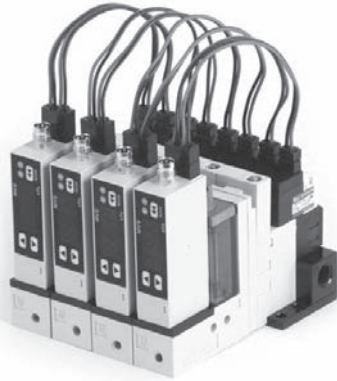


# Vacuum ejector unit

## MC22 CONVUM



- Light and compact  
20mm width, compact solenoid valve.
- Vacuum pressure and nozzle sizes choice available  
Energy savings with MVS-201 sensor. Nozzle choice: 0.5, 0.7 and 1.0
- Manifold option  
Up to 8 units

CONVUM

### How to order

In case of manifold

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

MC22 S 05 H S ABS LC 4 B L R 3 1 2 L

**① Body type**

S	Single unit
M	Manifold unit

**② Nozzle size**

05	φ 0.5
07	φ 0.7
10	φ 1.0

**③ Maximum vacuum pressure**

H	-87kPa
L	-53kPa

**④ Supply pressure**

S	0.5MPa
R	0.35MPa

Note: ② ③ ④ applicable models

②	③	④	
		S	R
05	H	○	○
	L	○	×
07	H	○	○
	L	○	×
10	H	○	○
	L	×	×

**⑤ Pressure sensor**

	Sensor type	Pressure	Display	Switch output	Analog output	Input specification
ABS	MVS-030AB	Vacuum	LED	NPN1 point	Without	Without
ABP	MVS-030AB	Vacuum	LED	PNP1 point	Without	Without
VG	MPS-V23	Vacuum	Digital	NPN2 point	DC1 ~ 5V	Without
VGP	MPS-V23	Vacuum	Digital	PNP2 point	DC1 ~ 5V	Without
21	MVS-201	Compound	Digital	NPN1 point	Without	Sink
21P	MVS-201	Compound	Digital	PNP1 point	Without	Sink
Z	Without	-	-	-	-	-

**⑥ Check valve**

L	Without check valve
LC	With check valve

**⑦ Solenoid valve voltage**

4	DC24V
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**⑭ Position of body**

R	Placed to the right
L	Placed to the left
Blank	When ⑪ & ⑬ are same

Note: Please turn the vacuum port towards your side, the unit body you faced could be either left or right upon chosen.

**⑬ Number of bodies**

1	1unit ★	5	5units
2	2units	6	6units ★
3	3units	7	7units ★
4	4units	8	8units ★

Note: 1,6,7&8 are made-to-order, consult with us.

**⑫ Number of block plates**

0	none	4	4units
1	1unit	5	5units ★
2	2units	6	6units ★
3	3units	7	7units ★

Note: 5,6&7 are made-to-order, consult with us.

**⑪ Number of manifold units**

1	1unit ★	5	5units
2	2units	6	6units ★
3	3units	7	7units ★
4	4units	8	8units ★

Note: 1,6,7&8 are made-to-order, consult with us.

**⑩ Port thread**

R	Rc1/8 (standard)
N	NPT1/8 ★
G	G1/8 ★

Note: NPT and G threads are made-to-order.

**⑨ Solenoid valve connection**

L	Connector type lamp and surge killer
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**⑧ Solenoid valve air passage**

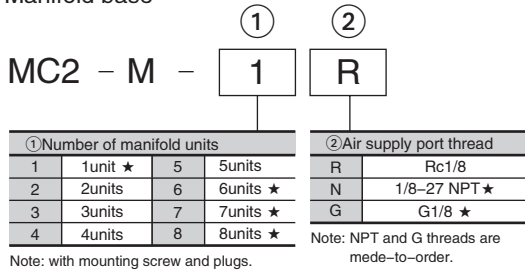
A	Normally open (N.O)
B	Normally closed (N.C)
W	Self-holding solenoid valve (note1)

Note1) The energy-saving function of a sensor cannot work if the self-holding valve is selected.

## Maintenance parts

- Solenoid valve (with gasket and mounting screws)
- Solenoid valve common for vacuum and blow-off  
**CKV010-4E**  
Note) Please check details P43
- Self-holding solenoid valve (with gasket and mounting screws)  
**LV290-4E**  
Note) Please check P43 for details.

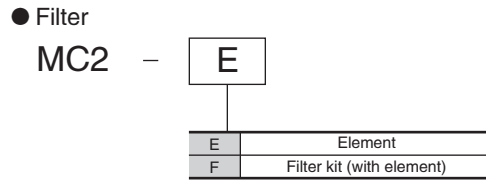
- Manifold base



- Pressure switch (with O ring, setting screws)
 

MVS-030AB-MC22
MVS-030ABP-MC22
MPS-V23C-NGA-MC22
MPS-V23C-PGA-MC22
MVS-201-MC22-A (Normally open)
MVS-201-MC22-B (Normally closed)
MVS-201-MC22-W (Self-holding)
MVS-201P-MC22-A (Normally open)
MVS-201P-MC22-B (Normally closed)
MVS-201P-MC22-W (Self-holding)
- Note) Please check P349 for details.

- Sensor plug  
**MC2-Z**



- Silencer (with mounting bracket)  
**MC2-S**
- Block plate for manifold (with setting screws)  
**MC2-MM**
- Mounting bracket for unit type (with setting screws)  
**MC2-B**

## Specifications

	Unit	MC22 □ -05			MC22 □ -07			MC22 □ -10	
		HS	LS	HR	HS	LS	HR	HS	HR
Fluid		Non-lubricated air / non-corrosive gas							
Ambient temperature	°C	0 ~ 50 (without freezing)							
Operating pressure range	MPa	0.2 ~ 0.5							
Blow-off flow	ℓ /min (ANR)	50							
Solenoid valve air passage		Normally closed, Normally open, Self-holding							
Filter element filtration	μ m	37							
Nozzle size	φ mm	0.5			0.7			1.0	
Nominal pressure	MPa	0.5		0.35	0.5		0.35	0.5	0.35
Vacuum (air) flow	ℓ /min (ANR)	6	11	4	11	21	9	20	15
Max. vacuum pressure	kPa	-87	-53	-87	-87	-53	-87	-87	-87
Air consumption	ℓ /min (ANR)	10			22.5			48	
Mass	L/LC single type	g 117							

### Solenoid valve specifications

Description	Unit	CKV010-4E	LV290-4E	Note
Solenoid valve air passage		normally closed (N.C), normally open (N.O)		self-holding
Operating voltage	V	DC24		
Allowable voltage tolerance	%	± 10		
Power consumption	W	1	1.3 / 1.5	
Grade of insulation		B class		
Manual override operation		Non-lock push button		
Display - Surge killer		LED · diode		
Cable		Lead wire with connector (300mm)		

Note) Please check common cautions in regard to CONVUM vacuum ejector "self-holding valve" (P22).

### Pressure sensor specifications

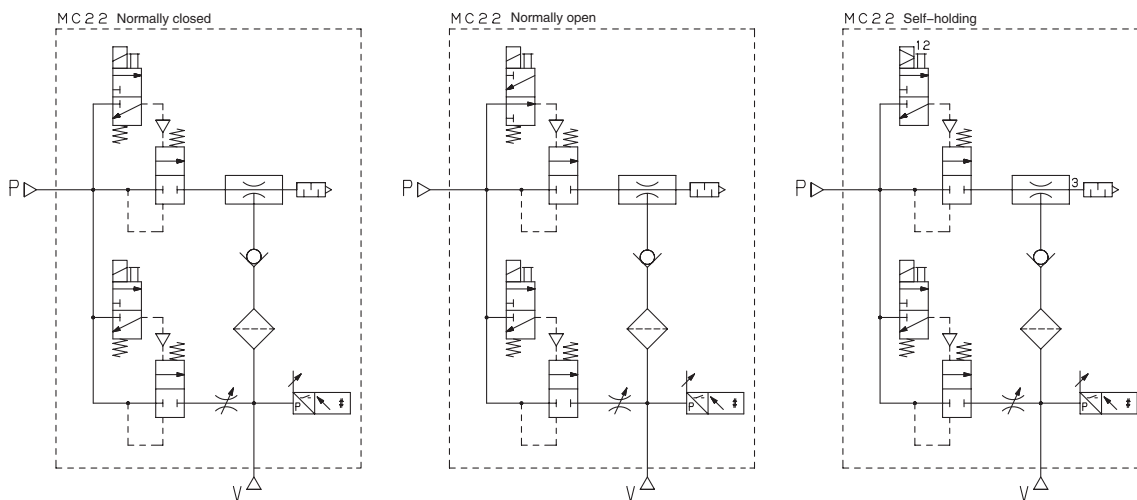
	Unit	MVS-030	MPS-V23	MVS-201
Fluid		Non-lubricated air/non-corrosive gas		
Pressure range settings	kPa	-10 ~ -101	0 ~ -101	500 ~ -101
Ambient temperature	°C	0 ~ 50 (without freezing)		
Output type		Switch output	Switch output Analog output	Switch output, input
Display		LED	Digital	Digital
Operating voltage	V	DC12 ~ 24		DC10.8 ~ 30

Note: Please check P349 for sensor details.

Note: Air flow condition of MVS-201 sensor is set as normally open (N.O.).

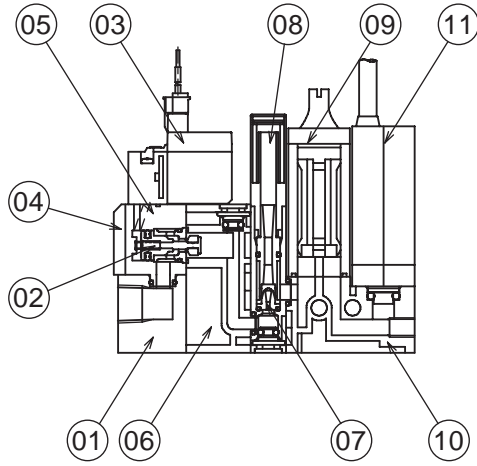
For normally closed (N.C.), please check the manual and change the settings manually.

### Symbol



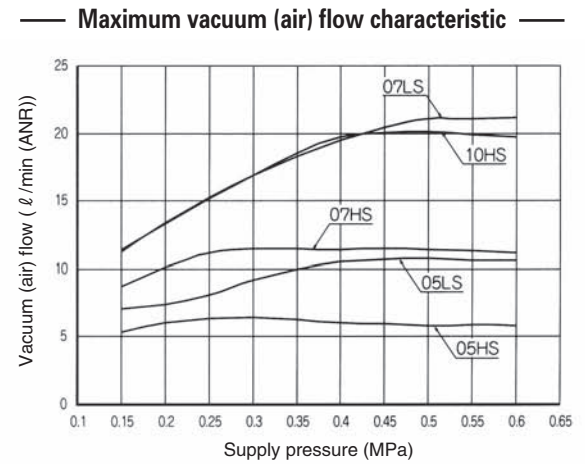
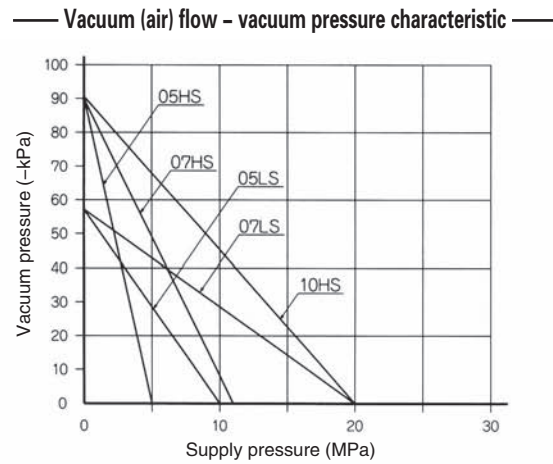
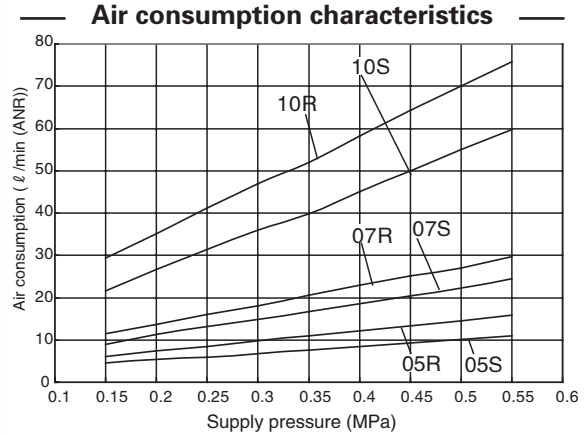
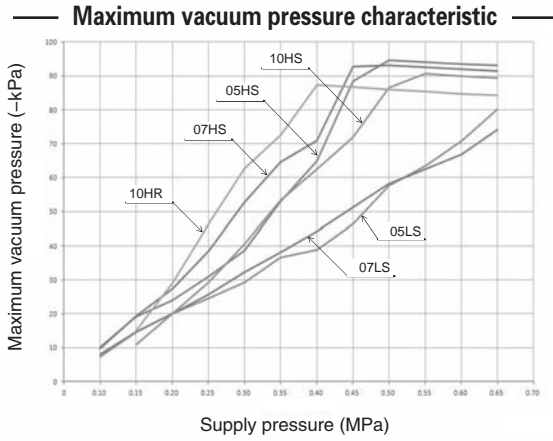
\*With sensor, with check valve

Construction



Parts	Part name	Material
1	Air supply base	Aluminium
2	Poppet valve	Aluminium, NBR, SUS FKM
3	Solenoid valve	-
4	Cover	Aluminium
5	Valve block	PA, NBR
6	Spacer block	PA, NBR
7	Nozzle kit	Aluminium, NBR
8	Silencer	SUS, PA, PVF
9	Filter assembly	-
10	Vacuum port	PA, Aluminium, NBR
11	Pressure sensor	-

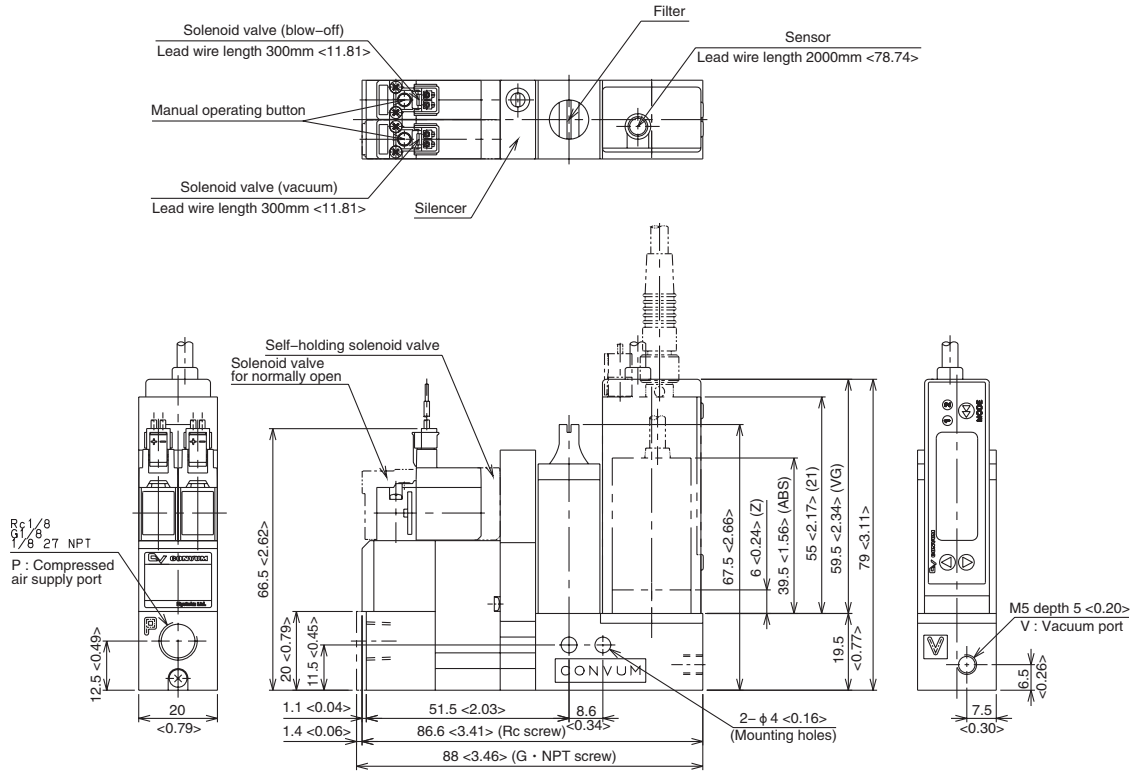
Performance charts



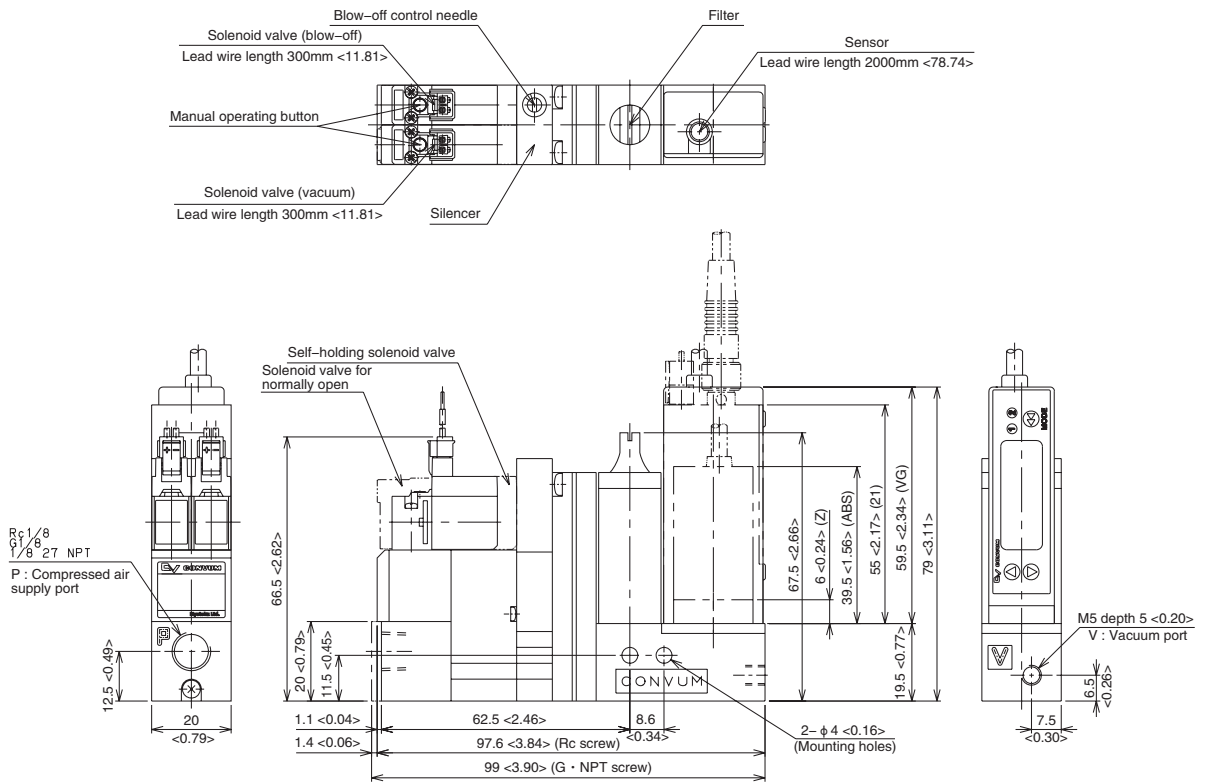
Dimensions

Unit:mm <inch>

Single unit type  
Without check valve

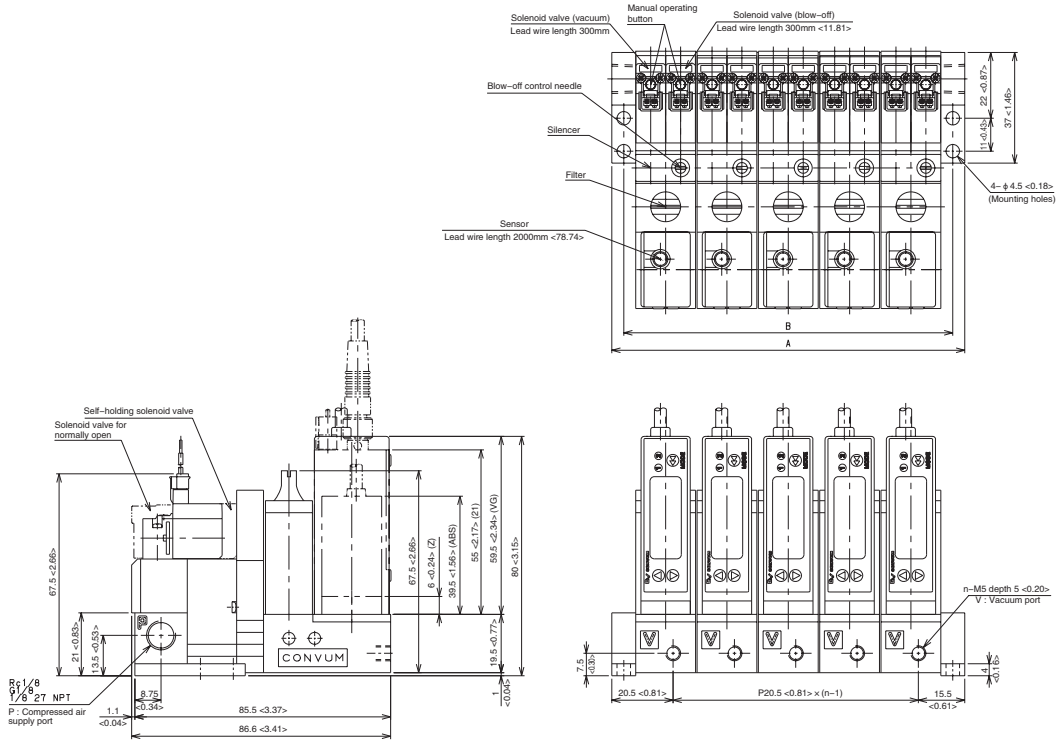


With check valve



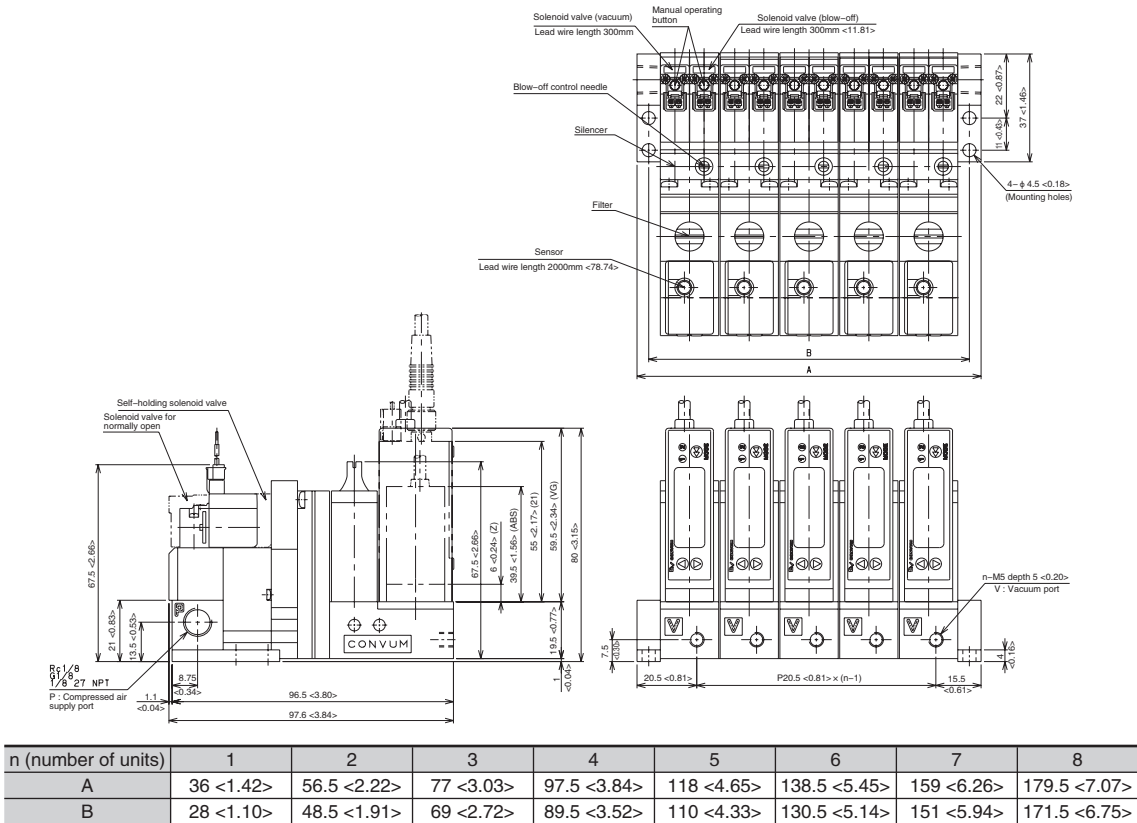
Manifold type  
Without check valve

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n (number of units)	1	2	3	4	5	6	7	8
A	36 <math>\pm 1.42</math>	56.5 <math>\pm 2.22</math>	77 <math>\pm 3.03</math>	97.5 <math>\pm 3.84</math>	118 <math>\pm 4.65</math>	138.5 <math>\pm 5.45</math>	159 <math>\pm 6.26</math>	179.5 <math>\pm 7.07</math>
B	28 <math>\pm 1.10</math>	48.5 <math>\pm 1.91</math>	69 <math>\pm 2.72</math>	89.5 <math>\pm 3.52</math>	110 <math>\pm 4.33</math>	130.5 <math>\pm 5.14</math>	151 <math>\pm 5.94</math>	171.5 <math>\pm 6.75</math>

With check valve



n (number of units)	1	2	3	4	5	6	7	8
A	36 <math>\pm 1.42</math>	56.5 <math>\pm 2.22</math>	77 <math>\pm 3.03</math>	97.5 <math>\pm 3.84</math>	118 <math>\pm 4.65</math>	138.5 <math>\pm 5.45</math>	159 <math>\pm 6.26</math>	179.5 <math>\pm 7.07</math>
B	28 <math>\pm 1.10</math>	48.5 <math>\pm 1.91</math>	69 <math>\pm 2.72</math>	89.5 <math>\pm 3.52</math>	110 <math>\pm 4.33</math>	130.5 <math>\pm 5.14</math>	151 <math>\pm 5.94</math>	171.5 <math>\pm 6.75</math>