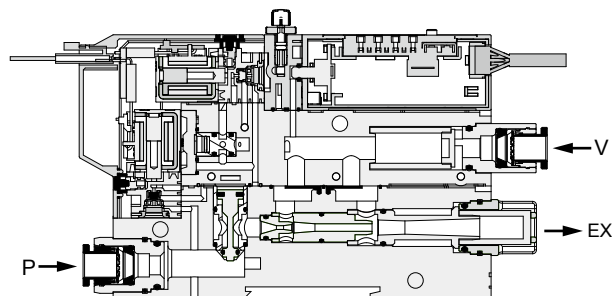


VKM series - Modularized vacuum ejector with manifold

Operation specification

CHELIC

Internal structure



Specification

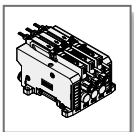
Item	Model	VKM15
Fluid		Air
Pressure range	Kgf/cm ² (kPa)	2.5 ~ 7 (250~700)
Proof pressure	Kgf/cm ² (kPa)	5 (500)
Vacuum value	kPa (mmHg)	-90 kPa (-680mmHg)
Nozzle diameter	(mm)	1.0mm
Max. suction flow	(L/min)	45
Temperature	°C	0 ~ 50
Material	Body	Copper (Nickel plating)
	Plastic	NYLON , PBT
Port size (P port)	Rc (PT)	Ø6、Ø8
Valve type		SR2 - 100
Rated voltage	(V)	24±10%VDC
Power consumption	(W)	1.4

Maximum number of manifold stations that can operate simultaneously

Item	Model	VKMX
Port size (P port) Ø8	Complex exhaust	5 stations
	Individual exhaust	10 stations

Weight

Item	Model	Weight (g)									
Single unit vacuum ejector	VKM 15-A-00-E1-10-DC24-H1-P04	142									
Manifold type vacuum ejector	VKM 15-B-00-E4-10-DC24-H2-P04	140									
Side end plate type	VKMX-08-E5-K1-01-C1 10	1 station	2 stations	3 stations	4 stations	5 stations	6 stations	7 stations	8 stations	9 stations	10 stations
		171	176	181	186	191	196	201	206	211	216



VKM series - Modularized vacuum ejector with manifold

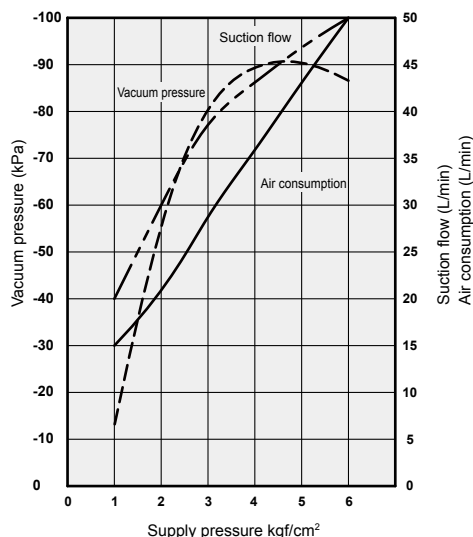
Pressure switch specification and feature

CHELIC

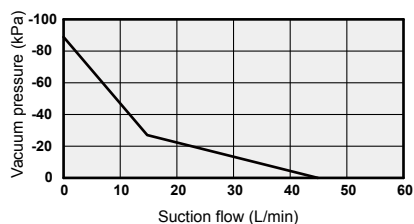
Pressure switch specification

Item		Model	PSV-35 (Numeric Display)
Set pressure range / Rated pressure range			- 101 to 0 KPa
Withstanding pressure			500 KPa
Applicable fluid			Air, Non-corrosive gas, Incombustible gas
Power voltage			12 to 24 VDC $\pm$ 10%, Ripple 10% or less
Reacting time			$\leq$ 2.5 ms (Prevent incorrect operation: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms options)
Repeatability			$\pm$ 0.2% F.S. $\pm$ 1 digit
Current consumption			$\leq$ 40 mA (no load current)
Environmental resistance	Enclosure		IP40
	Operating temperature range		Operating: 0~50°C, Storage: -20~60°C (No freezing or condensation)
	Operating humidity range		Operation and storage: 35~85% RH (No condensation)
	Withstand voltage		1000VAC 1minute (Between terminals and housing)
	Insulation resistance		50M Ω or less (500) VDC (Between terminals and housing)
	Vibration resistance		Phasor 1.5mm 10Hz ~ 55Hz, X, Y, Z, 2 hours per direction
Impact resistance			980 m/s ² (100G) X, Y, Z 3 times per direction
Temperature characteristics			$\pm$ 2% F.S. (0~50°C in operating temperature)
Weight			53g (Including 2 meter wires)

Exhaust Characteristics



Flow Rate Characteristics



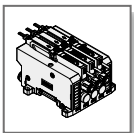
The caution while design, selection and maintenance

Warning

- Please avoid chemical, corrosive and inflammable gas; avoid sea water, steam high temperature place in surrounding.
- Please avoid oil contain gas, do not apply the piping that has mist-oil objects; the oil in pipeline will cause blockage resulting in poor effect.
- Please apply clean and compressed air only. Un-clean air is prohibited.
- While applying clean air, the air shall be dry without water; the steam and humidity will cause pressure detecting defunction.

Caution

- Please don't disassemble the vacuum generator in discretion, disassemble the vacuum generator in discretion will lead to displacement of the original calibration accuracy; wrong disassembling will lead to hazard and cause problem on operation of the product.
- Please do must apply supply pressure according to indicated range; If the using pressure higher than indicated range, the product is possible damaged.
- While operating, please avoid dropping, immediate impact or high impact (100m/s). If the unit body not damaged, the inner components might be destroyed.



VKM series - Modularized vacuum ejector with manifold

Order expression

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How to Order - Vacuum ejector / Single unit

VKM 15	A	06	E1	10	DC 24	H1	P04	C1
Vacuum ejector	Model	P port	Exhaust	Nozzle	Input voltage	Electrical entry	Output	Bracket
	Code Type	Code Type Image	Code Type Image	Code Port size	Code Type	Code Type Image	Code Type	Code Type Image
	A Single unit	06 Ø 6 supply tube	E1 Direct exhaust	10 Ø1.0	DC 24 24V 1.0W DC 12 12V 0.6W	H1 Individual wiring	P04 2NPN output +Analog P05 2PNP output +Analog	None No bracket C1 Rail bracket C2 Mounting bracket

※ C1 : With rail 107.1 mm

How to Order - Vacuum ejector / Manifold type

VKM 15	B	00	E4	10	DC 24	H2	P04
Vacuum ejector	Model	P port	Exhaust	Nozzle	Input voltage	Electrical entry	Output
	Code Type	Code Type Image	Code Type Image	Code Port size	Code Type	Code Type Image	Code Type
	B Manifold type ※ End plate is required	00 Closed type	E1 Direct exhaust E2 Ø 6 supply tube E3 Ø 8 supply tube E4 Closed type	10 Ø1.0	DC 24 24V 1.0W DC 12 12V 0.6W	H1 Individual wiring H2 Grouping wiring	P04 2NPN output +Analog P05 2PNP output +Analog

※ Wire length 2M

※ While select H1 individual wiring, it should apply L type side end plate without plug
※ While select H2 grouping wiring, it should apply K1 or K3 with D type plug
※ Individual wiring length 1M

※ While select E4, it can't be applied with E6 together

How to Order - Vacuum ejector / Side end plate

VKMX	06	E5	K1	02	C3
Side end plate	P port	Exhaust	Electrical entry	Manifold no.	Bracket
	Code Type Image	Code Type Image	Code Type Image	Code Manifold no.	Code Type Image
	06 Ø 6 tube 08 Ø 8 tube	E5 Complex exhaust E6 Closed type	K1 D type plug; 1M cable length K3 D type plug; 3M cable length L None	01 1 station 02 2 station ⋮ ⋮ 10 10 station	None No bracket C3 Rail bracket C4 Rail bracket (With rail)

※ For manifold type of vacuum ejector only

※ While select E6, it can't be applied with E4 together

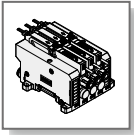
※ Select D type K1 or K3, shall apply manifold type of vacuum ejector with H2 grouping wire
※ Select L type without plug, shall apply manifold type of vacuum ejector with H1 individual wiring

※ C3 : Without rail
※ C4 : Manifold rail length (Please refer Chart 1)

Manifold no.	Rail length (L)
1~2	107.1 mm
3~4	142.8 mm
5~6	178.5 mm
7~8	214.2 mm
9~10	249.9 mm

(Chart 1)





VKM series - Modularized vacuum ejector with manifold

Manifold type ordering expression

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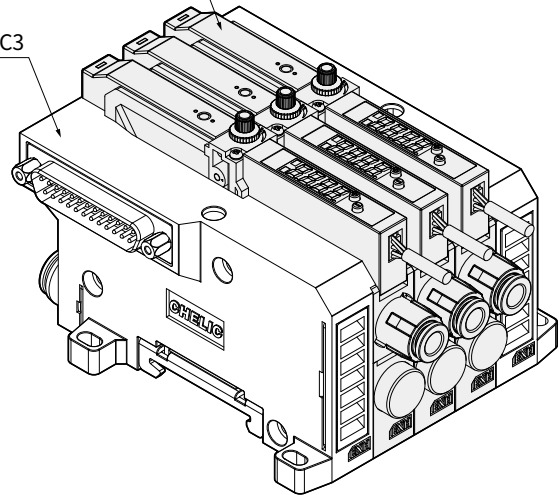
Manifold type ordering expression

VKM 15-B-00-E4-10-DC24-H2-P04
(Vacuum Ejector / Manifold type)

VKMX-08-E5-K1-03-C3
(Side end plate)

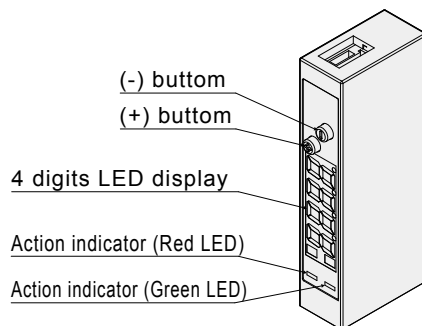
1. VKM 15-B-00-E4-10-DC24-H2-P043pcs
+
2. VKMX-08-E5-K1-03-C31set

- Before ordering, please confirm the type of vacuum ejector and quantity. After selection, gathering all the vacuum ejectors and chose the type of side end plate.

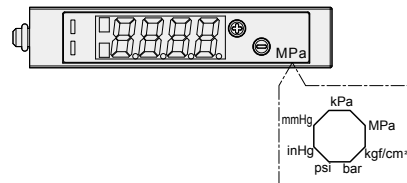


PSV-35 Numeric Display Pressure Switch Setting Instructions

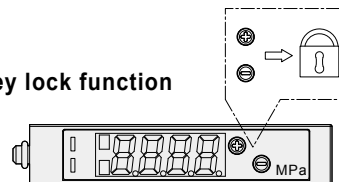
- 2 sets of output & linear analogy output (1~5V)
- Compact size: 10mm
- Key lock function
- Various pressure units available
kPa, MPa, kgf/cm², bar, psi, inHg, mmHg



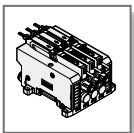
Various pressure units available



Key lock function



Key lock mode can prevent improper operation to pressure switch.
Key lock mode can pbe activated by pressing + and - for 3 seconds.



VKM series - Modularized vacuum ejector with manifold

Components description

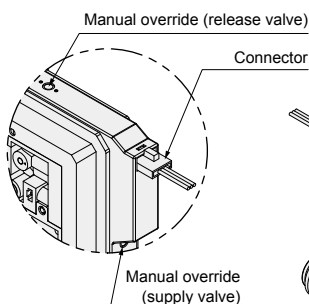
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Single Unit Components

A. Fitting replacement

● P port / EXH port :

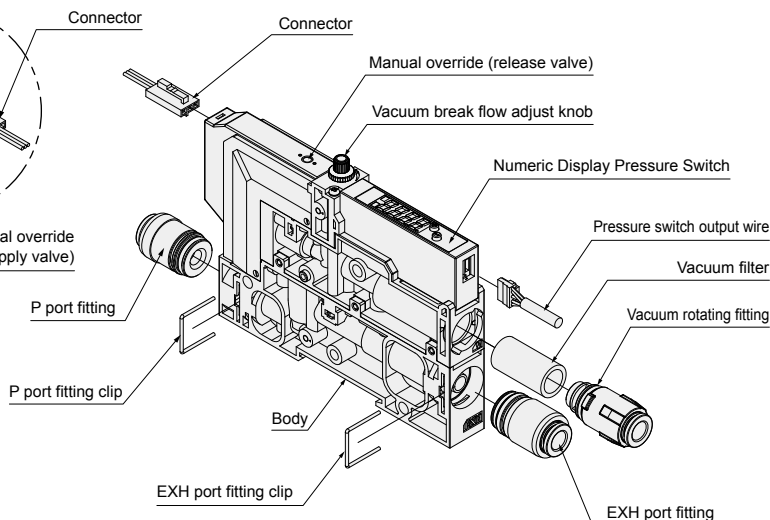
- (1) Dismantling fitting clips
- (2) Take out the fittings, then put into new fittings.
- (3) Place new fittings onto ejectors and put back the fitting clips



B. Filter element replacement

● Vacuum port :

- (1) Pull out the vacuum port fitting
- (2) Take out the element and replace
- (3) Position the element into the ejector, then rotate vacuum fitting back to the port



Component Replacement

A. How to increase manifold stations

- (1) Remove three tension bolts
- (2) Dismantling right end plate (Be careful not to drop the gasket and PC board)
- (3) Mount a single unit to the end surface (Be careful not to drop the gasket and PC board)
- (4) Lock three tension bolts

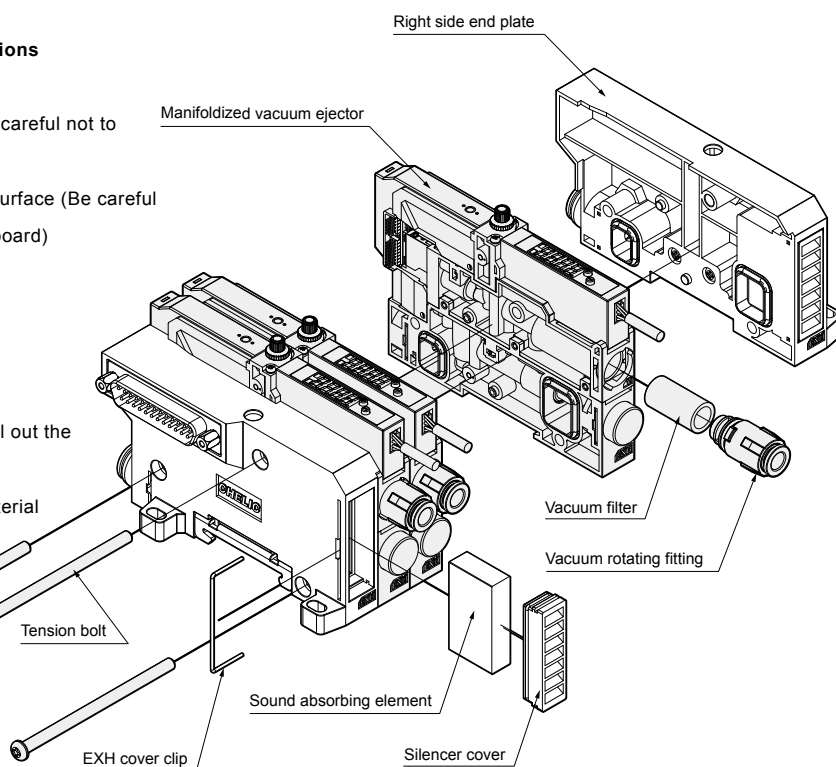
B. Silencer cover replacement

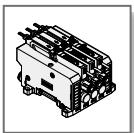
● Sound absorbing element :

- (1) Remove the clip
- (1) Remove the silencer cover, pull out the sound absorbing element
- (1) Replace the new absorbing material and position the silencer cover, then put the clip back to unit

● Vacuum port :

- (1) Pull out the vacuum port fitting
- (2) Take out the element and replace
- (3) Position the element into the ejector, then rotate vacuum fitting back to the port





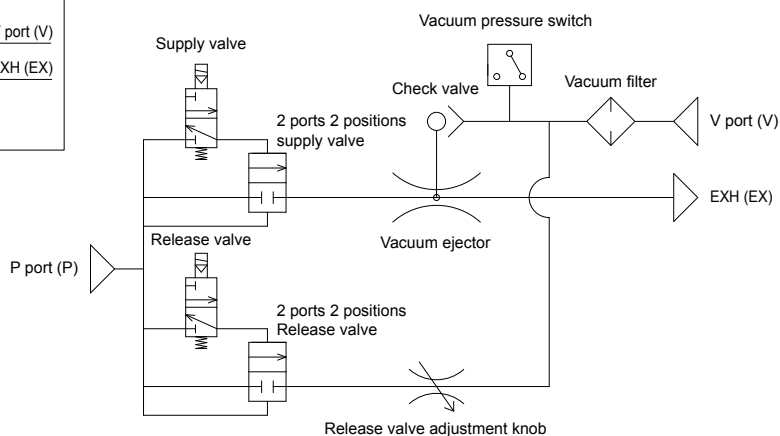
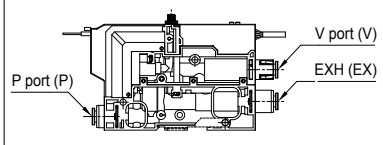
VKM series - Modularized vacuum ejector with manifold

Circuit expression

CHELIC

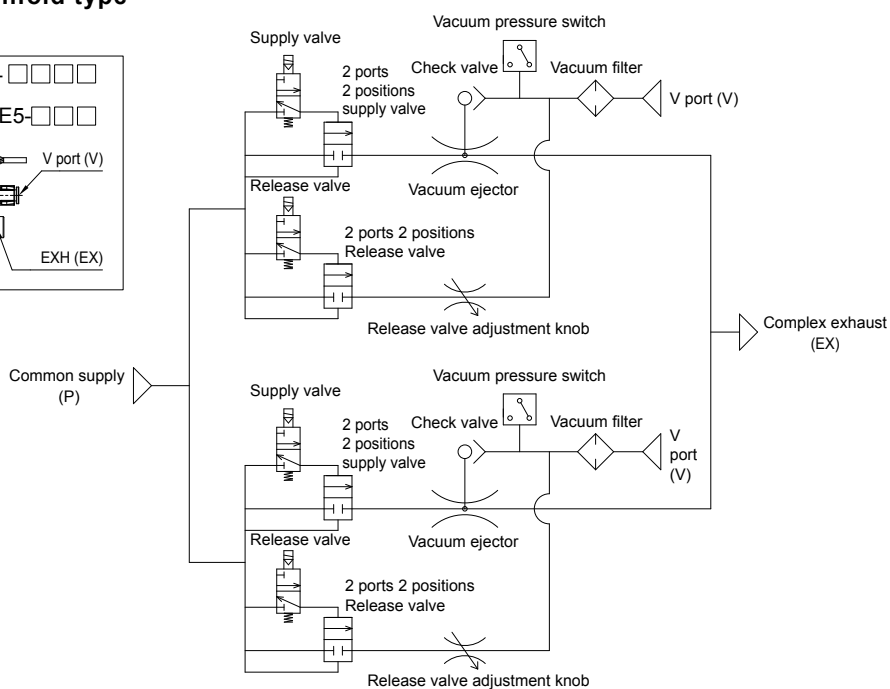
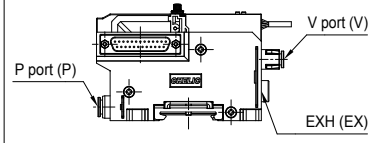
☛ Vacuum ejector / Single unit

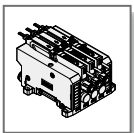
Single unit : VKM 15-A- □□□□



☛ Vacuum Ejector / Manifold type

Manifold type : VKM 15-B- □□□□
+ VKMX-□-E5-□□□□





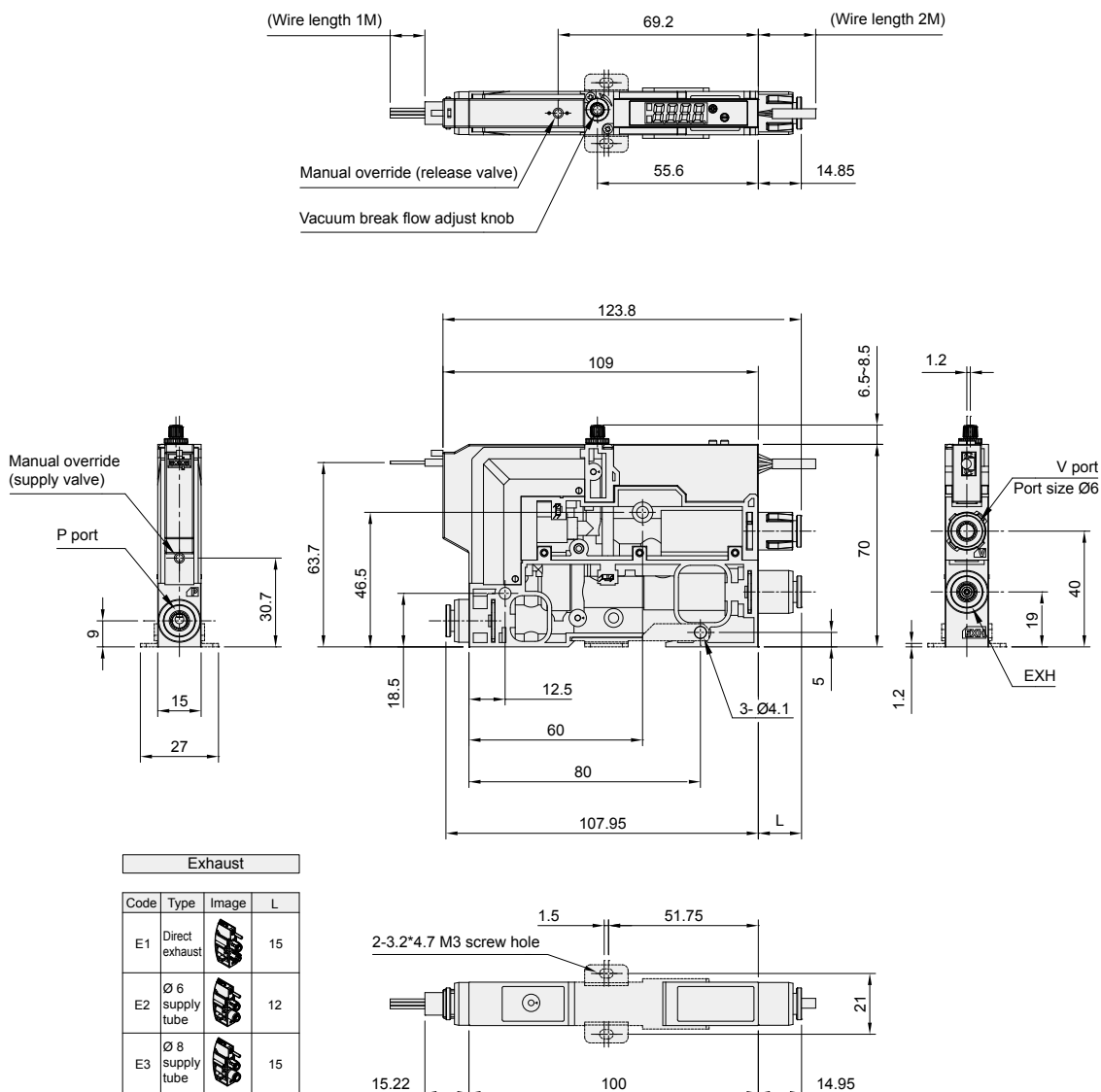
VKM series - Modularized vacuum ejector with manifold

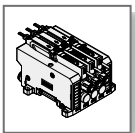
Single unit - External dimensions

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Single Unit Components

VKM 15 -A-06- **E2** -10-DC24-H1-P04-C2





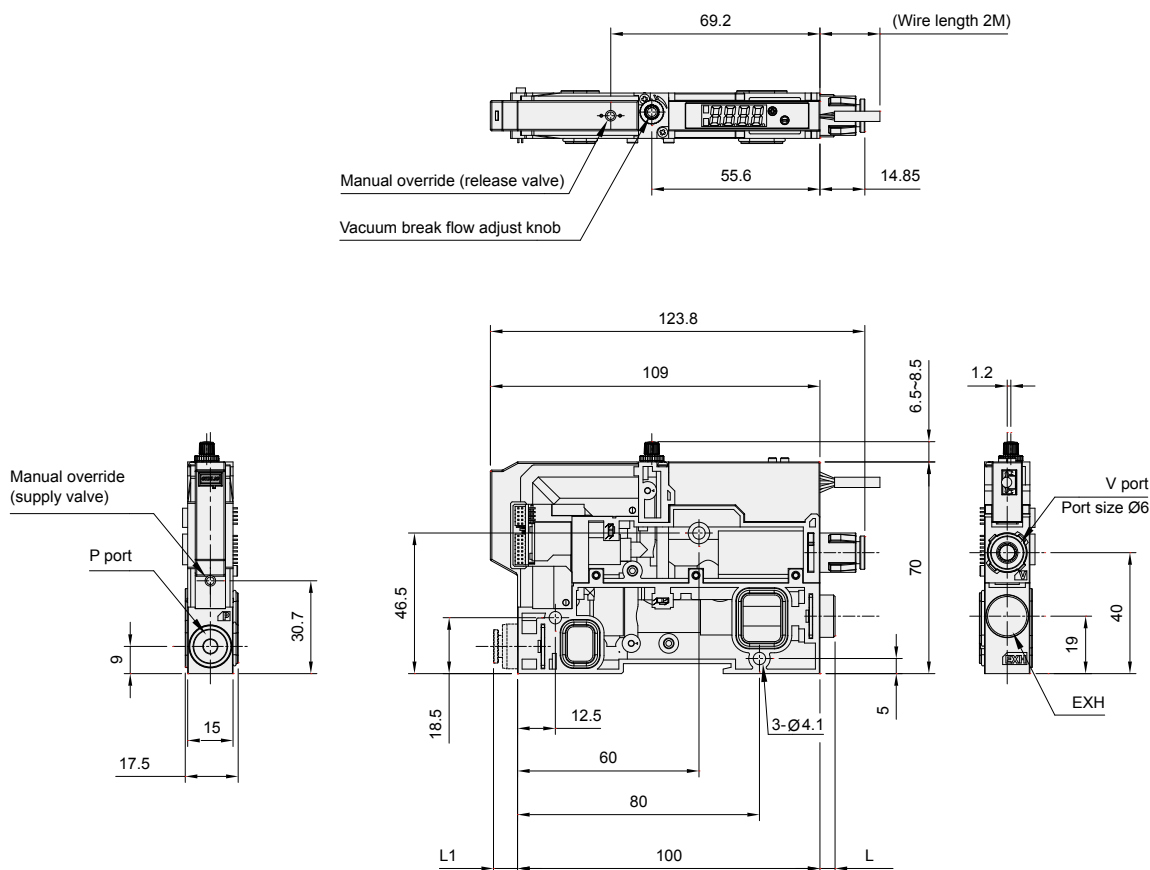
VKM series - Modularized vacuum ejector with manifold

Manifold type - External dimensions

CHELIC

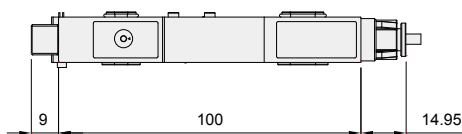
Manifold Vacuum Ejector Must With Side End Plate

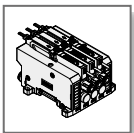
VKM 15-B-**00** - **E4** -10-DC24-H2-P04



P port				Exhaust			
Code	Type	Image	L1	Code	Type	Image	L
00	Closed type		0	E1	Direct exhaust		12
06	Ø 6 supply tube		8	E2	Ø 6 supply tube		15
08	Ø 8 supply tube		8	E3	Ø 8 supply tube		15
				E4	Closed type		5

※ While select E4, it can't be applied with E6 together





VKM series - Modularized vacuum ejector with manifold

Single unit - External dimensions

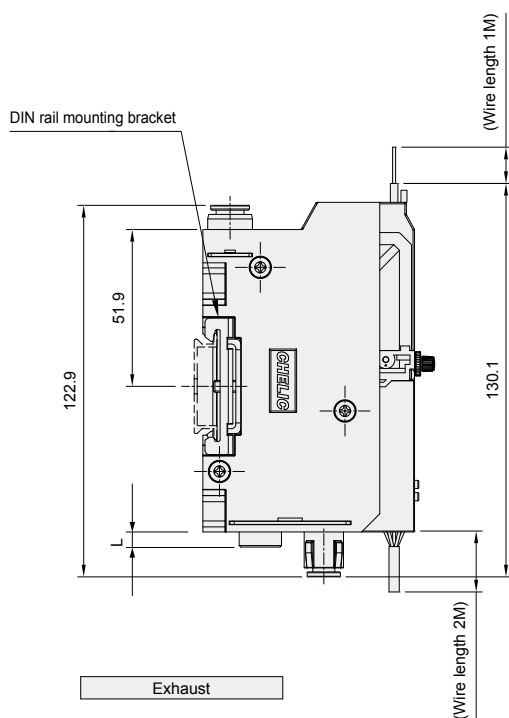
CHELIC

Manifold Individual Wiring

VKM 15-B-00- **E4** -10-DC24-H1-P04 *2pcs

+

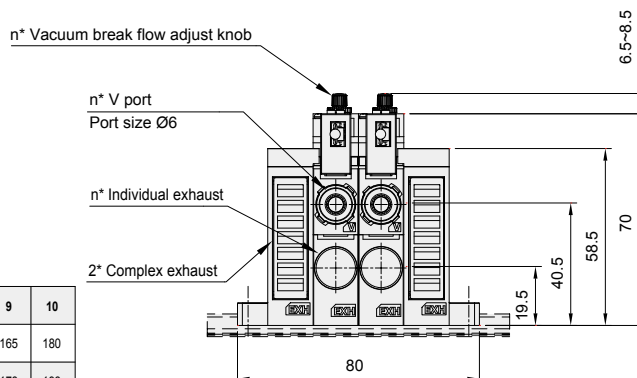
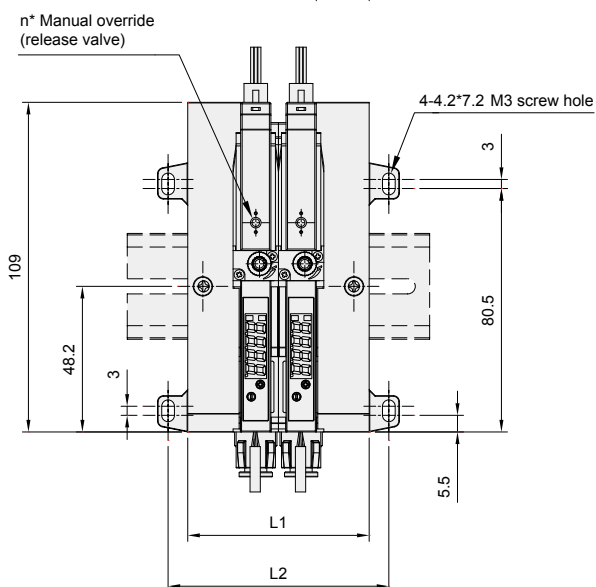
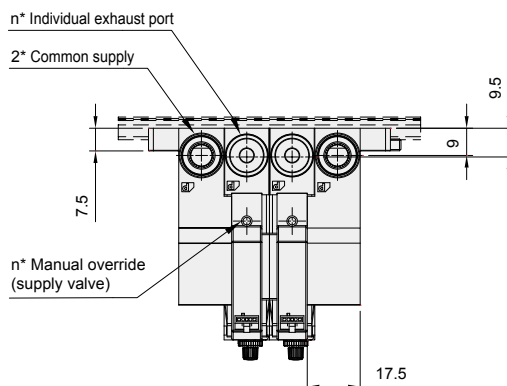
VKMX-06-E5-L1-02-C1*1set

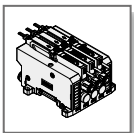


Exhaust

Code	Type	Image	L
E1	Direct exhaust		12
E2	Ø 6 supply tube		15
E3	Ø 8 supply tube		15
E4	Closed type		5

Manifold no.	1	2	3	4	5	6	7	8	9	10
L1	45	60	75	90	105	120	135	150	165	180
L2	58	73	88	103	118	133	148	163	178	193





VKM series - Modularized vacuum ejector with manifold

Manifold type - External dimensions

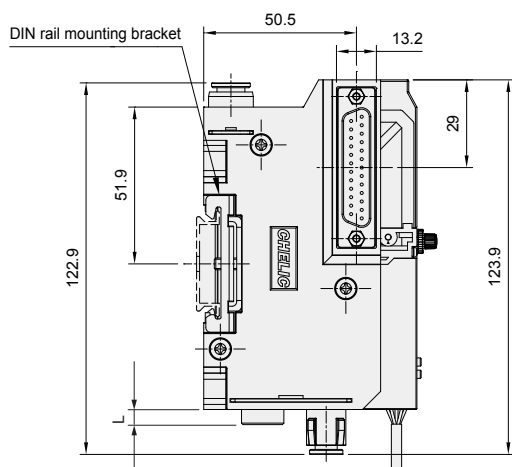
CHELIC

D-Sub Connector

VKM 15-B-00- **E4** -10-DC24-H2-P04 *2pcs

+

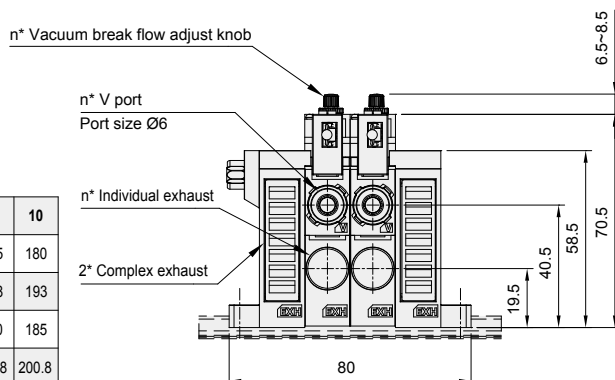
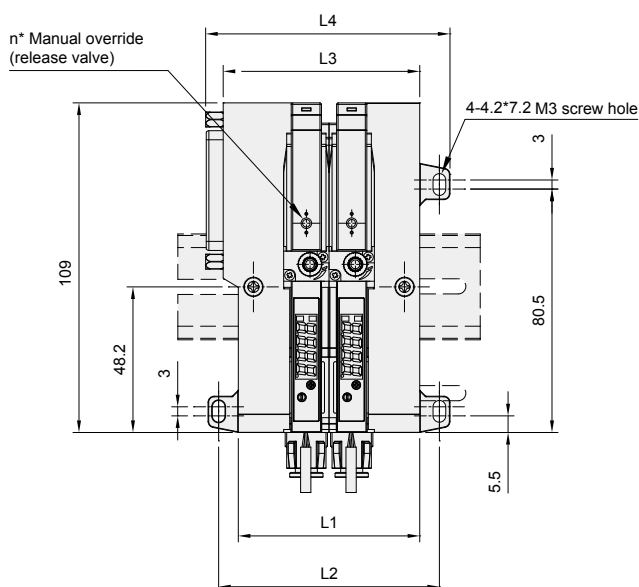
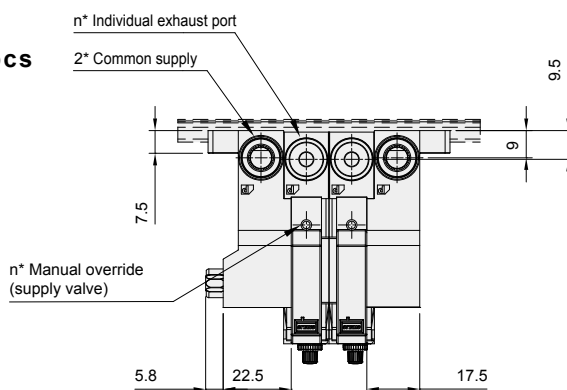
VKMX-06-E5-K1-02-C1*1set

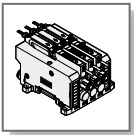


Exhaust

Code	Type	Image	L
E1	Direct exhaust		12
E2	Ø 6 supply tube		15
E3	Ø 8 supply tube		15
E4	Closed type		5

Manifold no.	1	2	3	4	5	6	7	8	9	10
L1	45	60	75	90	105	120	135	150	165	180
L2	58	73	88	103	118	133	148	163	178	193
L3	50	65	80	95	110	125	140	155	170	185
L4	65.8	80.8	95.8	110.8	125.8	140.8	155.8	170.8	185.8	200.8



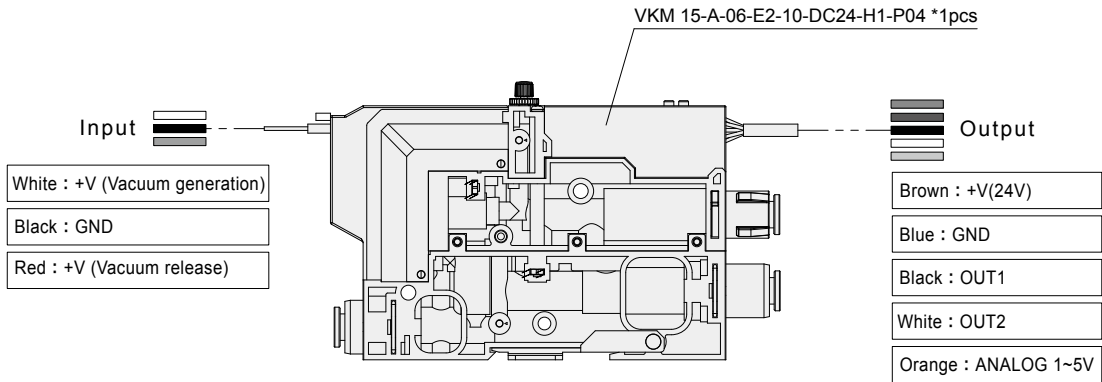


VKM series - Modularized vacuum ejector with manifold

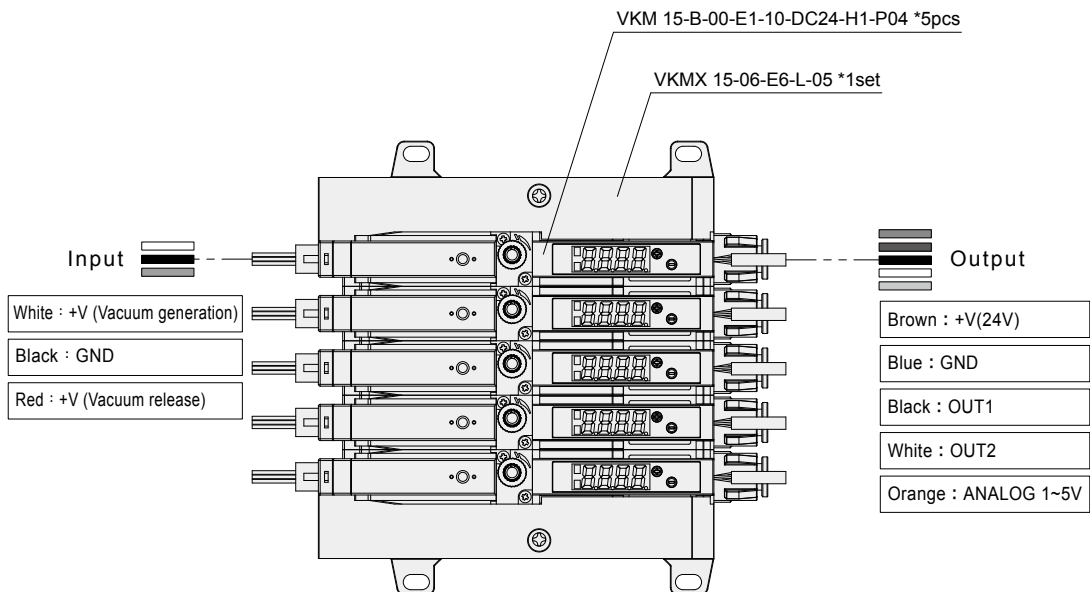
Wiring expression

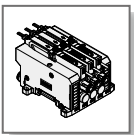
CHELIC

Wiring expression - Vacuum ejector / Single unit



Wiring expression - Manifold vacuum ejector with individual wiring





VKM series - Modularized vacuum ejector with manifold

Wiring expression

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Wiring expression - Manifold vacuum ejector with D-sub connector

