications

Description	M3123	ML3123
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	513 Nl/min	600 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	788 g	788 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3123	92	3.0	510	456	318	192	99	96	66	50	19	6
	92	4.0	513	462	383	282	207	129	70	52	21	6.3
ML3123	70	5.0	585	528	390	246	150	112.5	69	33.9	-	-
	75	6.0	600	549	462	300	156	114	96	66	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3123	3.0	354	0.009	0.03	0.06	0.1	0.13	0.21	0.26	0.4	1.27
	4.0	456	0.008	0.019	0.03	0.033	0.08	0.16	0.23	0.35	1.17
ML3123	5.0	255	0.009	0.028	0.05	0.083	0.1	0.13	0.26	-	-
	6.0	312	0.009	0.027	0.04	0.06	0.09	0.12	0.2	-	-

M3122 / ML3122

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity & Auto-cleaning system
- Flexible structure
  - Available to select various port options and port position / direction
- Easy to assemble and disassemble without any tools
- Quick response time
- Patented design

Specifications

Description	M3122	ML3122
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	342 Nl/min	400 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	50 ~ 60 dbA
Weight	787 g	787 g

Vacuum Flow

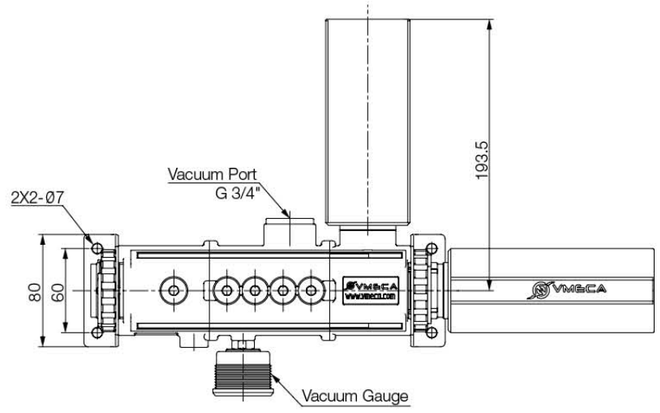
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
M3122	92	3.0	340	304	212	128	66	64	44	33	12.8	3.8
	92	4.0	342	308	255	188	138	86	46.6	34.6	13.8	4.2
ML3122	60	4.0	376	316	220	140	92	56	13.6			
	75	6.0	400	366	308	200	104	76	64	44		

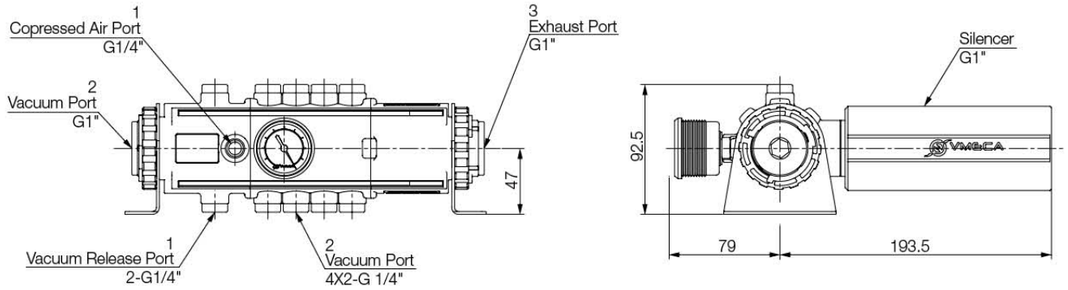
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
M3122	3.0	236	0.016	0.05	0.07	0.16	0.23	0.34	0.5	0.795	2.01
	4.0	304	0.014	0.029	0.043	0.05	0.13	0.25	0.355	0.71	1.75
ML3122	5.0	170	0.014	0.036	0.075	0.125	0.15	0.2	0.4	-	-
	6.0	208	0.013	0.032	0.06	0.1	0.155	0.18	0.35	-	-

Dimensions – Basic Pump

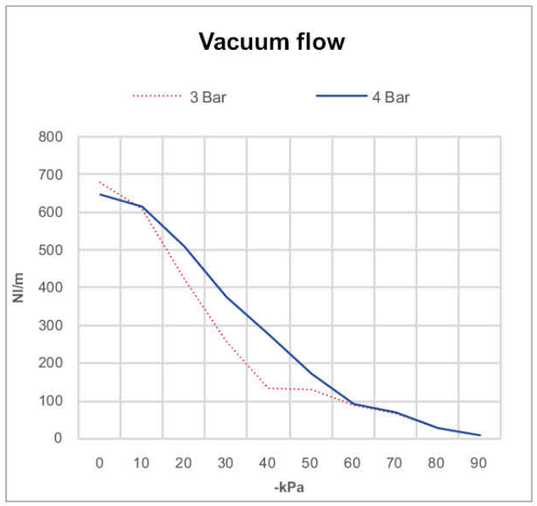
[Unit : mm]



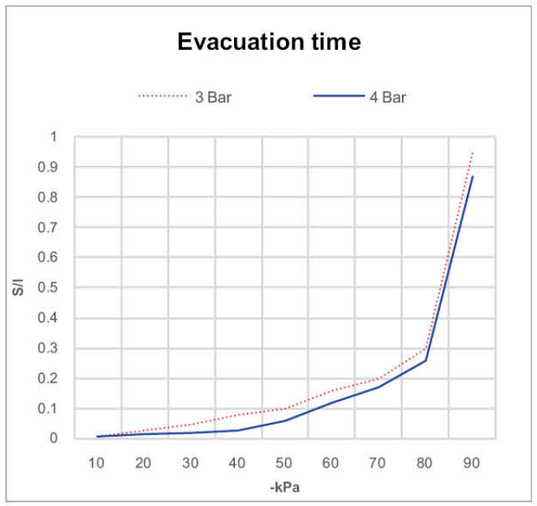


Performance data

M3124

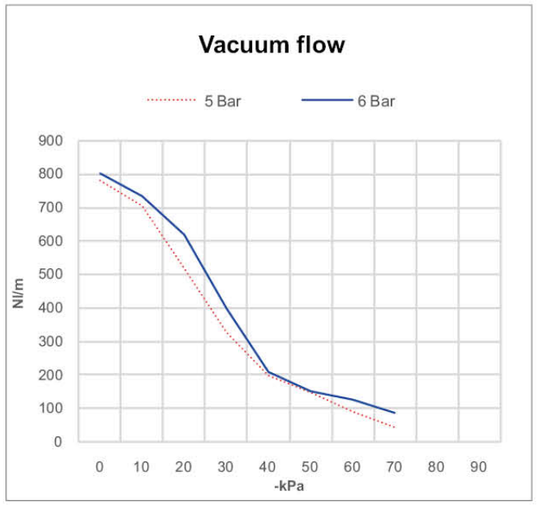


※ Vacuum flow at different vacuum level

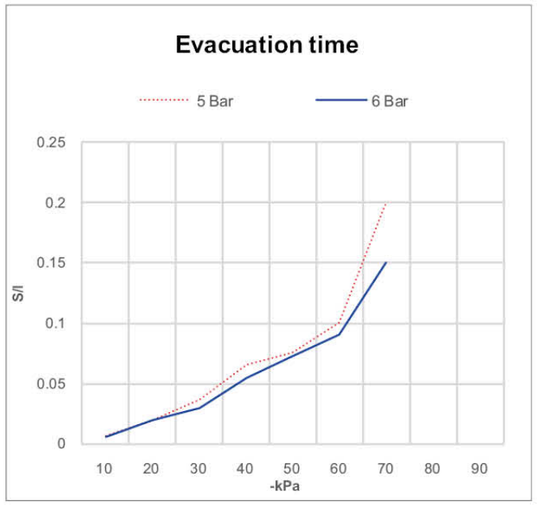


※ Time to evacuate a volume at different vacuum level

ML3124



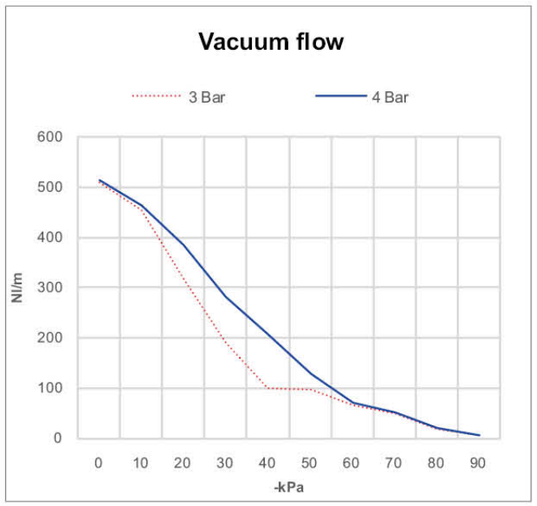
※ Vacuum flow at different vacuum level



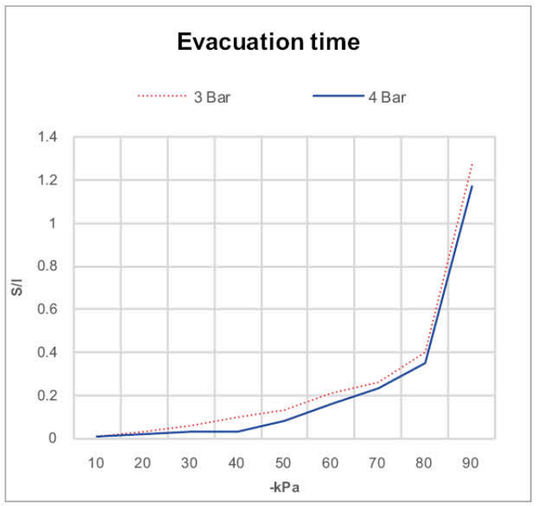
※ Time to evacuate a volume at different vacuum level

Performance data

M3123

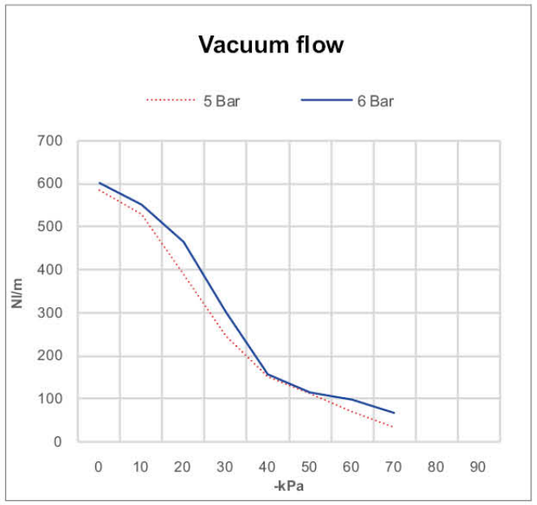


※ Vacuum flow at different vacuum level

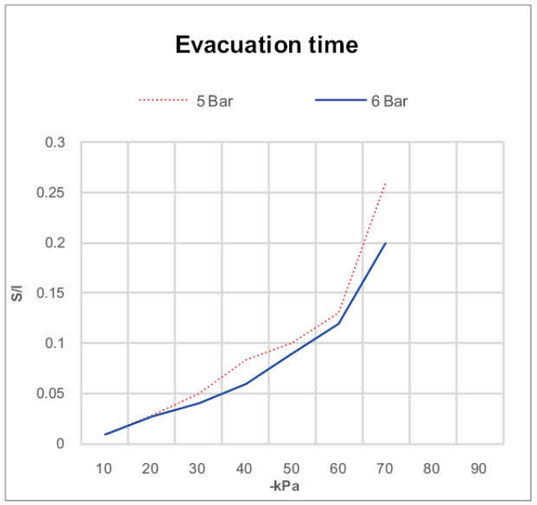


※ Time to evacuate a volume at different vacuum level

ML3123



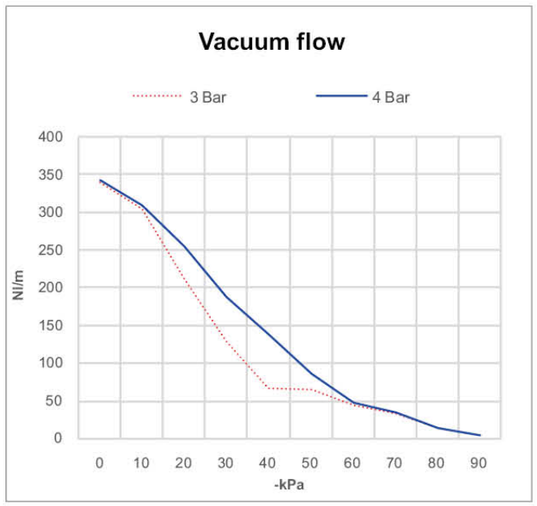
※ Vacuum flow at different vacuum level



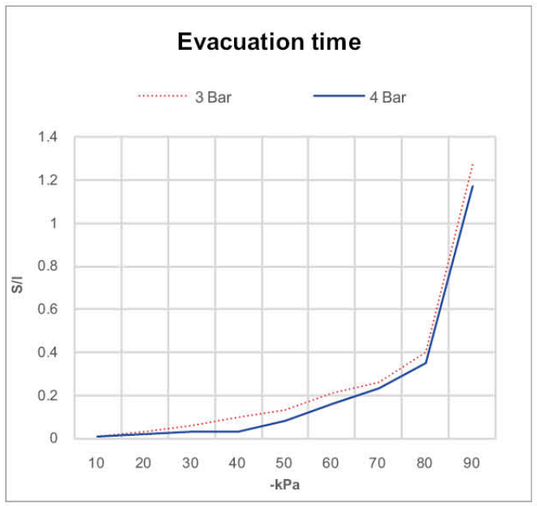
※ Time to evacuate a volume at different vacuum level

Performance data

M3122

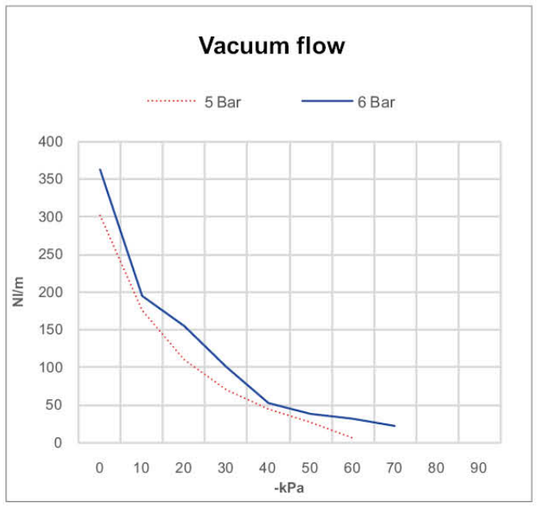


※ Vacuum flow at different vacuum level

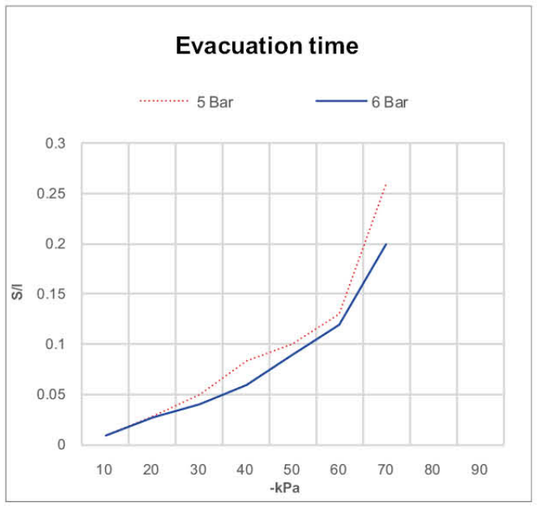


※ Time to evacuate a volume at different vacuum level

ML3122

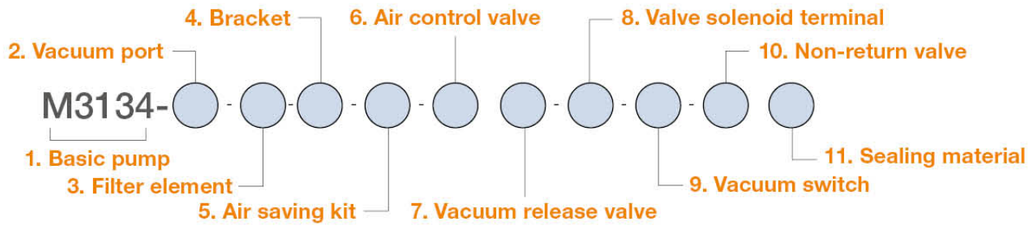


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	Magic pump, 2-Stage, 2-vacuum cartridge	M3122
	Magic pump, 2-Stage, 3-vacuum cartridge	M3123
	Magic pump, 2-Stage, 4-vacuum cartridge	M3124
	Magic pump, 2-Stage “L” cartridge, 2-vacuum cartridge	ML3122
	Magic pump, 2-Stage “L” cartridge, 3-vacuum cartridge	ML3123
	Magic pump, 2-Stage “L” cartridge, 4-vacuum cartridge	ML3124
	Magic pump, 3-Stage, 2-vacuum cartridge	M3132
	Magic pump, 3-Stage, 3-vacuum cartridge	M3133
	Magic pump, 3-Stage, 4-vacuum cartridge	M3134
	Magic pump, 3-Stage “L” cartridge, 2-vacuum cartridge	ML3132
	Magic pump, 3-Stage “L” cartridge, 3-vacuum cartridge	ML3133
	Magic pump, 3-Stage “L” cartridge, 4-vacuum cartridge	ML3134

2. Vacuum port	Description	Symbol
	Vacuum port G3/4”	34
	Vacuum port G1”	01

3. Filter element	Description	Symbol
	No filter	Blank
	Polyester Filter Element	2

4. Bracket	Description	Symbol
	No bracket	Blank
	2ponit L-type	B

5. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

6. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double solenoid valve, AC110V	D1
	Double solenoid valve, AC220V	D2
	Double solenoid valve, DC24V	D3

7. Vacuum release valve	Description	Symbol
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

Build an Ordering No.

8. Valve solenoid terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

9. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

10. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

11. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
M3122-34-2	Magic pump, 2-Stage, 2-vacuum cartridge, G3/4” vacuum port, Silencer	791
M3123-34-2	Magic pump, 2-Stage, 3-vacuum cartridge, G3/4” vacuum port, Silencer	788
M3124-34-2	Magic pump, 2-Stage, 4-vacuum cartridge, G3/4” vacuum port, Silencer	784
M3122-01-2	Magic pump, 2-Stage, 2-vacuum cartridge, G1” vacuum port, Silencer	787
M3123-01-2	Magic pump, 2-Stage, 3-vacuum cartridge, G1” vacuum port, Silencer	784
M3124-01-2	Magic pump, 2-Stage, 4-vacuum cartridge, G1” vacuum port, Silencer	780
ML3122-34-2	Magic pump, 2-Stage “L” cartridge, 2-vacuum cartridge, G3/4” vacuum port, Silencer	790
ML3123-34-2	Magic pump, 2-Stage “L” cartridge, 3-vacuum cartridge, G3/4” vacuum port, Silencer	788
ML3124-34-2	Magic pump, 2-Stage “L” cartridge, 4-vacuum cartridge, G3/4” vacuum port, Silencer	784
ML3122-01-2	Magic pump, 2-Stage “L” cartridge, 2-vacuum cartridge, G1” vacuum port, Silencer	787
ML3123-01-2	Magic pump, 2-Stage “L” cartridge, 3-vacuum cartridge, G1” vacuum port, Silencer	783
ML3124-01-2	Magic pump, 2-Stage “L” cartridge, 4-vacuum cartridge, G1” vacuum port, Silencer	778
M3132-34-2	Magic pump, 3-Stage, 2-vacuum cartridge, G3/4” vacuum port, Silencer	891
M3133-34-2	Magic pump, 3-Stage, 3-vacuum cartridge, G3/4” vacuum port, Silencer	887
M3134-34-2	Magic pump, 3-Stage, 4-vacuum cartridge, G3/4” vacuum port, Silencer	884
M3132-01-2	Magic pump, 3-Stage, 2-vacuum cartridge, G1” vacuum port, Silencer	890
M3133-01-2	Magic pump, 3-Stage, 3-vacuum cartridge, G1” vacuum port, Silencer	883
M3134-01-2	Magic pump, 3-Stage, 4-vacuum cartridge, G1” vacuum port, Silencer	880
ML3132-34-2	Magic pump, 3-Stage “L” cartridge, 2-vacuum cartridge, G3/4” vacuum port, Silencer	890
ML3133-34-2	Magic pump, 3-Stage “L” cartridge, 3-vacuum cartridge, G3/4” vacuum port, Silencer	887
ML3134-34-2	Magic pump, 3-Stage “L” cartridge, 4-vacuum cartridge, G3/4” vacuum port, Silencer	883
ML3132-01-2	Magic pump, 3-Stage “L” cartridge, 2-vacuum cartridge, G1” vacuum port, Silencer	888
ML3133-01-2	Magic pump, 3-Stage “L” cartridge, 3-vacuum cartridge, G1” vacuum port, Silencer	882
ML3134-01-2	Magic pump, 3-Stage “L” cartridge, 4-vacuum cartridge, G1” vacuum port, Silencer	878

Spare Parts – Cartridges

Part No.	Description	Available model
VC302	Midi Vacuum Cartridge, 2-Stage	M3122, M3123, M3124
VC303	Midi Vacuum Cartridge, 3-Stage	M3132, M3133, M3134
VCL302	Midi Vacuum Cartridge, "L" Series, 2-Stage	ML3122, ML3123, ML3124
VCL303	Midi Vacuum Cartridge, "L" Series, 3-Stage	ML3132, ML3133, ML3134

Spare Parts – Filter elements

Part No.	Description
VTFE342	Filter element, Polyester, 5 Micron

Spare Parts – Silencers

Part No.	Description	Weight (g)
VTS-10-A	Free flow silencer, Low noise, G1”	116.24

PM pump

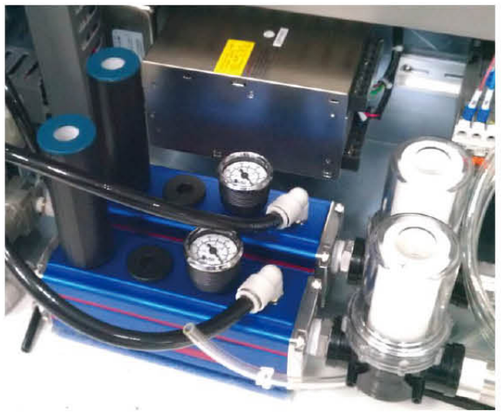
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Various connection ports

Advantages

Excellent performance in application that the large vacuum flow is needed
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application



Overall of specification

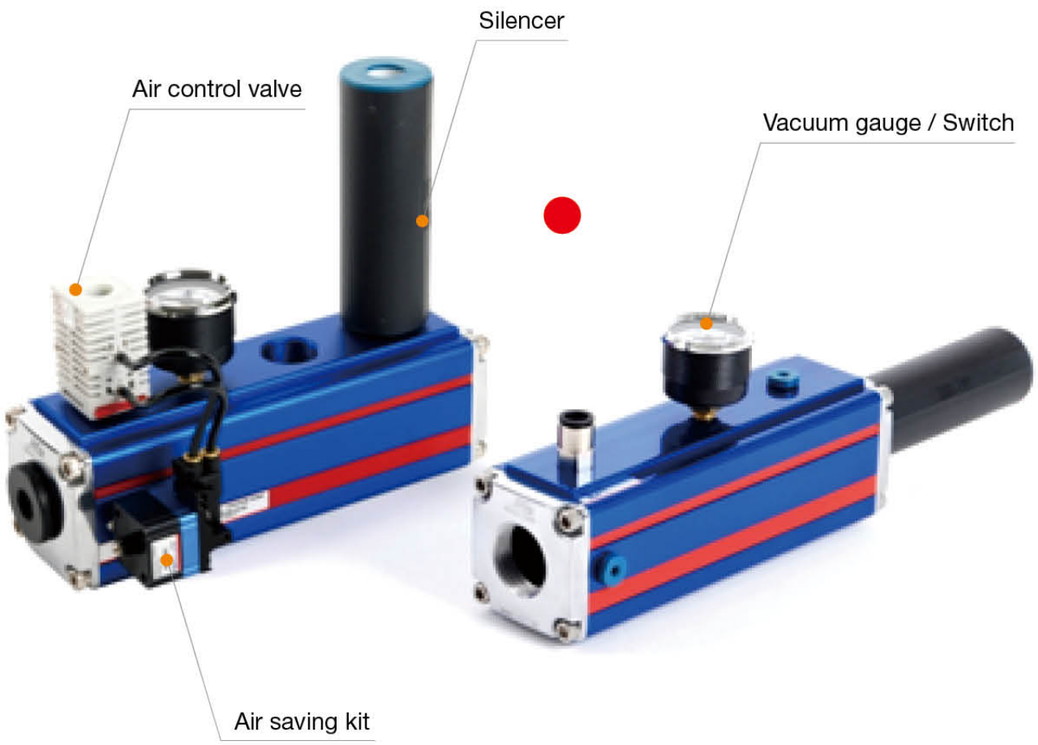
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
PM303x1	92	7	341	158
PM303x2	92	7	682	304
PM303x3	92	7	1023	456
PM303x4	92	7	1364	608
PML303x1	75	7	362	104
PML303x2	75	7	724	208
PML303x3	75	7	1086	312
PML303x4	75	7	1448	416

PM pump

VMECA PM pump be combined with the optional Vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for many applications where the high vacuum flow required.
VMECA PM pump and optional components has been widely Used in automation field due to design which is easily mounted and can be simply replaced with classic pumps without changing dimensions

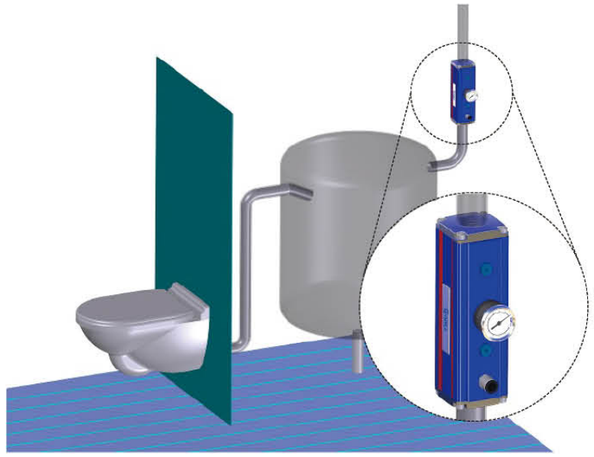
Key advantages

· VMECA vacuum cartridge integrated
· Fast response time with high vacuum flow
· Durable aluminum body



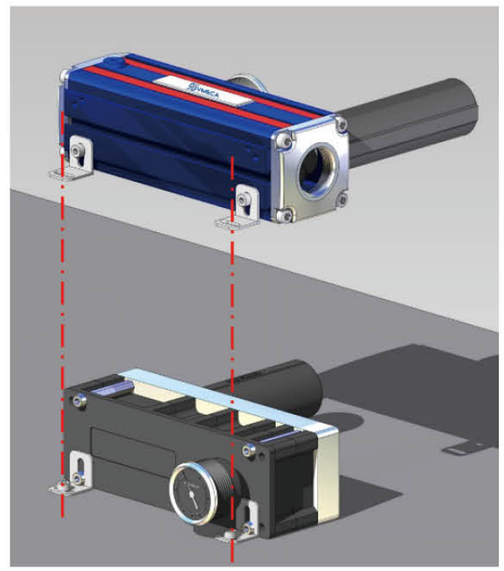
Applications

VMECA PREMIUM VACUUM PUMP (PM pump) can be mounted directly inline to save space and is suitable for applications requiring high suction flows or evacuation of large volumes of air (i.e. vacuum chamber)



Despite fluctuations and drops in air pressure, PREMIUM PUMP maintains a high flow rate along with a high and stable vacuum level eliminating lost or interrupted cycles. This pump is excellent for non-sealed system applications or where large suction cups are used.

VMECA PREMIUM VACUUM PUMP can directly replace Classic Vacuum Pump without any change of mounting holes or brackets.



VMECA™ www.vmeca.com

PM / PML 303x1

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Top and side vacuum connection ports available
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· Strong aluminum body

Specifications

Description	PM303x1	PML303x1
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	341 Nl/min	362 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dbA	60 ~ 65 dbA
Weight	1,528 g	1,527 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
PM303x1	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3.0	338	152	106	64	33	32	22	16.5	6.4	1.9
	92	4.0	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1
PML303x1	60	4.0	302	172	110	70	46	28	6.8	-	-	-
	70	5.0	344	196	130	82	50	37.5	23	11.3	-	-
	75	6.0	362	207	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
PM303x1	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3.0	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	12	3.8
	4.0	152	0.01	0.48	0.07	0.09	0.2	0.42	0.8	1	3.4
PML303x1	4.0	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-
	5.0	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6.0	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-

Blow flow

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)											
			10	20	40	60	70	80	90	100	110	120	130	140
PM303x1	6.0	210	572	387	359	315	280	272	274	271	269	259	242	225

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)							
			0	10	20	30	40	50	60	70
PML303x1	6.0	104	470	320	272	225	196	189	165	140

PM / PML 303x2

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Various connection ports
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· Strong aluminum body

Specifications

Description	PM303x2	PML303x2
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	682 Nl/min	724 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dbA	60 ~ 65 dbA
Weight	1,523 g	1,523 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
PM303x2	75	2.2	604	245	176	106	62.8	57	33	9.2	-	-
	92	3.0	676	304	212	128	66	64	44	3.3	12.8	3.8
	92	4.0	682	308	255	188	138	86	46.6	34.6	13.8	4.2
PML303x2	60	4.0	604	344	220	140	92	56	13.6	-	-	-
	70	5.0	688	392	260	164	100	75	46	23.8	-	-
	75	6.0	724	415	308	200	104	76	64	44	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
PM303x2	2.2	194	0.011	0.043	0.05	0.17	0.23	0.38	0.81	-	-
	3.0	236	0.01	0.032	0.045	0.15	0.22	0.33	0.48	0.78	1.98
	4.0	304	0.01	0.026	0.037	0.047	0.12	0.23	0.35	0.7	1.72
PML303x2	4.0	140	0.017	0.037	0.073	0.14	0.19	0.45	-	-	-
	5.0	170	0.014	0.032	0.06	0.128	0.16	0.25	0.43	-	-
	6.0	208	0.012	0.03	0.047	0.098	0.15	0.2	0.32	-	-

Blow flow

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)											
			10	20	40	60	70	80	90	100	110	120	130	140
PM303x2	6.0	420	1144	774	718	630	560	544	548	542	538	518	484	450

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)							
			0	10	20	30	40	50	60	70
PML303x2	6.0	208	940	640	544	450	392	378	330	280

PM / PML 303x3

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Various connection ports
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· Strong aluminum body

Specifications

Description	PM303x3	PML303x3
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1,023 Nl/min	1,086 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dbA	60 ~ 65 dbA
Weight	1,519 g	1,519 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
PM303x3	75	2.2	902	368	264	159	94	86	50	14	-	-
	92	3.0	1014	456	318	192	99	96	66	50	19	6
	92	4.0	1023	462	383	282	207	129	70	52	21	6.3
PML303x3	60	4.0	906	516	330	210	138	84	20.4	-	-	-
	70	5.0	1032	588	390	246	150	112.5	69	34	-	-
	75	6.0	1086	621	462	300	156	114	96	66	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
PM303x3	2.2	291	0.006	0.03	0.038	0.1	0.14	0.24	0.54	-	-
	3.0	354	0.005	0.02	0.03	0.09	0.12	0.21	0.24	0.4	1.27
	4.0	456	0.004	0.01	0.02	0.03	0.06	0.14	0.2	0.33	1.13
PML303x3	4.0	210	0.016	0.03	0.085	0.09	0.12	0.26	-	-	-
	5.0	255	0.0085	0.028	0.05	0.08	0.1	0.13	0.26	-	-
	6.0	312	0.0079	0.02	0.04	0.06	0.09	0.12	0.2	-	-

Blow flow

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)											
			10	20	40	60	70	80	90	100	110	120	130	140
PM303x3	6.0	630	1716	1161	1077	945	840	816	822	813	807	777	747	675

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)							
			0	10	20	30	40	50	60	70
PML303x3	6.0	312	1404	966	822	678	589	564	492	416

PM / PML 303x4

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· Various connection ports
· Optional Air-Saving Kit available to minimize energy consumption
· Quick response time
· Strong aluminum body

Specifications

Description	PM303x4	PML303x4
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1,364 Nl/min	1,448 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dbA	60 ~ 65 dbA
Weight	1,516 g	1,515 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
PM303x4	75	2.2	1208	490	352	212	126	114	66	18	-	-
	92	3.0	1352	608	424	256	132	128	88	66	26	7.6
	92	4.0	1364	616	510	376	276	172	93	69	28	8.4
PML303x4	60	4.0	1208	688	440	280	184	112	27	-	-	-
	70	5.0	1376	784	520	328	200	150	92	45	-	-
	75	6.0	1448	828	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
PM303x4	2.2	388	0.005	0.02	0.027	0.08	0.1	0.18	0.4	-	-
	3.0	472	0.004	0.018	0.02	0.07	0.09	0.16	0.2	0.3	0.95
	4.0	608	0.003	0.01	0.01	0.02	0.05	0.1	0.15	0.25	0.85
PML303x4	4.0	280	0.0089	0.023	0.04	0.07	0.09	0.2	-	-	-
	5.0	340	0.0057	0.018	0.03	0.063	0.075	0.1	0.2	-	-
	6.0	416	0.0053	0.015	0.029	0.052	0.071	0.09	0.15	-	-

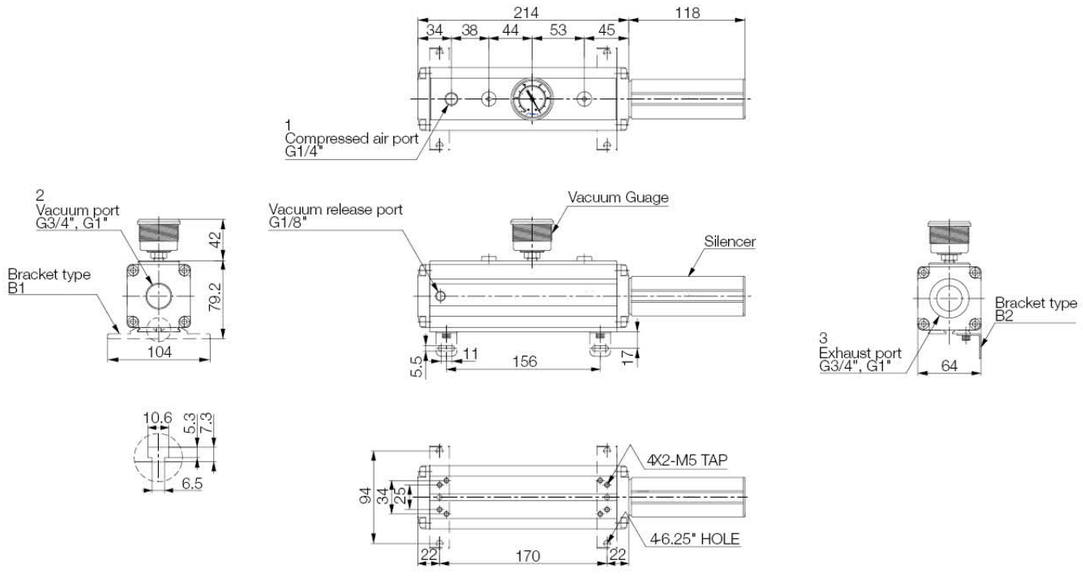
Blow flow

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)											
			10	20	40	60	70	80	90	100	110	120	130	140
PM303x4	6.0	840	2288	1548	1436	1260	1120	1088	1096	1084	1076	1036	968	900

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Blow flow, Nl/min, at different internal pressure levels (-kPa)							
			0	10	20	30	40	50	60	70
PML303x4	6.0	416	1868	1284	1096	904	784	752	656	556

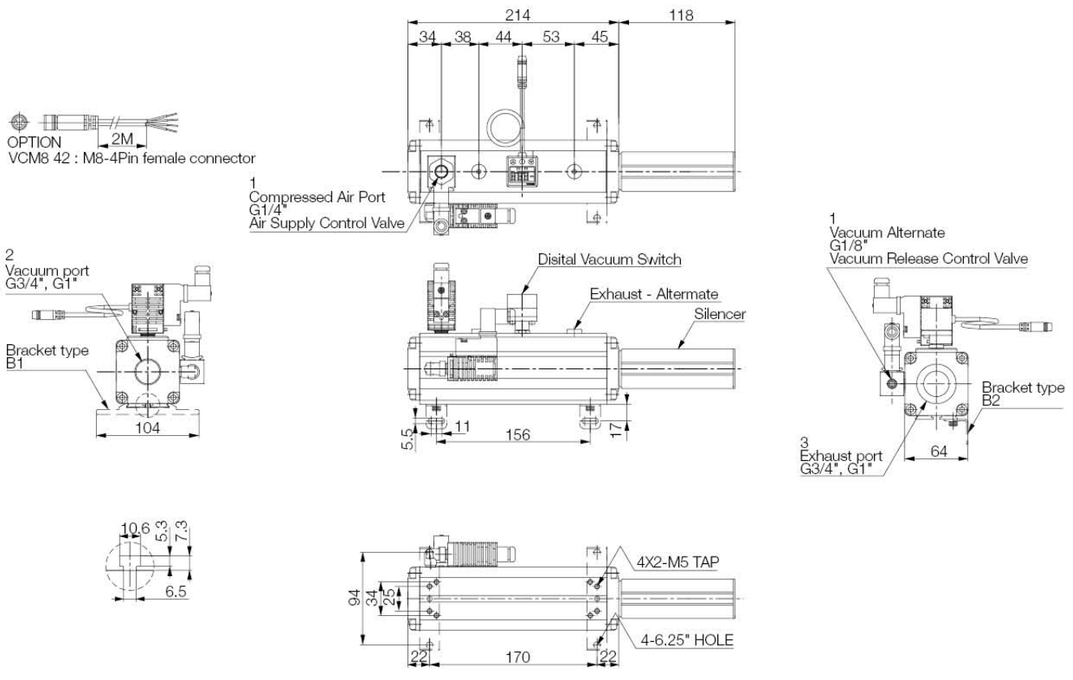
Body type “A” Dimensions – Basic Pump

[Unit : mm]



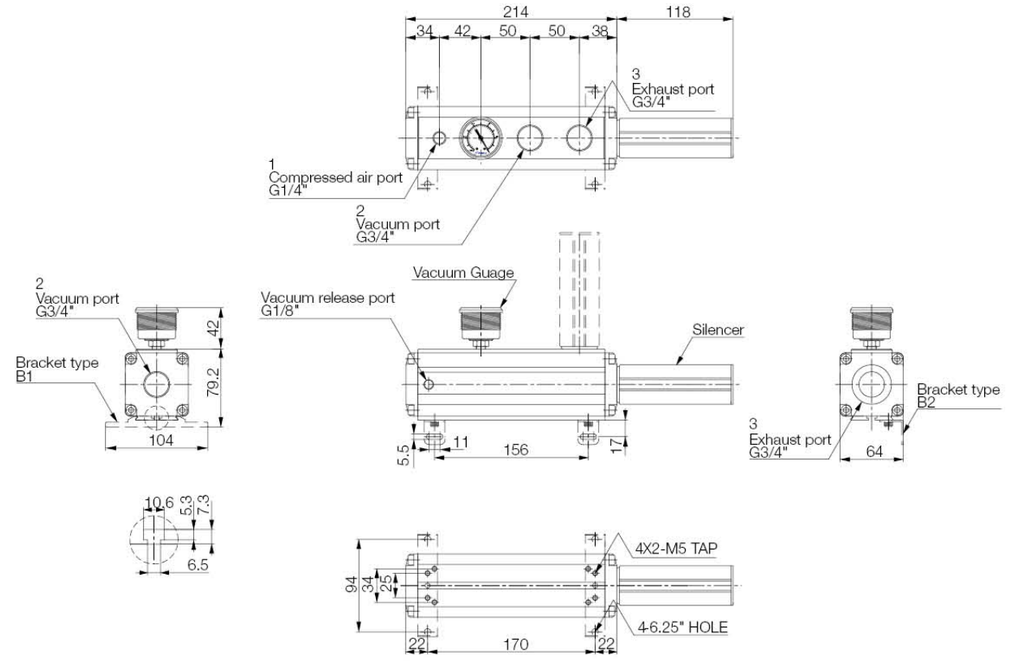
Body type “A” Dimensions – with Accessories

[Unit : mm]



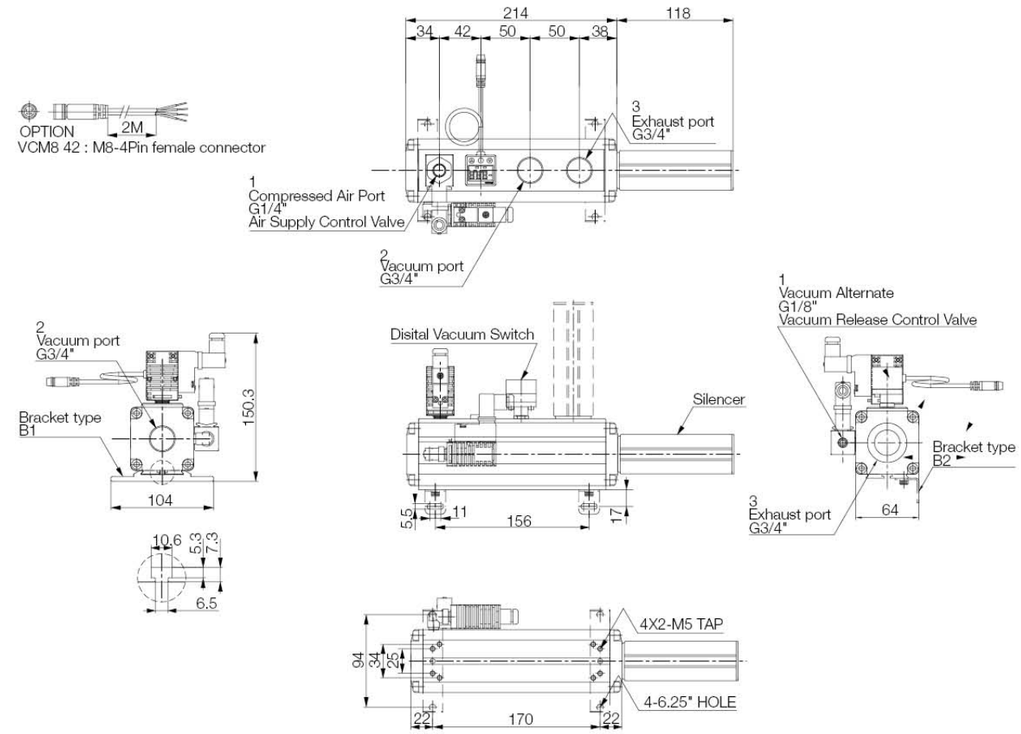
Body type “B” Dimensions – Basic Pump

[Unit : mm]



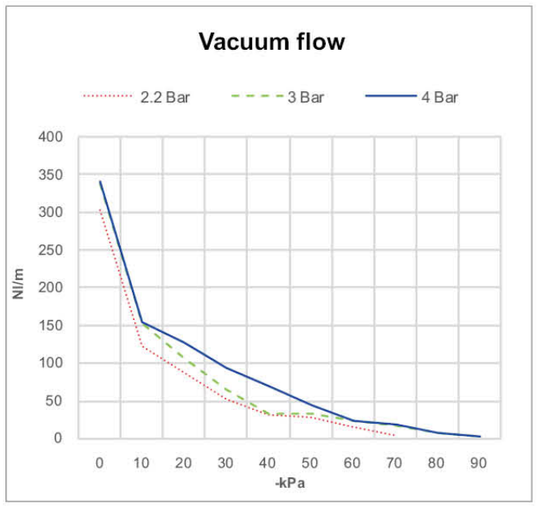
Body type “B” Dimensions – with Accessories

[Unit : mm]

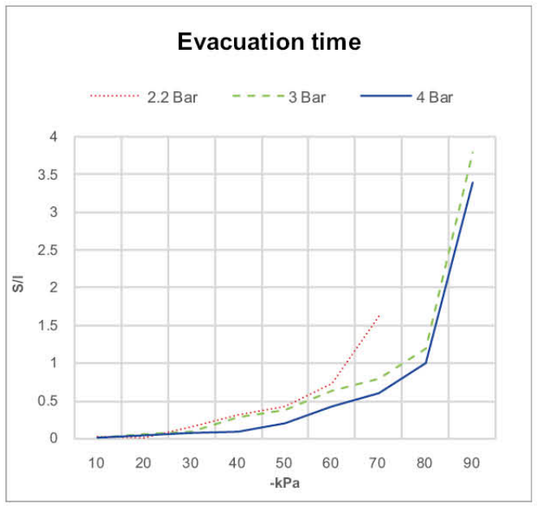


Performance data

PM303x1

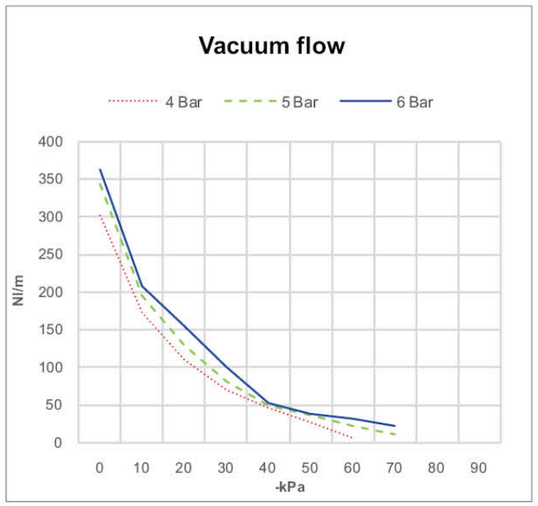


※ Vacuum flow at different vacuum level

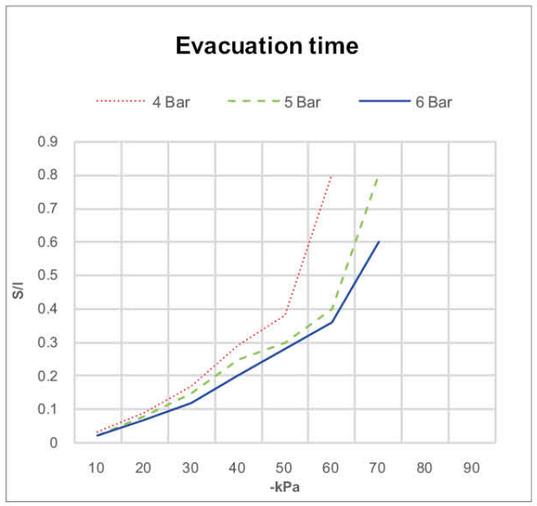


※ Time to evacuate a volume at different vacuum level

PML303x1



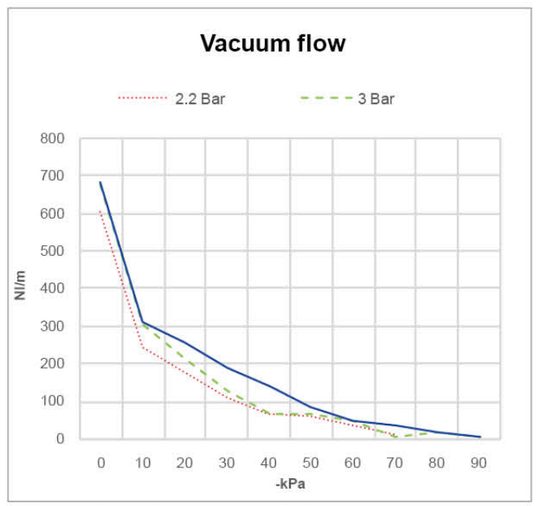
※ Vacuum flow at different vacuum level



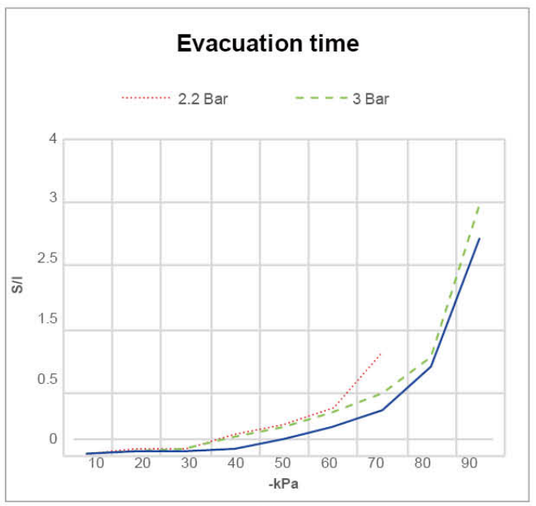
※ Time to evacuate a volume at different vacuum level

Performance data

PM303x2

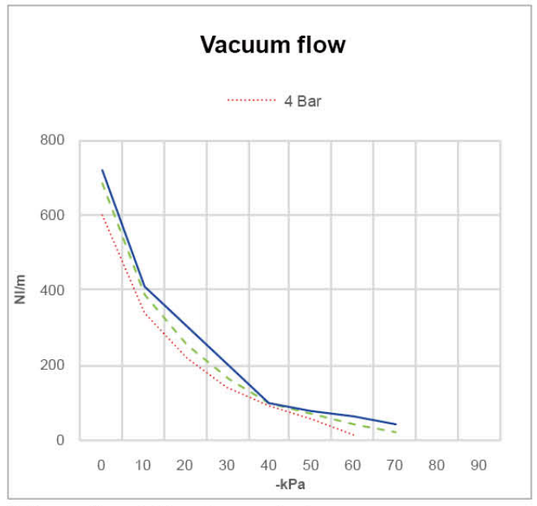


※ Vacuum flow at different vacuum level

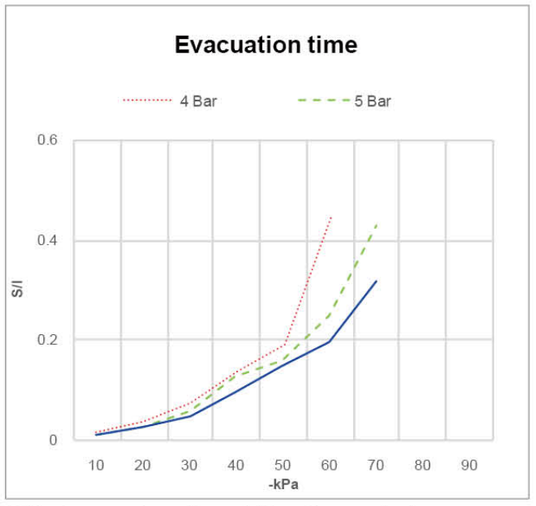


※ Time to evacuate a volume at different vacuum level

PML303x2



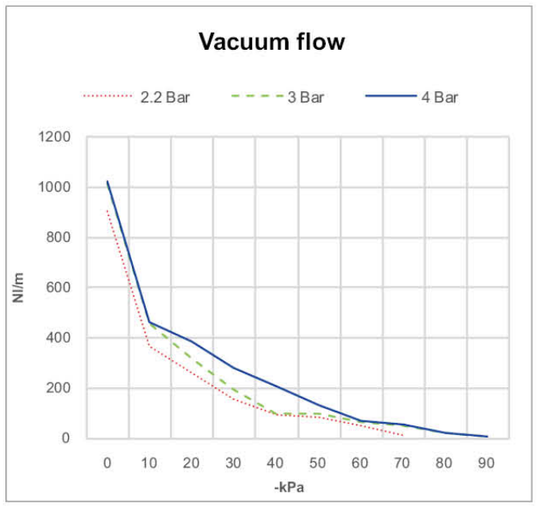
※ Vacuum flow at different vacuum level



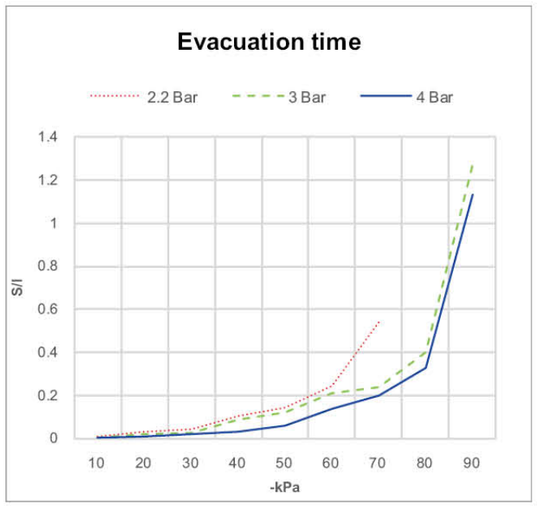
※ Time to evacuate a volume at different vacuum level

Performance data

PM303x3

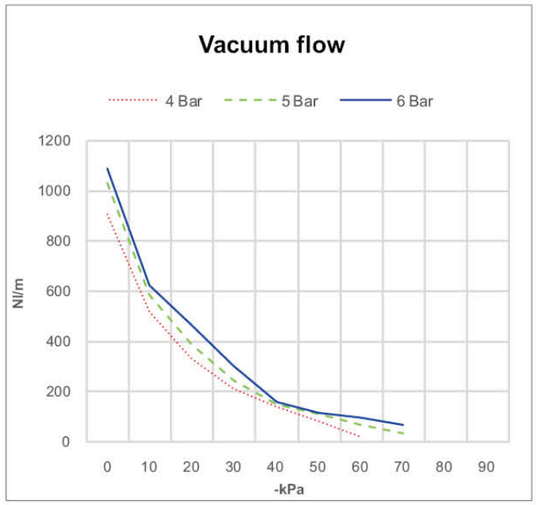


※ Vacuum flow at different vacuum level

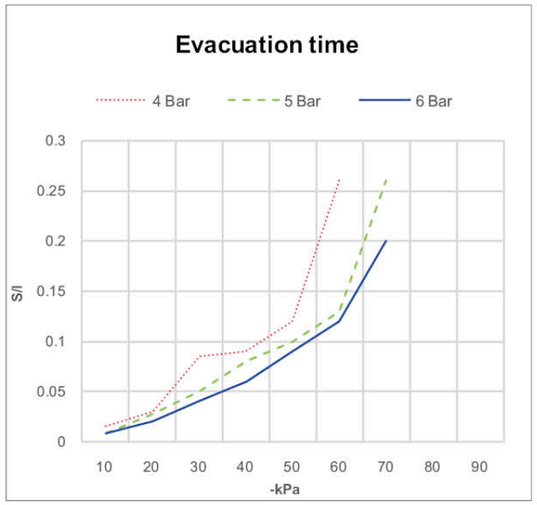


※ Time to evacuate a volume at different vacuum level

PML303x3



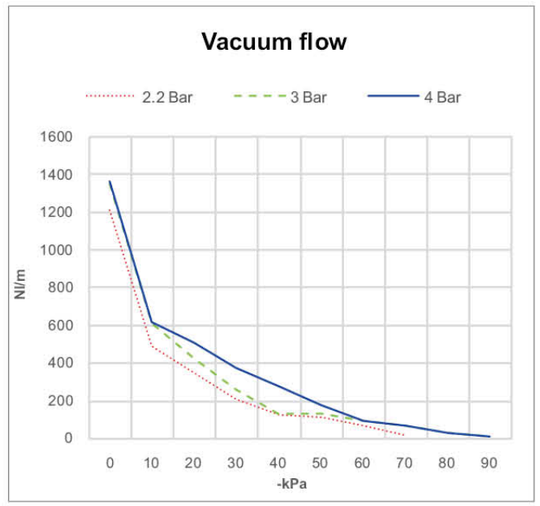
※ Vacuum flow at different vacuum level



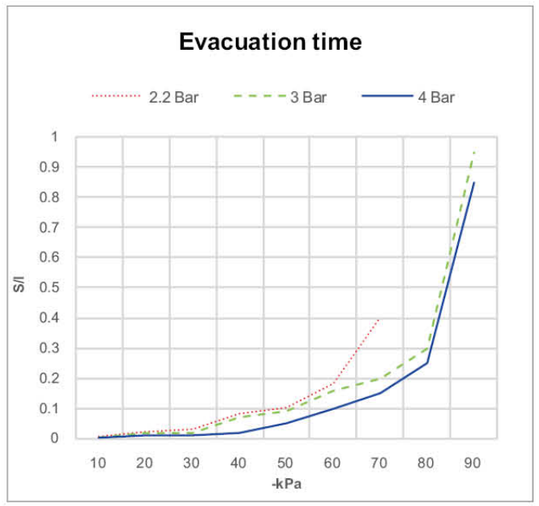
※ Time to evacuate a volume at different vacuum level

Performance data

PM303x4

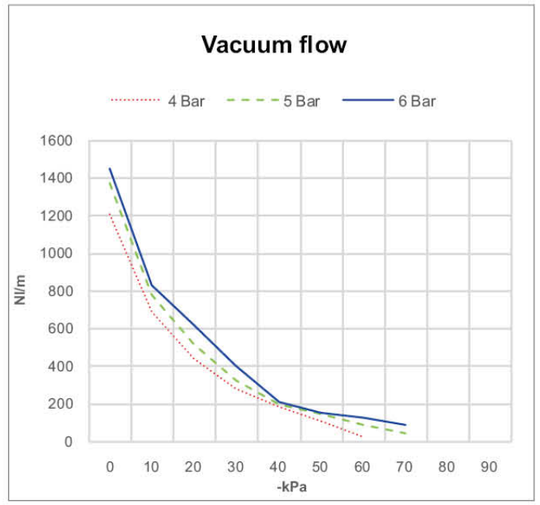


※ Vacuum flow at different vacuum level

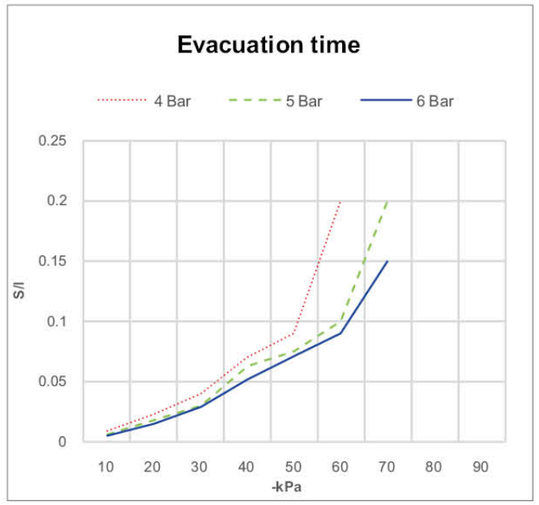


※ Time to evacuate a volume at different vacuum level

PML303x4

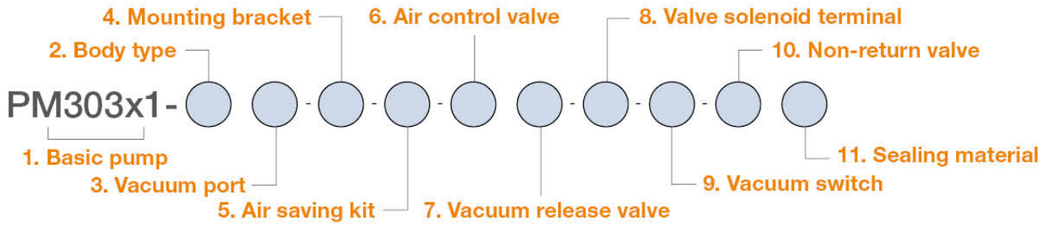


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	PM Pump, 3-Stage, 1-vacuum cartridge, Silencer	PM303x1
	PM Pump, 3-Stage, 2-vacuum cartridge, Silencer	PM303x2
	PM Pump, 3-Stage, 3-vacuum cartridge, Silencer	PM303x3
	PM Pump, 3-Stage, 4-vacuum cartridge, Silencer	PM303x4
	PM Pump, 3-Stage "L" cartridge, 1-vacuum cartridge, Silencer	PML303x1
	PM Pump, 3-Stage "L" cartridge, 2-vacuum cartridge, Silencer	PML303x2
	PM Pump, 3-Stage "L" cartridge, 3-vacuum cartridge, Silencer	PML303x3
	PM Pump, 3-Stage "L" cartridge, 4-vacuum cartridge, Silencer	PML303x4

2. Body type	Description	Symbol
	Vacuum port on side	A
	Vacuum ports on top and side	B

3. Vacuum port	Description	Symbol
	Vacuum port G3/4"	34
	Vacuum port G1"	01
	- Body type "B" is available only with vacuum port G3/4"	

4. Mounting bracket	Description	Symbol
	No mounting bracket	Blank
	4 points support	B1
	2 points support	B2

5. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

6. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double solenoid valve, AC110V	D1
	Double solenoid valve, AC220V	D2
	Double solenoid valve, DC24V	D3

7. Vacuum release valve	Description	Symbol
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

8. Valve solenoid terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

Build an Ordering No.

9. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

10. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

11. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
PM303x1-A-34	PM Pump, 3-Stage, 1-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,528
PM303x2-A-34	PM Pump, 3-Stage, 2-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,523
PM303x3-A-34	PM Pump, 3-Stage, 3-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,519
PM303x4-A-34	PM Pump, 3-Stage, 4-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,516
PML303x1-A-34	PM Pump, 3-Stage "L" cartridge, 1-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,527
PML303x2-A-34	PM Pump, 3-Stage "L" cartridge, 2-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,523
PML303x3-A-34	PM Pump, 3-Stage "L" cartridge, 3-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,519
PML303x4-A-34	PM Pump, 3-Stage "L" cartridge, 4-vacuum cartridge, G3/4" vacuum port on side, Silencer	1,515
PM303x1-B-34	PM Pump, 3-Stage, 1-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,499
PM303x2-B-34	PM Pump, 3-Stage, 2-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,495
PM303x3-B-34	PM Pump, 3-Stage, 3-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,490
PM303x4-B-34	PM Pump, 3-Stage, 4-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,486
PML303x1-B-34	PM Pump, 3-Stage "L" cartridge, 1-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,498
PML303x2-B-34	PM Pump, 3-Stage "L" cartridge, 2-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,494
PML303x3-B-34	PM Pump, 3-Stage "L" cartridge, 3-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,489
PML303x4-B-34	PM Pump, 3-Stage "L" cartridge, 4-vacuum cartridge, G3/4" vacuum ports on top & side, Silencer	1,484
PM303x1-A-01	PM Pump, 3-Stage, 1-vacuum cartridge, G1" vacuum port on side, Silencer	1,516
PM303x2-A-01	PM Pump, 3-Stage, 2-vacuum cartridge, G1" vacuum port on side, Silencer	1,513
PM303x3-A-01	PM Pump, 3-Stage, 3-vacuum cartridge, G1" vacuum port on side, Silencer	1,509
PM303x4-A-01	PM Pump, 3-Stage, 4-vacuum cartridge, G1" vacuum port on side, Silencer	1,504
PML303x1-A-01	PM Pump, 3-Stage "L" cartridge, 1-vacuum cartridge, G1" vacuum port on side, Silencer	1,516
PML303x2-A-01	PM Pump, 3-Stage "L" cartridge, 2-vacuum cartridge, G1" vacuum port on side, Silencer	1,512
PML303x3-A-01	PM Pump, 3-Stage "L" cartridge, 3-vacuum cartridge, G1" vacuum port on side, Silencer	1,507
PML303x4-A-01	PM Pump, 3-Stage "L" cartridge, 4-vacuum cartridge, G1" vacuum port on side, Silencer	1,502

Spare Parts – Cartridges & Silencer

Part No.	Description	Weight (g)
VC303	Midi Vacuum Cartridge, 3-Stage for PM303	24.08
VCL303	Midi Vacuum Cartridge, "L" Series, 3-Stage for PML303	24.72
VTS-34	Free flow silencer, G3/4"	52.37

MPM pump

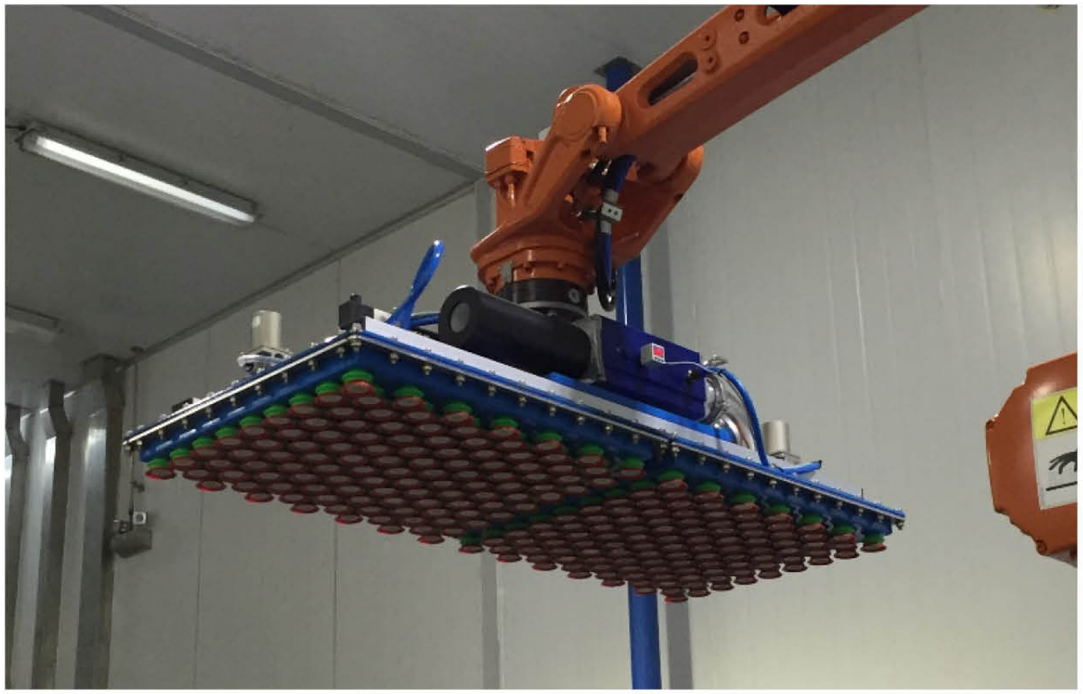
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Low noise level
Available with a three-stage MIDI vacuum cartridge pump integrate
Up to 16 cartridges with high vacuum flow

Advantages

Large vacuum flow to replace 4kw (5Hp) electric motor pump
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Durable and light aluminum body

Application



Overall of specification

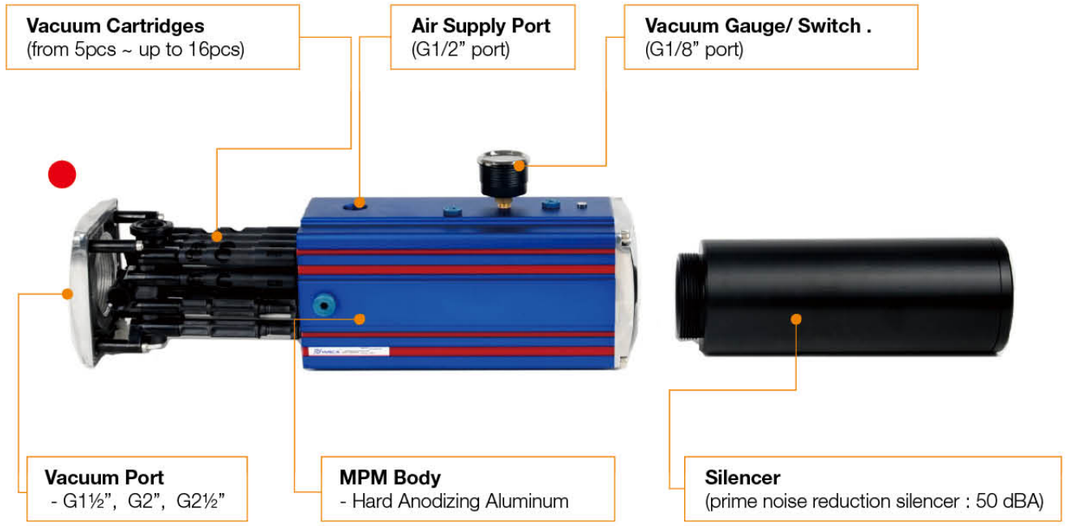
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
MPM303x6	92	7	2046	804	55 ~ 62
MPM303x8	92	7	2728	1072	55 ~ 62
MPM303x10	92	7	3410	1340	55 ~ 62
MPM303x12	92	7	4092	1608	55 ~ 62
MPM303x14	92	7	4774	1876	55 ~ 62
MPM303x16	92	7	5456	2144	55 ~ 62
MPML303x6	75	7	2172	624	55 ~ 62
MPML303x8	75	7	2896	832	55 ~ 62
MPML303x10	75	7	3620	1040	55 ~ 62
MPML303x12	75	7	4344	1248	55 ~ 62
MPML303x14	75	7	5068	1456	55 ~ 62
MPML303x16	75	7	5792	1664	55 ~ 62

MPM pump

VMECA MPM pump can be combined with the optional Vacuum On/Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution especially for high vacuum flow – Maximum 16 cartridges.
It can replace up to 4kw motor pumps with many better advantages such performance, size, weight, noise level and etc. Also it can contribute dramatic energy saving effect by VMECA air saving kit.

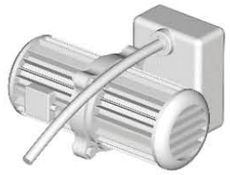
Key advantages

· VMECA vacuum cartridge integrated
· High vacuum flow as much as replaced with 4kw motor pump
· Quite low noise level



Comparison against motor pump

- Compact size & Lighter weight
- Fast maintenance & Low sound level
- No heat emission

	 **Motor pump**	 **VMECA MPM pump**
Size	Huge	Compact
Weight	Much heavy	Light
Heat emission	Max. 40°c	None
Vacuum flow	High vacuum flow	High vacuum flow
Noise level	High noise level	Low noise level

※ Comparison data above can be different according to motor pump model.

MPM303x6 / MPML303x6

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
- Very low noise level
- Durable and light aluminum body

Specifications

Description	MPM303x6	MPML303x6
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	2046 Nl/min	2172Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,491 g	4,487 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x6	75	2.2	1812	735	528	318	188.4	171	99	27.6	-	-
	92	3.0	2028	912	636	384	198	192	132	99	38.4	11.4
	92	4.0	2046	924	765	564	414	258	139.8	103.8	41.4	12.6
MPML303x6	60	4.0	1812	1056	660	420	276	168	40.8		-	-
	70	5.0	2064	1200	780	492	300	225	138	71.4	-	-
	75	6.0	2172	1164	924	600	312	228	192	132	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x6	2.2	588	0.0038	0.013	0.0483	0.055	0.08	0.128	0.28	-	-
	3.0	672	0.0032	0.0098	0.0217	0.0433	0.0733	0.115	0.162	0.263	0.642
	4.0	804	0.003	0.0088	0.0133	0.025	0.0433	0.093	0.143	0.26	0.63
MPML303x6	4.0	420	0.0047	0.015	0.0283	0.0483	0.0633	0.1333	-	-	-
	5.0	510	0.0022	0.0133	0.025	0.0417	0.05	0.0667	0.1333	-	-
	6.0	624	0.002	0.0117	0.02	0.0333	0.0467	0.0600	0.1	-	-

MPM303x8 / MPML303x8

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
- Very low noise level
- Durable and light aluminum body

Specifications

Description	MPM303x8	MPML303x8
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	2728 Nl/min	2896 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,483 g	4,478 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x8	75	2.2	2416	980	704	424	251.2	228	132	36.8	-	-
	92	3.0	2704	1216	848	512	264	256	176	132	51.2	15.2
	92	4.0	2728	1232	1020	752	552	344	186.4	138.4	55.2	16.8
MPML303x8	60	4.0	2416	1408	880	560	368	224	54.4		-	-
	70	5.0	2752	1600	1040	656	400	300	184	95.2	-	-
	75	6.0	2896	1552	1232	800	416	304	256	176	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x8	2.2	784	0.0029	0.0098	0.0363	0.0413	0.06	0.096	0.21	-	-
	3.0	896	0.0024	0.0074	0.0163	0.0325	0.055	0.086	0.121	0.1975	0.481
	4.0	1072	0.0023	0.0066	0.01	0.0188	0.0325	0.07	0.1075	0.195	0.473
MPML303x8	4.0	560	0.0035	0.0113	0.0213	0.0363	0.0475	0.1	-	-	-
	5.0	680	0.0016	0.01	0.0188	0.0313	0.0375	0.05	0.1	-	-
	6.0	832	0.0015	0.0088	0.0150	0.0250	0.0350	0.0450	0.075	-	-

MPM303x10 / MPML303x10

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
· Very low noise level
· Durable and light aluminum body

Specifications

Description	MPM303x10	MPML303x10
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	3410 Nl/min	3620 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,476 g	4,469 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x10	75	2.2	3020	1225	880	530	314	285	165	46		
	92	3.0	3380	1520	1060	640	330	320	220	165	64	19
	92	4.0	3410	1540	1275	940	690	430	233	173	69	21
MPML303x10	60	4.0	3020	1760	1100	700	460	280	68		-	-
	70	5.0	3440	2000	1300	820	500	375	230	119	-	-
	75	6.0	3620	1940	1540	1000	520	380	320	220	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x10	2.2	980	0.0023	0.0078	0.029	0.033	0.048	0.077	0.168	-	-
	3.0	1120	0.0019	0.0059	0.013	0.026	0.044	0.069	0.097	0.158	0.385
	4.0	1340	0.0018	0.0053	0.008	0.015	0.026	0.056	0.086	0.156	0.378
MPML303x10	4.0	700	0.0028	0.009	0.017	0.0290	0.038	0.08	-	-	-
	5.0	850	0.0013	0.008	0.015	0.025	0.03	0.04	0.08	-	-
	6.0	1040	0.0012	0.007	0.012	0.02	0.028	0.036	0.06	-	-

MPM303x12 / MPML303x12

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
· Very low noise level
· Durable and light aluminum body

Specifications

Description	MPM303x12	MPML303x12
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	4092 Nl/min	4344 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,469 g	4,460 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x12	75	2.2	3624	1470	1056	636	376.8	342	198	55.2	-	-
	92	3.0	4056	1824	1272	768	396	384	264	198	76.8	22.8
	92	4.0	4092	1848	1530	1128	828	516	279.6	207.6	82.8	25.2
MPML303x12	60	4.0	3624	2112	1320	840	552	336	81.6		-	-
	70	5.0	4128	2400	1560	984	600	450	276	142.8	-	-
	75	6.0	4344	2328	1848	1200	624	456	384	264	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x12	2.2	1176	0.0019	0.0065	0.0242	0.0275	0.04	0.064	0.14	-	-
	3.0	1344	0.0016	0.0049	0.0108	0.0217	0.0367	0.0575	0.081	0.132	0.321
	4.0	1608	0.0015	0.0044	0.0067	0.0125	0.0217	0.047	0.072	0.13	0.315
MPML303x12	4.0	840	0.0023	0.0075	0.0142	0.0242	0.0317	0.0667	-	-	-
	5.0	1020	0.0011	0.0067	0.0125	0.0208	0.025	0.0333	0.0667	-	-
	6.0	1248	0.001	0.0058	0.01	0.0167	0.0233	0.03	0.05	-	-

MPM303x14 / MPML303x14

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
· Very low noise level
· Durable and light aluminum body

Specifications

Description	MPM303x14	MPML303x14
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	4774 Nl/min	5068 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,461 g	4,451 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x14	75	2.2	4228	1715	1232	742	439.6	399	231	64.4	-	-
	92	3.0	4732	2128	1484	896	462	448	308	231	89.6	26.6
	92	4.0	4774	2156	1785	1316	966	602	326.2	242.2	96.6	29.4
MPML303x14	60	4.0	4228	2464	1540	980	644	392	95.2		-	-
	70	5.0	4816	2800	1820	1148	700	525	322	166.6	-	-
	75	6.0	5068	2716	2156	1400	728	532	448	308	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x14	2.2	1372	0.0016	0.0056	0.0207	0.0236	0.0343	0.055	0.12	-	-
	3.0	1568	0.0014	0.0042	0.0093	0.0186	0.0314	0.0493	0.0693	0.1129	0.275
	4.0	1876	0.0013	0.0038	0.0057	0.0107	0.0186	0.04	0.0614	0.1114	0.27
MPML303x14	4.0	980	0.0020	0.0064	0.0121	0.0207	0.0271	0.0571	-	-	-
	5.0	1190	0.0009	0.0057	0.0107	0.0179	0.0214	0.0286	0.0571	-	-
	6.0	1456	0.0009	0.005	0.0086	0.0143	0.0200	0.0257	0.0429	-	-

MPM303x16 / MPML303x16

Features and Strengths

· Highly operational reliability despite fluctuating or low compressed-air pressure
· High vacuum flow with low energy consumption
  - Available to replace 4kw(5Hp) electric motor pump
· Very low noise level
· Durable and light aluminum body

Specifications

Description	MPM303x16	MPML303x16
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	5456 Nl/min	5792 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	55 ~ 62 dbA	55 ~ 62 dbA
Weight	4,454 g	4,422 g

Vacuum Flow

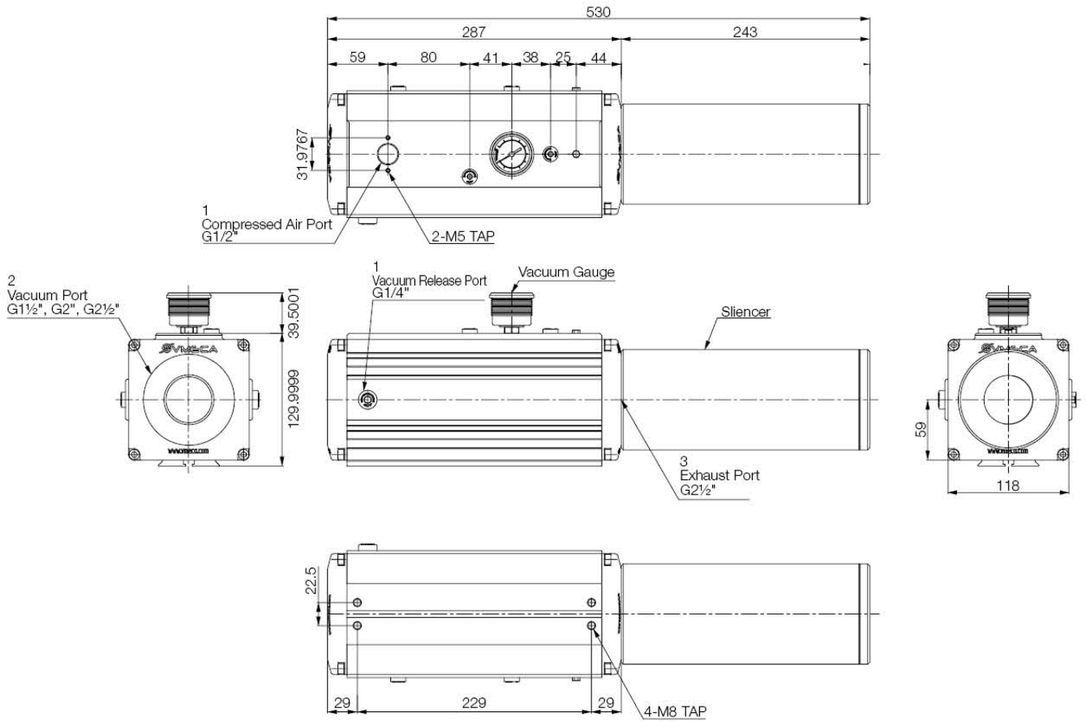
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
MPM303x16	75	2.2	4832	1960	1408	848	502.4	456	264	73.6	-	-
	92	3.0	5408	2432	1696	1024	528	512	352	264	102.4	30.4
	92	4.0	5456	2464	2040	1504	1104	688	372.8	276.8	110.4	33.6
MPML303x16	60	4.0	4832	2816	1760	1120	736	448	108.8		-	-
	70	5.0	5504	3200	2080	1312	800	600	368	190.4	-	-
	75	6.0	5792	3104	2464	1600	832	608	512	352	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
MPM303x16	2.2	1568	0.0014	0.0049	0.0181	0.0206	0.03	0.048	0.105	-	-
	3.0	1792	0.0012	0.0037	0.0081	0.0163	0.0275	0.0431	0.0606	0.0988	0.2406
	4.0	2144	0.0011	0.0033	0.005	0.0094	0.0163	0.035	0.0538	0.0975	0.2363
MPML303x16	4.0	1120	0.0018	0.0056	0.0106	0.0181	0.0238	0.05	-	-	-
	5.0	1360	0.0008	0.005	0.0094	0.0156	0.0188	0.025	0.05	-	-
	6.0	1664	0.0008	0.0044	0.0075	0.0125	0.0175	0.0225	0.0375	-	-

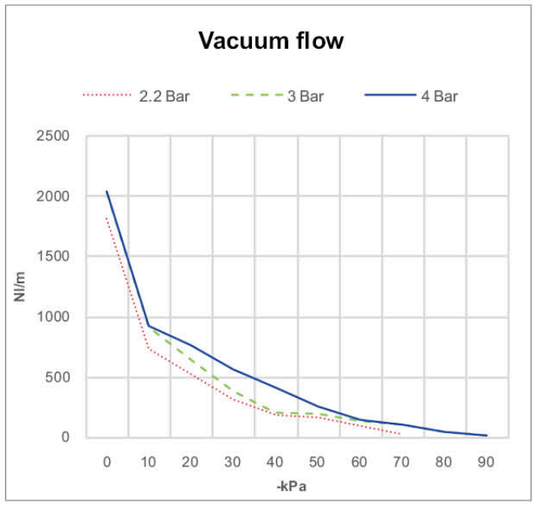
Dimensions – MPM303 / MPML303

[Unit : mm]

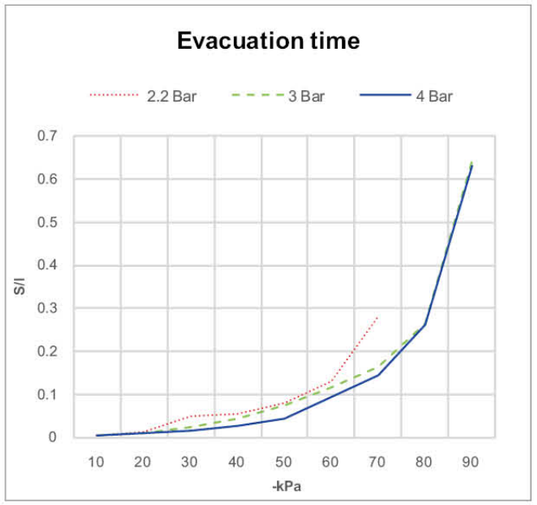


Performance data

MPM303x6

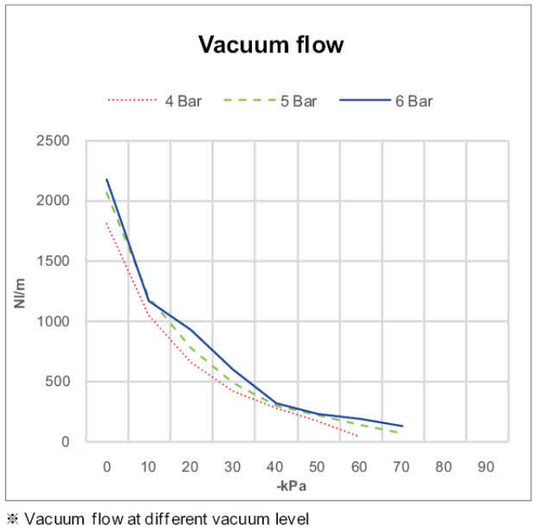


※ Vacuum flow at different vacuum level

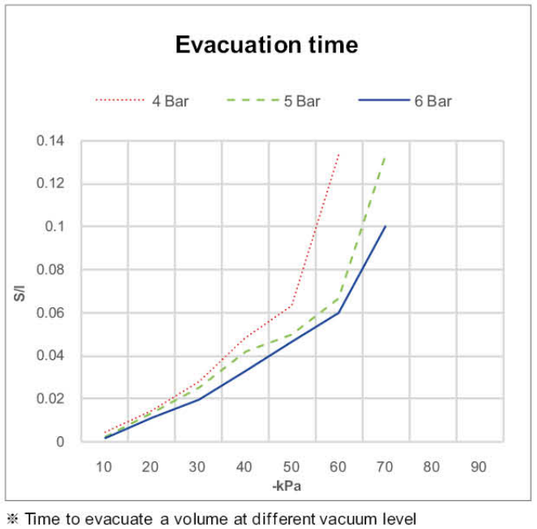


※ Time to evacuate a volume at different vacuum level

MPML303x6



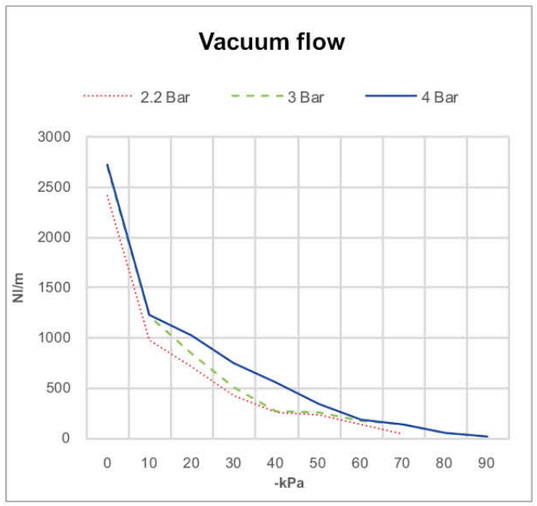
※ Vacuum flow at different vacuum level



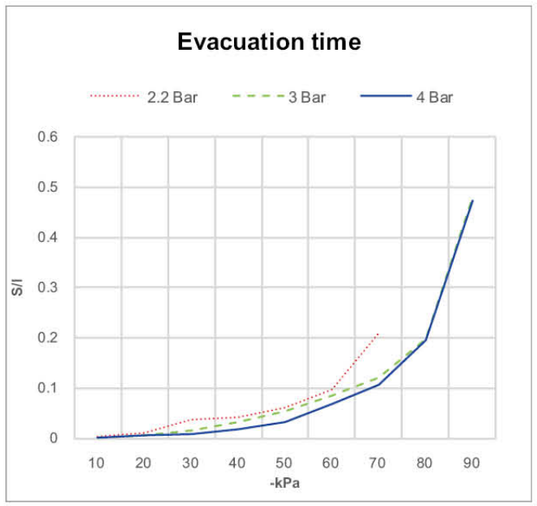
※ Time to evacuate a volume at different vacuum level

Performance data

MPM303x8

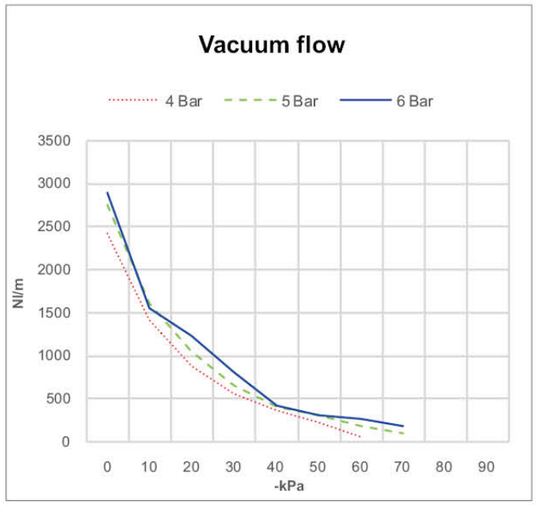


※ Vacuum flow at different vacuum level

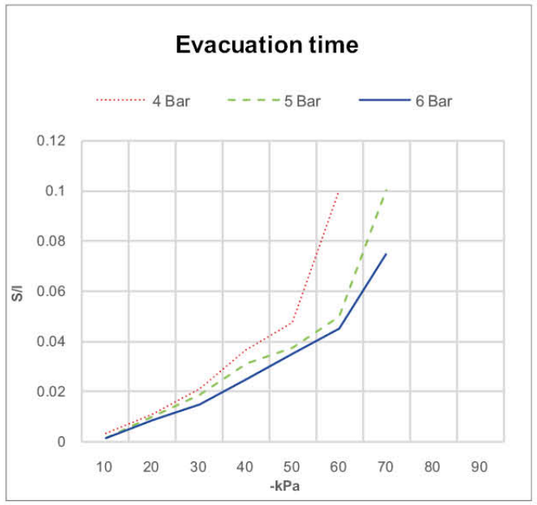


※ Time to evacuate a volume at different vacuum level

MPML303x8



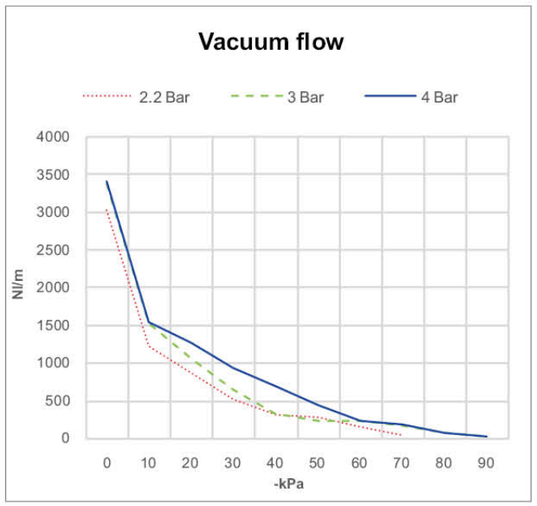
※ Vacuum flow at different vacuum level



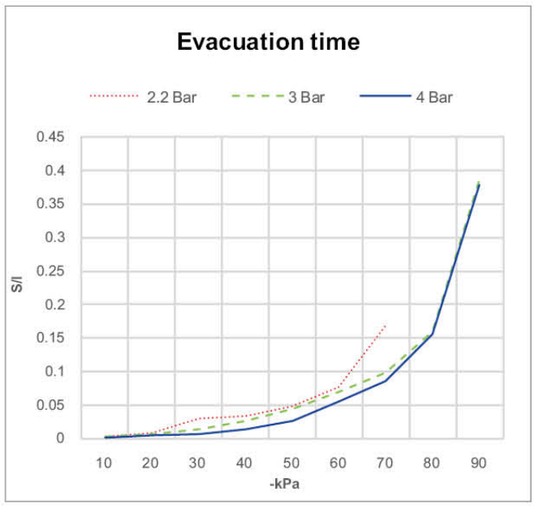
※ Time to evacuate a volume at different vacuum level

Performance data

MPM303x10

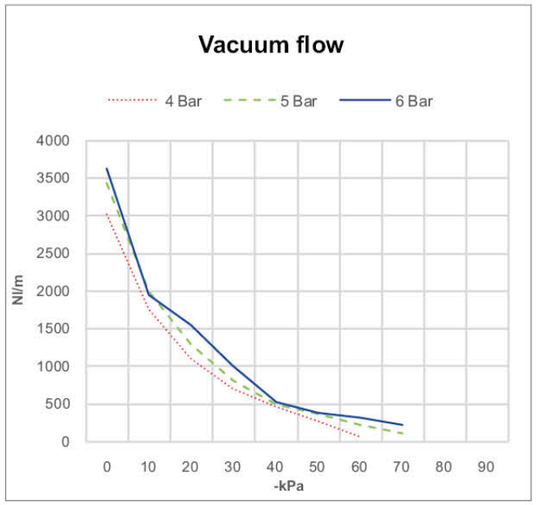


※ Vacuum flow at different vacuum level

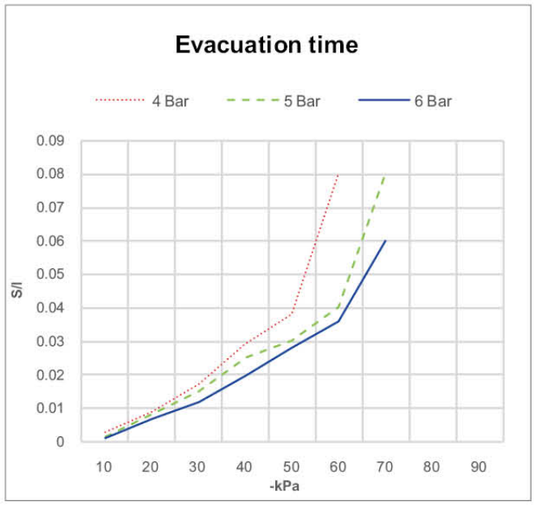


※ Time to evacuate a volume at different vacuum level

MPML303x10



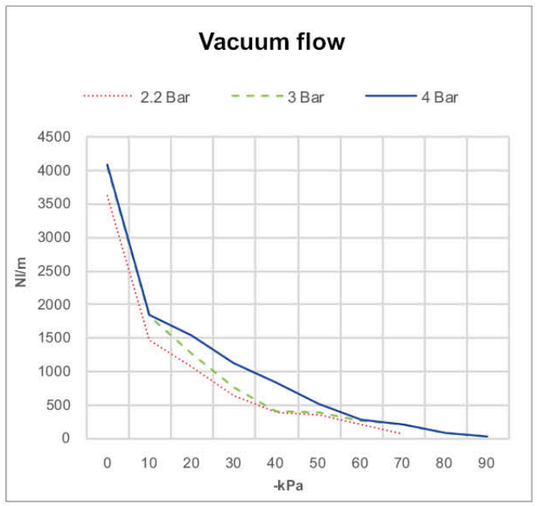
※ Vacuum flow at different vacuum level



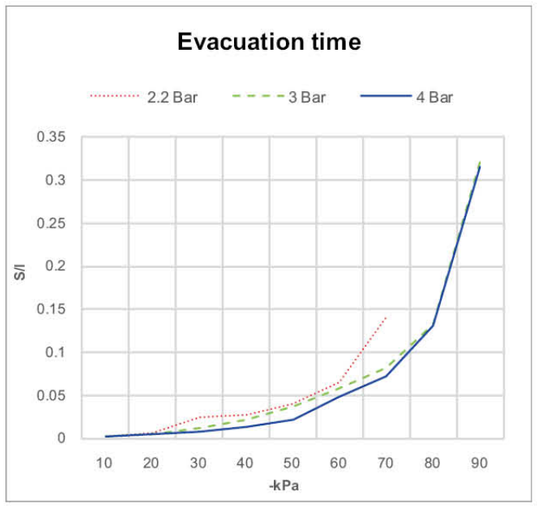
※ Time to evacuate a volume at different vacuum level

Performance data

MPM303x12

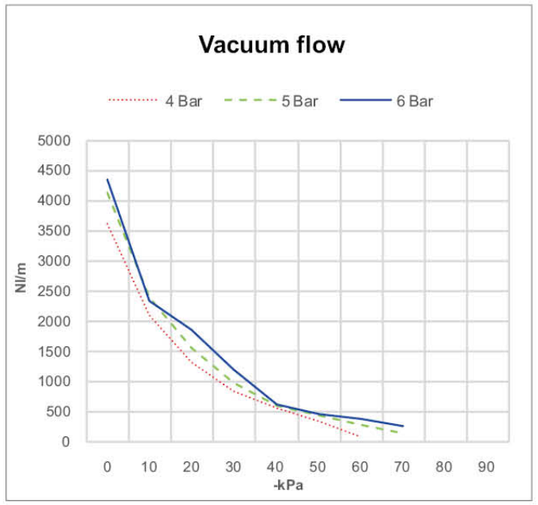


※ Vacuum flow at different vacuum level

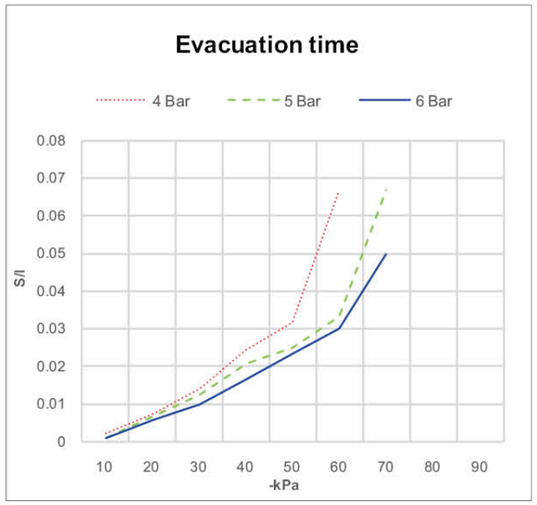


※ Time to evacuate a volume at different vacuum level

MPML303x12



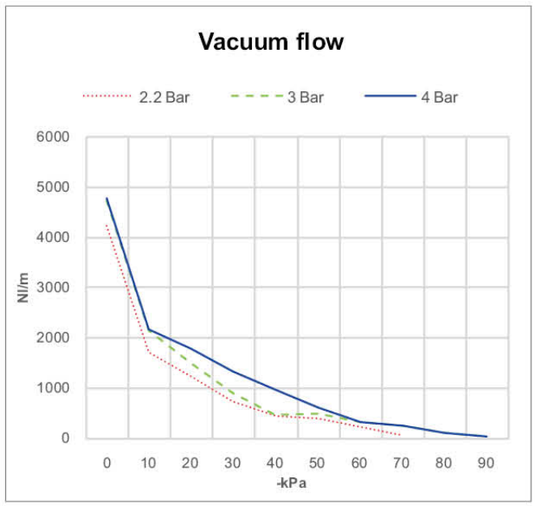
※ Vacuum flow at different vacuum level



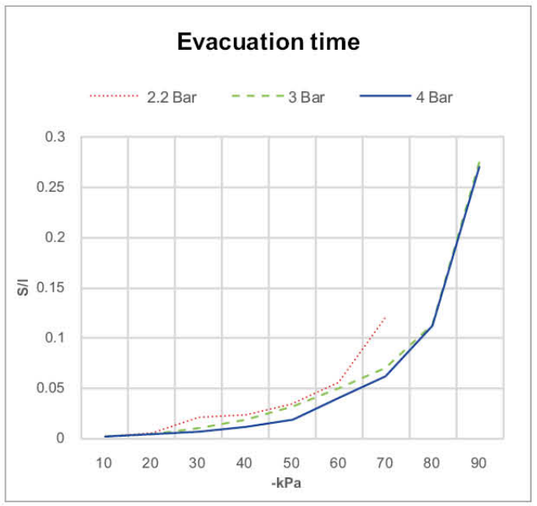
※ Time to evacuate a volume at different vacuum level

Performance data

MPM303x14

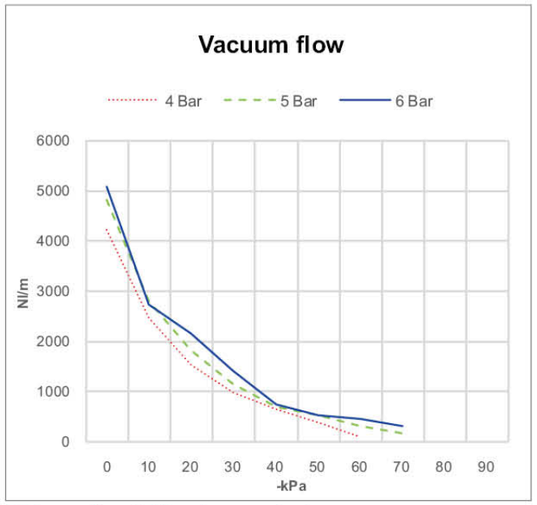


※ Vacuum flow at different vacuum level

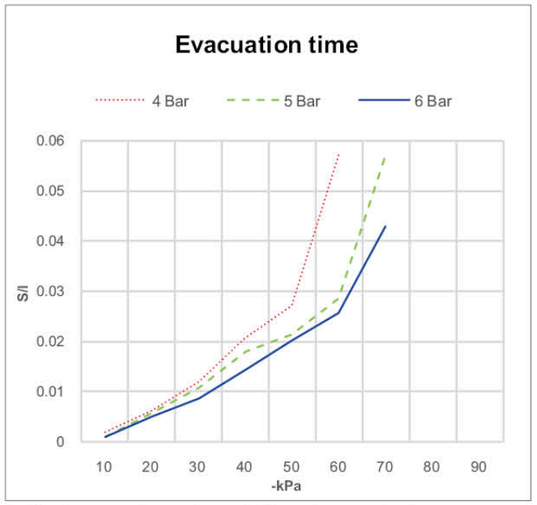


※ Time to evacuate a volume at different vacuum level

MPML303x14



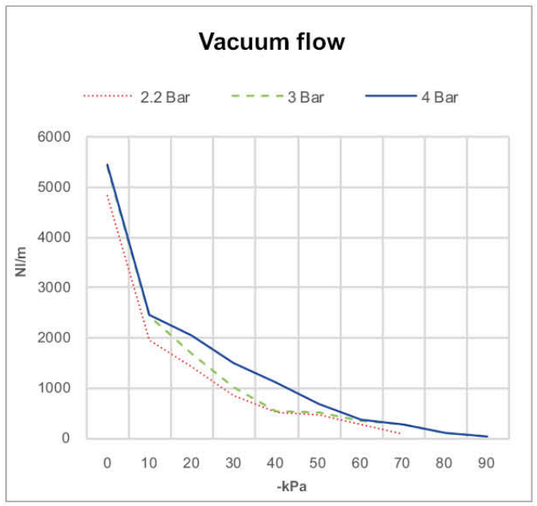
※ Vacuum flow at different vacuum level



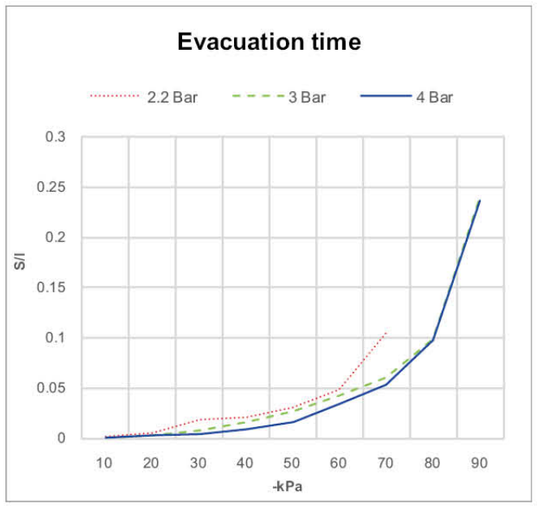
※ Time to evacuate a volume at different vacuum level

Performance data

MPM303x16

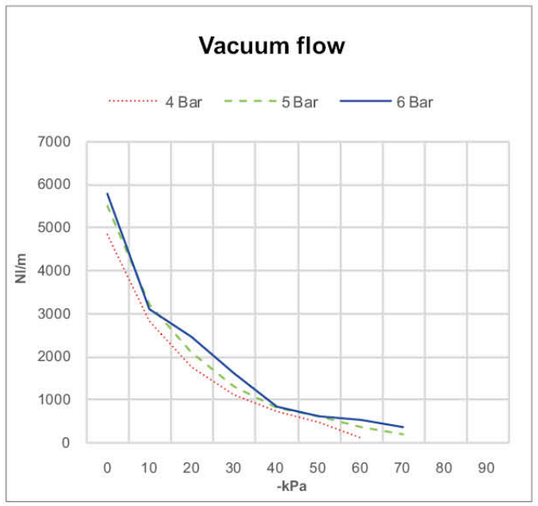


※ Vacuum flow at different vacuum level

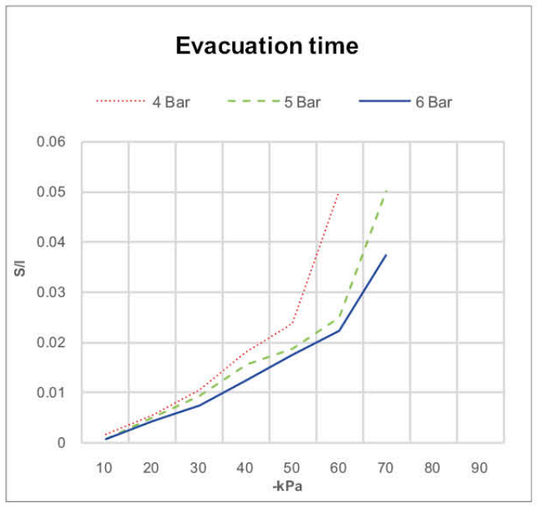


※ Time to evacuate a volume at different vacuum level

MPML303x16

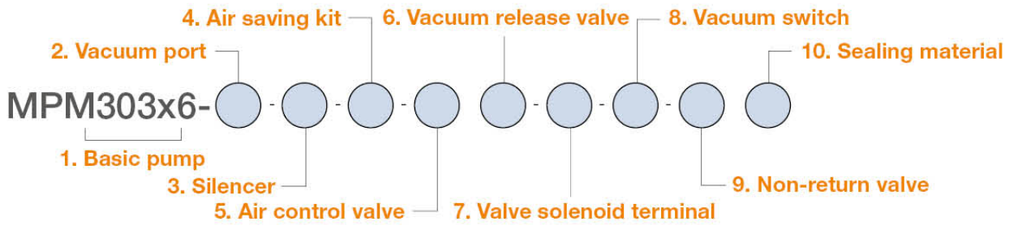


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	MPM pump, 3-stage, 6-vacuum cartridge	MPM303x6
	MPM pump, 3-stage, 8-vacuum cartridge	MPM303x8
	MPM pump, 3-stage, 10-vacuum cartridge	MPM303x10
	MPM pump, 3-stage, 12-vacuum cartridge	MPM303x12
	MPM pump, 3-stage, 14-vacuum cartridge	MPM303x14
	MPM pump, 3-stage, 16-vacuum cartridge	MPM303x16
	MPM pump, 3-stage "L" cartridge, 6-vacuum cartridge	MPML303x6
	MPM pump, 3-stage "L" cartridge, 8-vacuum cartridge	MPML303x8
	MPM pump, 3-stage "L" cartridge, 10-vacuum cartridge	MPML303x10
	MPM pump, 3-stage "L" cartridge, 12-vacuum cartridge	MPML303x12
	MPM pump, 3-stage "L" cartridge, 14-vacuum cartridge	MPML303x14
	MPM pump, 3-stage "L" cartridge, 16-vacuum cartridge	MPML303x16

2. Vacuum port	Description	Symbol
	Vacuum port, G1-1/2"	02
	Vacuum port, G2"	03
	Vacuum port, G2-1/2"	04

3. Silencer	Description	Symbol
	No silencer	Blank
	Free flow silencer with G2-1/2"	S

4. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV

5. Air control valve	Description	Symbol
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double air control valve, AC110V	D1
	Double air control valve, AC220V	D2
	Double air control valve, DC24V	D3

6. Vacuum release valve	Description	Symbol
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3

7. Valve solenoid terminal	Description	Symbol
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	

Build an Ordering No.

8. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

9. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

10. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
MPM303x6-02	MPM pump, 3-stage, 6-vacuum cartridge, G1-1/2" vacuum port	4,491
MPM303x8-02	MPM pump, 3-stage, 8-vacuum cartridge, G1-1/2" vacuum port	4,483
MPM303x10-02	MPM pump, 3-stage, 10-vacuum cartridge, G1-1/2" vacuum port	4,476
MPM303x12-02	MPM pump, 3-stage, 12-vacuum cartridge, G1-1/2" vacuum port	4,469
MPM303x14-02	MPM pump, 3-stage, 14-vacuum cartridge, G1-1/2" vacuum port	4,461
MPM303x16-02	MPM pump, 3-stage, 16-vacuum cartridge, G1-1/2" vacuum port	4,454
MPML303x6-02	MPM pump, 3-stage "L" cartridge, 6-vacuum cartridge, G1-1/2" vacuum port	4,487
MPML303x8-02	MPM pump, 3-stage "L" cartridge, 8-vacuum cartridge, G1-1/2" vacuum port	4,478
MPML303x10-02	MPM pump, 3-stage "L" cartridge, 10-vacuum cartridge, G1-1/2" vacuum port	4,469
MPML303x12-02	MPM pump, 3-stage "L" cartridge, 12-vacuum cartridge, G1-1/2" vacuum port	4,460
MPML303x14-02	MPM pump, 3-stage "L" cartridge, 14-vacuum cartridge, G1-1/2" vacuum port	4,451
MPML303x16-02	MPM pump, 3-stage "L" cartridge, 16-vacuum cartridge, G1-1/2" vacuum port	4,442
MPM303x6-03	MPM pump, 3-stage, 6-vacuum cartridge, G2" vacuum port	4,451
MPM303x8-03	MPM pump, 3-stage, 8-vacuum cartridge, G2" vacuum port	4,443
MPM303x10-03	MPM pump, 3-stage, 10-vacuum cartridge, G2" vacuum port	4,436
MPM303x12-03	MPM pump, 3-stage, 12-vacuum cartridge, G2" vacuum port	4,429
MPM303x14-03	MPM pump, 3-stage, 14-vacuum cartridge, G2" vacuum port	4,421
MPM303x16-03	MPM pump, 3-stage, 16-vacuum cartridge, G2" vacuum port	4,414
MPML303x6-03	MPM pump, 3-stage "L" cartridge, 6-vacuum cartridge, G2" vacuum port	4,447
MPML303x8-03	MPM pump, 3-stage "L" cartridge, 8-vacuum cartridge, G2" vacuum port	4,438
MPML303x10-03	MPM pump, 3-stage "L" cartridge, 10-vacuum cartridge, G2" vacuum port	4,428
MPML303x12-03	MPM pump, 3-stage "L" cartridge, 12-vacuum cartridge, G2" vacuum port	4,419
MPML303x14-03	MPM pump, 3-stage "L" cartridge, 14-vacuum cartridge, G2" vacuum port	4,409
MPML303x16-03	MPM pump, 3-stage "L" cartridge, 16-vacuum cartridge, G2" vacuum port	4,402
MPM303x6-04	MPM pump, 3-stage, 6-vacuum cartridge, G2-1/2" vacuum port	4,376
MPM303x8-04	MPM pump, 3-stage, 8-vacuum cartridge, G2-1/2" vacuum port	4,368
MPM303x10-04	MPM pump, 3-stage, 10-vacuum cartridge, G2-1/2" vacuum port	4,361
MPM303x12-04	MPM pump, 3-stage, 12-vacuum cartridge, G2-1/2" vacuum port	4,354
MPM303x14-04	MPM pump, 3-stage, 14-vacuum cartridge, G2-1/2" vacuum port	4,346
MPM303x16-04	MPM pump, 3-stage, 16-vacuum cartridge, G2-1/2" vacuum port	4,339
MPML303x6-04	MPM pump, 3-stage "L" cartridge, 6-vacuum cartridge, G2-1/2" vacuum port	4,373
MPML303x8-04	MPM pump, 3-stage "L" cartridge, 8-vacuum cartridge, G2-1/2" vacuum port	4,362
MPML303x10-04	MPM pump, 3-stage "L" cartridge, 10-vacuum cartridge, G2-1/2" vacuum port	4,353
MPML303x12-04	MPM pump, 3-stage "L" cartridge, 12-vacuum cartridge, G2-1/2" vacuum port	4,346
MPML303x14-04	MPM pump, 3-stage "L" cartridge, 14-vacuum cartridge, G2-1/2" vacuum port	4,336
MPML303x16-04	MPM pump, 3-stage "L" cartridge, 16-vacuum cartridge, G2-1/2" vacuum port	4,327

Spare Parts – Silencer

Part No.	Description	Weight (g)
VTS-04	Free flow silencer with G2-1/2"	880

Mega pump

Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
The largest compressed-air driven vacuum pump with comparatively compact and light weight

Advantages

Excellent performance in application that the large vacuum flow is needed such as replacement with Motor pump or conveyor system
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption

Application

Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
ML200	92	7	2410	600 ~ 780
ML400	92	7	4820	1200 ~ 1680
ML600	92	7	7230	1800 ~ 2520
ML800	92	7	9640	2400 ~ 3360
ML1000	92	7	12050	3000 ~ 4140
ML1200	92	7	14460	3600 ~ 4920
VCML100	92	7	1364	608
VCML200	92	7	2728	1072
VCML400	92	7	5456	2144
VCML100L	75	7	1448	416
VCML200L	75	7	2896	832
VCML400L	75	7	5792	1664

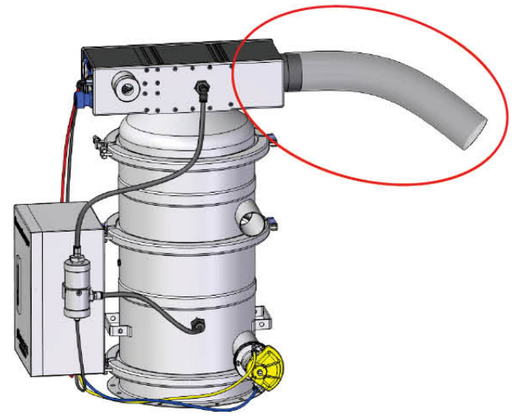
Mega pump

VMECA Mega pump is the biggest vacuum pump in the range to be used in large vacuum flow needed vacuum conveyor or replacement with large motor pump.
With air saving kit, air consumption can be dramatically reduced while covering the application which needs high vacuum flow.

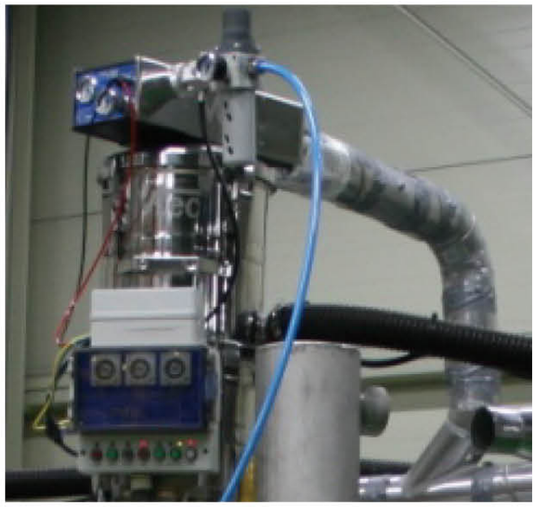
· VMECA vacuum cartridge integrated
· High vacuum flow to replace up to 12kw motor pump
· Energy save by air saving kit

External Exhaust Port

Basically, external exhaust port is used in the purpose to prevent exhaust air for elaborate work or which is clean room such as semicon, food, and chemical application, etc.
With VMECA conveyor system, an external exhaust port is used when the particles are too small for the filter to catch. When this happens, the small particles will exit through the exhaust port. For this reason the external exhaust port has been created to either recycle the particles back into the conveyor system or dump it in a container.



Example



ML200

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML200
Max. Vacuum level	-92 kPa
Open Vacuum flow	2410 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	4,800 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML200	92	6.0	2410	1688	1116	580	290	216	144	80	40	6.4

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML200	6.0	600 ~ 780	0.0021	0.0055	0.0124	0.029	0.054	0.09	0.153	0.274	0.67

ML400

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML400
Max. Vacuum level	-92 kPa
Open Vacuum flow	4820 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	4,800 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML400	92	6.0	4820	3376	2232	1160	580	432	288	160	80	12.8

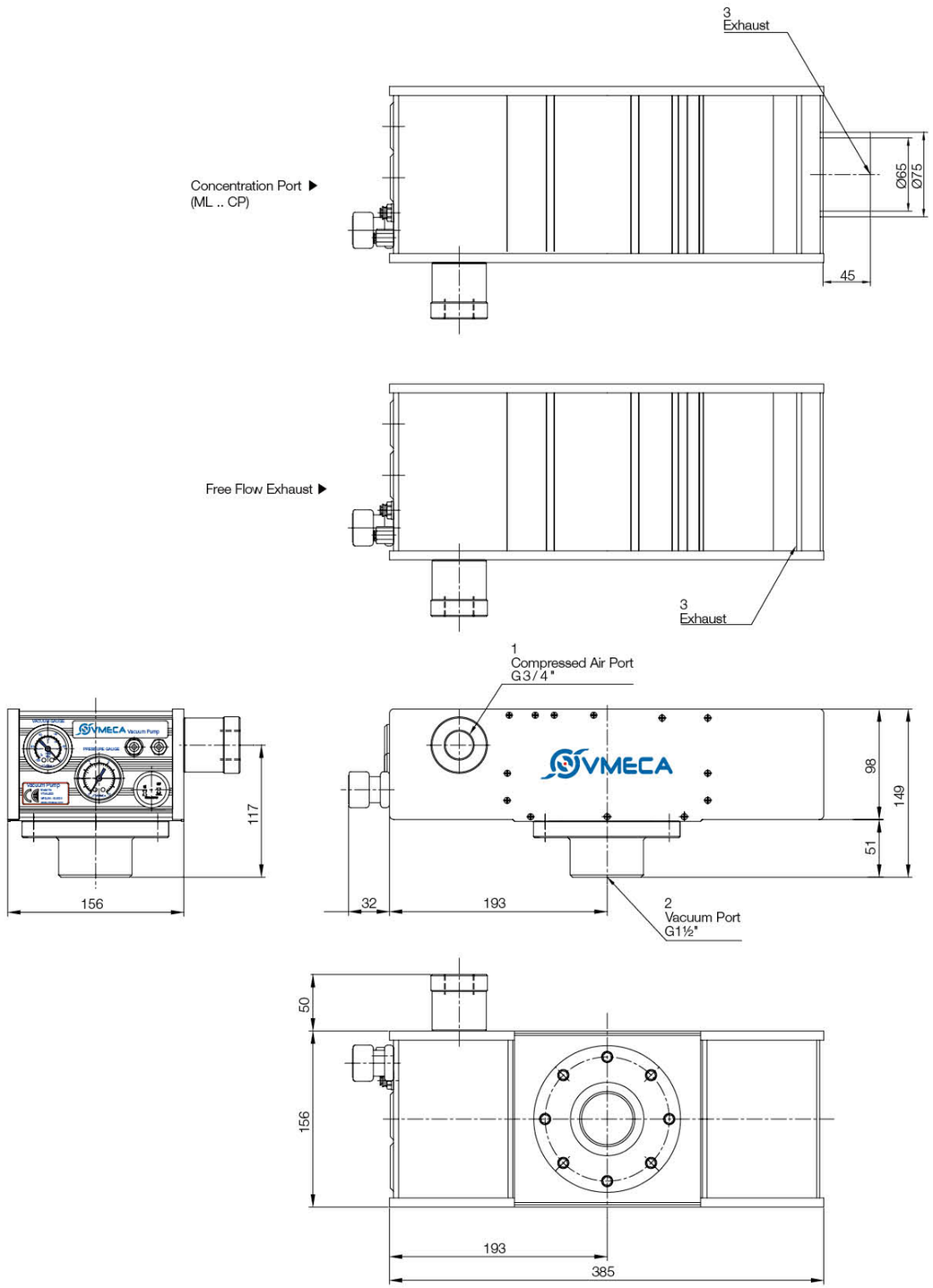
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML400	6.0	1200 ~ 1680	0.0011	0.0027	0.0062	0.014	0.027	0.045	0.076	0.137	0.335

Dimensions – Basic Pump

[Unit : mm]

ML200 & 400



ML600

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML600
Max. Vacuum level	-92 kPa
Open Vacuum flow	7230 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	5,920 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML600	92	6.0	7230	5064	3348	1740	870	648	432	240	120	19.2

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML600	6.0	1800 ~ 2520	0.0009	0.0021	0.0047	0.011	0.021	0.034	0.057	0.103	0.252

ML800

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML800
Max. Vacuum level	-92 kPa
Open Vacuum flow	9640 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	6,080 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML800	92	6.0	9640	6752	4464	2320	1160	864	576	320	160	25.6

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML800	6.0	2400 ~ 3360	0.0006	0.0014	0.0031	0.007	0.014	0.023	0.038	0.068	0.168

ML1000

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML1000
Max. Vacuum level	-92 kPa
Open Vacuum flow	12050 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	7,700 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML1000	92	6.0	12050	8440	5580	2900	1450	1080	720	400	200	32

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML1000	6.0	3000 ~ 4140	0.0005	0.0012	0.0026	0.006	0.012	0.018	0.031	0.057	0.147

ML1200

Features and Strengths

- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system for granules, transferring bulk materials and powder

Specifications

Description	ML1200
Max. Vacuum level	-92 kPa
Open Vacuum flow	14460 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	68 ~ 76 dBA
Weight	10,200 g

Vacuum Flow

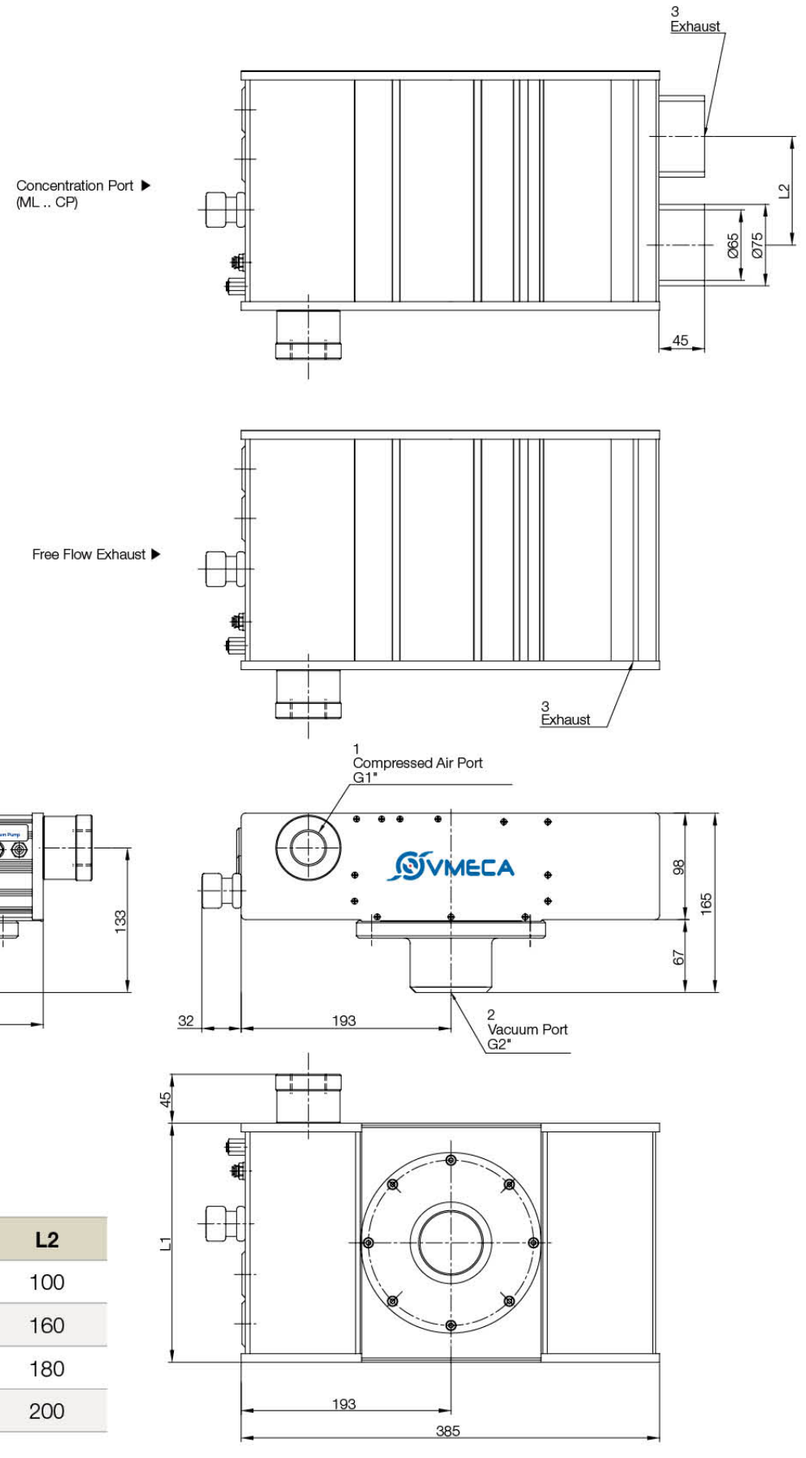
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
ML1200	92	6.0	14460	10128	6696	3480	1740	1296	864	480	240	38.4

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
ML1200	6.0	3600 ~ 4920	0.0004	0.0009	0.0021	0.005	0.009	0.014	0.024	0.045	0.125

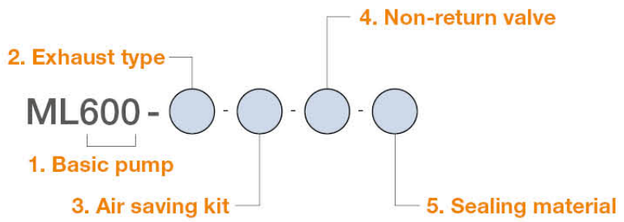
Dimensions – Basic Pump

[Unit : mm]



Model	L1	L2
ML600	220	100
ML800	284	160
ML1000	348	180
ML1200	412	200

Build an Ordering No.



1. Basic pump	Description	Symbol
	Mega Pump - 200 Series, G1-1/2" vacuum port, G3/4" air supply port	ML200
	Mega Pump - 400 Series, G1-1/2" vacuum port, G3/4" air supply port	ML400
	Mega Pump - 600 Series, G2" vacuum port, G3/4" air supply port	ML600
	Mega Pump - 800 Series, G2" vacuum port, G3/4" air supply port	ML800
	Mega Pump - 1000 Series, G2" vacuum port, G3/4" air supply port	ML1000
	Mega Pump - 1200 Series, G2" vacuum port, G3/4" air supply port	ML1200

2. Exhaust type	Description	Symbol
	Free flow exhaust duct	Blank
	Concentration port	CP

3. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS

4. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

5. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
ML200	Mega Pump - 200 Series, G1-1/2" vacuum port, G3/4" air supply port	4,800
ML400	Mega Pump - 400 Series, G1-1/2" vacuum port, G3/4" air supply port	4,880
ML600	Mega Pump - 600 Series, G2" vacuum port, G3/4" air supply port	5,920
ML800	Mega Pump - 800 Series, G2" vacuum port, G3/4" air supply port	6,080
ML1000	Mega Pump - 1000 Series, G2" vacuum port, G3/4" air supply port	7,700
ML1200	Mega Pump - 1200 Series, G2" vacuum port, G3/4" air supply port	10,200

VCML100 / VCML100L

Features and Strengths

- Integrated VMECA Vacuum Cartridge technology
- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system
- for granules, transferring bulk materials and powder

Specifications

Description	VCML100	VCML100L
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	1364 Nl/min	1,448 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dBA	60 ~ 65 dBA
Weight	5,520 g	5,518 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCML100	75	2.2	1208	490	352	212	126	114	66	18	-	-
	92	3.0	1352	608	424	256	132	128	88	66	26	7.6
	92	4.0	1364	616	510	376	276	172	93	69	28	8.4
VCML100L	60	4.0	1208	688	440	280	184	112	27	-	-	-
	70	5.0	1376	784	520	328	200	150	92	45	-	-
	75	6.0	1448	828	616	400	208	152	128	88	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCML100	2.2	388	0.005	0.02	0.027	0.08	0.10	0.18	0.40	-	-
	3.0	472	0.004	0.018	0.02	0.07	0.09	0.16	0.20	0.30	0.95
	4.0	608	0.003	0.01	0.01	0.02	0.05	0.10	0.15	0.25	0.85
VCML100L	4.0	280	0.0089	0.023	0.04	0.07	0.09	0.2	-	-	-
	5.0	340	0.0057	0.018	0.03	0.063	0.075	0.1	0.2	-	-
	6.0	416	0.0053	0.015	0.029	0.052	0.071	0.09	0.15	-	-

VCML200 / VCML200L

Features and Strengths

- Integrated VMECA Vacuum Cartridge technology
- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system
- for granules, transferring bulk materials and powder

Specifications

Description	VCML200	VCML200L
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	2,728 Nl/min	2,896 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dBA	60 ~ 65 dBA
Weight	5,523 g	5,530 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCML200	75	2.2	2416	980	704	424	252	228	132	36	-	-
	92	3.0	2704	1216	848	512	264	256	176	132	52	15.2
	92	4.0	2728	1232	1020	752	552	344	186	138	56	16.8
VCML200L	60	4.0	2416	1376	880	560	368	224	54	-	-	-
	70	5.0	2752	1568	1040	656	400	300	184	90	-	-
	75	6.0	2896	1656	1232	800	416	304	256	176	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCML200	2.2	784	0.0029	0.0098	0.0363	0.0413	0.06	0.096	0.21	-	-
	3.0	896	0.0024	0.0074	0.0163	0.0325	0.055	0.086	0.121	0.1975	0.481
	4.0	1072	0.0023	0.0066	0.01	0.0188	0.0325	0.07	0.1075	0.195	0.473
VCML200L	4.0	560	0.0045	0.0115	0.02	0.035	0.045	0.1	-	-	-
	5.0	680	0.0029	0.009	0.015	0.0315	0.0375	0.05	0.1	-	-
	6.0	832	0.0027	0.0075	0.0145	0.026	0.0355	0.045	0.075	-	-

VCML400 / VCML400L

Features and Strengths

- Integrated VMECA Vacuum Cartridge technology
- High vacuum flow to replace motor pump
- Easy maintenance
- Excellent performance in leakage application and in conveying system
- for granules, transferring bulk materials and powder

Specifications

Description	VCML400	VCML400L
Max. Vacuum level	-92 kPa	-75 kPa
Open Vacuum flow	5,456 Nl/min	5,792 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	60 ~ 65 dBA	60 ~ 65 dBA
Weight	5,270 g	5,262 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCML400	75	2.2	4832	1960	1408	848	504	456	264	72	-	-
	92	3.0	5408	2432	1696	1024	528	512	352	264	104	30.4
	92	4.0	5456	2464	2040	1504	1104	688	372	276	112	33.6
VCML400L	60	4.0	4832	2752	1760	1120	736	448	108	-	-	-
	70	5.0	5504	3136	2080	1312	800	600	368	180	-	-
	75	6.0	5792	3312	2464	1600	832	608	512	352	-	-

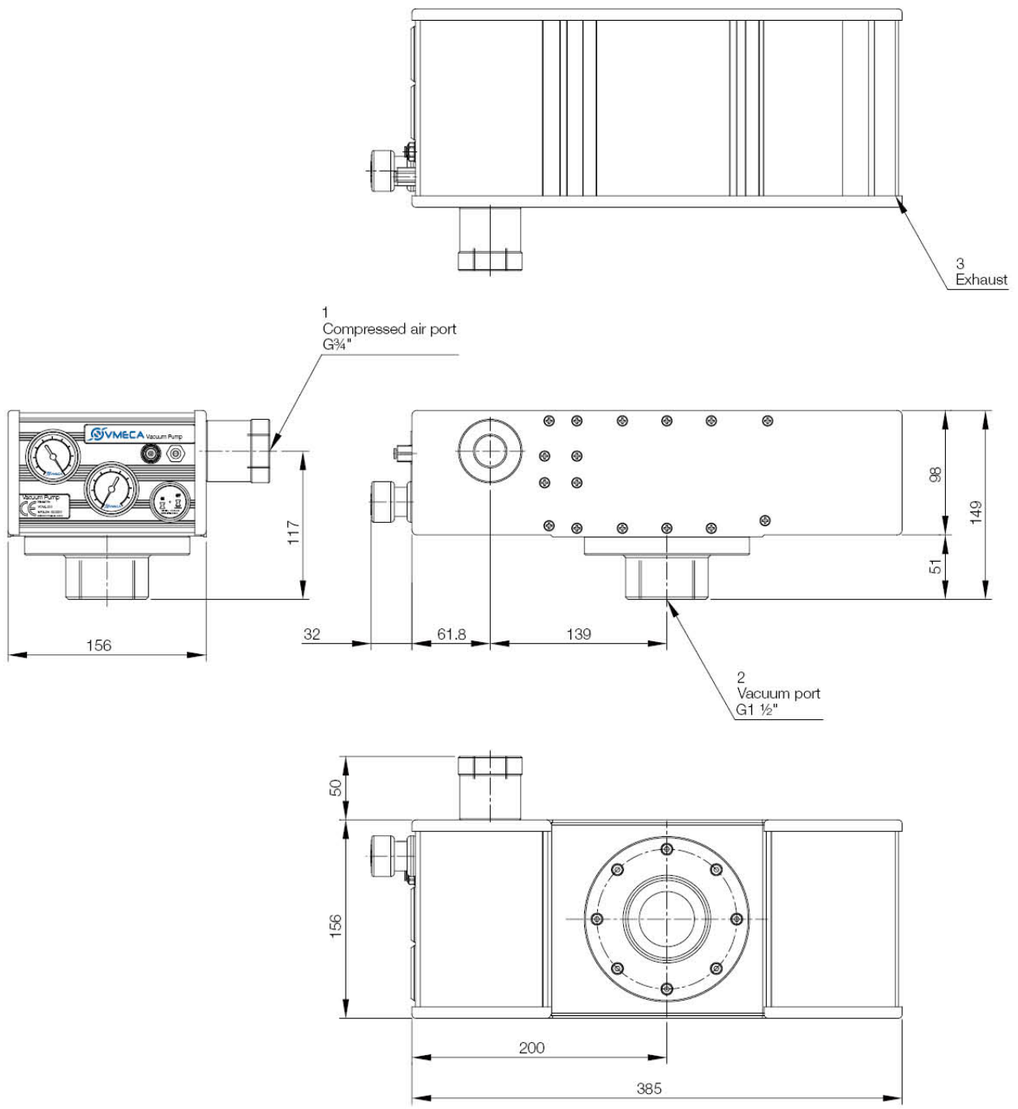
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCML400	2.2	1586	0.0014	0.0049	0.0181	0.0206	0.03	0.048	0.105	-	-
	3.0	1792	0.0012	0.0037	0.0081	0.0163	0.0275	0.0431	0.0606	0.0988	0.2406
	4.0	2144	0.0011	0.0033	0.005	0.0094	0.0163	0.035	0.0538	0.0975	0.2363
VCML400L	4.0	1120	0.0022	0.0058	0.01	0.0175	0.0225	0.05	-	-	-
	5.0	1360	0.0014	0.0045	0.0075	0.0158	0.0188	0.0250	0.05	-	-
	6.0	1664	0.0013	0.0038	0.0073	0.013	0.0178	0.0225	0.0375	-	-

Dimensions – Basic Pump

[Unit : mm]

Free flow exhaust duct Type

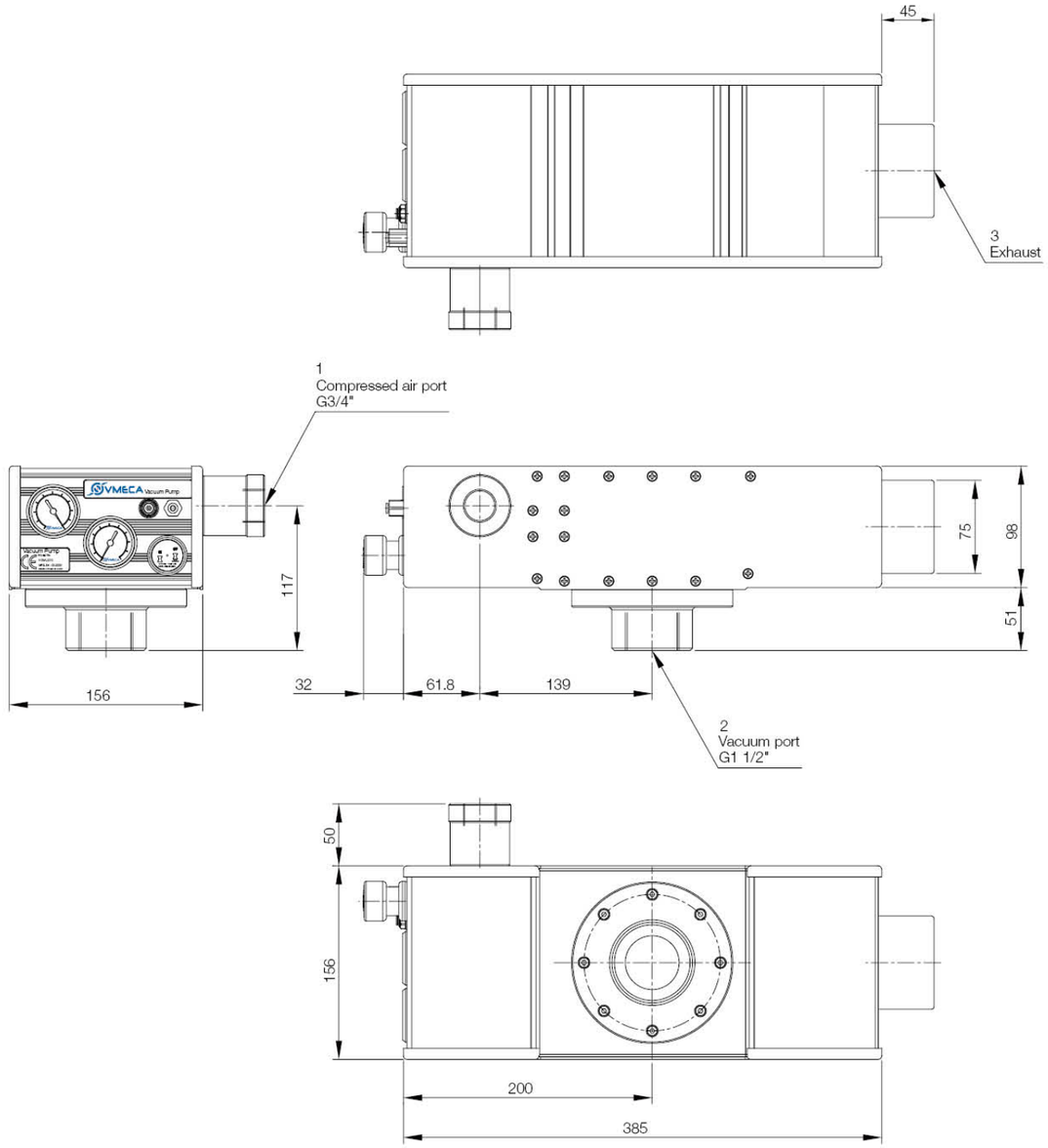


VCML100(L)-VCML400(L)

Dimensions – Basic Pump

[Unit : mm]

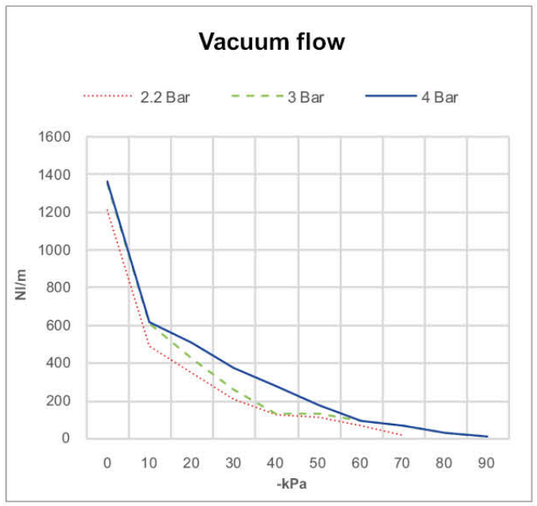
CP (Concentration port) Type



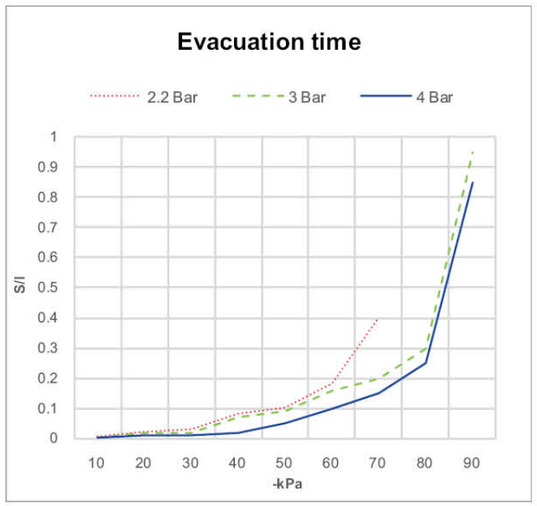
VCML100(L)-VCML400(L)-CP

Performance data

VCML100

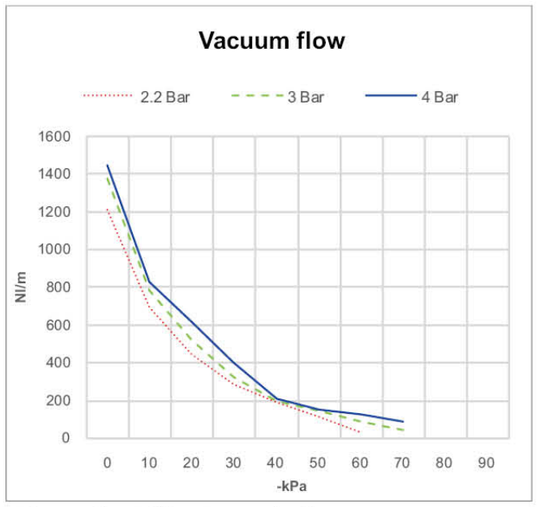


※ Vacuum flow at different vacuum level

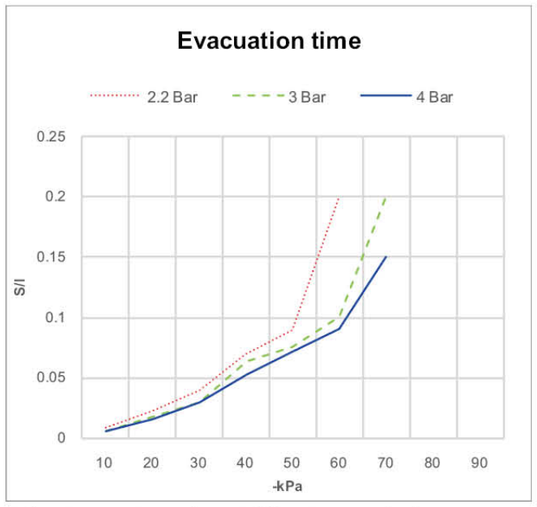


※ Time to evacuate a volume at different vacuum level

VCML100L



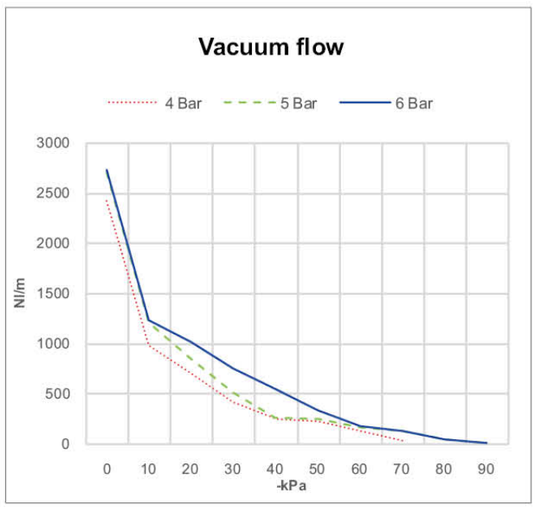
※ Vacuum flow at different vacuum level



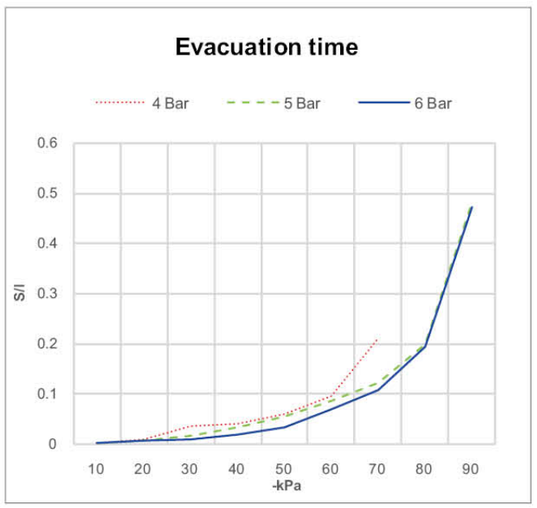
※ Time to evacuate a volume at different vacuum level

Performance data

VCML200

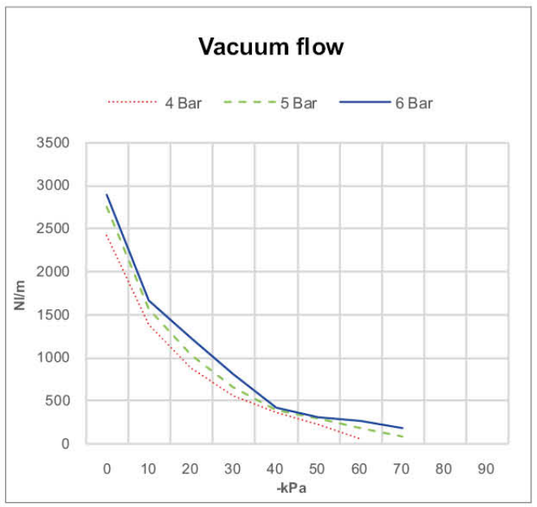


※ Vacuum flow at different vacuum level

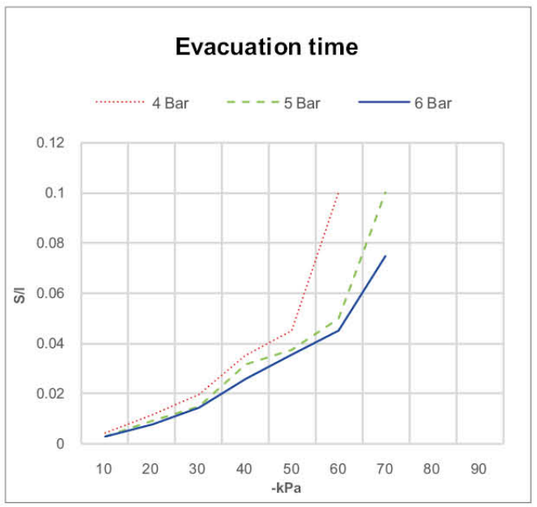


※ Time to evacuate a volume at different vacuum level

VCML200L



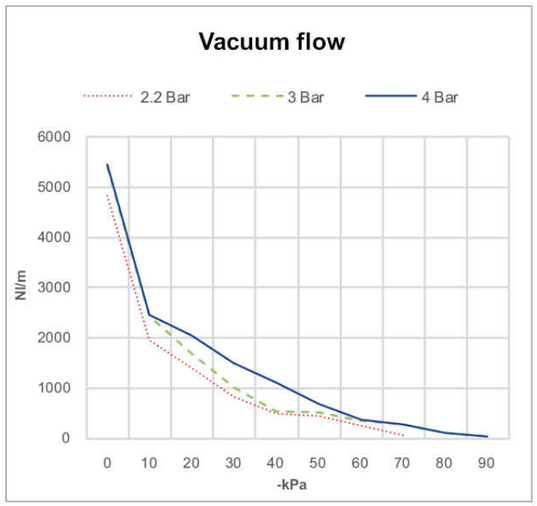
※ Vacuum flow at different vacuum level



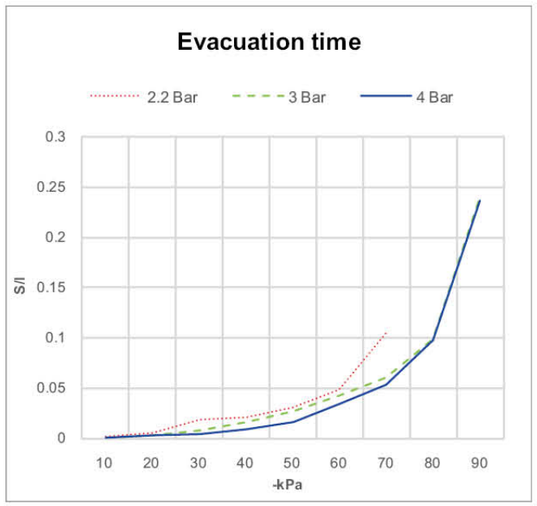
※ Time to evacuate a volume at different vacuum level

Performance data

VCML400

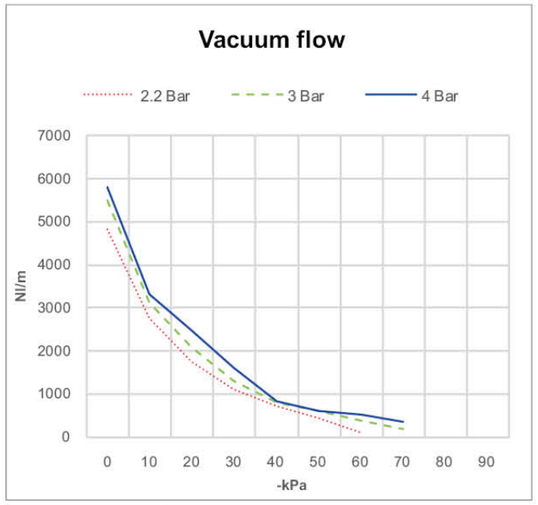


※ Vacuum flow at different vacuum level

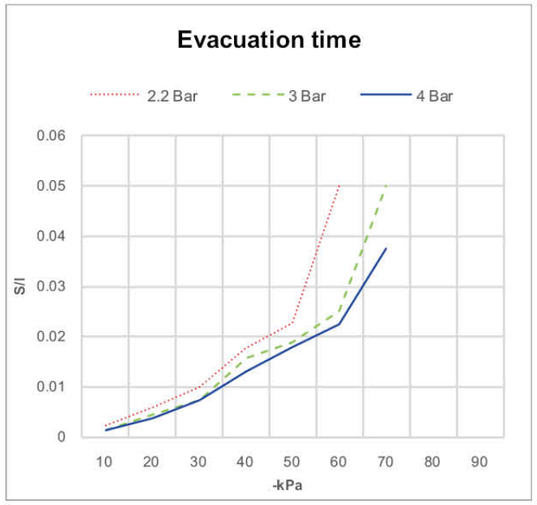


※ Time to evacuate a volume at different vacuum level

VCML400L

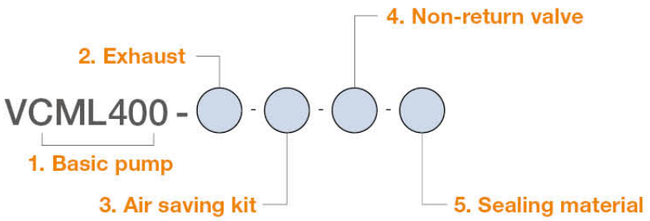


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	VCML Pump, 100 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML100
	VCML Pump, 200 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML200
	VCML Pump, 400 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML400
	VCML Pump "L" cartridge, 100 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML100L
	VCML Pump "L" cartridge, 200 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML200L
	VCML Pump "L" cartridge, 400 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	VCML400L

2. Exhaust	Description	Symbol
	Free flow exhaust duct	No mark
	Concentration port	CP

3. Air saving kit	Description	Symbol
	No air saving kit	Blank
	Air saving kit without air control valve	AS

4. Non-return valve	Description	Symbol
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

5. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VCML100	VCML Pump, Cartridge, 100 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,220
VCML200	VCML Pump, Cartridge, 200 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,234
VCML400	VCML Pump, Cartridge, 400 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,270
VCML100L	VCML Pump, "L" cartridge, 100 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,218
VCML200L	VCML Pump, "L" cartridge, 200 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,230
VCML400L	VCML Pump, "L" cartridge, 400 Series, G 1-1/2" Vacuum Port, G 3/4" Air Supply Port	5,262

Spare Parts – Cartridges

Part No.	Description	Available model
VC303	Midi Vacuum Cartridge, 3-Stage	VCML100, VCML200, VCML400
VCL303	Midi Vacuum Cartridge, "L" Series, 3-Stage	VCML100L, VCML200L, VCML400L

VCS pump

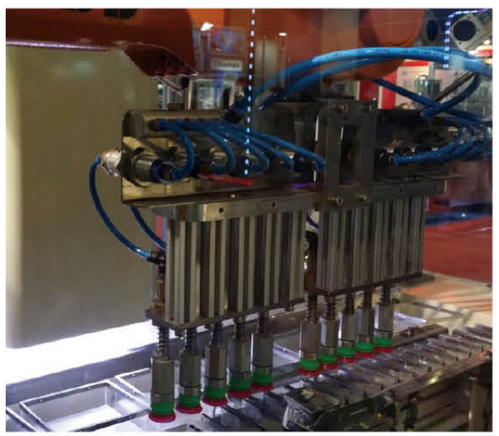
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Integrated with level compensator and vacuum ejector in one body

Advantages

No need additional level compensator
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Compact size and light weight

Application



Overall of specification

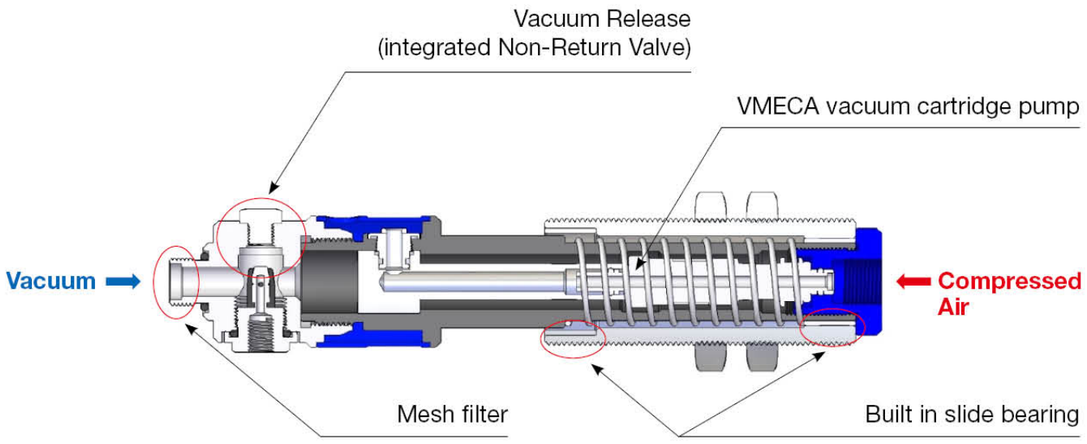
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
VCS102	83	2.2	16	10	50 ~ 55
VCS202	90	7	40	32	55 ~ 65

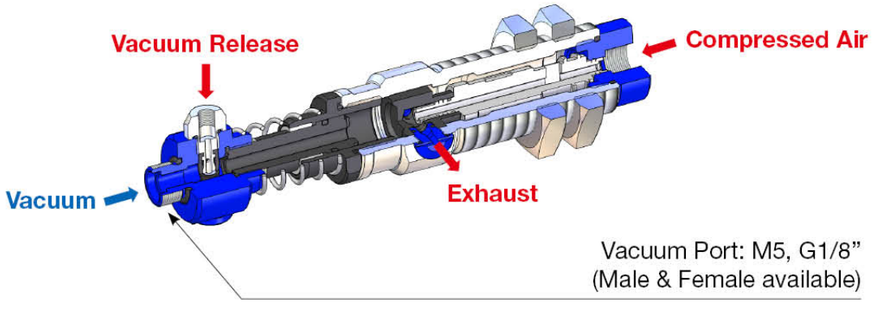
VCS pump

VMECA VCS pump is integrated with VMECA vacuum cartridge technology for reliable and stable performance in fluctuation or drop of compressed-air pressure.
VCS is compact size as it features vacuum ejector and level compensator in one body so that it can build vacuum system in simple structure. Also individual vacuum system can be easily made for safely handling applications.

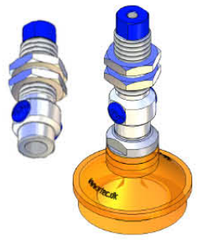
Key advantages

· VMECA vacuum cartridge integrated
· Individual vacuum system
· Level compensator in one body



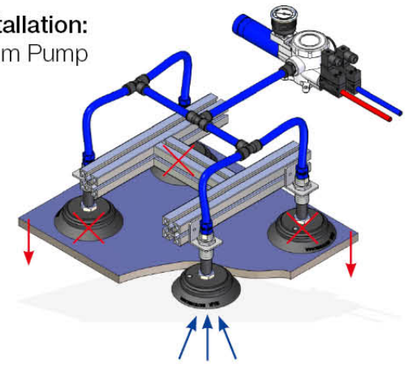


Body type

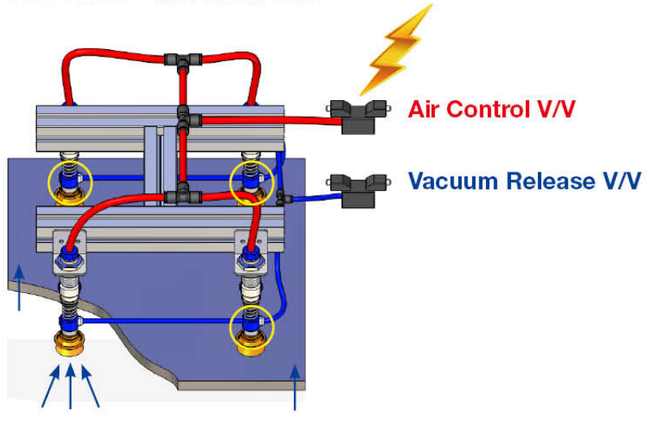
A type	B type	C type	D type
			
Vacuum Cartridge + Level compensator + Non-return valve (option)	Vacuum Cartridge + Level compensator + Non-return valve (option)	Vacuum Cartridge + Holder + Non-return valve (option)	Vacuum Cartridge + Holder

Individual vacuum system

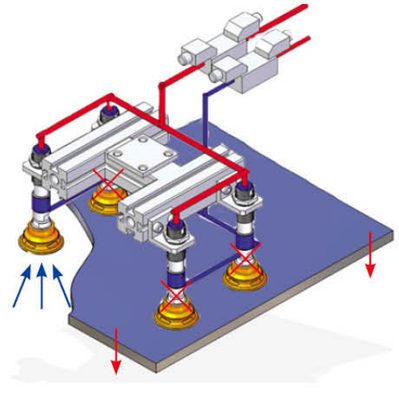
Typical installation:
Suction Cup + Level Spring + Vacuum Pump



VCS Series - with check valve



VCS Series - without check valve



VCS102

Features and Strengths

- Built in level compensator in one body
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Quick response time
- Compact size and light weight

Specifications

Description	VCS102
Max. Vacuum level	-83 kPa
Open Vacuum flow	16 Nl/min
Max. Feed pressure	2.2 bar
Temperature	-20 ~ 80 °C
Noise level	50~55 dBA
Weight	28.72 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCS102	50	1.1	11.5	6.3	2.2	1.6	0.7	-	-	-	-	-
	83	1.8	14.2	9.4	3.3	2.2	2	1.4	0.8	0.4	0.18	-
	83	2.2	16	11.9	5.1	2.3	1.4	1.3	0.9	0.3	0.12	-

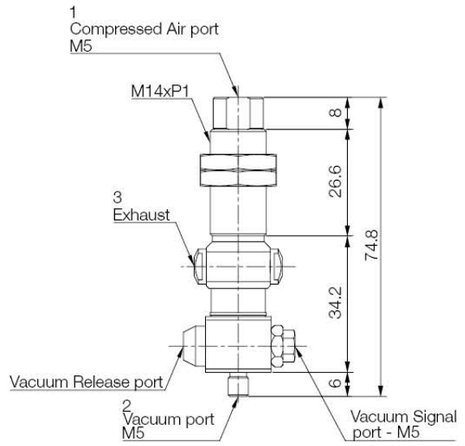
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCS102	1.1	5.9	0.68	3	6.1	11.8	27.2	-	-	-	-
	1.8	8.2	0.4	1.48	4.3	6.9	9.1	15.3	27.4	50.2	-
	2.2	10	0.34	1.6	3.9	7	10.4	17.5	30.9	61.4	-

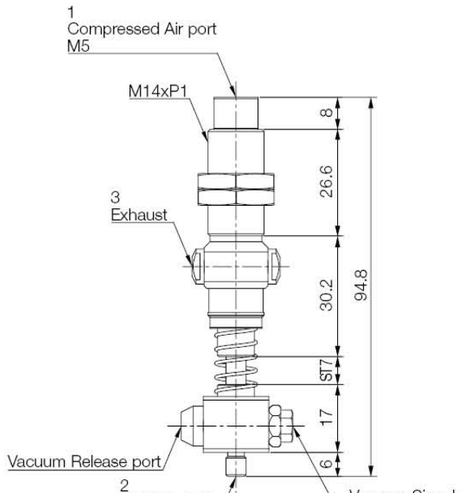
Dimensions – VCS102 series

[Unit : mm]

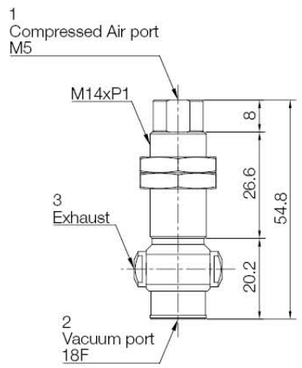
VCS102-LM5
VCS102C-LM5



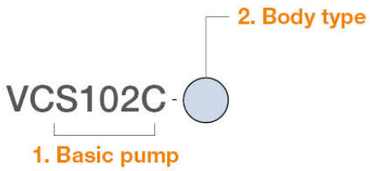
VCS102-LM5 07
VCS102C-LM5 07



VCS102-L18F



Build an Ordering No.



1. Basic pump	Description	Symbol
	Vacuum speeder VCS102 series, 2-stage cartridge, No release check valve	VCS102
	Vacuum speeder VCS102 series, 2-stage cartridge, Release check valve	VCS102C

2. Body type	Description	Symbol
	Port size M5 male	LM5
	Port size M5 male, Level compensator 7mm	LM507
	Port size G1/8" female: Only available with VCS102	L18F

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VCS102-LM5	Vacuum speeder VCS102 series, 2-stage cartridge, No release check valve, Port size M5 male	43
VCS102-LM507	Vacuum speeder VCS102 series, 2-stage cartridge, No release check valve, Port size M5 male, Level compensator 7mm	47
VCS102-L18F	Vacuum speeder VCS102 series, 2-stage cartridge, No release check valve, Port size G1/8" female	28.72
VCS102C-LM5	Vacuum speeder VCS102 series, 2-stage cartridge, Release check valve, Port size M5 male	45
VCS102C-LM507	Vacuum speeder VCS102 series, 2-stage cartridge, Release check valve, Port size M5 male, Level compensator 7mm	46

Spare Parts – Cartridges

Part No.	Description
VC102	Micro vacuum cartridge, 2-Stage

VCS202

Features and Strengths

- Built in level compensator in one body
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Quick response time
- Compact size and light weight

Specifications

Description	VCS202
Max. Vacuum level	-90 kPa
Open Vacuum flow	40 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 °C
Noise level	55 ~ 65 dBA
Weight	232.82 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VCS202	50	1.7	35	25.4	12.8	8.3	4	-	-	-	-	-
	65	2.2	38.8	29.5	17	11.5	8	5.2	1.4	-	-	-
	90	3.14	40	36.9	26	15.8	11	8.9	6.6	3.9	2	-
	85	4	40	42.7	31	23	14.1	7.6	6.4	3.9	1.3	-

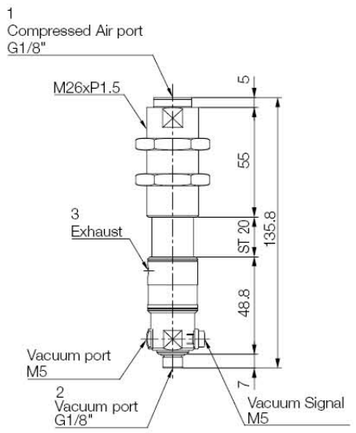
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VCS202	1.7	17	0.26	0.59	1.29	2.56	-	-	-	-	-
	2.2	20	0.18	0.48	0.95	1.55	2	2.5	-	-	-
	3.14	26	0.15	0.37	0.61	1.5	1.5	2	3.8	6.2	-
	4	32	0.14	0.39	0.59	0.9	1.2	1.8	3.2	6.9	-

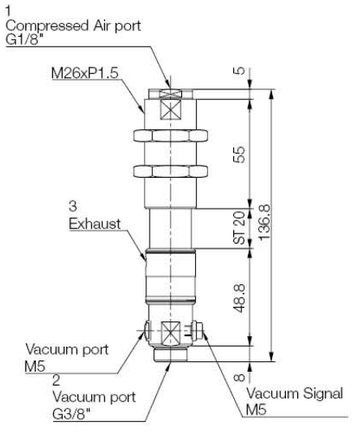
Dimensions – VCS202 series

[Unit : mm]

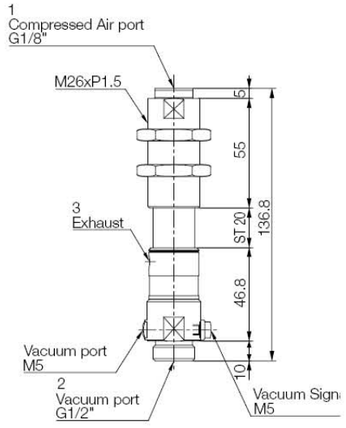
VCS202 – Internal level compensator type



VCS102-LM5 07
VCS102C-LM5 07

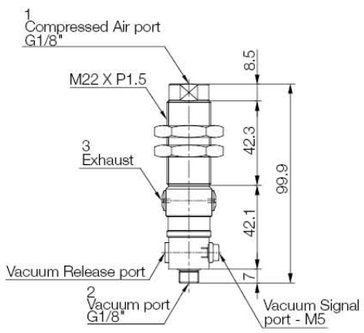


VCS202-38M20
VCS202C-38M20

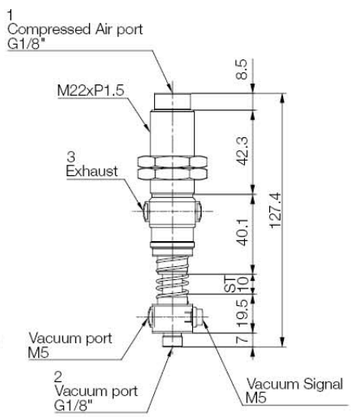


VCS202-12M20
VCS202C-12M20

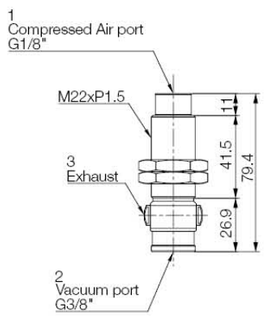
VCS202 – External level compensator type



VCS102-L18M
VCS102C-L18M

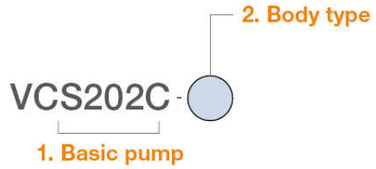


VCS202-L18M 10
VCS202C-L18M 10



VCS202-L38F

Build an Ordering No.



1. Basic pump	Description	Symbol
	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve	VCS202
	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve	VCS202C

2. Body type	Description	Symbol
	Port size G1/8" male, Level compensator 20mm	18M20
	Port size G3/8" male, Level compensator 20mm	38M20
	Port size G1/2" male, Level compensator 20mm	12M20
	Port size G1/8" male	L18M
	Port size G1/8" male, Level compensator 10mm	L18M10
	Port size G3/8" female: Only available with VCS202	L38F

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VCS202-18M20	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G1/8" male, Level compensator 20mm	228.02
VCS202-38M20	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G3/8" male, Level compensator 20mm	229.2
VCS202-12M20	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G1/2" male, Level compensator 20mm	232.82
VCS202-L18M	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G1/8" male	114.72
VCS202-L18M10	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G3/8" male, Level compensator 10mm	130.56
VCS202-L38F	Vacuum speeder VCS202 series, 2-stage cartridge, No release check valve, Port size G3/8" female	92.25
VCS202C-18M20	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve, Port size G1/8" male, Level compensator 20mm	228.83
VCS202C-38M20	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve, Port size G3/8" male, Level compensator 20mm	229.03
VCS202C-12M20	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve, Port size G1/2" male, Level compensator 20mm	232.6
VCS202C-L18M	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve, Port size G1/8" male	113.68
VCS202C-L18M10	Vacuum speeder VCS202 series, 2-stage cartridge, Release check valve, Port size G1/8" male, Level compensator 10mm	129.84

Spare Parts – Cartridges

Part No.	Description
VC202	Mini vacuum cartridge, 2-Stage

VSM pumps

Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Multiple connection ports

Advantages

Fast response time with individual vacuum system available
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption

Application

Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
VSM202	90	7	44	40	55 ~ 65
VSM203	90	7	84.5	40	55 ~ 65
VSM302	92	7	171	152	50 ~ 60
VSM303	92	7	341	152	50 ~ 60

VSM pump

VMECA VSM pump is integrated with VMECA vacuum cartridge technology for reliable and stable performance In fluctuation or drop of compressed-air pressure.
VQ pump is the most suitable in high speed application such as delta robot in packaging industry because SC pump has check valve on vacuum release port so, it can operate in 2times faster evacuation time compared with conventional vacuum ejectors.

Key advantages

· VMECA vacuum cartridge integrated
· Available for quick release without vacuum release valve
· Auto filter cleaning system

Features

Wide selection

· VSM without vacuum cartridge
when using as a slave to another vacuum source; typically sealed applications or where fast response time is Not required.

· VSM with VC202 Mini cartridge (2stage cartridge)
Provide sufficient vacuum flow (up to 41Nl/m) for sealed applications such as sheet metal handling or for low volume applications with small vacuum cups.
*Optional non-return valve available.

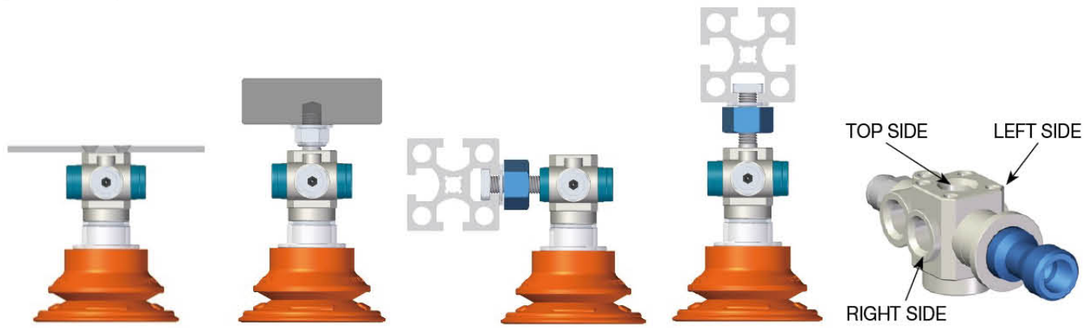
· VSM with VC203 cartridge (3stage cartridge
For quick response time in high volume and sealed Applications with large vacuum cups or for non-sealed applications such as cardboard handling where high vacuum flow is required.
*Optional non-return valve is available.

Various mounting options

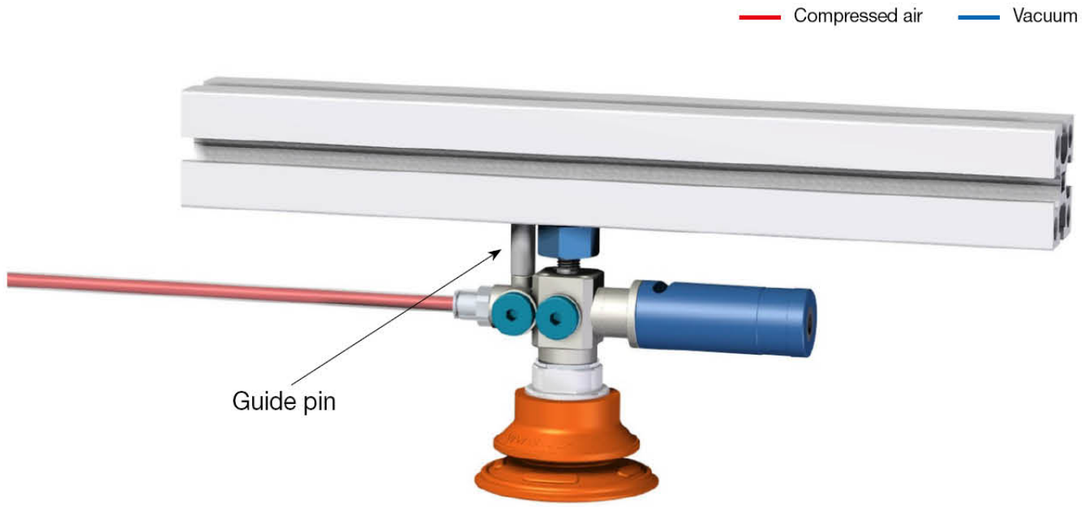
· Option “F” (Direct plate mounting) – Type ⓐ
Mount directly to plate (only for top mounting) using M4 screws and G1/8 plugs.

· Option “M” (M8 male mounting) – Type ⓑ
Mount using M8 male fixed at factory in one of 3 specified positions (top, right and left) with G1/8” plugs. Left and right side mounting provides a lower profile vs. top mounting

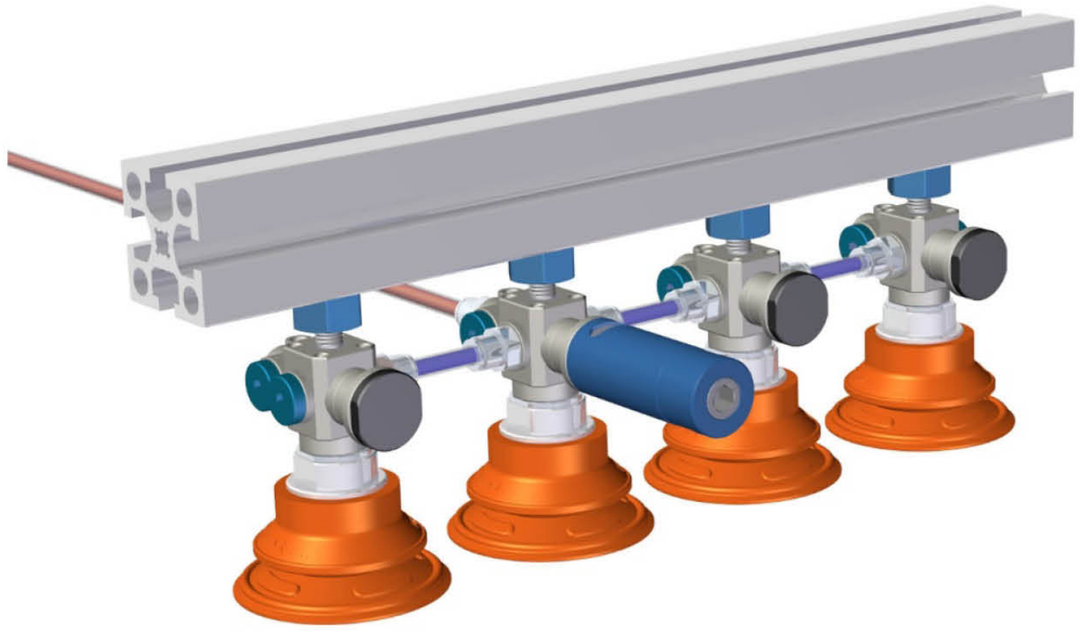
· Option “P” (T-Slot Frame Mounting) – Type ⓒ & ⓓ
Mount to appropriate t-slot frame in one of 3 positions (top, right, left) using M8 27mm Or M6 22mm screw as specified with supplied nut, washers and G1/8” plugs.



Features



▲ To prevent VSM from rotating when mounted in the top position, use a guide pin inserted into M5 port on the top of the VSM and extended into the T-frame slot.



▲ Use VSM as a slave unit with vacuum supplied by another VSM in sealed applications or in applications where quick response time is not required.

VSM202

Features and Strengths

· Efficient individual and independent point-of-use vacuum
· Highly operational reliability despite fluctuating or low compressed-air pressure
· Extremely quick response
· Available for multiple connection ports

Specifications

Description	VSM202
Max. Vacuum level	-90 kPa
Open Vacuum flow	44 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	55 ~ 65 dBA
Weight	41 g

Vacuum Flow

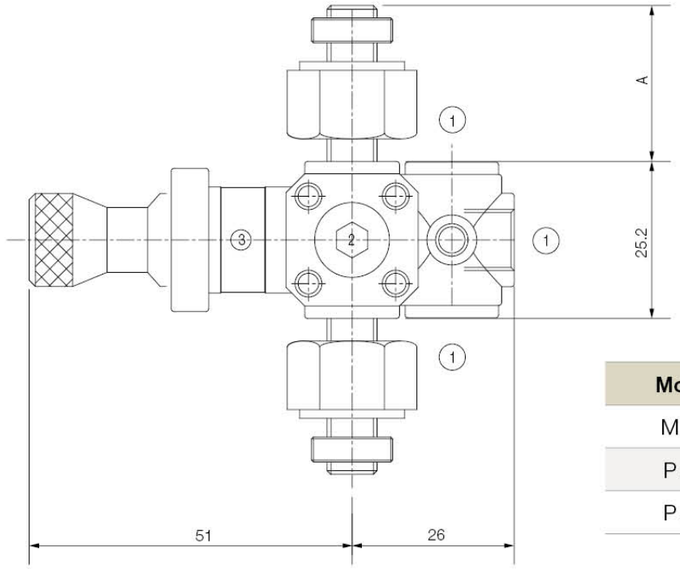
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSM202	48	1.7	38.5	20	16	12	5.3	-	-	-	-	-
	65	2.2	39	26.5	17.3	15.6	13.5	8.4	2.6	-	-	-
	90	3.14	44	36	24.5	16.5	16	13.8	10	7	3.5	-
	89	4.0	42	38.8	28.5	21.2	15.8	12.2	9.5	7	2.4	-

Evacuation Time

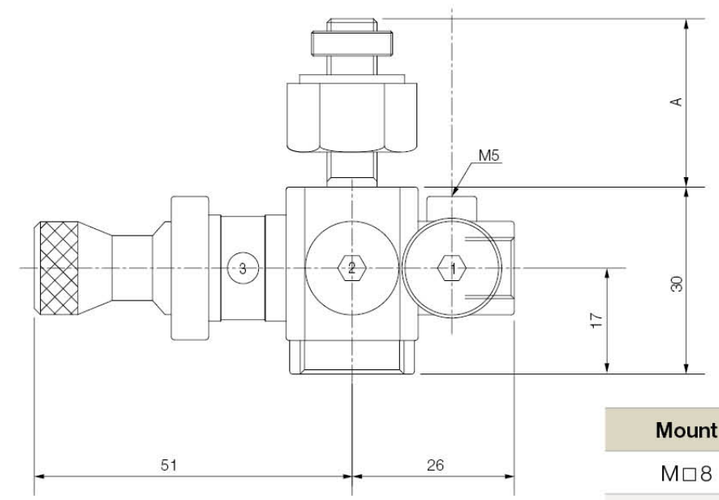
Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSM202	1.7	22	0.33	0.47	0.89	1.93	-	-	-	-	-
	2.2	25.5	0.20	0.47	0.70	0.92	1.24	1.35	-	-	-
	3.14	34	0.15	0.39	0.95	1.03	1.28	1.32	2.12	3.54	-
	4.0	40	0.15	0.42	0.56	0.80	0.99	1.21	1.46	3.74	-

Dimensions

[Unit : mm]



Mount	A
M□8	16
P□8	27
P□8	22



Mount	A
M□8	16
P□8	27
P□8	22

1. Compressed Air Port: 3 X G1/8"
2. Vacuum Port: 1 X G3/8" and 3 X G1/8"
3. Exhaust

VSM203

Features and Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports

Specifications

Description	VSM203
Max. Vacuum level	-90 kPa
Open Vacuum flow	84.5 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	55 ~ 65 dBA
Weight	72 g

Vacuum Flow

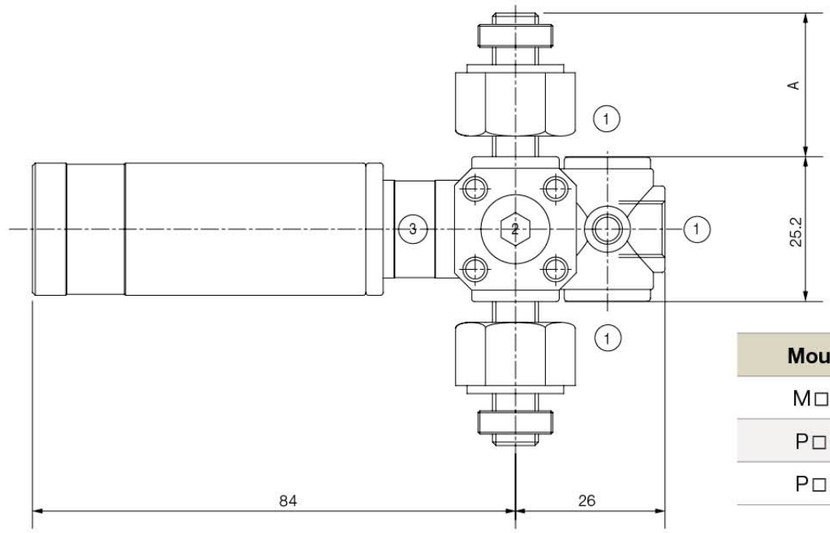
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSM203	49	1.7	55	23.2	15.5	12.6	6.1					
	65	2.2	68	31	16.5	15.5	13.8	9	3.5			
	90	3.14	84	37.5	26	16	15.2	12.3	10	7.2	4	
	90	4.0	84.5	40	33.2	22.6	15.8	12	9.2	7.3	2.9	

Evacuation Time

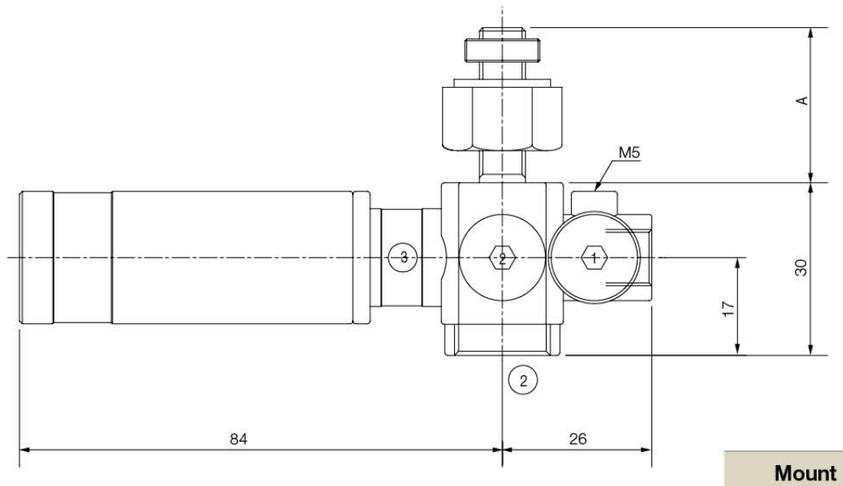
Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSM203	1.7	22	0.13	0.40	0.79	1.57					
	2.2	25.5	0.08	0.39	0.59	0.85	1.10	0.96			
	3.14	34	0.06	0.28	0.51	1.01	1.18	1.29	1.73	3.00	
	4.0	40	0.08	0.24	0.50	0.71	0.85	1.18	1.41	3.05	

Dimensions

[Unit : mm]



Mount	A
M□8	16
P□8	27
P□8	22

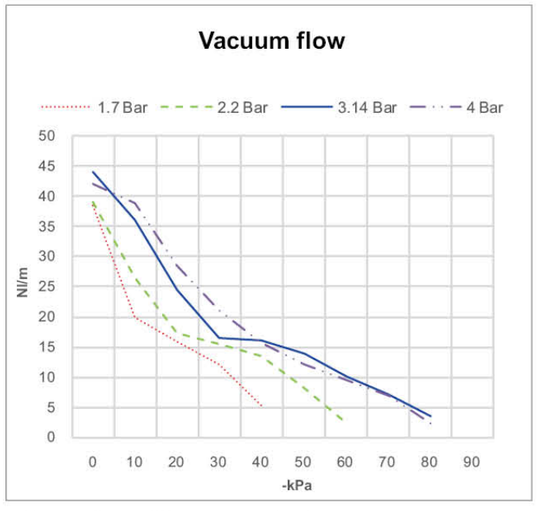


Mount	A
M□8	16
P□8	27
P□8	22

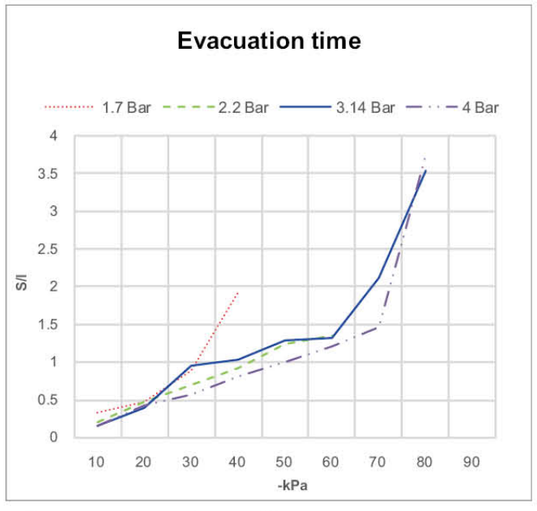
1. Compressed Air Port: 3 X G1/8"
2. Vacuum Port: 1 X G3/8" and 3 X G1/8"
3. Exhaust

Performance data

VSM202

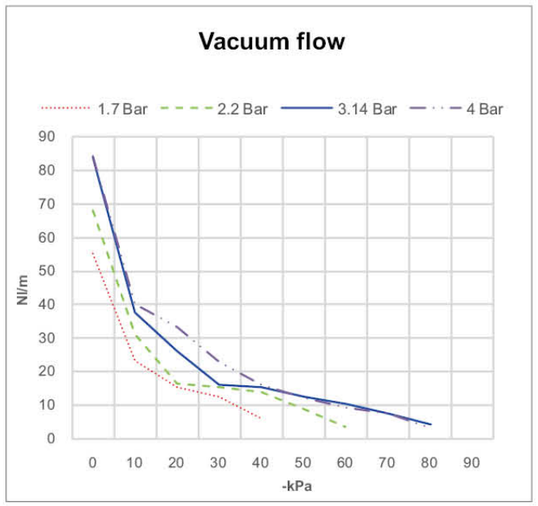


※ Vacuum flow at different vacuum level

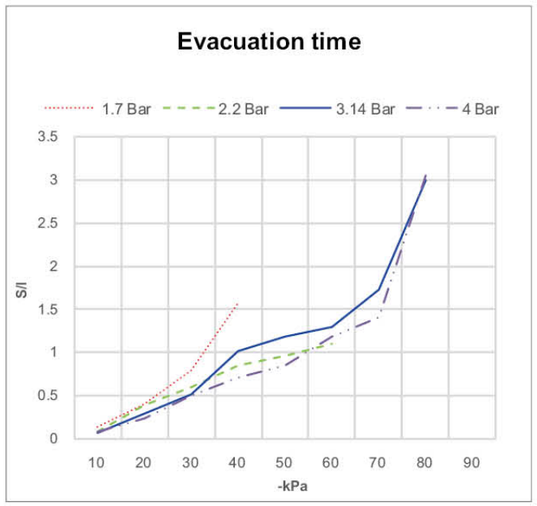


※ Time to evacuate a volume at different vacuum level

VSM203

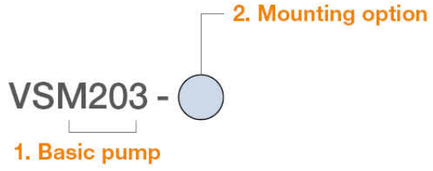


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	VSM pump, 2-stage cartridge, Plug	VSM202
	VSM pump, 2-stage cartridge, Plug, Non-return valve	VSM202N
	VSM pump, 3-stage cartridge, Two-fold silencer	VSM203
	VSM pump, 3-stage cartridge, Two-fold silencer, Non-return valve	VSM203N
	VSM pump, No vacuum cartridge for slave unit	VSM020

2. Mounting option	Description	Symbol
	4x screw M4 top, 5x plug G1/8"(direct mount)	F
	M8 16mm screw top, 4x plug G1/8" incl. mounting kit	MT8
	M8 16mm screw left, 4x plug G1/8" incl. mounting kit	ML8
	M8 16mm screw right, 4x plug G1/8" incl. mounting kit	MR8
	M8 27mm screw top, 4x plug G1/8" incl. profile kit with jam nut	PT8
	M8 27mm screw left, 4x plug G1/8" incl. profile kit with jam nut	PL8
	M8 27mm screw right, 4x plug G1/8" incl. profile kit with jam nut	PR8
	M6 22mm screw top, 4x plug G1/8" incl. profile kit with jam nut	PT6
	M6 22mm screw left, 4x plug G1/8" incl. profile kit with jam nut	PL6
	M6 22mm screw right, 4x plug G1/8" incl. profile kit with jam nut	PR6

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VSM202	VSM pump, 2-stage cartridge, Plug	41
VSM202N	VSM pump, 2-stage cartridge, Plug, Non-return valve	42
VSM203	VSM pump, 3-stage cartridge, Two-fold silencer	72
VSM203N	VSM pump, 3-stage cartridge, Two-fold silencer, Non-return valve	73
VSM020	VSM pump, No vacuum cartridge for slave unit	40

Spare Parts – Mounting

Part No.	Description
F	4x screw M4 top, 5x plug G1/8"(direct mount)
M8	M8 16mm screw, 4x plug G1/8" incl. mounting kit
P8	M8 27mm screw, 4x plug G1/8" incl. profile kit with jam nut
P6	M6 22mm screw, 4x plug G1/8" incl. profile kit with jam nut

Spare Parts – Cartridges

Part No.	Description	Available model
VC202	Mini vacuum cartridge, 2-Stage	VSM202
VC202-N	Mini vacuum cartridge, 2-Stage, Non-return valve	VSM202N
VC203	Mini vacuum cartridge, 3-Stage	VSM203
VC203-N	Mini vacuum cartridge, 3-Stage, Non-return valve	VSM203N

Spare Parts – Plug & Silencer

Part No.	Description
VCP-M14	Holding plug for VSM202 and VSM202N
VTTS-M14	Two-Fold Silencer for VSM203 and VSM203N

VSM302

Features and Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports

Specifications

Description	VSM302
Max. Vacuum level	-92 kPa
Open Vacuum flow	171 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	50 ~ 60 dBA
Weight	176 g

Vacuum Flow

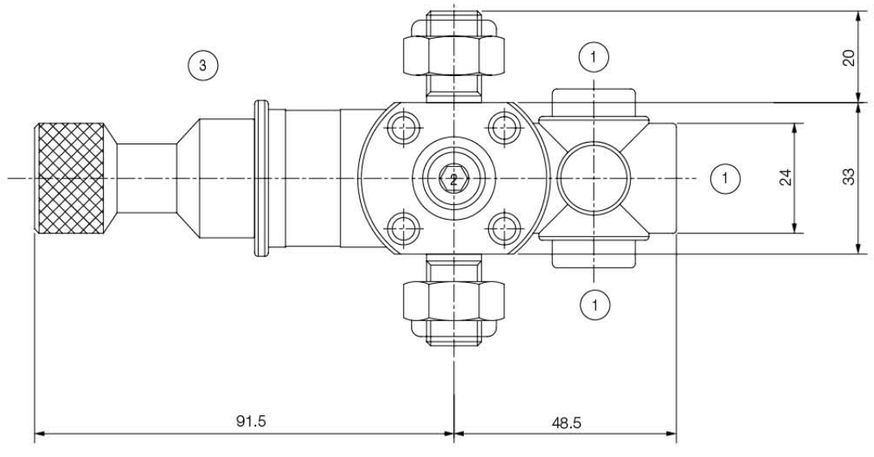
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSM302	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3	170	152	106	64	33	32	22	16.5	6.4	1.9
	92	4	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1

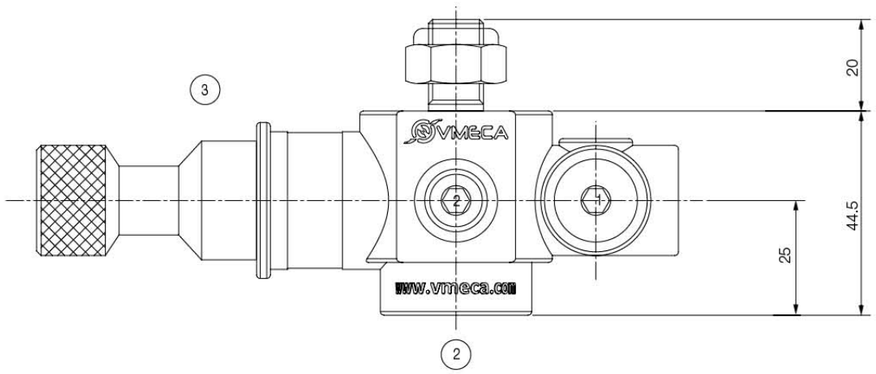
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSM302	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-
	3	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8
	4	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5

Dimensions

[Unit : mm]





1. Compressed Air Port : 3xG1/4"
2. Vacuum Port : 1xG1/2" and 3xG1/4"
3. Exhaust

VSM303

Features and Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports

Specifications

Description	VSM303
Max. Vacuum level	-92 kPa
Open Vacuum flow	341 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	50 ~ 60 dBA
Weight	212 g

Vacuum Flow

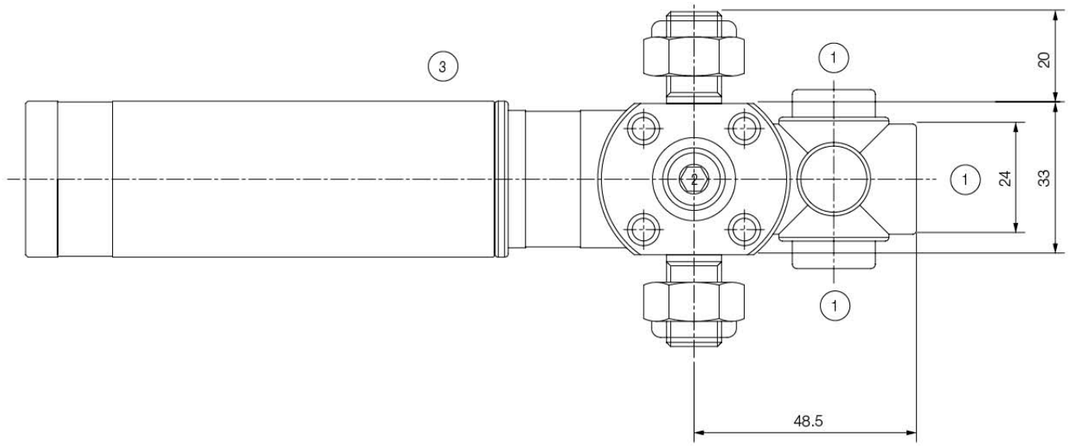
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSM303	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	92	3.0	338	152	106	64	33	32	22	16.5	6.4	1.9
	92	4.0	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1

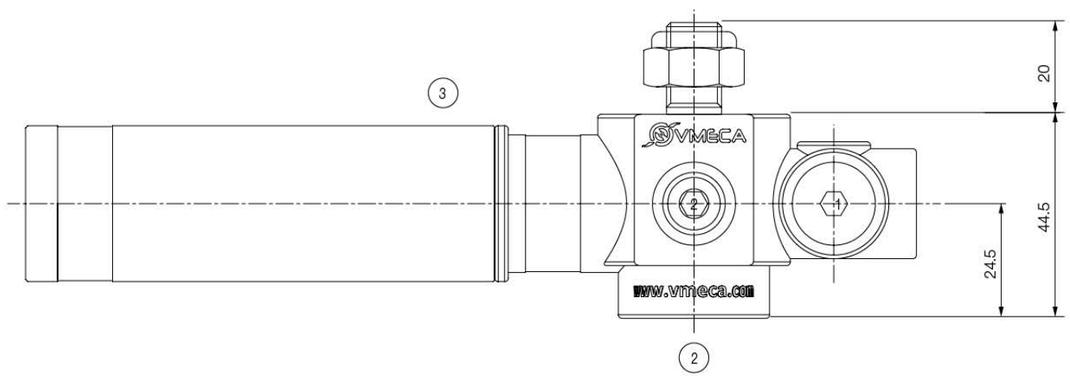
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSM303	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8
	4	152	0.01	0.048	0.07	0.09	0.2	0.42	0.6	1	3.4

Dimensions

[Unit : mm]

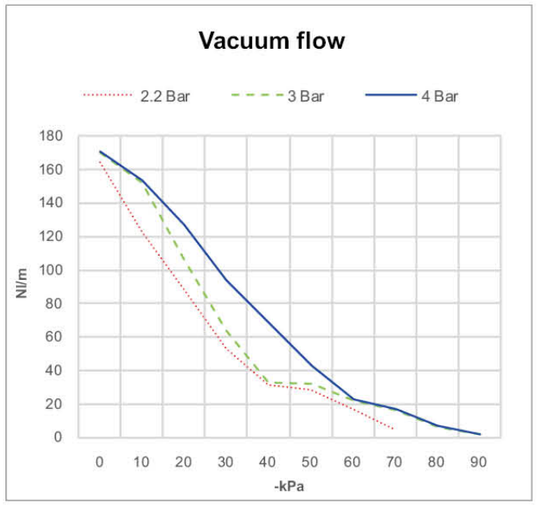




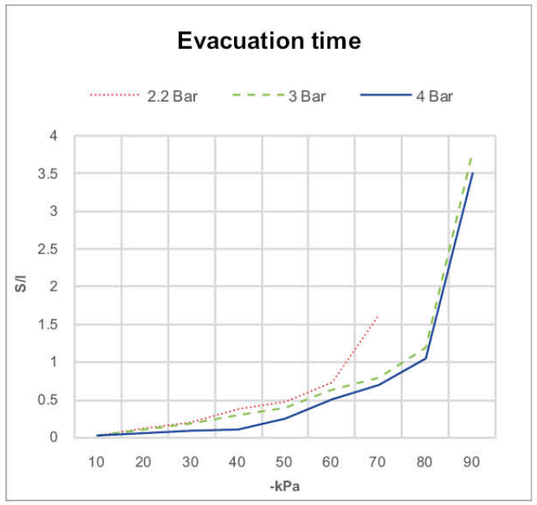
1. Compressed air Port : 3xG1/4"
2. Vacuum Port: 1xG1/2" and 3xG1/4"
3. Exhaust

Performance data

VSM302

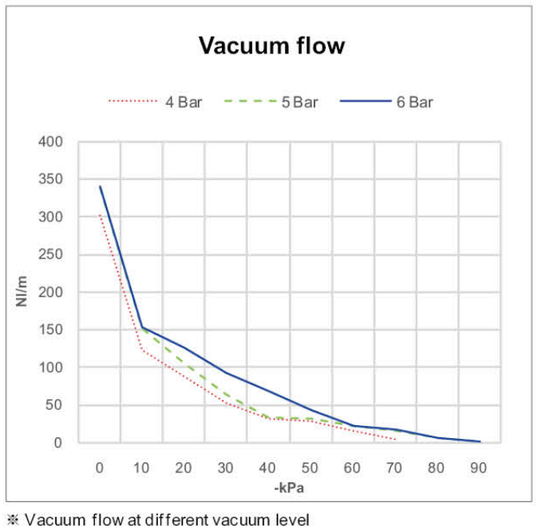


※ Vacuum flow at different vacuum level

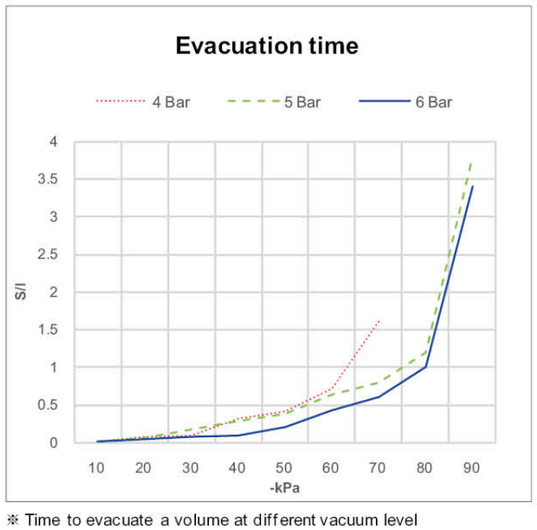


※ Time to evacuate a volume at different vacuum level

VSM303

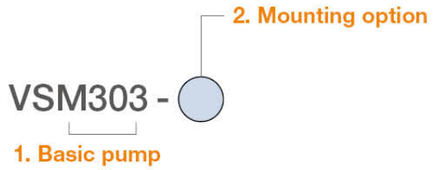


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	VSM pump, 2-stage cartridge, Plug	VSM302P
	VSM pump, 2-stage cartridge, Plug, Non-return valve	VSM302P-N
	VSM pump, 3-stage cartridge, Plug	VSM303P
	VSM pump, 3-stage cartridge, Plug, Non-return valve	VSM303P-N
	VSM pump, 3-stage cartridge, Two-fold silencer	VSM303S
	VSM pump, 3-stage cartridge, Two-fold silencer, Non-return valve	VSM303S-N
	VSM pump, No vacuum cartridge for slave unit	VSM030

2. Mounting option	Description	Symbol
	4x screw M6 top, 6x plug G1/4"(direct mount)	F
	M12 20mm screw top, 6x plug G1/4"	MT12
	M12 20mm screw left, 6x plug G1/4"	ML12
	M12 20mm screw right, 6x plug G1/4"	MR12
	M12 20mm screw top, 6x plug G1/4, Mounting bracket	BT12

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VSM302P	VSM pump, 2-stage cartridge, Plug	176
VSM302P-N	VSM pump, 2-stage cartridge, Plug, Non-return valve	177
VSM303P	VSM pump, 3-stage cartridge, Plug	212
VSM303P-N	VSM pump, 3-stage cartridge, Plug, Non-return valve	213
VSM303S	VSM pump, 3-stage cartridge, Two-fold silencer	231
VSM303S-N	VSM pump, 3-stage cartridge, Two-fold silencer, Non-return valve	232
VSM030	VSM pump, No vacuum cartridge for slave unit	236

Spare Parts – Cartridges

Part No.	Description	Available model
VC302	Midi vacuum cartridge, 2-Stage	VSM302P
VC302-N	Midi vacuum cartridge, 2-Stage, Non-return valve	VSM302P-N
VC303	Midi vacuum cartridge, 2-Stage	VSM303P, VSM303S
VC303-N	Midi vacuum cartridge, 3-Stage, Non-return valve	VSM303P-N, VSM303S-N

Spare Parts – Mounting

Part No.	Description
F	4x screw M6 top, 6x plug G1/4"(direct mount)
MT12	M12 20mm screw top, 6x plug G1/4"
ML12	M12 20mm screw left, 6x plug G1/4"
MR12	M12 20mm screw right, 6x plug G1/4"
BT12	M12 20mm screw top, 6x plug G1/4, Mounting bracket

Spare Parts – Plug & Silencer

Part No.	Description
VCP-M25-302	Holding plug for VSM302P and VSM302P-N
VCP-M25-303	Holding plug for VSM303P and VSM303P-N
VTTS-M25	Two-Fold Silencer for VSM303S and VSM303S-N

VSMR pump

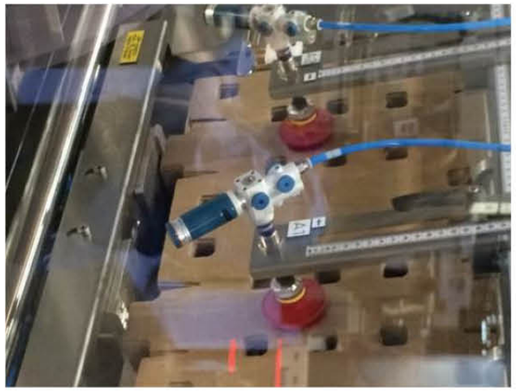
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Auto quick release function – Fast response time
Multiple connection ports

Advantages

Fast response time with individual vacuum system available
Available for auto quick release without additional vacuum release control valve
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption

Application



Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
VSMR202	90	7	44	40	55 ~ 65
VSMR203	90	7	84.5	40	55 ~ 65

VSMR pump

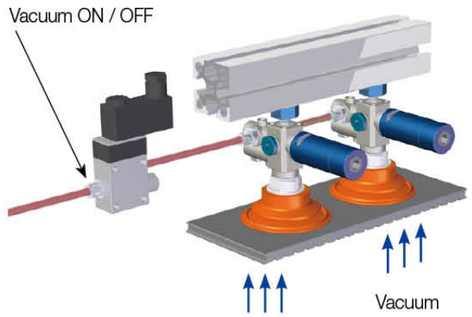
VMECA VSMR pump is integrated with VMECA vacuum cartridge technology for reliable and stable performance In fluctuation or drop of compressed-air pressure.
VQ pump is the most suitable in high speed application such as delta robot in packaging industry because SC pump has check valve on vacuum release port so, it can operate in 2times faster evacuation time compared with conventional vacuum ejectors.

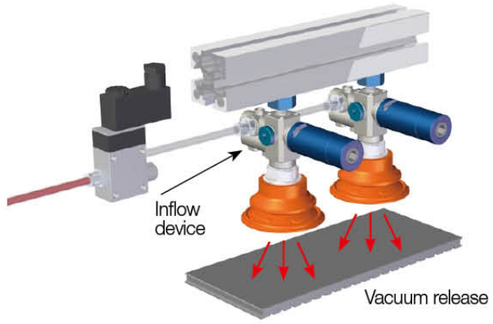
Key advantages

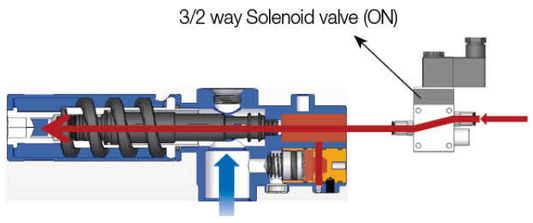
· VMECA vacuum cartridge integrated
· Available for quick release without vacuum release valve
· Auto filter cleaning system

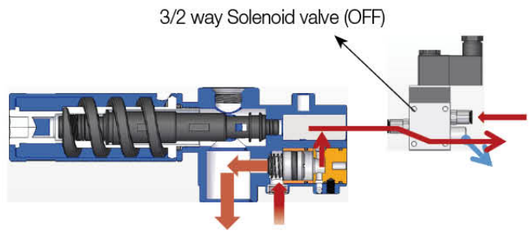
Comparison with VSM

VSMR

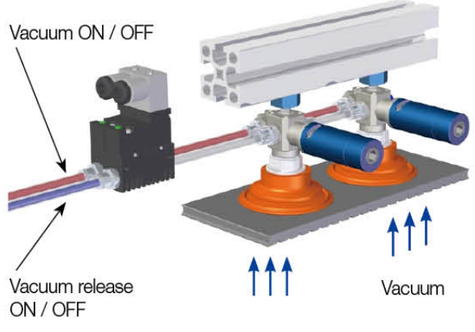


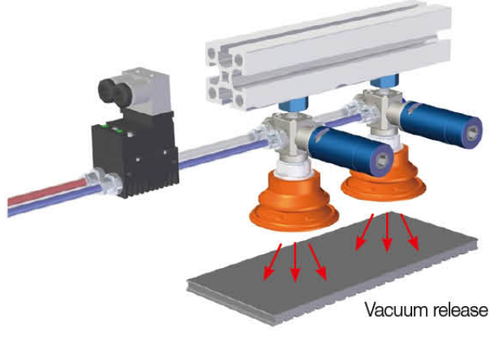






VSM





VSMR202

Features and Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports

Specifications

Description	VSMR202
Max. Vacuum level	-90 kPa
Open Vacuum flow	44 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	55 ~ 65 dBA
Weight	237 g

Vacuum Flow

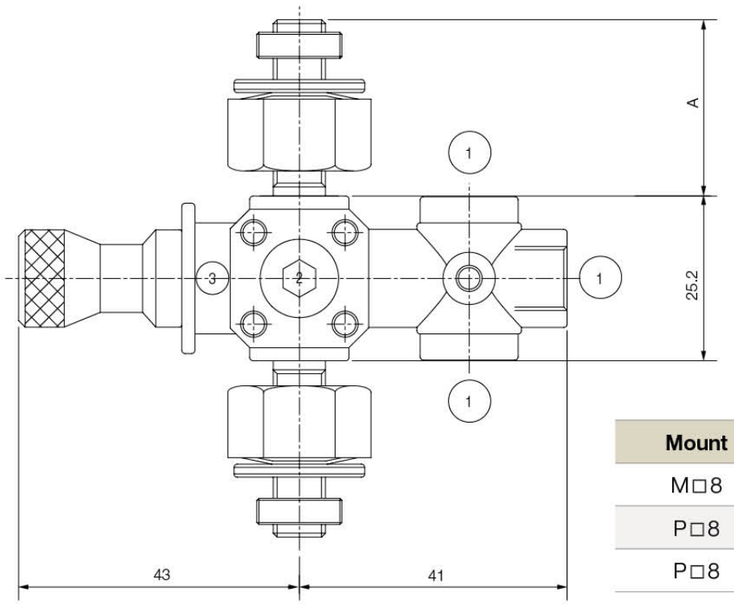
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSMR202	48	1.7	38.5	20	16	12	5.3					
	65	2.2	39	26.5	17.3	15.6	13.5	8.4	2.6			
	90	3.14	44	36	24.5	16.5	16	13.8	10	7	3.5	
	89	4.0	42	38.8	28.5	21.2	15.8	12.2	9.5	7	2.4	

Evacuation Time

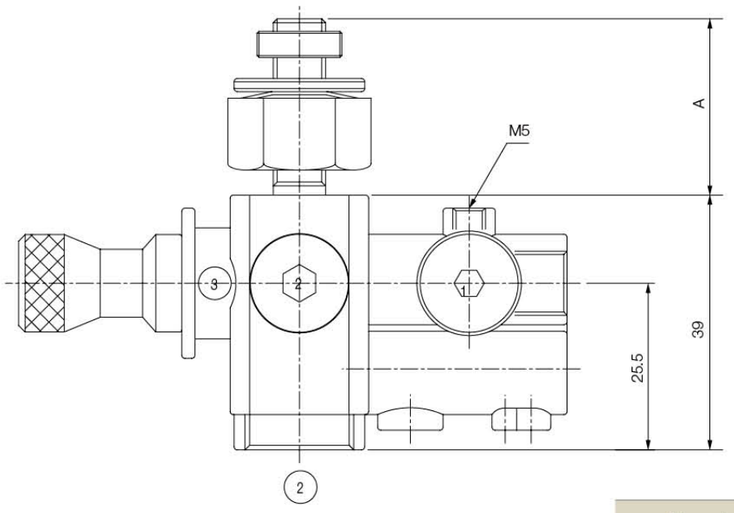
Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSMR202	1.7	22	0.33	0.47	0.89	1.93					
	2.2	25.5	0.20	0.47	0.70	0.92	1.24	1.35			
	3.14	34	0.15	0.39	0.95	1.03	1.28	1.32	2.12	3.54	
	4.0	40	0.15	0.42	0.56	0.80	0.99	1.21	1.46	3.74	

Dimensions

[Unit : mm]



Mount	A
M□8	16
P□8	27
P□8	22



Mount	A
M□8	16
P□8	27
P□8	22

1. Compressed air : 3xG1/8"
2. Vacuum : 1xG3/8" and 3xG1/8"
3. Exhaust

VSMR203

Features and Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports

Specifications

Description	VSMR203
Max. Vacuum level	-90 kPa
Open Vacuum flow	84.5 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 80 ℃
Noise level	55 ~ 65 dBA
Weight	141 g

Vacuum Flow

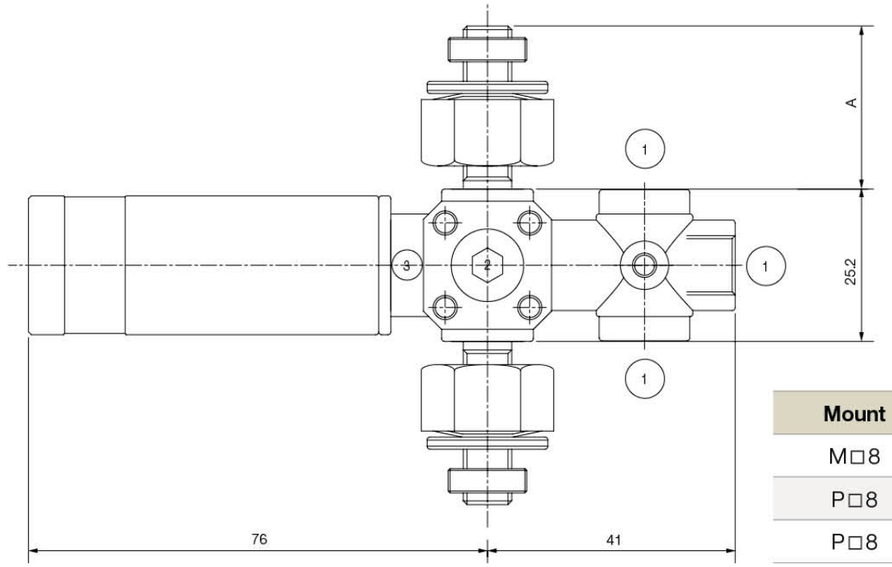
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VSMR203	49	1.7	55	23.2	15.5	12.6	6.1					
	65	2.2	68	31	16.5	15.5	13.8	9	3.5			
	90	3.14	84	37.5	26	16	15.2	12.3	10	7.2	4	
	89	4.0	84.5	40	33.2	22.6	15.8	12	9.2	7.3	2.9	

Evacuation Time

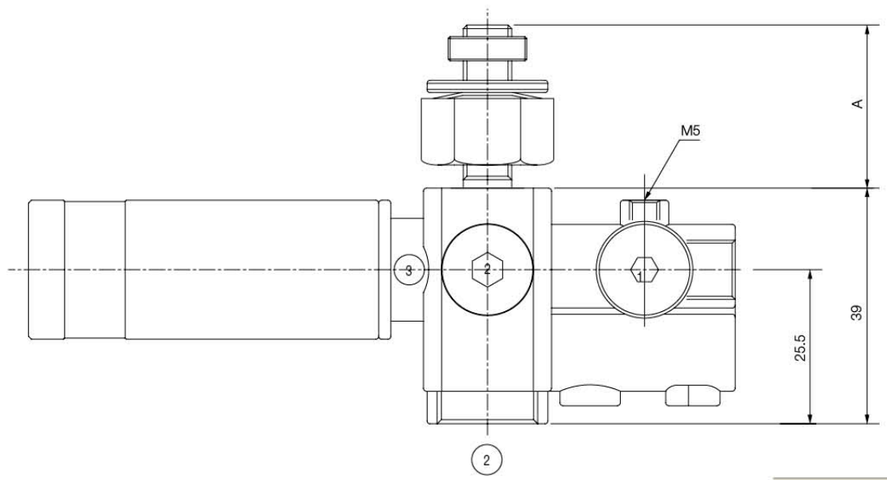
Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VSMR203	1.7	22	0.13	0.40	0.79	1.57					
	2.2	25.5	0.08	0.39	0.59	0.85	1.10	0.96			
	3.14	34	0.06	0.28	0.51	1.01	1.18	1.29	1.73	3.00	
	4.0	40	0.08	0.24	0.50	0.71	0.85	1.18	1.41	3.05	

Dimensions

[Unit : mm]



Mount	A
M□8	16
P□8	27
P□8	22

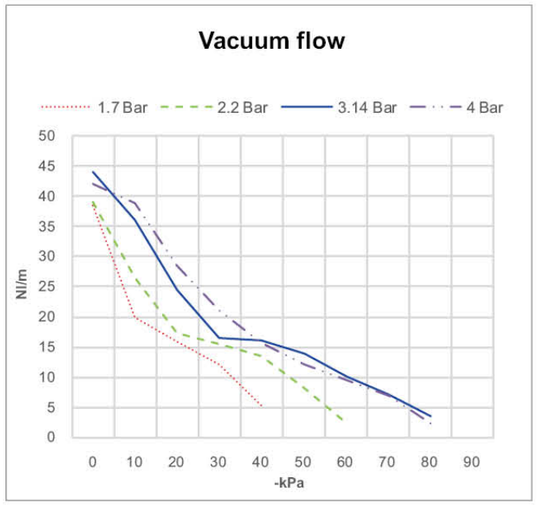


Mount	A
M□8	16
P□8	27
P□8	22

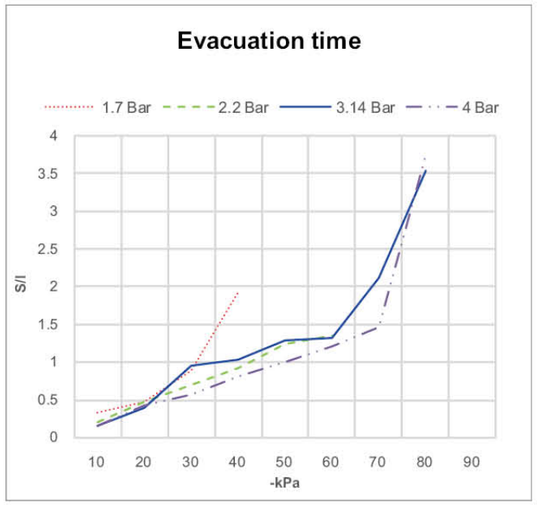
1. Compressed air : 3xG1/8"
2. Vacuum : 1xG3/8" and 3xG1/4"
3. Exhaust

Performance data

VSMR202

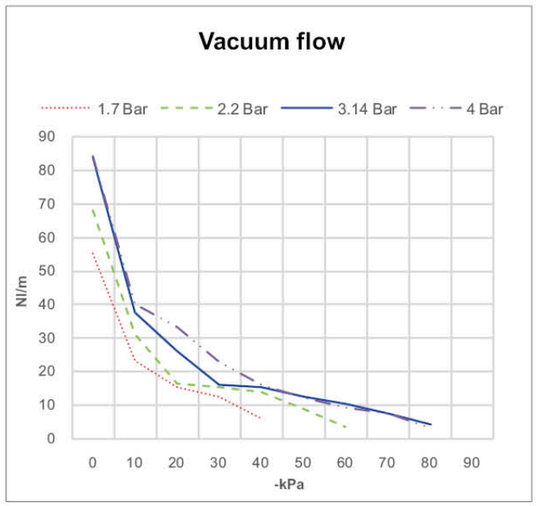


※ Vacuum flow at different vacuum level

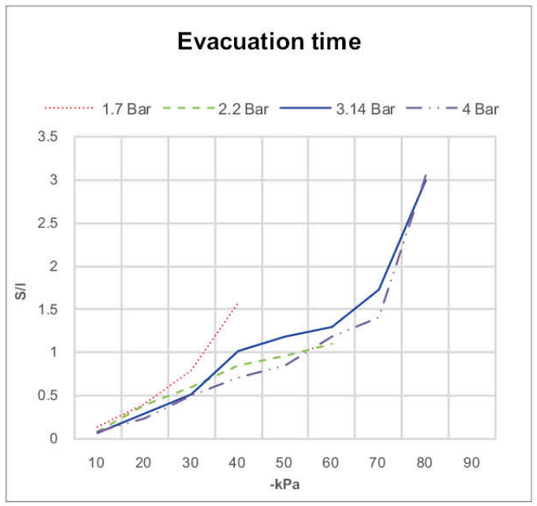


※ Time to evacuate a volume at different vacuum level

VSMR203

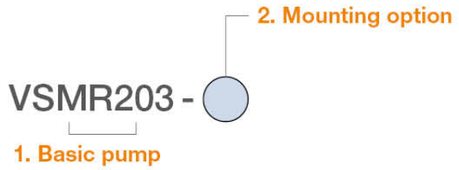


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	VSMR pump, 2-stage cartridge, Plug	VSMR202
	VSMR pump, 3-stage cartridge, Two-fold silencer	VSMR203

2. Mounting option	Description	Symbol
	4x screw M4 top, 5x plug G1/8"(direct mount)	F
	M8 16mm screw top, 4x plug G1/8" incl. mounting kit	MT8
	M8 16mm screw left, 4x plug G1/8" incl. mounting kit	ML8
	M8 16mm screw right, 4x plug G1/8" incl. mounting kit	MR8
	M8 27mm screw top, 4x plug G1/8" incl. profile kit with jam nut	PT8
	M8 27mm screw left, 4x plug G1/8" incl. profile kit with jam nut	PL8
	M8 27mm screw right, 4x plug G1/8" incl. profile kit with jam nut	PR8
	M6 22mm screw top, 4x plug G1/8" incl. profile kit with jam nut	PT6
	M6 22mm screw left, 4x plug G1/8" incl. profile kit with jam nut	PL6
	M6 22mm screw right, 4x plug G1/8" incl. profile kit with jam nut	PR6

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VSMR202	VSMR pump, 2-stage cartridge, Plug	237
VSMR203	VSMR pump, 3-stage cartridge, Two-fold silencer	147

Spare Parts – Mounting

Part No.	Description
F	4x screw M4 top, 5x plug G1/8"(direct mount)
M8	M8 16mm screw, 4x plug G1/8" incl. mounting kit
P8	M8 27mm screw, 4x plug G1/8" incl. profile kit with jam nut
P6	M6 22mm screw, 4x plug G1/8" incl. profile kit with jam nut

Spare Parts – Cartridges

Part No.	Description	Weight (g)
VC202	Mini vacuum cartridge, 2-Stage for VSMR202	2.69
VC203	Mini vacuum cartridge, 3-Stagefor VSMR203	5.45

Spare Parts – Plug & Silencer

Part No.	Description
VCP-M14	Holding plug for VSMR202
VTTS-M14	Two-Fold Silencer for VSMR203

VQ pump

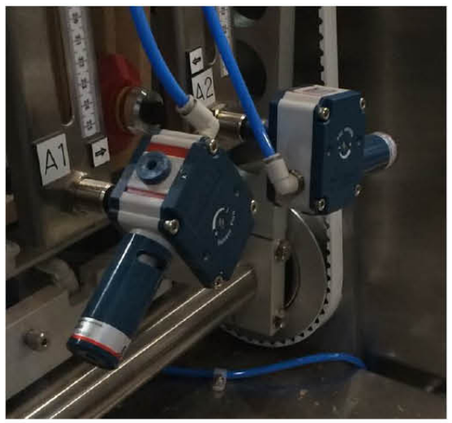
Features and Strengths

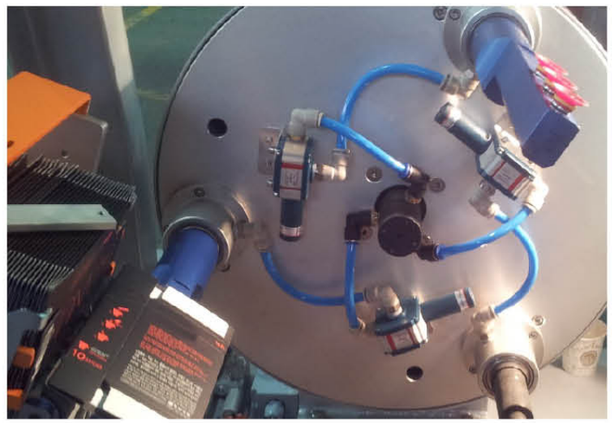
Highly operational reliability despite fluctuating or low compressed-air pressure
Auto quick release function – Fast response time
Filter auto cleaning with auto blow off module

Advantages

Available auto quick release without additional vacuum release control valve
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Compact size and light weight

Application





Overall of specification

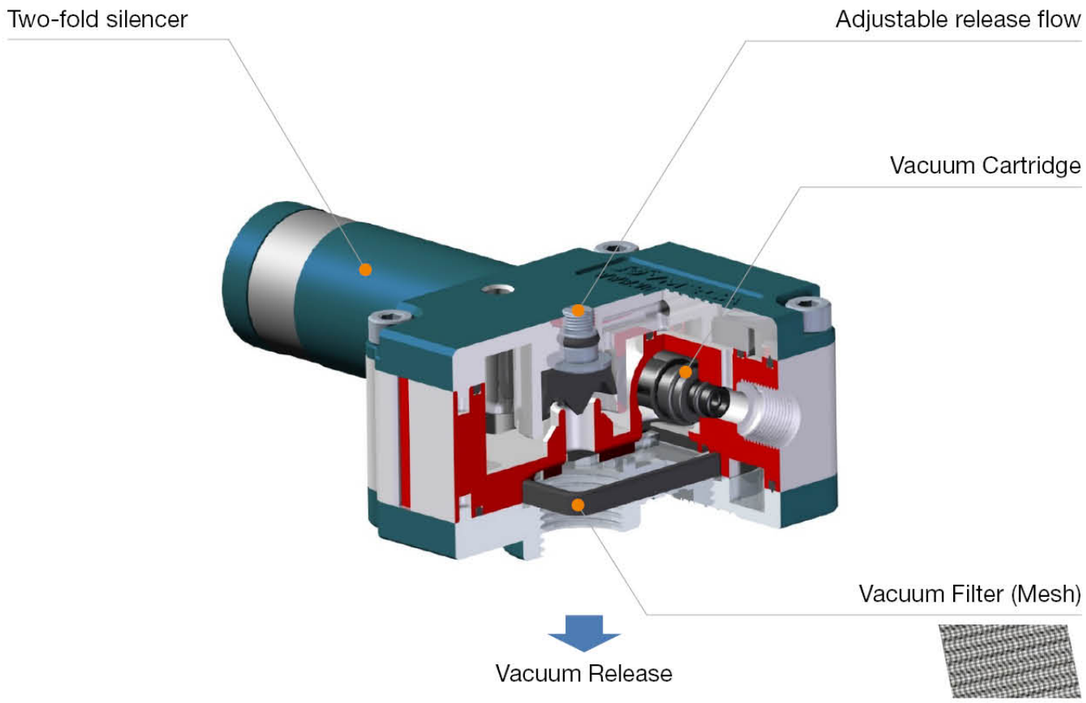
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)
VQ202	90	7	44	40	59 ~ 68
VQ203	90	7	84.5	40	55 ~ 65

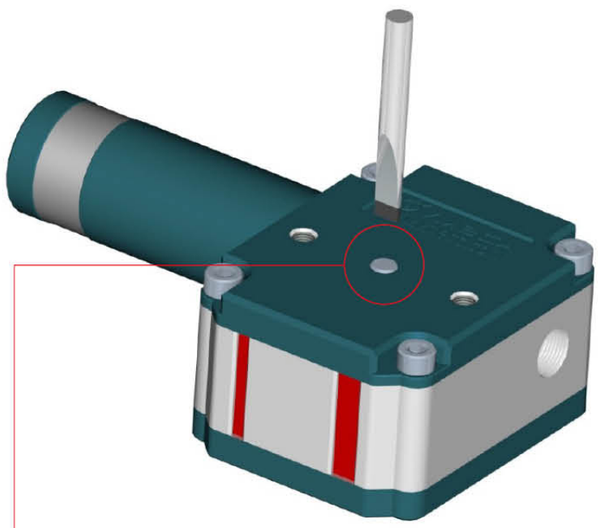
VQ pump

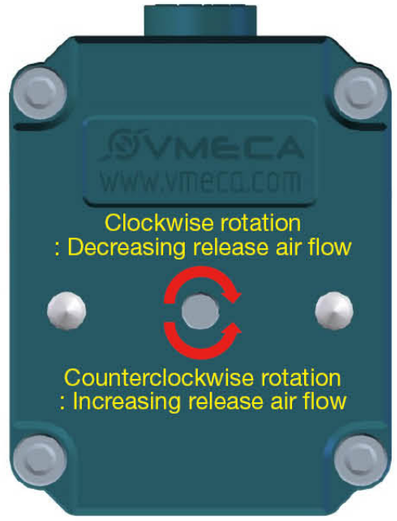
VMECA VQ pump is integrated with VMECA vacuum cartridge technology for reliable and stable performance in fluctuation or drop of compressed-air pressure.
VQ pump is the most suitable in high speed application and features quick release function without vacuum release control valve – It can contribute the cost save for additional valve and tubing, etc. The flow rate for vacuum release can be adjusted in easy way according to applications.

Key advantages

· VMECA vacuum cartridge integrated
· Available for quick release without vacuum release valve
· Auto filter cleaning system







VQ202 / VQ203

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Auto quick release
- Quick response time
- Compact size and light weight

Specifications

Description	VQ202	VQ203
Max. Vacuum level	-90 kPa	-90 kPa
Open Vacuum flow	44 Nl/min	84.5 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ℃	-20 ~ 80 ℃
Noise level	59 ~ 68 dbA	55 ~ 65 dbA
Weight	146 g	160 g

Vacuum Flow

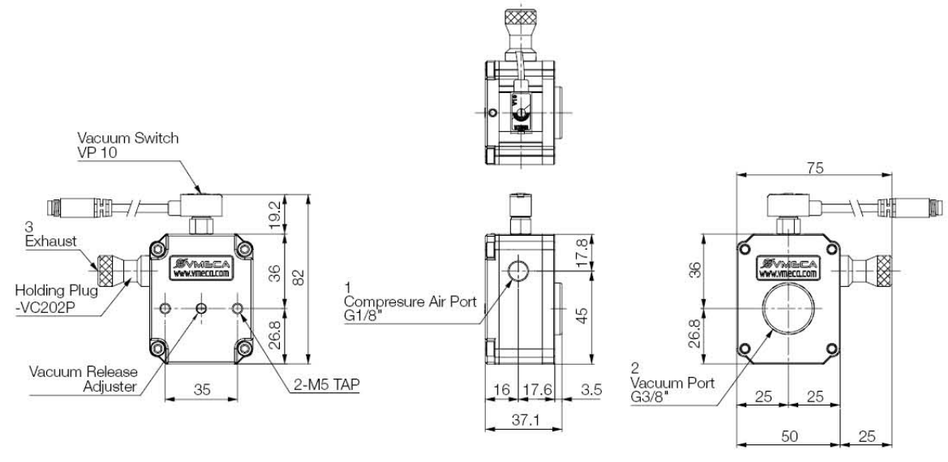
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VQ202	48	1.7	38.5	20	16	12	5.3	-	-	-	-	-
	65	2.2	39	26.5	17.3	15.6	13.5	8.4	2.6	-	-	-
	90	3.14	44	36	24.5	16.5	16	13.8	10	7	3.5	-
	89	4.0	42	38.8	28.5	21.2	15.8	12.2	9.5	7	2.4	-
VQ203	49	1.7	55	23.2	15.5	12.6	6.1	-	-	-	-	-
	65	2.2	68	31	16.5	15.5	13.8	9	3.5	-	-	-
	90	3.14	84	37.5	26	16	15.2	12.3	10	7.2	4	-
	89	4.0	84.5	40	33.2	22.6	15.8	12	9.2	7.3	2.9	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VQ202	1.7	22	0.33	0.47	0.89	1.93	-	-	-	-	-
	2.2	25.5	0.20	0.47	0.70	0.92	1.24	1.35	-	-	-
	3.14	34	0.15	0.39	0.95	1.03	1.28	1.32	2.12	3.54	-
	4.0	40	0.15	0.42	0.56	0.80	0.99	1.21	1.46	3.74	-
VQ203	1.7	22	0.13	0.40	0.79	1.57	-	-	-	-	-
	2.2	25.5	0.08	0.39	0.59	0.85	0.96	1.10	-	-	-
	3.14	34	0.06	0.28	0.51	1.01	1.18	1.29	1.73	3.00	-
	4.0	40	0.08	0.24	0.50	0.71	0.85	1.18	1.41	3.05	-

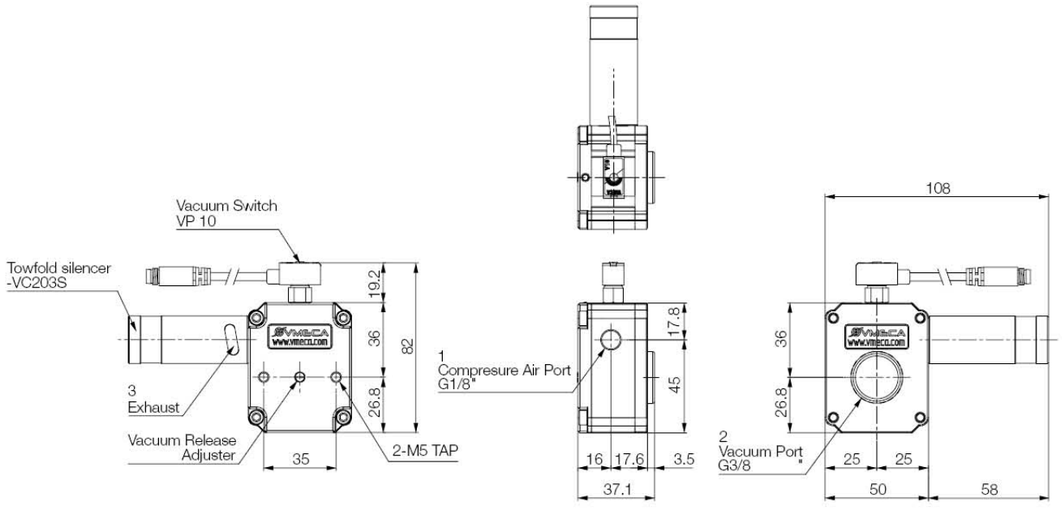
Dimensions – VQ202P with switch

[Unit : mm]



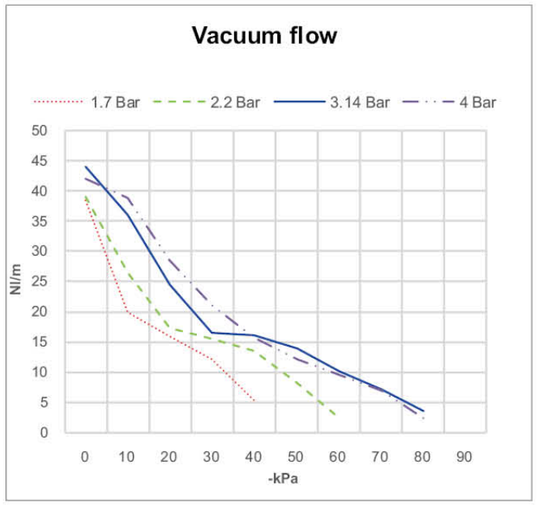
Dimensions – VQ203S with switch

[Unit : mm]

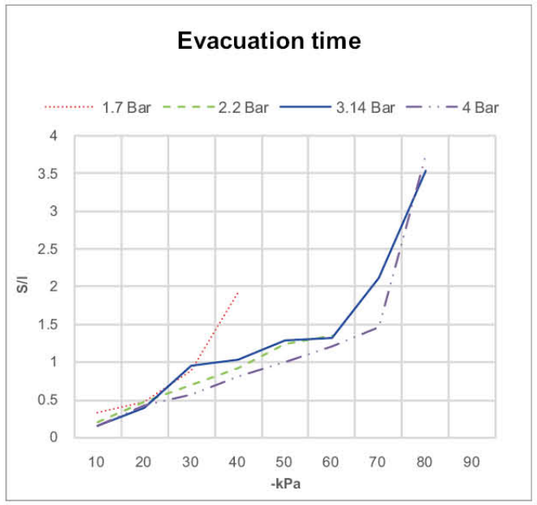


Performance data

VQ202

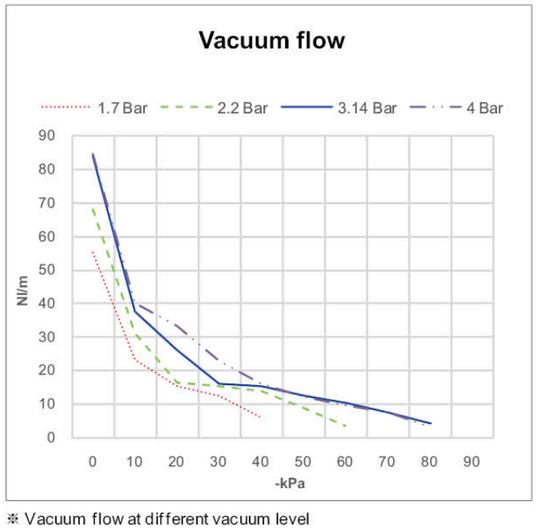


※ Vacuum flow at different vacuum level

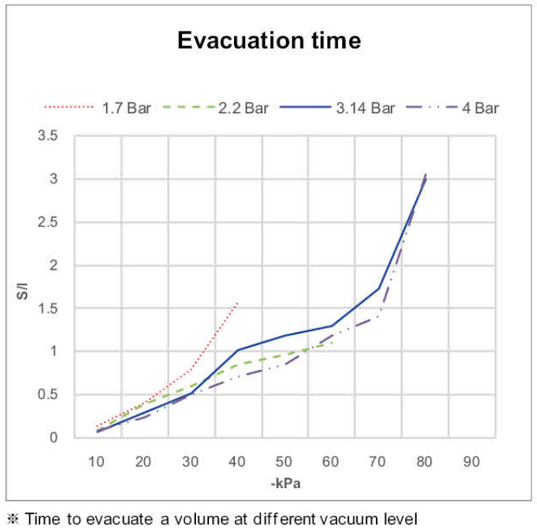


※ Time to evacuate a volume at different vacuum level

VQ203

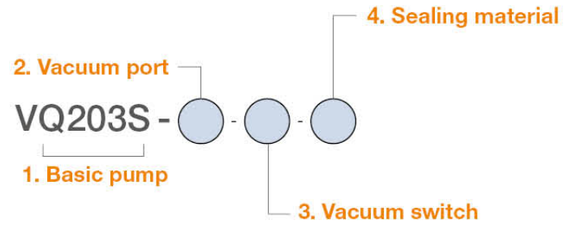


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	VQ pump, 2-stage cartridge, Plug	VQ202P
	VQ pump, 3-stage cartridge, Two-fold silencer	VQ203S

2. Vacuum port	Description	Symbol
	Vacuum port, G3/8" female	38F

3. Vacuum switch	Description	Symbol
	No vacuum switch	Blank
	LED switch, No analog supply, M8-3pins, NPN	S
	LED switch, No analog supply, M8-3pins, PNP	SP
	LED switch, No analog supply, Grommet, NPN	SG
	LED switch, No analog supply, Grommet, PNP	SGP
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

4. Sealing material	Description	Symbol
	NBR	Blank
	VITON	V
	EPDM	E

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
VQ202P-38F	VQ pump, 2-stage cartridge, Plug, Vacuum port G3/8" female	146
VQ203S-38F	VQ pump, 3-stage cartridge, Two-fold silencer, Vacuum port G3/8" female	160

Spare Parts – Cartridges

Part No.	Description	Available model
VC202	Mini Vacuum Cartridge, 2-Stage	VQ202P-38F
VC203	Mini Vacuum Cartridge, 3-Stage	VQ203S-38F

Spare Parts – Plug & Silencer

Part No.	Description
VCP-M14	Holding plug for VQ202P-38F
VTTS-M14	Two-Fold Silencer for VQ203S-38F

SC pump

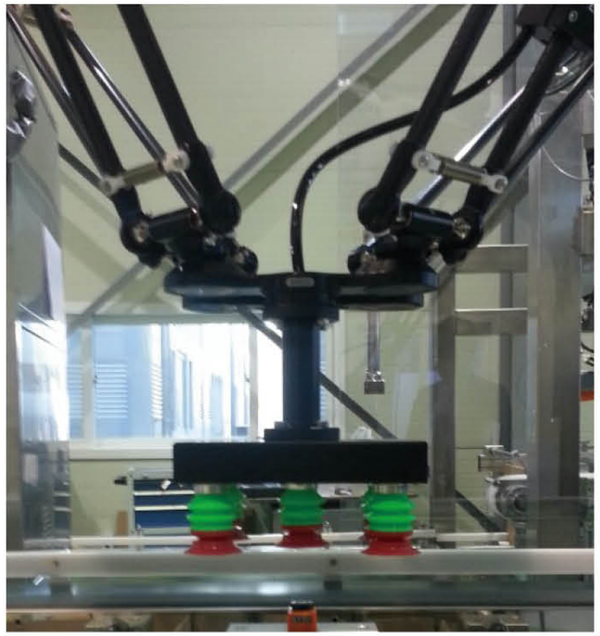
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Integrated check valve on vacuum release port for fast evacuation time

Advantages

Fast evacuation time – More than 2times faster compared with conventional vacuum ejector
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Suitable with delta robot due to compact size and light weight

Application



Overall of specification

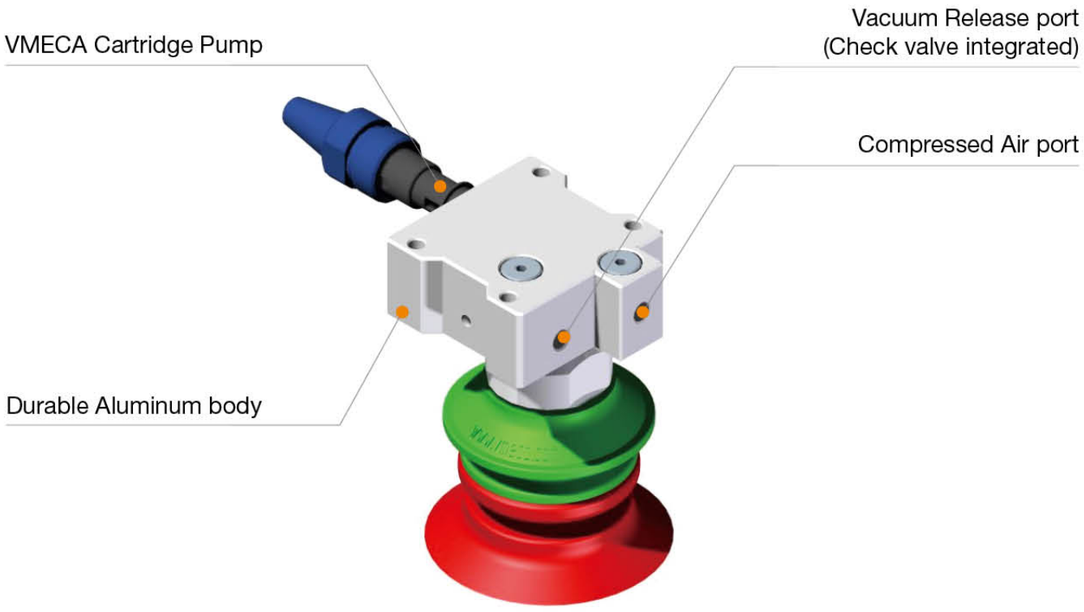
Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
SC202	90	7	44	40
SC203	90	7	84.5	40

SC pump

VMECA SC pump is integrated with VMECA vacuum cartridge technology for reliable and stable performance In fluctuation or drop of compressed-air pressure.
SC pump is the most suitable in high speed application such as delta robot in packaging industry because SC pump has check valve on vacuum release port so, it can operate in 2times faster evacuation time compared with conventional vacuum ejectors.

Key advantages

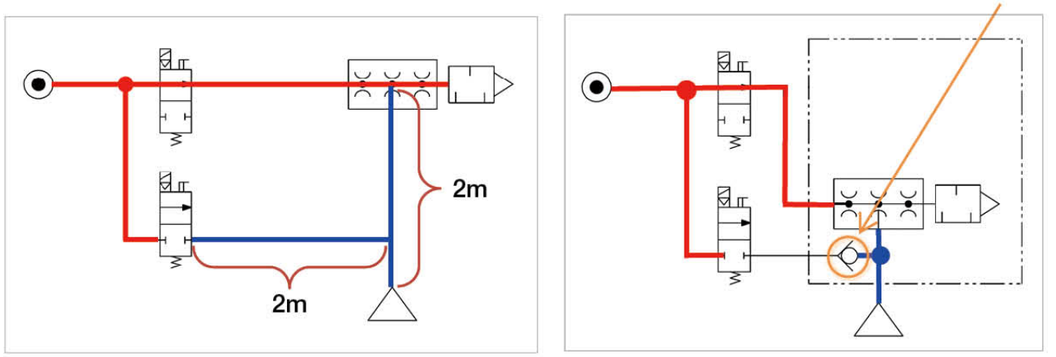
· VMECA vacuum cartridge integrated
· Compact and light weight
· Check valve on vacuum release port
  – 2times faster evacuation time than conventional ejectors



Advantage for Check valve

Check valve **"2 times Faster" evacuation time!!**

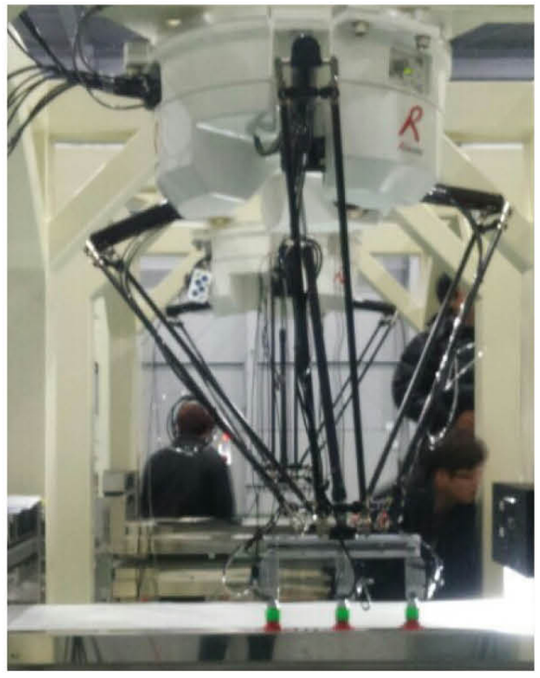
· Quicker evacuation due to lack of vacuum release line
· Installation at the nearest suction point recommended

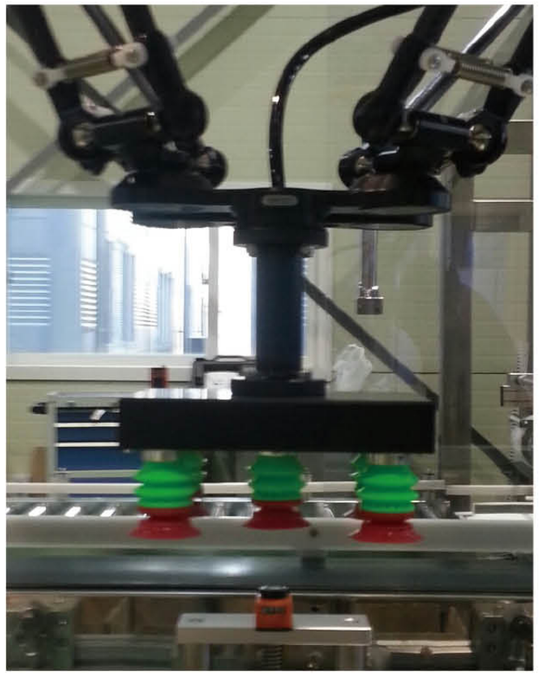


Conventional vacuum generator

SC pump

Example





SC202 / SC203

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated check valve on vacuum release port
  - Quick evacuation time
- Compact size and light weight

Specifications

Description	SC202	SC203
Max. Vacuum level	-90 kPa	-90 kPa
Open Vacuum flow	44 Nl/min	84.5 Nl/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 °C	-20 ~ 80 °C
Noise level	59 ~ 65 dbA	59 ~ 65 dbA
Weight	80g	85g

Vacuum Flow

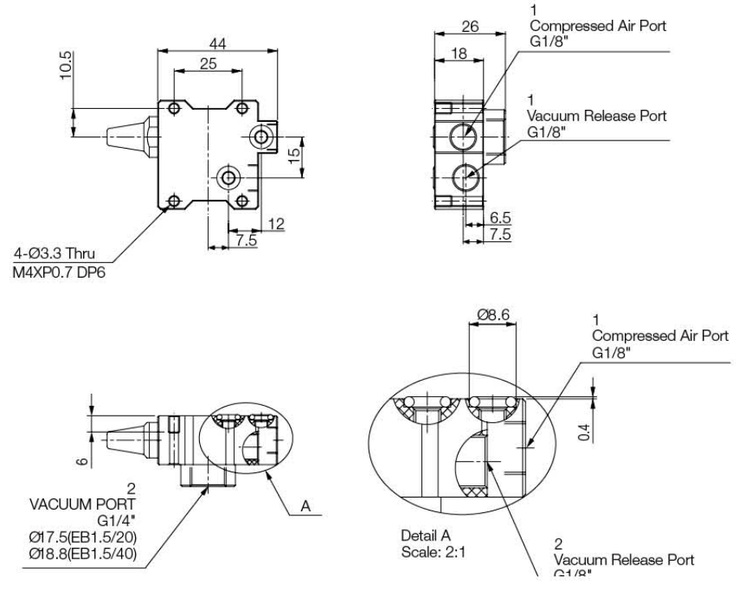
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
SC202	48	1.7	38.5	20	16	12	5.3					
	65	2.2	39	26.5	17.3	15.6	13.5	8.4	2.6			
	90	3.14	44	36	24.5	16.5	16	13.8	10	7	3.5	
	89	4.0	42	38.8	28.5	21.2	15.8	12.2	9.5	7	2.4	
SC203	49	1.7	55	23.2	15.5	12.6	6.1					
	65	2.2	68	31	16.5	15.5	13.8	9	3.5			
	90	3.14	84	37.5	26	16	15.2	12.3	10	7.2	4	
	89	4.0	84.5	40	33.2	22.6	15.8	12	9.2	7.3	2.9	

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (Nl/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
SC202	1.7	22	0.33	0.47	0.89	1.93					
	2.2	25.5	0.20	0.47	0.70	0.92	1.24	1.35			
	3.14	34	0.15	0.39	0.95	1.03	1.28	1.32	2.12	3.54	
	4.0	40	0.15	0.42	0.56	0.80	0.99	1.21	1.46	3.74	
SC203	1.7	22	0.13	0.40	0.79	1.57					
	2.2	25.5	0.08	0.39	0.59	0.85	0.96	1.10			
	3.14	34	0.06	0.28	0.51	1.01	1.18	1.29	1.73	3.00	
	4.0	40	0.08	0.24	0.50	0.71	0.85	1.18	1.41	3.05	

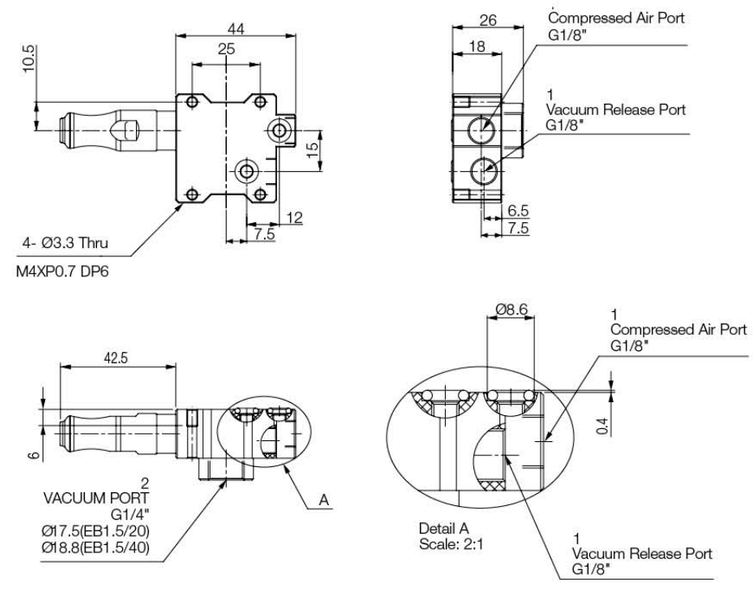
Dimensions – SC202P-C

[Unit : mm]



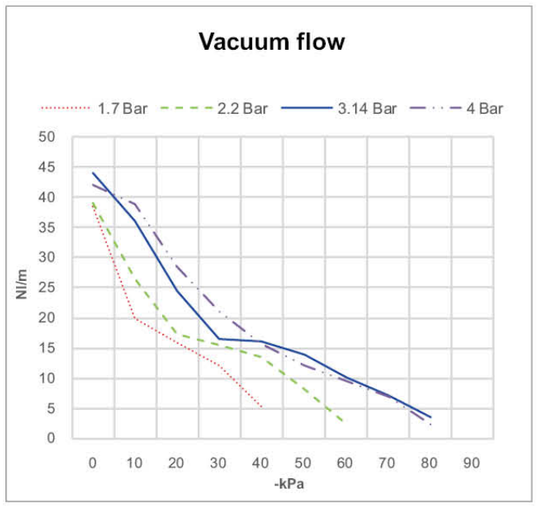
Dimensions – SC203P-C

[Unit : mm]

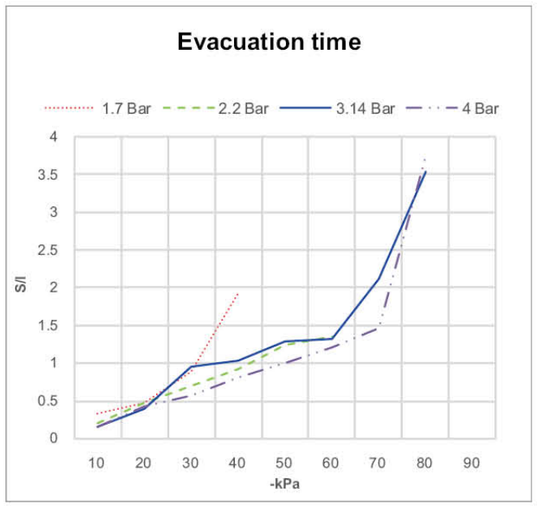


Performance data

SC202

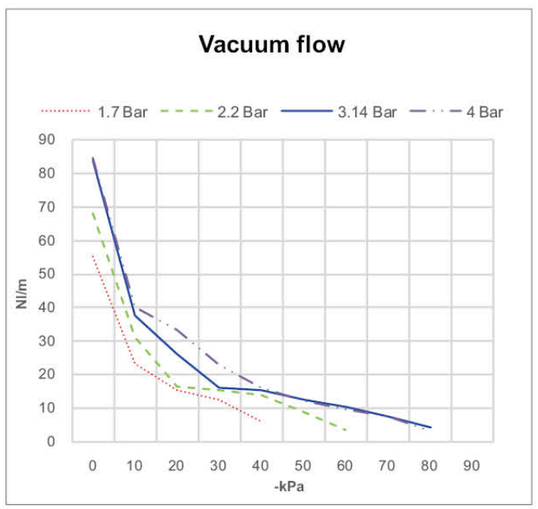


※ Vacuum flow at different vacuum level

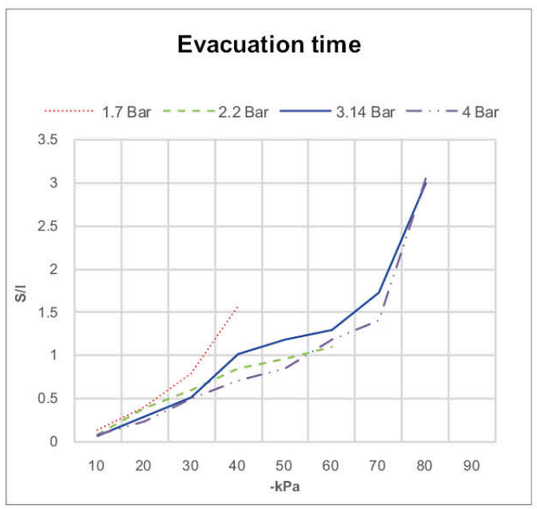


※ Time to evacuate a volume at different vacuum level

SC203

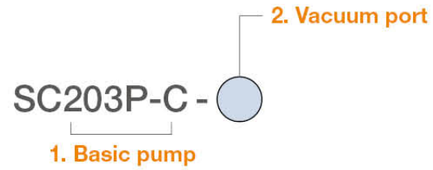


※ Vacuum flow at different vacuum level



※ Time to evacuate a volume at different vacuum level

Build an Ordering No.



1. Basic pump	Description	Symbol
	SC pump, 2-stage cartridge, Plug	SC202P-C
	SC pump, 3-stage cartridge, Plug	SC203P-C

2. Vacuum port	Description	Symbol
	Vacuum port, G1/4" female	14F

Spare Parts – Basic pumps

Part No.	Description	Weight (g)
SC202P-C-14F	SC pump, 2-stage cartridge, Plug, Vacuum port - G1/4" female	80
SC203P-C-14F	SC pump, 3-stage cartridge, Plug, Vacuum port - G1/4" female	85

Spare Parts – Cartridges

Part No.	Description	Available model
VC202	Mini vacuum cartridge, 2-Stage	SC202P-C-14F
VC203	Mini vacuum cartridge, 3-Stage	SC203P-C-14F

Spare Parts – Plugs

Part No.	Description
VCP-202PS2	Holding plug for SC202P-C-14F
VCP-203PS2	Holding plug for SC203P-C-14F

Conveying pump

Features and Strengths

Single stage vacuum ejector integrated in pump body
High vacuum flow for transferring bulk materials, granules and powders, etc.

Advantages

Reliable and cost effective solution for product transfer
No maintenance due to non-clogging structure

Application

Recommended Lifting Force (Max.)

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (Nl/m)	Air Consumption (Nl/m)
VTRA250	85	7	283	113~340
VTRA375	85	7	849	175~820
VTRA500	70	7	1698	340~934
VTRA750	70	7	3396	651~1783
VTRF2-3	27	7	283	88~170
VTRF3-3	15.2	7	424	99~170
VTRF5-6	33.8	7	849	396~679
VTRF7-6	27	7	1698	792~1358
VTRF15-3	4.4	7	4670	396~769
VTRF15-6	8.5	7	5660	792~1358

VTRA250

Features and Strengths

· Excellent in high contamination areas where dust and small debris
· High vacuum flow in conjunction with vacuum levels down

Specifications

Description	VTRA250
Max. Vacuum level	-85 kPa
Open Vacuum flow	283 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	93 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)				
			16.9	33.8	50.7	67.5	84.4
VTRA250	85	5.5	283	243	204	164	127

Air consumption

Model	Feed Pressure (bar)	Air consumption (Nl/min) at different vacuum levels (-kPa)				
		16.9	33.8	50.7	67.5	84.4
VTRA250	5.5	113	170	235	275	340

VTRA375

Features and Strengths

· Excellent in high contamination areas where dust and small debris
· High vacuum flow in conjunction with vacuum levels down

Specifications

Description	VTRA375
Max. Vacuum level	-85 kPa
Open Vacuum flow	849 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	265 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)				
			16.9	33.8	50.7	67.5	84.4
VTRA375	85	5.5	849	736	623	524	396

Air consumption

Model	Feed Pressure (bar)	Air consumption (Nl/min) at different vacuum levels (-kPa)				
		16.9	33.8	50.7	67.5	84.4
VTRA375	5.5	175	325	481	594	820

VTRA500

Features and Strengths

· Excellent in high contamination areas where dust and small debris
· High vacuum flow in conjunction with vacuum levels down

Specifications

Description	VTRA500
Max. Vacuum level	-70 kPa
Open Vacuum flow	1,698 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	380 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)				
			16.9	33.8	50.7	67.5	84.4
VTRA500	85	5.5	1698	1330	1132	991	651

Air consumption

Model	Feed Pressure (bar)	Air consumption (Nl/min) at different vacuum levels (-kPa)				
		16.9	33.8	50.7	67.5	84.4
VTRA500	5.5	340	623	792	934	1274

VTRA750

Features and Strengths

· Excellent in high contamination areas where dust and small debris
· High vacuum flow in conjunction with vacuum levels down

Specifications

Description	VTRA750
Max. Vacuum level	-70 kPa
Open Vacuum flow	3,396 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	527 g

Vacuum Flow

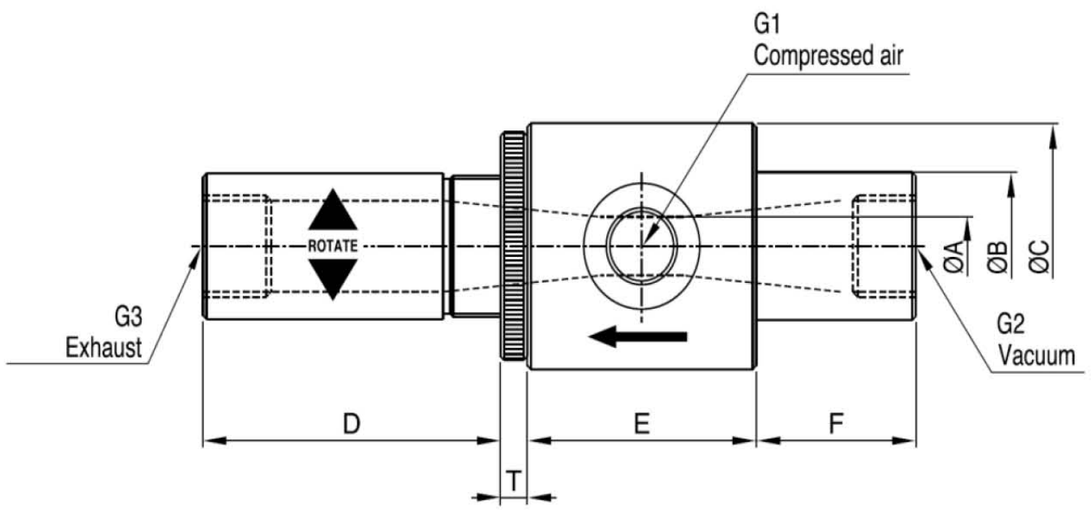
Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (Nl/min) at different vacuum levels (-kPa)				
			16.9	33.8	50.7	67.5	84.4
VTRA750	85	5.5	3396	2462	1975	1443	1132

Air consumption

Model	Feed Pressure (bar)	Air consumption (Nl/min) at different vacuum levels (-kPa)				
		16.9	33.8	50.7	67.5	84.4
VTRA750	5.5	651	872	1245	1783	2547

Dimensions – VTRA series

[Unit : mm]



Model	ØA	ØB	ØC	D	E	F	T	G1	G2	G3
VTRA250	6.8	18.8	31.3	41.0	31.6	22.0	3.7	G1/8”	G1/4”	G1/4”
VTRA375	9.6	25.2	43.5	69.8	44.4	37.6	5.0	G3/8”	G1/2”	G1/2”
VTRA500	12.7	31.4	50.0	63.5	50.8	38.0	5.0	G3/8”	G1/2”	G3/4”
VTRA750	19.1	37.8	56.8	85.7	50.8	38.2	55.0	G1/2”	G3/4”	G1”

VTRF2-3

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

Description	VTRF2-3
Max. Vacuum level	-27 kPa
Open Vacuum flow	283 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ºC
Weight	79 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF2-3	27	490	88	170

VTRF3-3

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

Description	VTRF3-3
Max. Vacuum level	-15.2 kPa
Open Vacuum flow	424 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ºC
Weight	72 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF3-3	15.2	328	99	170

VTRF5-6

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

Description	VTRF5-6
Max. Vacuum level	-33.8 kPa
Open Vacuum flow	849 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	154 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF5-6	33.8	362	396	679

VTRF7-6

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

Description	VTRF7-6
Max. Vacuum level	-27 kPa
Open Vacuum flow	1,698 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	373 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF7-6	27.0	326	792	1,358

VTRF15-3

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

Description	VTRF15-3
Max. Vacuum level	-4.4 kPa
Open Vacuum flow	4,670 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	589 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF15-3	4.4	224	396	679

VTRF15-6

Features and Strengths

· Reliable and cost effective solution for in line product transfer
· High vacuum flow in conjunction with vacuum levels down
· No need of maintenance due to straight through design

Specifications

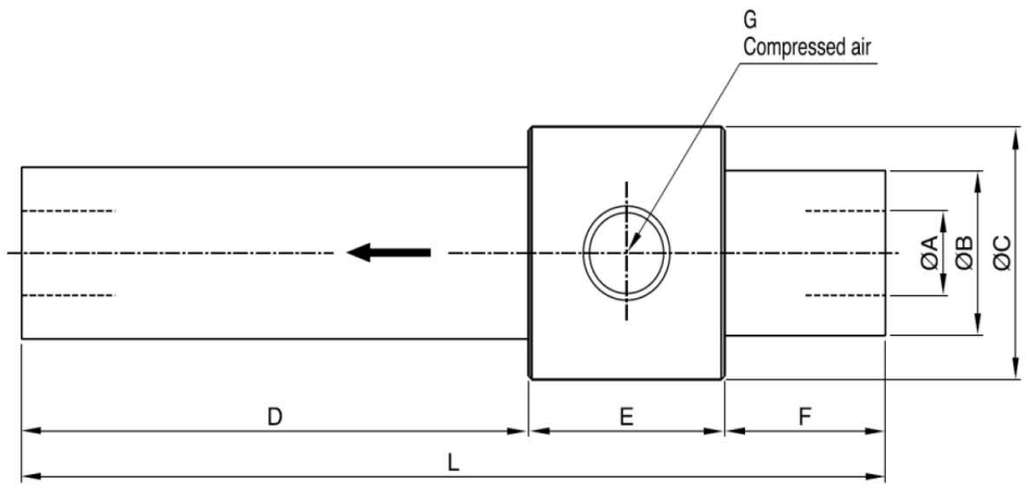
Description	VTRF15-6
Max. Vacuum level	-8.5 kPa
Open Vacuum flow	5,660 Nl/min
Max. Feed pressure	7 bar
Temperature	-20 ~ 120 ℃
Weight	591 g

Performance data

Model	Max. vacuum (-kPa)	Air velocity (ft/sec)	Air consumption (Nl/m)	
			2.8bar	5.5bar
VTRF15-6	8.5	272	792	1,358

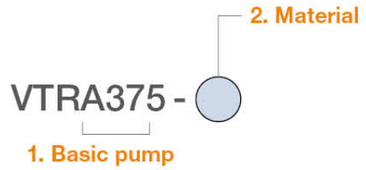
Dimensions – VTRF series

[Unit : mm]



Model	ØA	ØB	ØC	D	E	F	L	G
VTRF2-3	6.4	18.4	31.5	45.0	24.9	19.0	88.9	G1/8”
VTRF3-3	9.5	18.8	31.3	45.3	25.5	18.2	89.0	G1/8”
VTRF5-6	12.6	24.5	37.6	82.0	31.7	26.0	139.7	G1/4”
VTRF7-6	19.0	31.8	50.0	101.8	50.6	38.0	190.4	G3/8”
VTRF15-3	38.2	49.6	69.0	101.4	50.8	38.2	190.4	G3/8”
VTRF15-6	38.2	49.6	69.0	101.4	50.8	38.2	190.4	G3/8”

Build an Ordering No.



1. Basic pump	Description	Symbol
	Conveying pump - VTRA series, Adjustable, G1/4" vacuum port, G1/4" exhaust port	VTRA250
	Conveying pump - VTRA series, Adjustable, G1/2" vacuum port, G1/2" exhaust port	VTRA375
	Conveying pump - VTRA series, Adjustable, G1/2" vacuum port, G3/4" exhaust port	VTRA500
	Conveying pump - VTRA series, Adjustable, G3/4" vacuum port, G1" exhaust port	VTRA750
	Conveying Pump - VTRF Series, 0.25" inlet dia., G1/8" air supply	VTRF2-3
	Conveying Pump - VTRF Series, 0.37" inlet dia., G1/8" air supply	VTRF3-3
	Conveying Pump - VTRF Series, 0.50" inlet dia., G1/4" air supply	VTRF5-6
	Conveying Pump - VTRF Series, 0.75" inlet dia., G3/8" air supply	VTRF7-6
	Conveying Pump - VTRF Series, 1.50" inlet dia., G3/8" air supply	VTRF15-3
	Conveying Pump- VTRF Series, 1.50" inlet dia., G3/8" air supply	VTRF15-6

2. Material	Description	Symbol
	Aluminum	AL
	Stainless	SS