

Vacuum Generator ECV

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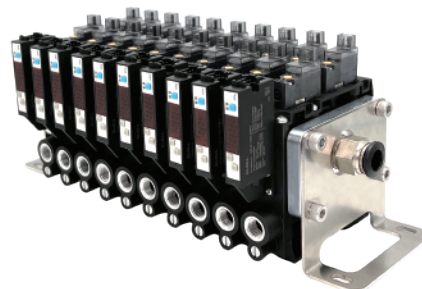


General

Max. 16 sets

Product characteristics

- * Energy efficient nozzle technology enables high suction rates while minimizing compressed air consumption
- * Compact, lightweight, can be installed directly on the grasping system
- * Single L-bracket, integrated DIN rail mounting, centralized gas supply
- * ECV-180M-S effectively reduces noise, with A minimum noise value of 60[dB(A)]



ECV-180M Ordering NO

ECV	180M	10	S	N	F2
1	2	3	4	5	6

1-Series	
ECV	

2-Models	
180M	

3-Specification	
10	1.0 Nozzle
15	1.5 Nozzle
GH	High vacuum
GM	Low supply

4-Silencer	
S	With enhanced silencing

5-Vacuum pressure switch	
N	NPN no energy saving function
P	PNP no energy saving function
NE	NPN with energy-saving function
PE	PNP with energy-saving function
	No vacuum switch

6-Quantity	
F2	2 sets
F3	3sets
F4	4sets
F5	5sets
....	...sets
F16	16sets

*1.5 Nozzle specifications Up to 10 sets, 1.0 nozzle/ high vacuum GH/ low gas supply GM up to 16 sets *

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真空发生器ECV-180M技术参数/Technical Data

Models	Used fluid	Temperature [°C]	inlet pressure [Mpa]	Inspiratory air consumption [L/Min]	Air consumption by blowing [L/Min]	Vacuum pressure reached [-Kpa]	Maximum vacuum flow [L/Min]
ECV-180M-10-F2	air	0~60 (non-freezing)	4.3	90	120	85	72.5
ECV-180M-10-F3	air	0~60 (non-freezing)	4.3	135	180	85	108.3
ECV-180M-10-F4	air	0~60 (non-freezing)	4.3	180	240	85	144.4
ECV-180M-10-F16	air	0~60 (non-freezing)	4.3	720	960	85	577.6
ECV-180M-15-F2	air	0~60 (non-freezing)	4.3	200	120	85	131
ECV-180M-15-F3	air	0~60 (non-freezing)	4.3	300	180	85	196.5
ECV-180M-15-F4	air	0~60 (non-freezing)	4.3	400	240	85	262
ECV-180M-15-F10	air	0~60 (non-freezing)	4.3	1000	600	85	655
ECV180M-GH-F2	air	0~60 (non-freezing)	5	52.8	120	92	90
ECV180M-GH-F3	air	0~60 (non-freezing)	5	79.2	180	92	135
ECV180M-GH-F4	air	0~60 (non-freezing)	5	105.6	240	92	180
ECV180M-GH-F16	air	0~60 (non-freezing)	5	422.4	960	92	720
ECV180M-GM-F2	air	0~60 (non-freezing)	3.2	55.2	120	90	82
ECV180M-GM-F3	air	0~60 (non-freezing)	3.2	82.8	180	90	123
ECV180M-GM-F4	air	0~60 (non-freezing)	3.2	110.4	240	90	164
ECV180M-GM-F16	air	0~60 (non-freezing)	3.2	441.6	960	90	656

ECV-180M vacuum generator blowing air consumption [L/Min]/ suction air consumption [L/Min]/ Maximum vacuum flow [L/Min] calculation formula

Models	Inspiratory air consumption [L/Min]	Air consumption by blowing [L/Min]	Maximum vacuum flow [L/Min]
ECV180M-10-F* (Up to 16 groups)	40xN	60xN	36.1xN
ECV180M-15-F* (Up to 10 groups)	100xN	60xN	65.5xN
ECV180M-GH-F* (Up to 16 groups)	26.4xN	60xN	45xN
ECV180M-GM-F* (Up to 16 groups)	27.6xN	60xN	41xN

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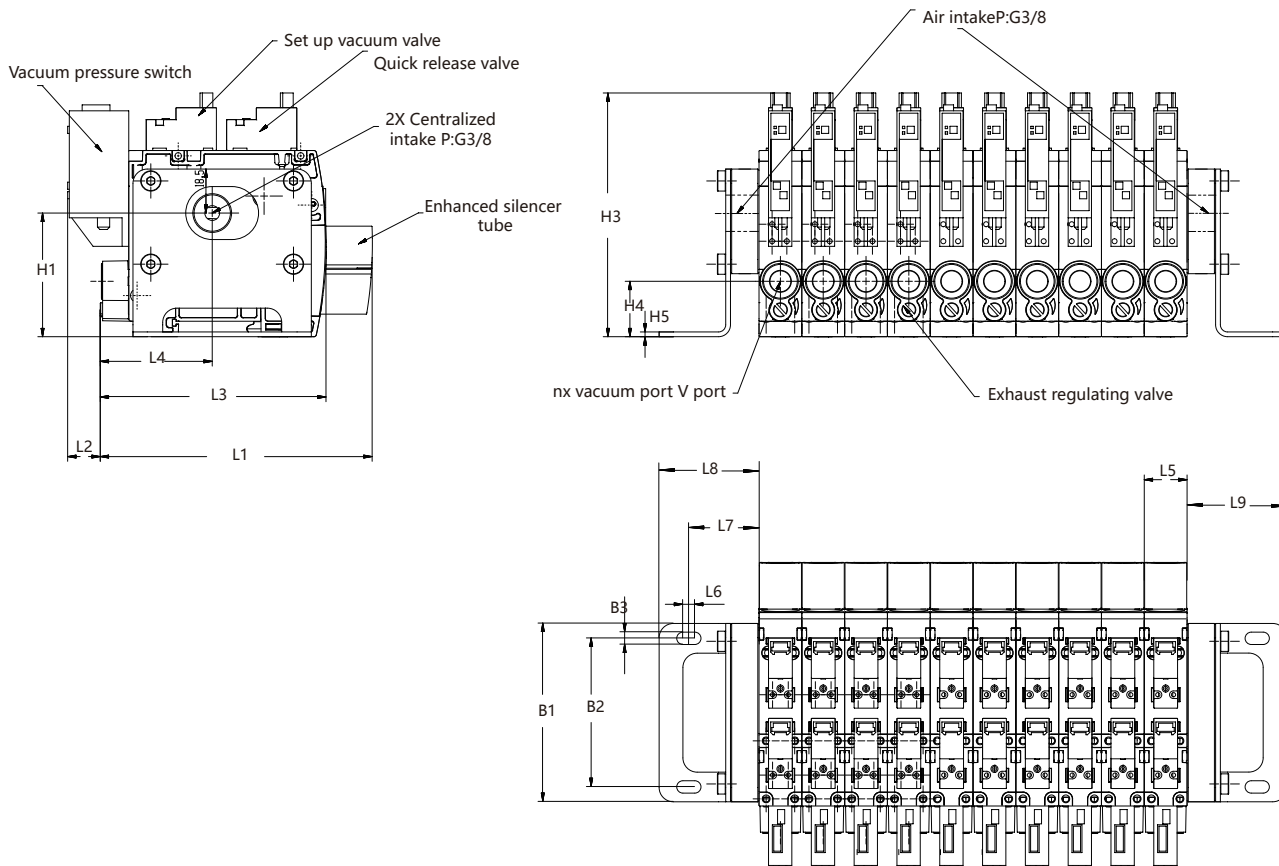


General

Max. 16 sets



ECV-180M Design Data



Size[mm]

Models	L1	L2	L3	L4	L5	L6	L7	L8	L9	H1	H2	H3	H4	H5	B1	B2	B3
ECV-180M-**-F2	/	13.7	94.9	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2
ECV-180M-**-F**	/	13.7	94.9	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2
ECV-180M-**-F16	/	13.7	94.9	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2
ECV-180M-**-S-F2	114.3	13.7	/	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2
ECV-180M-**-S-F**	114.3	13.7	/	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2
ECV-180M-**-S-F16	114.3	13.7	/	47.1	18	5	29.5	42	42	52	108.5	18.5	23.3	2	75	62.5	5.2

Total length of ECV180 vacuum generator = L8 + L5 * N + L9

*1.5 nozzle specifications up to 10 sets, 1.0 nozzle/high vacuum GH/ low gas supply GM up to 16 sets *

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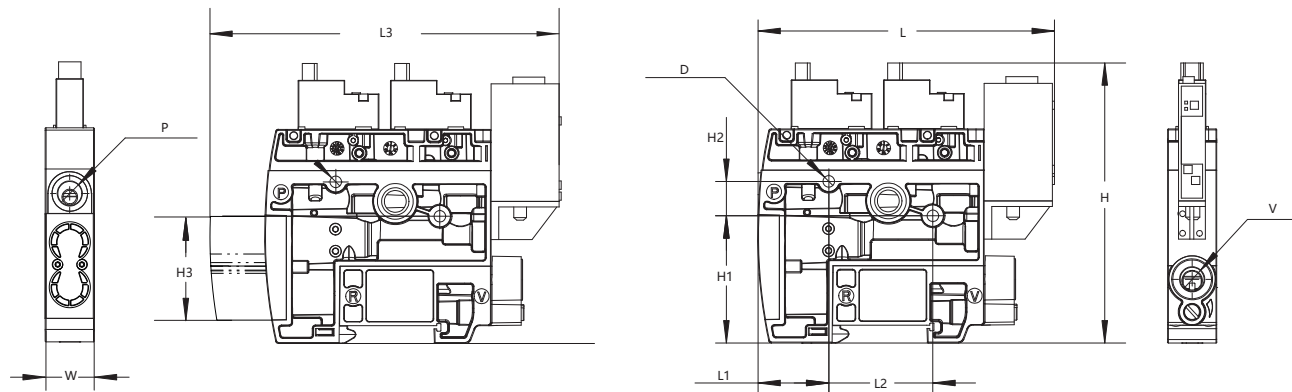
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General

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ECV-180M Design Data



ECV-180M/ECV-180M-S

Size[mm]

Models	L	L1	L2	L3	H	H1	H2	H3	W	D	P	V
ECV-180M-10	108.5	25.9	38.1	/	102.5	46.55	12.6	/	18	2-φ4.2	G1/8"	G1/8"
ECV-180M-15	108.5	25.9	38.1	/	102.5	46.55	12.6	/	18	2-φ4.2	G1/8"	G1/8"
ECV-180M-10-S	108.5	25.9	38.1	128	102.5	46.55	12.6	38	18	2-φ4.2	G1/8"	G1/8"
ECV-180M-15-S	108.5	25.9	38.1	128	102.5	46.55	12.6	38	18	2-φ4.2	G1/8"	G1/8"



Solenoid Valve Technical Data

Item	Technical parameter number	Project	Technical parameter number
Type	Two-position tee	Port type	T102-BL-B
Working medium	Compressed air, inert gas	Electrical interface mode	Right Angle (L-shaped)
Ambient temperature	-10°C~+80°C	Standard voltage	DC 24V
Working pressure	0~7bar	Allowable voltage fluctuation	Plus or minus 10%
On-current duration	ED 100%	Maximum operating frequency	10 Hz
Insulation class	H	Service life	More than 50 million times
Class of protection	IP50		

* Supply air containing foreign matter, moisture, oil, condensate, etc., may lead to poor operation of supply valve and damage valve. Therefore, please set up air purification components in the upstream of the product, and carry out regular maintenance, and fully manage the supply air.

* Please set the air filter and oil mist separator upstream of the product (especially the oil mist separator must be installed in high-frequency occasions)

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压力开关技术参数/Technical Data

Model number	P93	
Rated pressure range	-100.0-100.0kpa	
Set pressure range	-105.0-105.0kpa	
Pressure resistance	500kpa	
Applicable gas	Air, non-corrosive, non-flammable	
The pressure unit is set to a minimum scale	Kpa	0.1
	Kgf/cm2	0.001
	Bar	0.001
	Psi	0.01
	Inhg	0.1
	Mmhg	1
Supply voltage	24V DC±10%, wave crest value below 10%	
Current consumption	≤40mA (off load)	
Switching output	Action display light output mode	NPN or PNP collector output
	Maximum load current	125mA
	Maximum supply voltage	24V DC
control input	Internal pressure drop	≤1.5V
		NPN type
		Low level input (SPST or electronic contact)
		Level voltage: below 0.4V DC, input time above 10ms
		PNP type
	High level input (SPST or electronic contact)	
	Level voltage: below 20-24V DC, input time above 10ms	
Solenoid valve drives maximum current	200mA@24V DC max	
repeatability	±0.2% F.S. ±1 digit	
Switching reaction time	≤2.5ms	
	(Error prevention function: 2.5ms, 20ms, 100ms, 500ms, 1000ms and 1999ms optional)	
Short-circuit protection	OUT switch: Yes, vacuum solenoid valve (V-Sol)/Broken vacuum solenoid valve (D-Sol) : No	
reveal	31/2-bit LED 7-segment display (red) (sampling rate 5 times/SEC)	
Display accuracy	±2% F.S. ±1 digit	
Motion display light	OUT Green/V-Sol control input: red (vacuum mark)	



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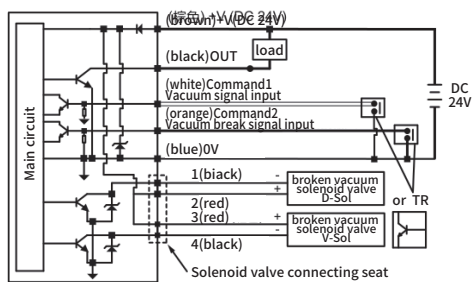


General

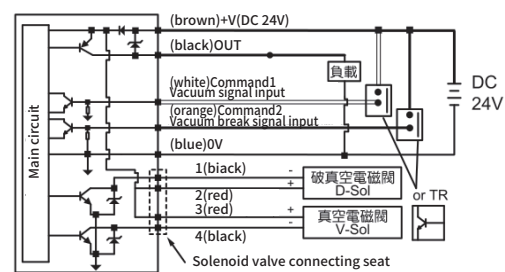
Pressure Switch Technical Data

Model number	P93	
Environmental requirement	Class of protection	IP40
	Ambient temperature	Action: 0-50°C storage -10-60°C (no water dew, no freezing)
	Ambient humidity	Operation and storage: 35-80% RH (no water)
	Withstand voltage	1000VAC 1 min (between lead and housing)
	Insulation impedance	Above 500MΩ (500V DC) (between the lead and the housing)
	Vibration resistance	Complex amplitude 1.5mm or 10G, 10HZ-150HZ-10HZ every minute, 2 hours in each direction X,Y,Z
	Impact resistance	900m/s ² (100G), 3 times in each direction X,Y,Z
Temperature characteristic	±2% F.F. Comparison reference temperature 25°C (0-50°C temperature range)	
Intake form	90 ° inlet Port & None	
Wire specification	Oil resistant PVC wire (0.15mm ²)	
weight	Approx. 58g (includes 2 meters of wire)	

Pressure Switch Circuit Wiring diagram



NPN output



PNP output

Schematic Diagram Of Gas Path

