Vacuum Generator

ECV

Maximum vacuum flow: -92Kpa

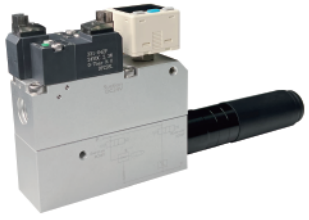
HANWHA

General

Product characteristics

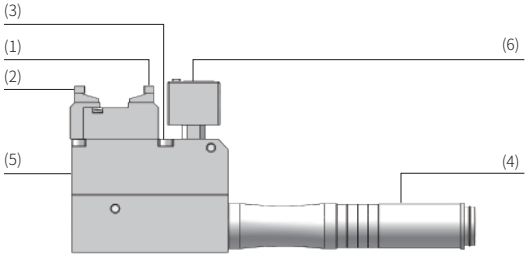
Integrated vacuum generators for handling airtight or slightly breathable workpieces in the electronics, packaging, robotics and automotive industries

* High flow, dirt resistance, long life, high performance vacuum generator for handling airtight workpieces under extreme conditions, such as for handling sheet metal in the stamping production line
* Pick and place application for short beat time
* For vacuum system preparation and accurate monitoring in automated systems



Product structure

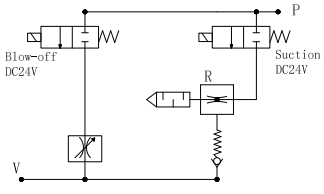
* Supply valve (1)
* Damage valve (2)
* Reverse blow adjustment button (3)
* Silencer tube (4)
* Compressed air intake (5)
* Pressure switch (6)



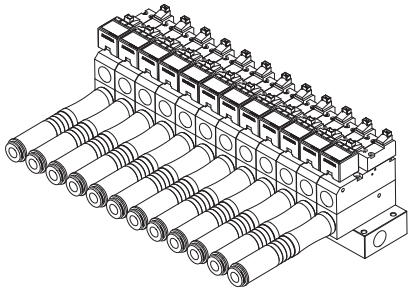
Product advantages

* Prevent workpiece from being sucked or damaged, compact suction unit, can be directly connected, porous material can also

Safe suction, low operating cost, no pollution process area



Schematic diagram of gas path



* Vacuum generator ECV multiple side-by-side installation examples

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General

ECV-200M Ordering NO

ECV	—	200M	—	H	—	S	—	01
1		2		3		4		5

1-Series	
ECV	Vacuum generator

2-Models	
200M	

3-Specification	
H	High vacuum
L	Low vacuum
M	Low admission

4-Silencer	
	Silenceless
S	With silencer

5-Pressure switch	
	No-pressure switch
01	NPN
03	PNP

ECV-200M Technical Data

Models	Used fluid	Temperature [°C]	inlet pressure [Mpa]	Air consumption [L/Min]	Vacuum pressure reached[-Kpa]	Maximum vacuum flow[L/Min]	Weight [Kg]
ECV-200M-H	air	0~60 (non-freezing)	0.5	113	92	168	0.58
ECV-200M-L	air	0~60 (non-freezing)	0.5	115	70	192	0.58
ECV-200M-M	air	0~60 (non-freezing)	0.31	115	90	168	0.58

Vacuum flow rate with different vacuum degree (-kpa)(L/min)

Models	0	10	20	30	40	50	60	70	80	90
ECV-200M-H	168	144	108	72	43.2	32.4	24	18	8.4	1.2
ECV-200M-L	192	174	132	84	51	37.2	21	10.8	0	0
ECV-200M-M	168	150	108	66	39	30	21	15	6	0

Pumping time with different vacuum (-kpa) (S/L)

Models	10	20	30	40	50	60	70	80	90
ECV-200M-H	0.04	0.009	0.17	0.28	0.44	0.63	0.9	1.3	2.3
ECV-200M-L	0.03	0.07	0.11	0.21	0.35	0.6	1	0	0
ECV-200M-M	0.038	0.084	0.153	0.267	0.441	0.677	1.01	1.581	0

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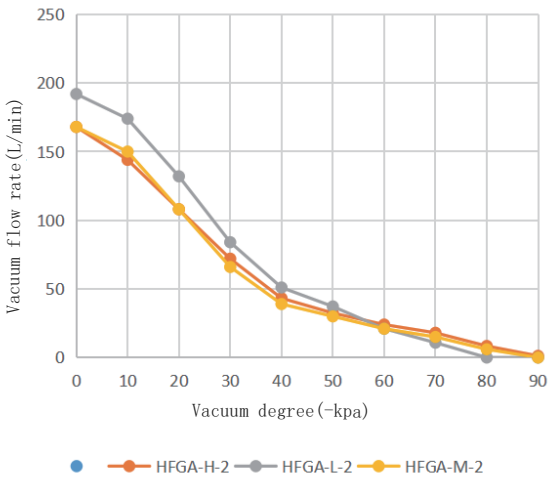
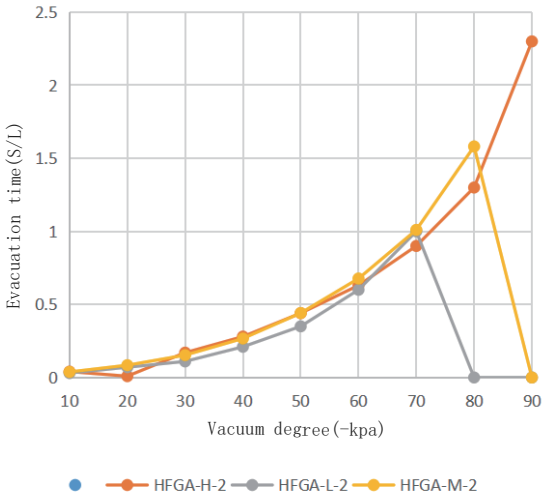
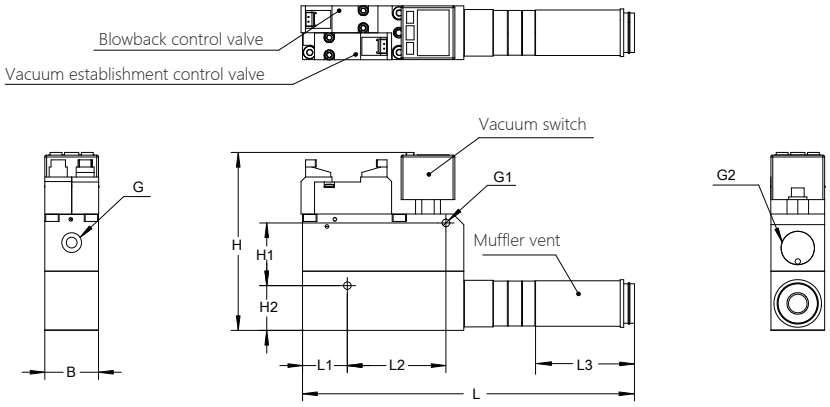
performance parameter





ECV-200M Design Data



ECV-200M

Size[mm]

Models	G	G1	G2	H	H1	H2	L	L1	L2	L3	B
ECV-200M	P:G1/4	M5↧10(4.2through-hole)	V:G1/2	100	35	25	185	25	55	49.3	30

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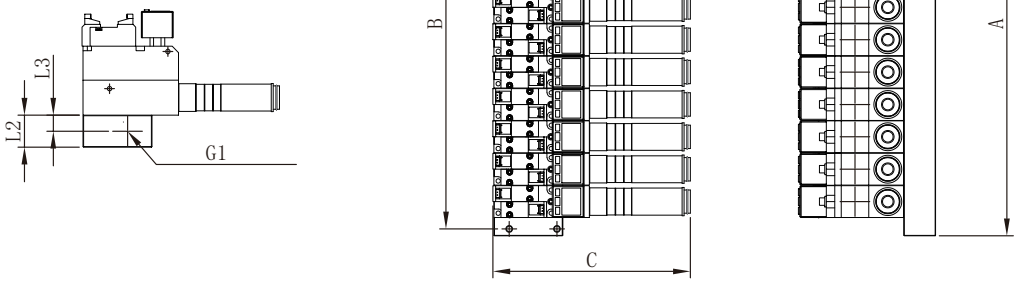
ECV-200M Design Data



ECV-200Mpackaging

Size[mm]

Models	Modular unit	A	B	C	L	L1	L2	L3	X	G	G1
ECV-200M-**-F12	12	400	387	186.5	65	14.5	30	15	45	4-Φ5.5	2-G1/2
ECV-200M-**-F10	10	339	326	186.5	65	14.5	30	15	45	4-Φ5.5	2-G1/2
ECV-200M-**-F8	8	278	265	186.5	65	14.5	30	15	45	4-Φ5.5	2-G1/2
ECV-200M-**-F6	6	217	204	186.5	65	14.5	30	15	45	4-Φ5.5	2-G1/2
ECV-200M-**-F4	4	156	143	186.5	65	14.5	30	15	45	4-Φ5.5	2-G1/2

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Pressure Switch Technical Data

Models		47C-□ (continuous pressure)
Rated pressure range		-100.0~100.0 kPa
Set pressure range		-103.0~103.0 kPa
Compression resistance		500 kPa
Applicable gas		air, non-corrosive, non-flammable
Pressure unit Minimum scale value	kPa	0.1
	MPa	—
	kgf/cm²	0.001
	bar	0.001
	psi	0.01
	inHg	0.1
	mmHg	1
Mains input		12 to 24V DC ±10%, ripple peakless than 10%
Consumption current		⩽40mA (off load)
Switched out put	Output type	open collector output (NPN or PNP)
	load current	Max.125mA
	Internal pressure drop	⩽1.0V
	Response time	⩽2.5ms (false action prevention function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms optional)
Linear analogy exportation	Output voltage	1~5V ±2.5% F.S. (under the rated pressure range)
	Output impedance	About 1kΩ
	Linearity	±1% F.S.
Display	Display	3 colors (red/green/orange) display (sampling rate: 5 times/SEC, 2 times/SEC, 1 time/SEC optional)
	Display accuracy	±1% F.S. ±1 digit (at ambient temperature: 25 ±3℃)
	Repeated accuracy	±0.3% F.S. ±1 digit
	Action light	orange (1 indicator) OUT1
Environmental proof	Protective structure class	IP 40
	Ambient temperature	0 ~ 50 ℃
	Temperature characteristic	±3% F.S. comparison parameter Temperature 25℃ (0~50℃ temperature range)
	Storage temperature	storage: -10 ~ 60 ℃ (no dew and no icing)
	Ambient humidity	operation and storage: 35~85% RH (dew free)
	Withstand voltage	1000V AC 1 min (between leads and plastic housing)
	Insulation resistance	50MΩ 以上 (500V DC) (between leads and plastic housing)
	Vibration resistance	complex amplitude 1.5mm or 10G, 10Hz ~150Hz~10Hz every minute, 2 hours in each direction X, Y and Z
	Impact resistance	100m/s² (10G), X、Y、Z three times in each direction
Nozzle diameter		R1/8", M5
Wire specification		Φ4 oil resistant PVC (0.15mm2)-4 cores
Weight		approx. 67g (including 2 meters of wire)