




□ : EP620-17P, EP720-21P

【 Vacuum Lifters】

End of Arm Tooling for Large objects

Vacuum Grippers

- Three types of vacuum grippers are offered to handle various types of workpieces

Rectangler ring / VRG	General purpose / VMG	
Foam rubber pad	Sealing foam pad	Bellows cups
 <p>Sacks and Shrink-wrapped bottles</p>	 <p>Wooden boards, Exterior wall, objects with rough/uneven surfaces</p>	 <p>Box cartons, Bags, Objects vary in dimensions and heights</p>

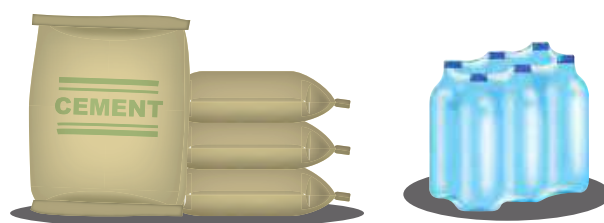
- Foam rubber gripper with large flow vacuum generator integrated is intended for robotic endeffectors with P.C.D. 40, P.C.D. 56, P.C.D. 80
- Multi-stage venturi generates suction flow **26.8cfm(760L/min)** (※) which enables to lift breathable or crumpled objects.

※) The value of the three vacuum generators included creates.

Rectangular Ring Lifter **VRG**



- Thanks to the elastic yield of foam rubber, it will grip irregular/rough surfaces.
 - ❖ 2 foam materials/3 types of thickness
- Suitable to handle sacks, bags, shrink-wrapped bottles, corrugated sheets/boxes, etc.



- The foam rubber with the frame can be replaced.

- We can customize the size of foam rubber.

Specification

Fluid medium		Air
Service pressure range	(MPa)	43.5~101.5psi (0.3~0.7)
Vacuum characteristic		High vacuum type
Rated supply pressure	(MPa)	72.5psi (0.5)
Achievable vacuum level	(kPa)	27.7inHg (-94)
Service temperature range	(°C)	41~122F° (5~50(No freezing))
Suction flow (※1)	(ℓ/min [ANR])	26.8scfm (760) in case of 3 nozzles type
Air consumption (※1)	(ℓ/min [ANR])	11.65scfm (330) in case of 3 nozzles type
Noise (※2)	(dB(A))	75(in case of 3 nozzles type (just for reference))
Gripping force (※3)	(N)	345(Safety factor 1/4 considered)

※1) Integrated vacuum generator's value

※2) The value is just for reference in case of the silencers installed

※3) The value is figured out at -80kPa (Safety factor of 1/4 is taken into consideration (Horizontal lifting))





Model Designation (Example) - Rectangular Ring Lister

VRG **2413** **-20** **-25** **SS10** **-163** **S1**

① Rectangular Ring Lister

⑦. Silencer type (direction)

Code	S1	S2
Direction	Side	Top
		

⑥. Vacuum generator type

Code	Number of Nozzle	Suction flow (ℓ/min)	Air consumption (ℓ/min)
-163	3	26.8scfm (760)	11.63scfm (330)

⑤. Foam rubber material and Durometer

Code	SS05	SS10	SEP07
Material, Durometer	Silicon, Shore E : 5°	Silicon, Shore E : 10°	EPDM, Shore E : 7°

④. Foam rubber cushion depth

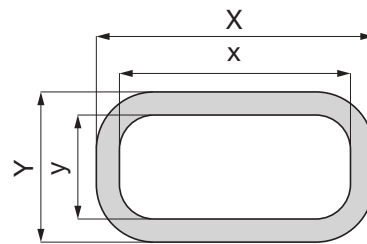
Code	-15	-25	-35
Stroke (mm)	15	25	35

③. Foam lip thickness

Code	-20	-40
Thickness (mm)	20	40
Foam lip outside dimensions code	2413	2817
Inside dimensions (mm)	x : 200, y : 90	x : 200, y : 90

②. Foam lip dimensions (external)

Code	2413	2817	
Size (mm)	X	240	280
	Y	130	170



Model Designation for Foam Rubber Cup only (Foam rubber cup + Mounting plate) (Example)



① Rectangular Ring Lister

⑥.: cUa 'fi VVYf'a UHYfJU'UbX''8i fca YHYf

Code	SS05	SS10	SEP07
Material, Durometer	Silicon, Shore E : 5°	Silicon, Shore E : 10°	EPDM, Shore E : 7°

⑤. Foam rubber cushion depth

Code	-15	-25	-35
Stroke (mm)	15	25	35

④. Foam rubber lip thickness

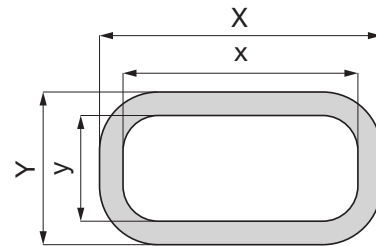
Code	-20	-40
Thickness (mm)	20	40
Foam lip outside dimensions code	2413	2817
Inside dimensions (mm)	x : 200, y : 90	x : 200, y : 90

③. Foam rubber lip outside dimensions

Code	2413	2817
Size (mm)		
X	240	280
Y	130	170

②. Maintenance spare parts

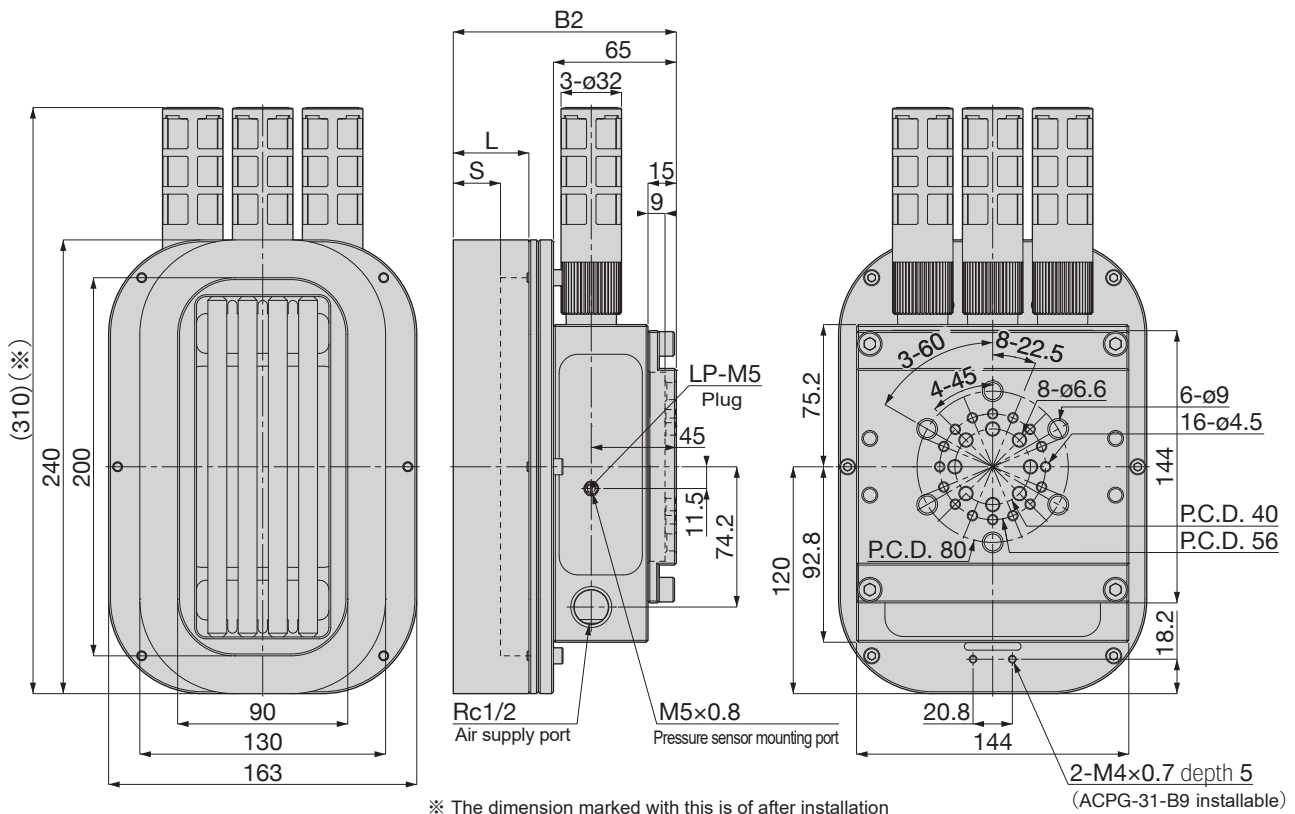
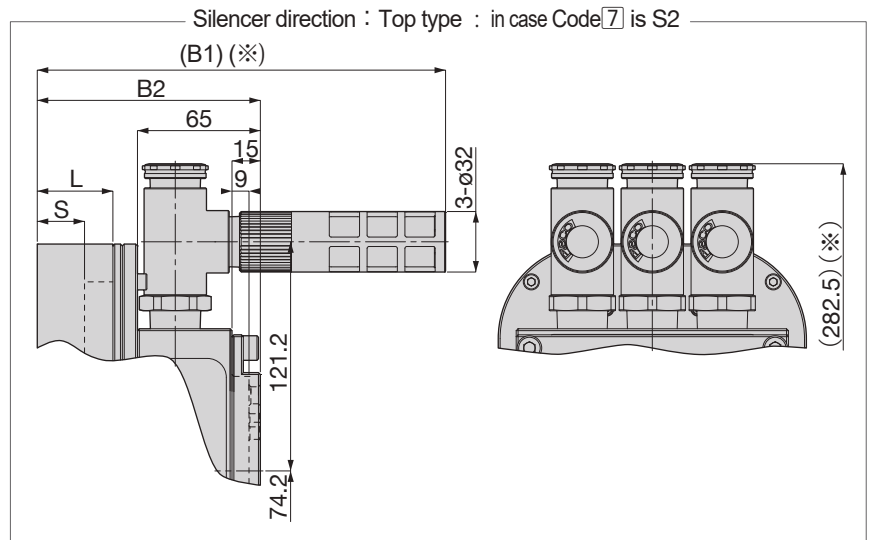
Code	-VP
Maintenace kit	Foam rubber lip + Mounting plate





Dimensions of foam rubber outside size : 240mm×130mm

Model : VRG2413-20[4][5]-163[7]



Mounting pitch	Installing screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

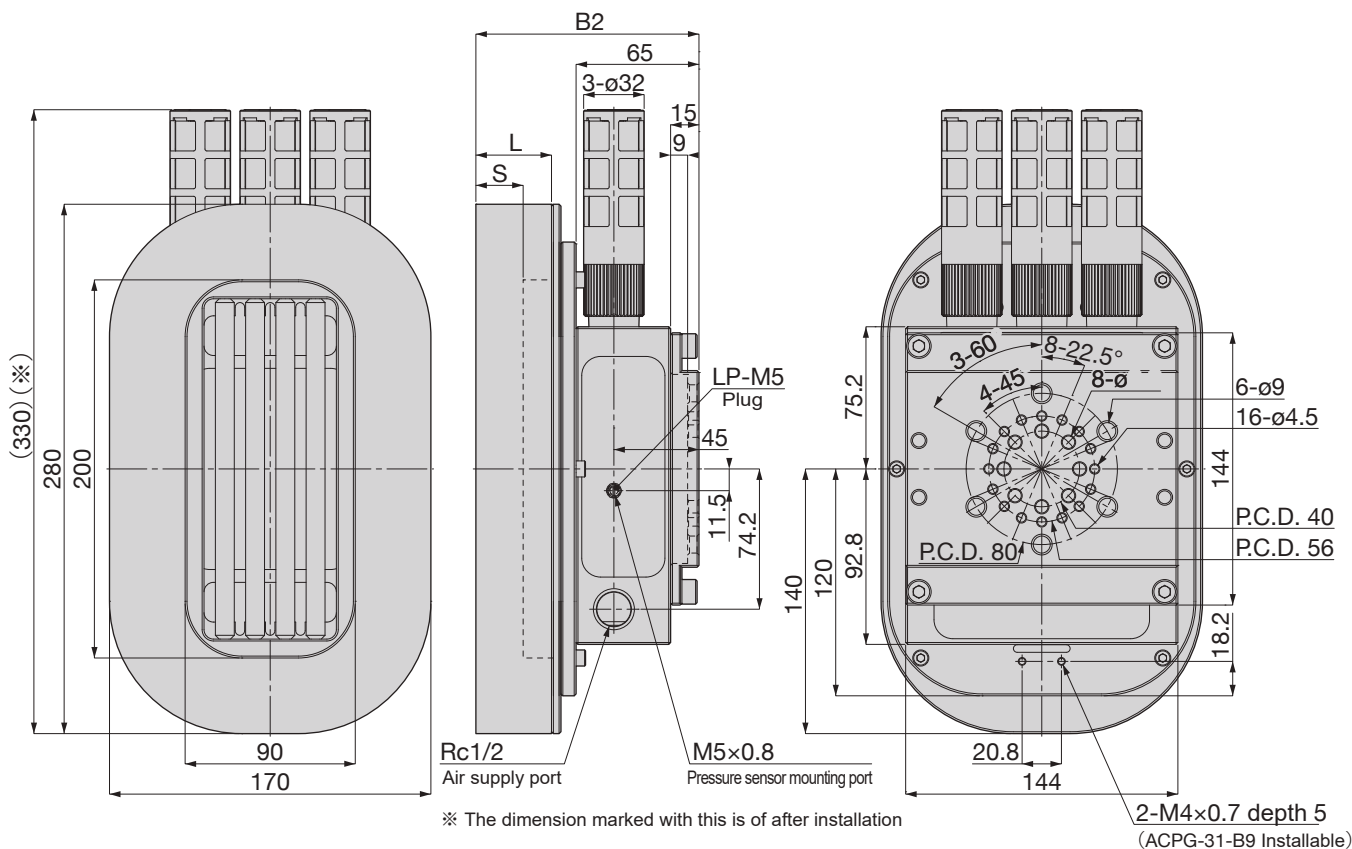
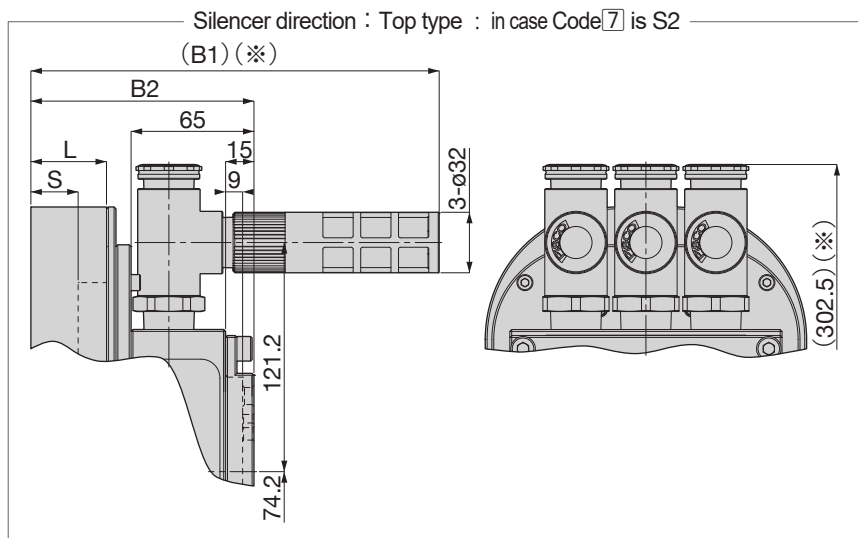
Unit : mm

Model	B1	B2	L	S (Cushion depth tolerance)	Weight (kg)
VRG2413-20-15[5]-163S1	—	108	30	15	3
VRG2413-20-15[5]-163S2	206				3.1
VRG2413-20-25[5]-163S1	—	118	40	25	3
VRG2413-20-25[5]-163S2	216				3.1
VRG2413-20-35[5]-163S1	—	128	50	35	3
VRG2413-20-35[5]-163S2	226				3.1

* Specify form rubber material in [5] referring the model designation example.

Dimensions of foam rubber outside size : 280mmX170mm

Model : VRG2817-40[5]-163[7]



Mounting pitch	Installing screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

Unit : mm

Model	B1	B2	L	S (Cushion depth tolerance)	Weight (kg)
VRG2817-40-15[5]-163S1	—	108	30	15	3
VRG2817-40-15[5]-163S2	206				3.1
VRG2817-40-25[5]-163S1	—	118	40	25	3
VRG2817-40-25[5]-163S2	216				3.1
VRG2817-40-35[5]-163S1	—	128	50	35	3.1
VRG2817-40-35[5]-163S2	226				3.2

※) Specify form rubber material in [5] referring the model designation example.

General purpose lifter **VMG**

- Using cup mounting screws with orifice enables minimizing vacuum leakage and lifting objects
- Four types of plates are provided, 2 kinds of sealing foams, 3-low bellows cups and 7-lows bellows cups. Just replace it depending on your applications

Sealing Foam Pad Lifter



- Suitable for objects with rough surfaces such as Wooden boards, Exterior walls - 2 sealing forms, 2 bellows cups
- Easy replacing the sealing foam pad. Just replace the plate with sealing foam pad.

Bellows Cups Lifter



- Suitable for box carton, bags and workpieces vary in dimensions and heights - 2 materials, 2 cup diameters
- Other bellows cups and suction cups also can be installed
(Cup connecting code : -M6)



Model Designation (Example) for General purpose type



① General Purpose Lister

⑦. Silencer type (direction)

Code	S1	S2
Direction	Side	Top

⑥. Vacuum generator type

Code	Number of Nozzle	Suction flow (ℓ/min)	Air consumption (ℓ/min)
-163	3	26.8scfm (760)	11.63scfm (330)

⑤. Vacuum retention option

Code	Specification	Orifice dia. (mm)	Remarks
No entry	Direct -mount (no filter)	—	No flow restricters
-0.8	Orifice restrictor type (comes with filters)	ø0.8	When -P5L, -P7L, -SE5L or -S7L is chosen for ③
-1.5		ø1.5	
-2.0		ø2.0	
-ECV	Valve type (comes with filters)	—	When -P5L or -P7L is chosen

※) Orifice restrictor is different between suction cups type and foam rubber pad type

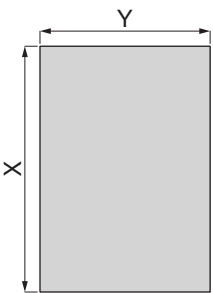
④. Suction cup/Foam rubber pad option

Code	Specification	Material	Spec. code
-20BN	ø20mm, 1.5 folds	Nitrile	-P7L
-20BS		Silicone	
-40BN	ø40mm, 1.5 folds	Nitrile	-P5L
-40BS		Silicone	
-SEP20S	Closed-cell foam, thickness 20mm	EPDM	-SE5L, -S7L
-SEP20C	Semi closed-cell foam, thickness 20mm		

※) Foam rubber pad type comes with a mounting plate

③. Suction cups/Foam rubber pad holes - sizes and layout

Code	Cup/Foam	Dia. (mm) (Cell dia.)	Rows	Pitch (mm)	Cups (Cells)	Theoretical suction force (safety factor 1/4 for vertical)								Unit
						-10kPa	-20kPa	-30kPa	-40kPa	-50kPa	-60kPa	-70kPa	-80kPa	
-P5L	Suction cup array type	ø40	5	53	22	69.3	138.6	208.0	277.3	346.6	415.9	485.2	554.6	[N]
						7.1	14.1	21.2	28.3	35.4	42.4	49.5	56.6	[kgf]
-P7L	Suction cup array type	ø20	7	36	44	34.7	69.3	104.0	138.6	173.3	208.0	242.6	277.3	[N]
3.5						7.1	10.6	14.1	17.7	21.2	24.8	28.3	[kgf]	
-SE5L	Foam rubber pad type	ø30 equiv. Oval holes	5	53	22	39.0	78.0	117.0	156.0	195.0	234.0	272.9	311.9	[N]
						4.0	8.0	11.9	15.9	19.9	23.9	27.9	31.8	[kgf]
-S7L	Suction cells	ø20 holes	7	36	44	34.7	69.3	104.0	138.6	173.3	208.0	242.6	277.3	[N]
						3.5	7.1	10.6	14.1	17.7	21.2	24.8	28.3	[kgf]



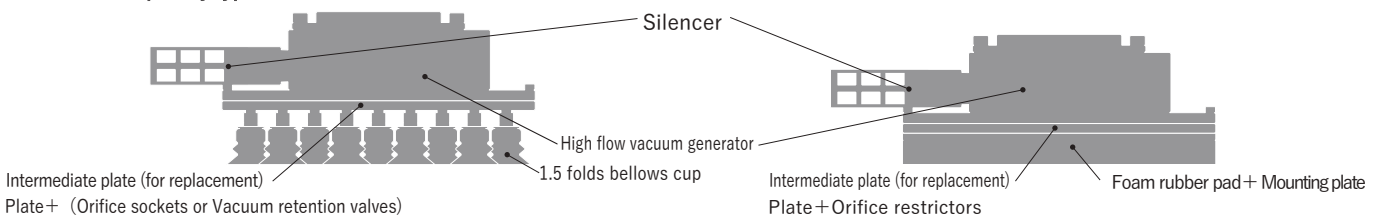
②. Plate size

Code	2618	
Size	X	260
(mm)	Y	180

● Set

Suction cup array type

Foam rubber pad type



Model Designation (Example) for General purpose type lifter with no cups/pad



① General Purpose Lifter

⑥. Silencer type (direction)

Code	S1	S2
Direction	Side	Top

⑤. Vacuum generator type

Code	Number of Nozzle	Suction flow (ℓ/min)	Air consumption (ℓ/min)
-163	3	26.8scfm (760)	11.63scfm (330)

④. Vacuum retention option

Code	Specification	Material	Spec. code
-20BN	ø20mm, 1.5 folds	Nitrile	-P7L
-20BS		Silicone	
-40BN	ø40mm, 1.5 folds	Nitrile	-P5L
-40BS		Silicone	
-SEP20S	Semi closed-cell foam, thickness 20mm	EPDM	-SE5L, -S7L
-SEP20C	Closed-cell foam, thickness 20mm		

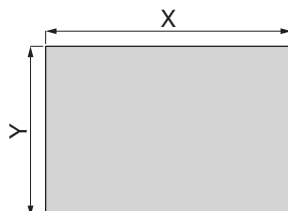
※) Foam rubber pad type comes with a mounting plate

③. Suction cups/Foam rubber pad cells - sizes and layout

Code	Cup/Foam	Cups/Pad arrangement Number · Size · Type	Cups dia./Pad cells	Rows	Pitch (mm)	Cups (Cells)
-5L	Vacuum cup array type	22 · M6 female thread (No orifice/retention valve)	Same as -P5L and -SE5L	5	53	22
-7L	Foam rubber pad type	44 · M6 female thread (No orifice/retention valve)	Same as -P7L and -S7L	7	36	44
-P5L	Suction cup array type	22 · M6 thread · Mounting取付用 (Option: Orifice or Valve)	ø25mm ~ ø40mm	5	53	22
-P7L		44 · M6 thread · Mounting取付用 (Option: Orifice or Valve)	ø20mm	7	36	44
-SE5L	Foam rubber pad type (Suction cells)	22 · for oval cells foam rubber (Orifice type)	ø30mm equiv. oval holes	5	53	22
-S7L		44 · for round cells foam rubber (Orifice type)	ø20mm round holes	7	36	44

②. Plate size

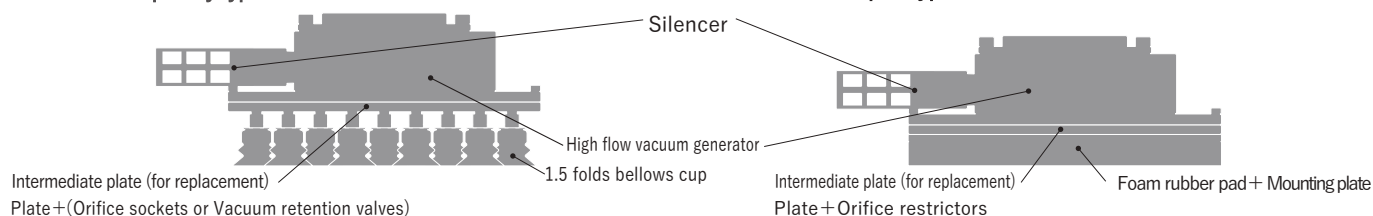
Code	2618	
Size (mm)	X	260
	Y	180



● Set

Suction cup array type

Foam rubber pad type





Model Designation (Example) for Sealing Foam Rubber



① General Purpose Lifter

⑤. Foam rubber type

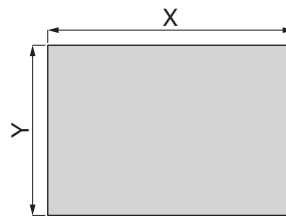
Code	Specification	Material	Spec. code
-SEP20S	Semi closed-cell foam, thickness 20mm	EPDM	-SE5L, -S7L
-SEP20C	Closed-cell foam, thickness 20mm		

④. Pad array

Code	Type	Dia. (mm) (Cells)	Array	Pitch (mm)	Cells (No.)	Theoretical suction force [N] (safety factor 1/4 for vertical lifting)								Unit
						-10kPa	-20kPa	-30kPa	-40kPa	-50kPa	-60kPa	-70kPa	-80kPa	
-SE5L	Sealing foam rubber	ø30 equiv. Oval holes	5	53	22	39.0	78.0	117.0	156.0	195.0	234.0	272.9	311.9	[N]
						4.0	8.0	11.9	15.9	19.9	23.9	27.9	31.8	[kgf]
-S7L		ø20 round holes	7	36	44	34.7	69.3	104.0	138.6	173.3	208.0	242.6	277.3	[N]
						3.5	7.1	10.6	14.1	17.7	21.2	24.8	28.3	[kgf]

③. Plate size

Code	2618
Size (mm)	X 260 Y 180



②. Replacement parts

Code	-VP
Set	Sealing foam rubber+Mounting plate

※) Comes with mounting threads+O-ring

● Sealing foam rubber set



Model Designation (Example) for Bellows Cup

※) Select the recommended cup and size from the chart mentioned below

Please check the details on the website

Bellows cups substitutes	1.5 folds bellows		Multi-bellows		Bellows for food packaging		Soft bellows		
	Cup array code	App.	Set with a mounting thread Model code	App.	Set with a mounting thread Model code	App.	Set with a mounting thread Model code	App.	Set with a mounting thread Model code
	-P5L -P7L								
Cup dia. (mm)	ø20	✓	VP20B①-M6	✓	VP20W①-M6	N/A	—	✓	VP20LB①-M6
	ø25	✓	VP25B①-M6	N/A	—	N/A	—	N/A	—
	ø30	✓	VP30B①-M6	✓	VP30W①-M6	✓	VPE30PBS②③M6-④	N/A	—
	ø40	✓	VP40B①-M6	✓	VP40W①-M6	✓	VPE40PBS②③M6-④	N/A	—
No. of folds	1.5		4.5		3.5 and 5.5		1.5		
How to mount	Screw-mounting								
Connecting code	-M6								

- ※1) Fill out in ①, ②, ③ and ④ of the model code selecting the code from the followings: ①: Cup material (Nitrile "N", Silicone "S")
- ②: Lip durometer (20° "2", 40° "4"), ③: Bellows folds (3.5 folds "3", 5.5 folds "5"), ④: Oversuction preventing adapter (Spherical "FS", Flat "FF")
- ※2) Order the total number of vacuum cups as needed (Cup dia. 20mm: Max. 44, Cup dia. 25~40mm: Max. 22)
- ※3) Installation should be done by yourself
- ※4) Please check other shapes and sizes of vacuum cups on our website

● Bellows cup set for the lifter

-
- Set with a mounting screw
 - Bellows or Multi-bellows cup + Mounting screw + (Cup support) + Washer
 - Soft bellows up + Mounting screw + Gasket
 - Bellows cup for food packaging + Mounting plate

Model Designation (Example) for replacement plate



① General Purpose Lister

⑥. Vacuum retention option

Code	Specification	Orifice dia. (mm)	Remarks
No entry	Direct -mount (no filter)	—	No flow restricters
-0.8	Orifice restrictor type (comes with filters)	ø0.8	When -P5L, -P7L, -SE5L or -S7L is chosen for ③
-1.5		ø1.5	
-2.0		ø2.0	
-ECV	Valve type (comes with filters)	—	When -P5L or -P7L is chosen

※) Orifice restrictor is different between suction cups type and foam rubber pad type

⑤. Suction cup/Foam rubber pad option

Code	Specification	Material	Spec. code
-20BN	ø20mm, 1.5 folds	Nitrile	-P7L
-20BS		Silicone	
-40BN	ø40mm, 1.5 folds	Nitrile	-P5L
-40BS		Silicone	
-SEP20S	Closed-cell foam, thickness 20mm	EPDM	-SE5L, -S7L
-SEP20C	Semi closed-cell foam, thickness 20mm		

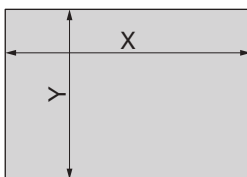
※) Foam rubber pad type comes with a mounting plate

④. Suction cups/Foam rubber pad cells - sizes and layout

Code	Cup/Foam	Cups/Pad arrangement Number · Size · Type	Cups dia./Pad cells	Rows	Pitch (mm)	Cups (Cells)
-5L	Vacuum cup array type	22 · M6 female thread (No orifice/retention valve)	Same as -P5L and -SE5L	5	53	22
-7L	Foam rubber pad type	44 · M6 female thread (No orifice/retention valve)	Same as -P7L and -S7L	7	36	44
-P5L	Suction cup array type	22 · M6 thread · Mounting 取付用 (Option: Orifice or Valve)	ø25mm ~ ø40mm	5	53	22
-P7L		44 · M6 thread · Mounting 取付用 (Option: Orifice or Valve)	ø20mm	7	36	44
-SE5L	Foam rubber pad type (Suction cells)	22 · for oval cells foam rubber (Orifice type)	ø30mm equiv. oval holes	5	53	22
-S7L		44 · for round cells foam rubber (Orifice type)	ø20mm round holes	7	36	44

③. Plate size

Code	2618	
Size (mm)	X	260
	Y	180



②. Replacement parts

Code	-EXP
Set	Replacement plate

※) Comes with mounting screws+O-ring

● Replacement plate set

Suction cup array type



Replacement plate (Intermediate plate)
Plate+ (Orifice sockets or Vacuum retention valves)

Foam rubber pad type



Replacement plate (Intermediate plate)
Plate+ Orifice restricters

Model Designation (Example) for Orifice restrictor (socket)



① General Purpose Lister

④. Orifice dia.

Code	Specification	Orifice dia. (mm)
-0.8	Orifice restrictor (comes with filter)	ø0.8
-1.5		ø1.5
-2.0		ø2.0

③. Lifter type

Code	P	S
Suction type	Suction cups	Sealing foam rubber

②. Replacement parts

Code	-VP6M6
Spec.	Orifice restrictor

※) Orifice restrictor is different between suction cups type and foam rubber pad type

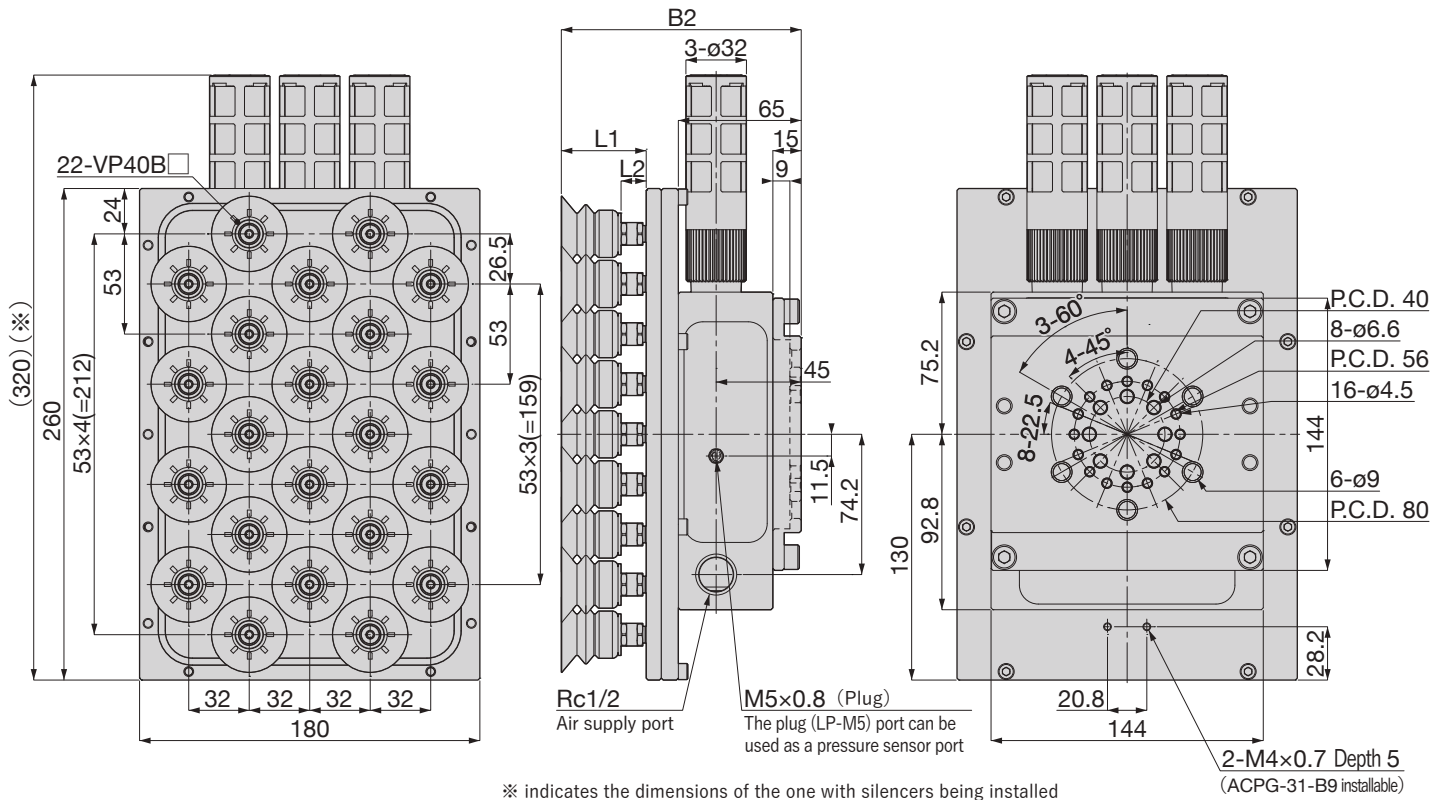
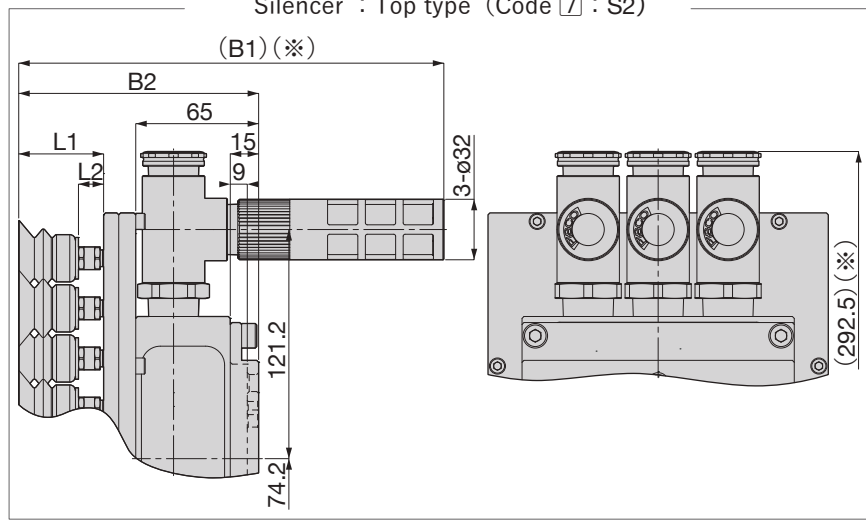
As for vacuum retention valve, please visit our website or the following model is recommended.
Model : ECVM6-FM6



Suction cup array type dimensions - Cup dia. 40mm, 1.5 folds Bellows cup, Orifice sockets or Direct mounting type

Model : **VMG2618-P5L-40B**45-1637

Silencer : Top type (Code 7 : S2)



※ indicates the dimensions of the one with silencers being installed

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

Unit : mm

Model	B1	B2	L1	L2	Weight (kg)
VMG2618-P5L-40B 4 -0.8-163S1	—	126.9	44.9	13.3	3.5
VMG2618-P5L-40B 4 -0.8-163S2	225				3.6
VMG2618-P5L-40B 4 -1.5-163S1	—	126.9	44.9	13.3	3.5
VMG2618-P5L-40B 4 -1.5-163S2	225				3.6
VMG2618-P5L-40B 4 -2.0-163S1	—	126.9	44.9	13.3	3.5
VMG2618-P5L-40B 4 -2.0-163S2	225				3.6
VMG2618-P5L-40B 4 -163S1	—	112	30	—	3.4
VMG2618-P5L-40B 4 -163S2	210.1				3.5

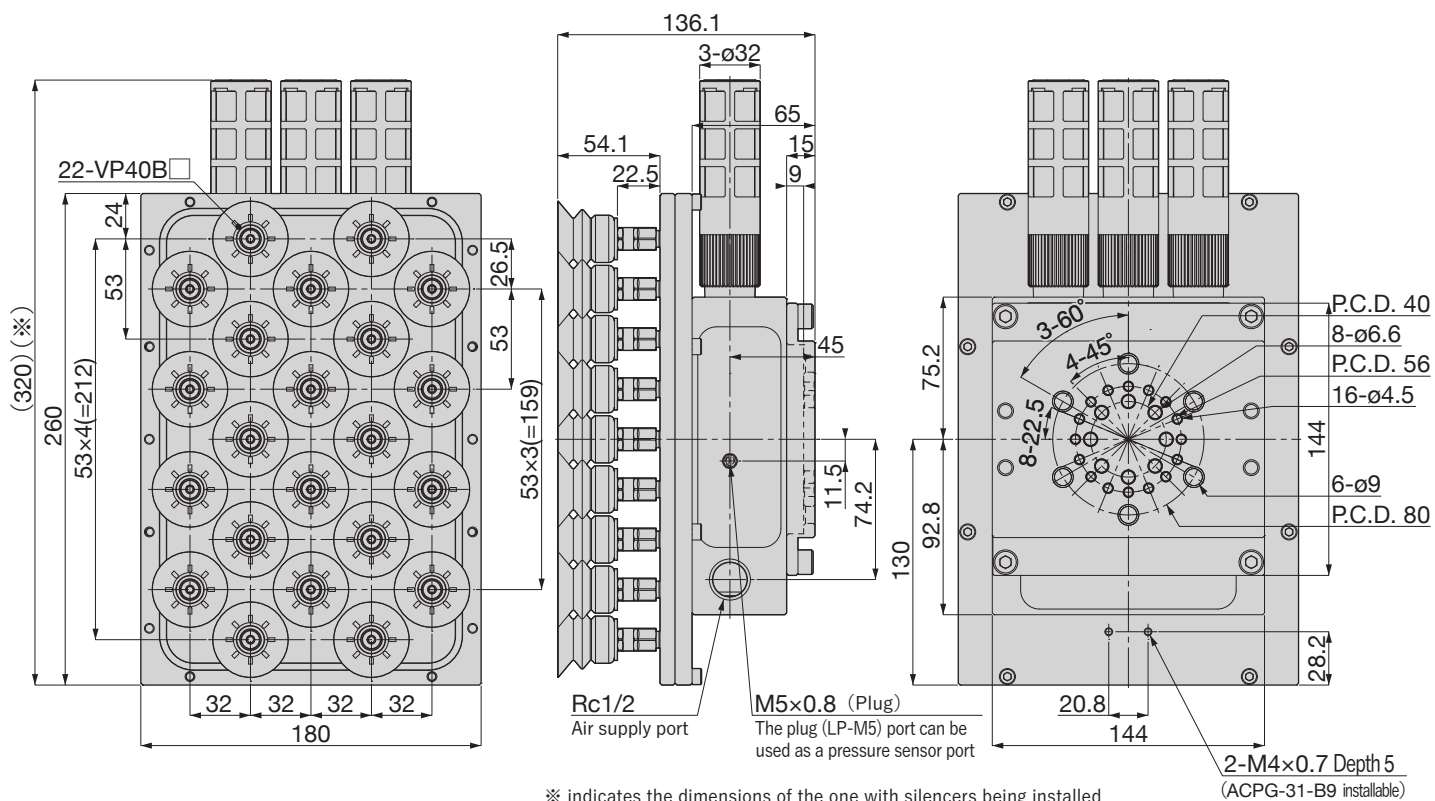
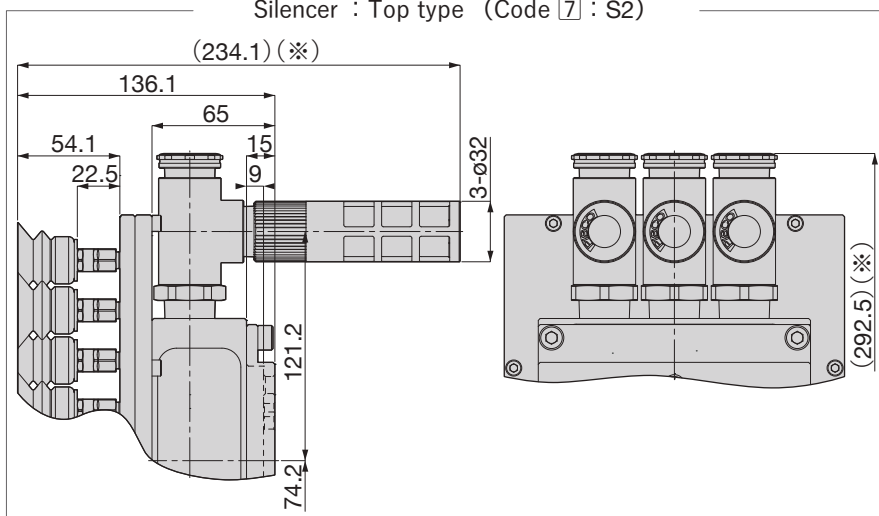
※) Fill in the material of cup in 4

Suction cup array type dimensions - Cup dia. 40mm, 1.5 Bellows cup, Vacuum retention valve

Model : **VMG2618-P5L-40B⁴-ECV-163⁷**



Silencer : Top type (Code ⁷ : S2)



※ indicates the dimensions of the one with silencers being installed

Unit : mm

Model	Weight (kg)
VMG2618-P5L-40B ⁴ -ECV-163S1	3.7
VMG2618-P5L-40B ⁴ -ECV-163S2	3.8

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

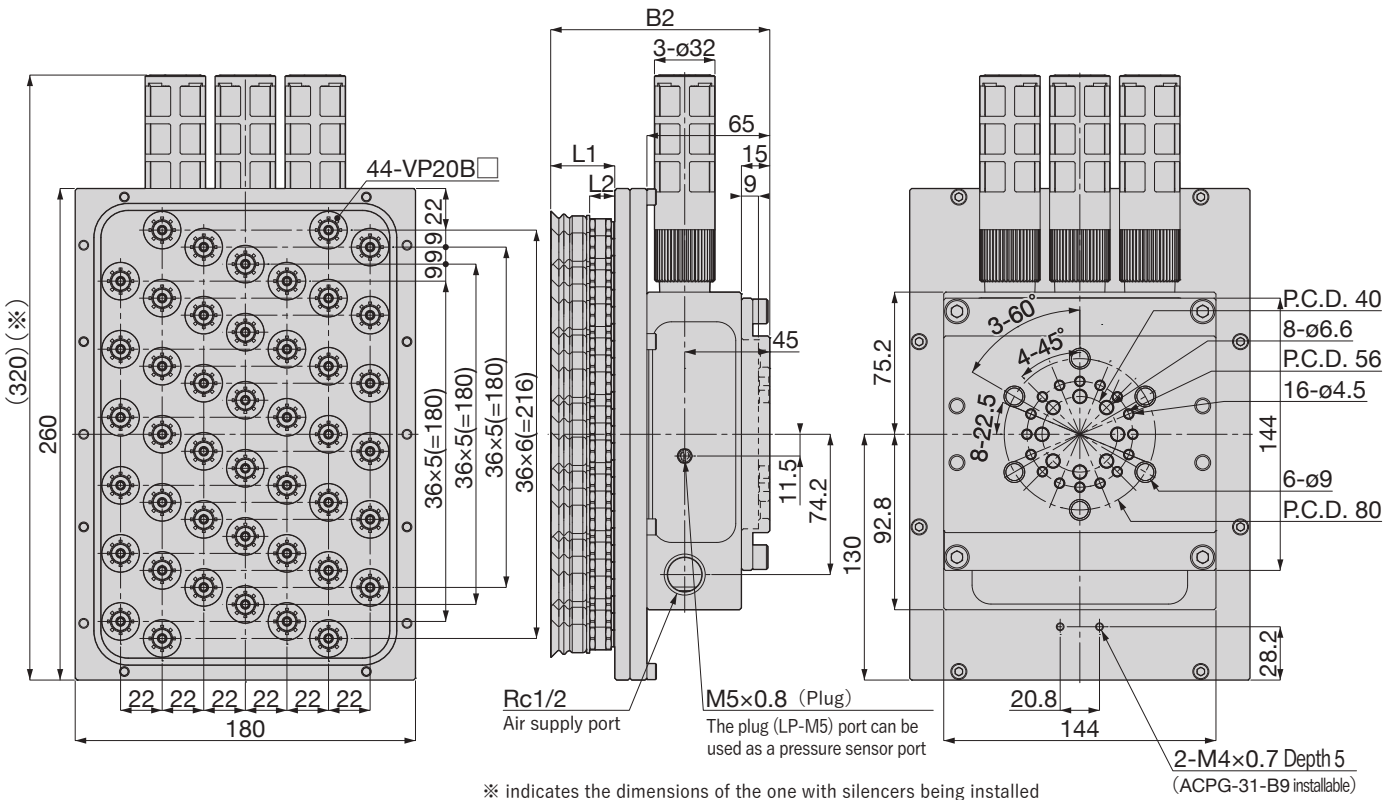
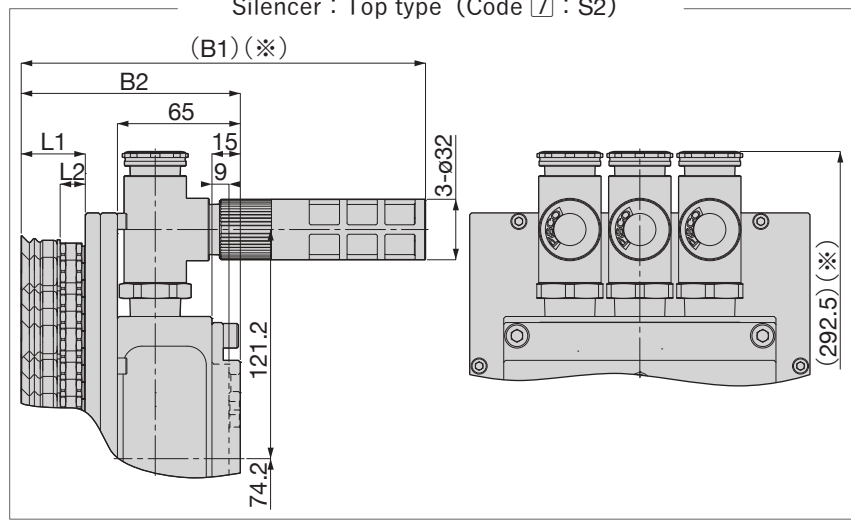
※) Fill in the cup material in ⁴



Suction cup array type dimensions - Cup dia. 20mm, 1.5 folds Bellows cup, Orifice sockets or Direct mounting type

Model : **VMG2618-P7L-20B**45-1637

Silencer : Top type (Code 7 : S2)



※ indicates the dimensions of the one with silencers being installed

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

Unit : mm

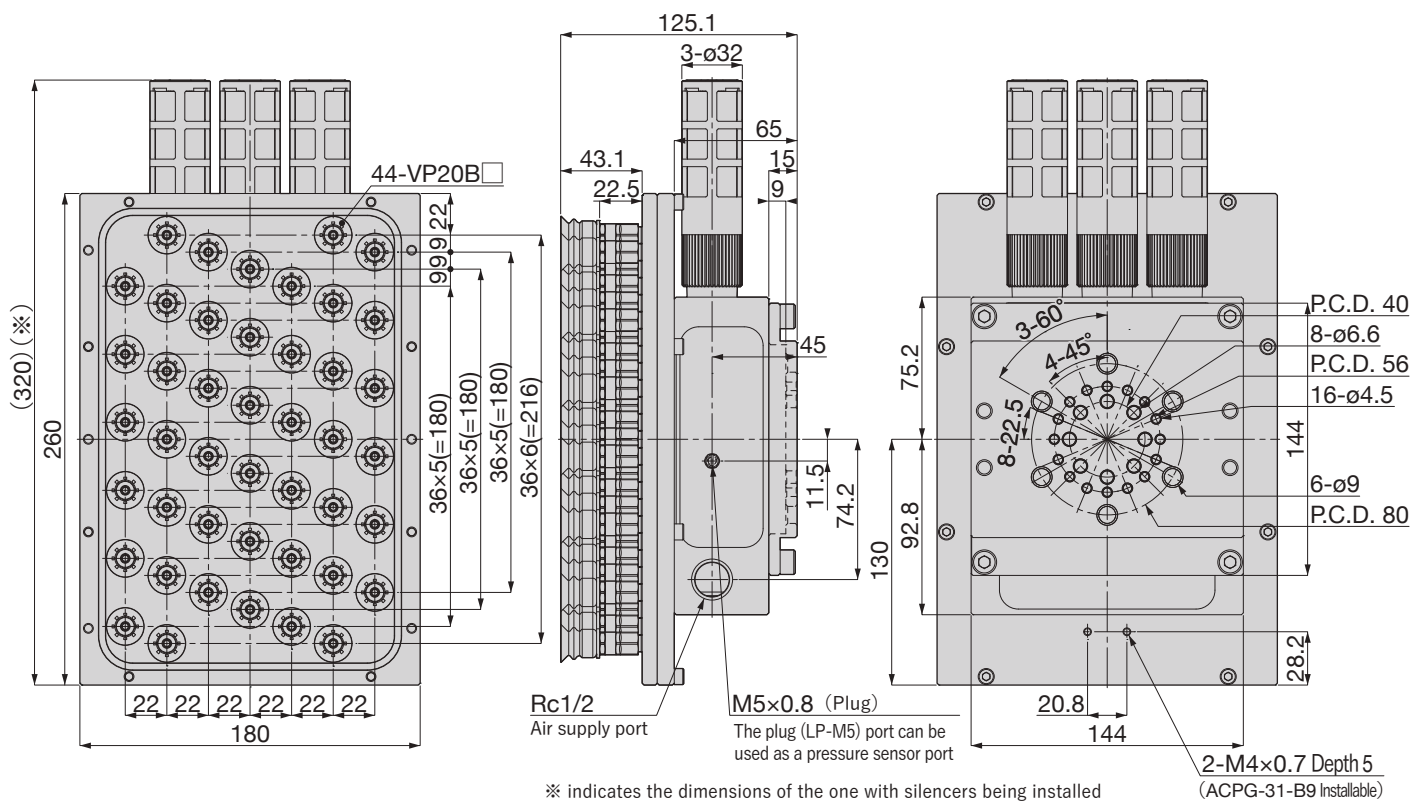
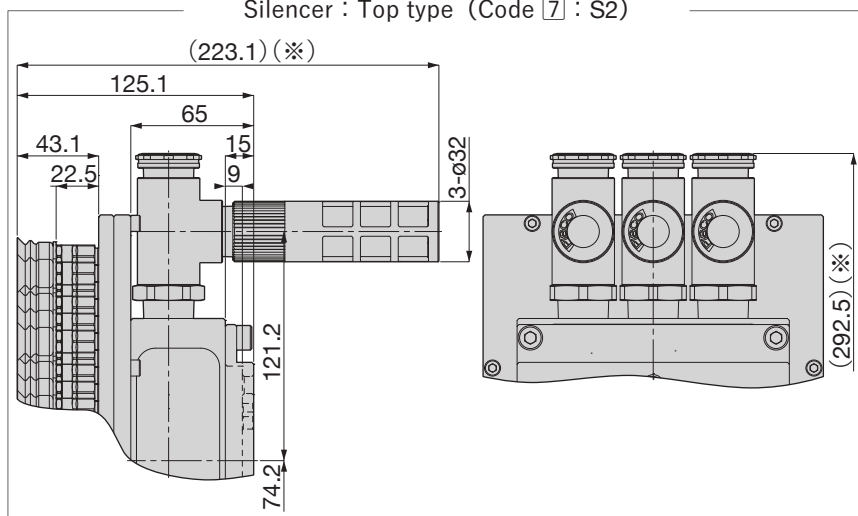
Model	B1	B2	L1	L2	Weight (kg)
VMG2618-P7L-20B 4 -0.8-163S1	—	115.9	33.9	13.3	3.5
VMG2618-P7L-20B 4 -0.8-163S2	213.9				3.6
VMG2618-P7L-20B 4 -1.5-163S1	—	115.9	33.9	13.3	3.5
VMG2618-P7L-20B 4 -1.5-163S2	213.9				3.6
VMG2618-P7L-20B 4 -2.0-163S1	—	115.9	33.9	13.3	3.5
VMG2618-P7L-20B 4 -2.0-163S2	213.9				3.6
VMG2618-P7L-20B 4 -163S1	—	101	19	—	3.3
VMG2618-P7L-20B 4 -163S2	199				3.4

※) Fill in the cup material in 4

Suction cup array type - Cup dia. 20mm, 1.5 folds Bellows cup, Vacuum retention valve

Model : **VMG2618-P7L-20B**4-**ECV-163**7

Silencer : Top type (Code 7 : S2)



Unit : mm

Model	Weight (kg)
VMG2618-P7L-20B 4 -ECV-163S1	3.9
VMG2618-P7L-20B 4 -ECV-163S2	4.0

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

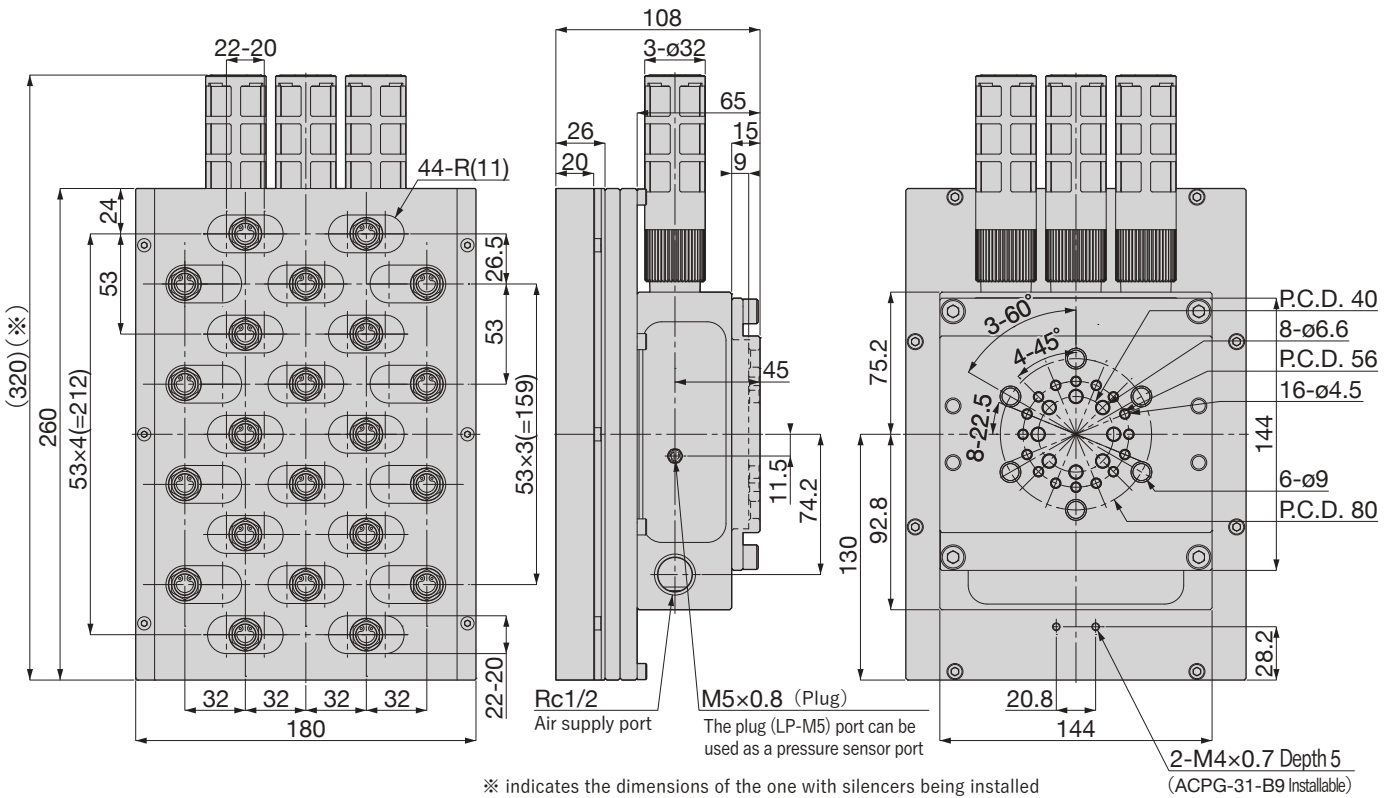
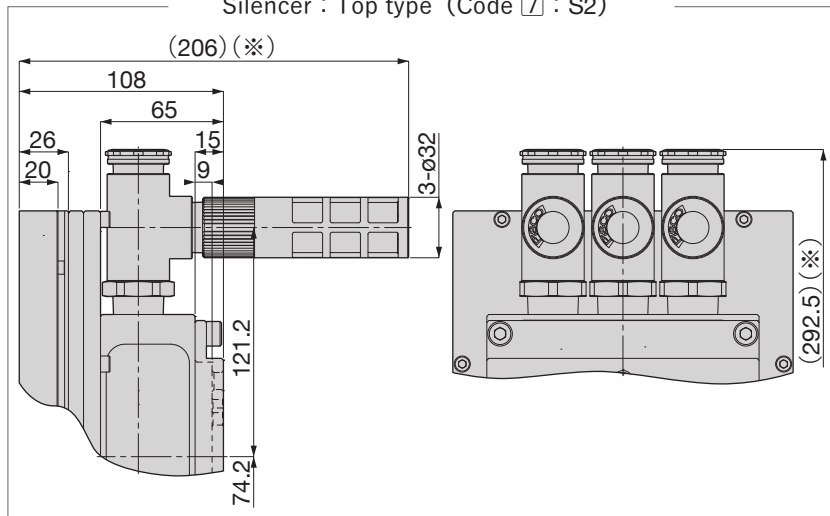
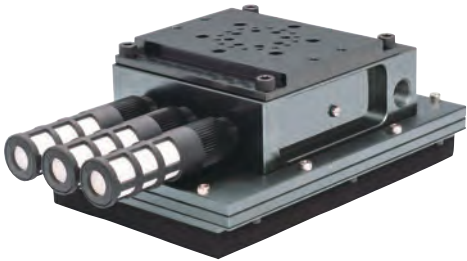
*) Fill in the cup material in 4



Sealing foam rubber type dimensions - $\phi 30$ mm equiv. Oval cells, Orifice restrictorg or No filter type

Model : **V MG2618-SE5L-SEP20**45-1637

Silencer : Top type (Code 7 : S2)



※ indicates the dimensions of the one with silencers being installed

Unit : mm

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

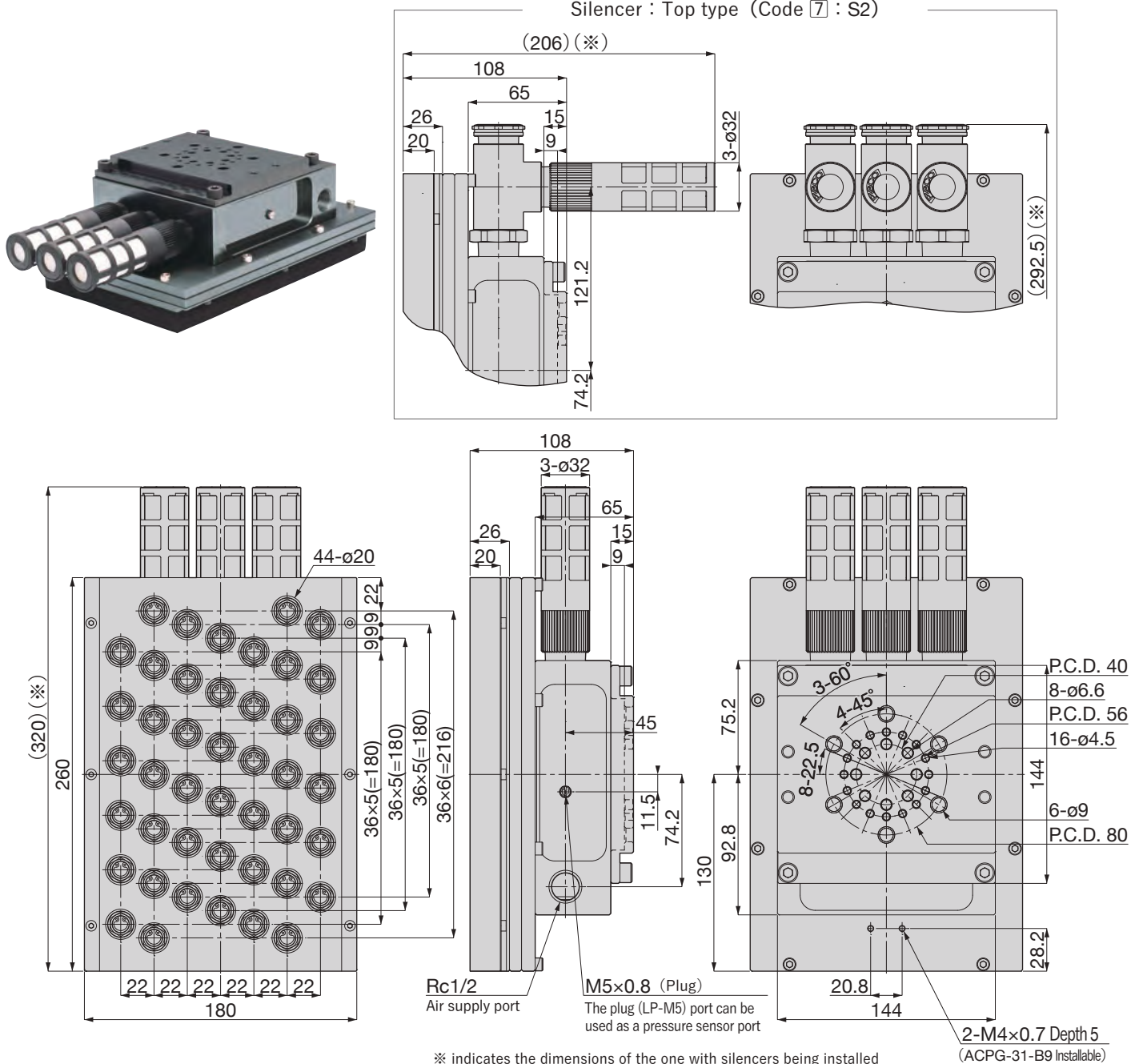
Model	Weight (kg)
VMG2618-SE5L-SEP20 4 -0.8-163S1	3.8
VMG2618-SE5L-SEP20 4 -0.8-163S2	3.9
VMG2618-SE5L-SEP20 4 -1.5-163S1	3.8
VMG2618-SE5L-SEP20 4 -1.5-163S2	3.9
VMG2618-SE5L-SEP20 4 -2.0-163S1	3.8
VMG2618-SE5L-SEP20 4 -2.0-163S2	3.9
VMG2618-SE5L-SEP20 4 -163S1	3.7
VMG2618-SE5L-SEP20 4 -163S2	3.8

※) Fill in the foam rubber type in 4

Sealing foam rubber type dimensions - $\phi 20$ mm round cells, Orifice restrictors or No filter type

Model : **V MG2618-S7L-SEP20**45-163**7**

Silencer : Top type (Code 7 : S2)



※ indicates the dimensions of the one with silencers being installed

2-M4x0.7 Depth 5 (ACPG-31-B9 Installable)

Unit : mm

Model	Weight (kg)
VMG2618-S7L-SEP20 4 -0.8-163S1	3.8
VMG2618-S7L-SEP20 4 -0.8-163S2	3.9
VMG2618-S7L-SEP20 4 -1.5-163S1	3.8
VMG2618-S7L-SEP20 4 -1.5-163S2	3.9
VMG2618-S7L-SEP20 4 -2.0-163S1	3.8
VMG2618-S7L-SEP20 4 -2.0-163S2	3.9
VMG2618-S7L-SEP20 4 -163S1	3.6
VMG2618-S7L-SEP20 4 -163S2	3.7

Mounting pitch	Mounting screw
P.C.D. 40	8-M6
P.C.D. 56	16-M4
P.C.D. 80	6-M8

※) Fill in the foam rubber type in 4



Relevant products

Push-in fitting for air supply port

※ Air supply port size : Rc1/2

PC

Straight



PL

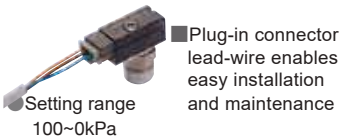
Elbow



Model code PC ϕ D-R	Description	Price (\$)	Model code PL ϕ D-R	Description	Price (\$)
PC3/8-04	Straight 3/8" O.D. x R1/2	3.27	PL3/8-04	Elbow 3/8" O.D. x R1/2	5.27
PC1/2-04	Straight 1/2" O.D. x R1/2	3.91	PL1/2-04	Elbow 1/2" O.D. x R1/2	5.91
PC5/8-04	Straight 5/8" O.D. x R1/2	8.09	PL5/8-04	Elbow 5/8" O.D. x R1/2	11.73
PC10-04	Straight 10mm O.D. x R1/2	3.27	PL10-04	Elbow 10mm O.D. x R1/2	5.27
PC12-04	Straight 12mm O.D. x R1/2	3.82	PL12-04	Elbow 12mm O.D. x R1/2	5.82

Small pressure sensor
Switch output type

VUS12 Male thread model



- Plug-in connector lead-wire enables easy installation and maintenance

- Setting range 100~0kPa

Model code	Price (\$)
VUS12-M5S	73.64

※ The above photo is different from the actual product of the model code. It comes with M5 metric thread instead.

Large digital display pressure sensor

VUS



- Large dual LCD, 3 colors display
- Connector type lead wire enables easy installation and maintenance
- Copy function enables the settings can be copied to slave sensors

- Rated pressure range : -101.3~0.0kPa

Model code	Price (\$)	Description
VUS-32-NV	70.91	NPN 2 points SW + Analog output (1-5V)
VUS-32-PV	70.91	PNP 2 points SW + Analog output (1-5V)
VUS-32-N2	70.91	NPN 2 points SW output + Copy function
VUS-32-P2	70.91	PNP 2 points SW output + Copy function

Mounting adapter for large digital pressure sensor

PF

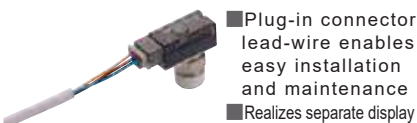
Mounting adapter



Model code PFR1-R2	Price (\$)
PFM5-01	1.73

Small pressure sensor
Analog output type

VUS12 Male thread model



- Plug-in connector lead-wire enables easy installation and maintenance
- Realizes separate display

Model code	Price (\$)
VUS12-M5A	63.64

※ The above photo is different from the actual product of the model code. It comes with M5 metric thread instead.

LCD for analog output pressure sensor

SED



- Large dual LCD, 3 colors display
- Connector type of lead-wire enables easy connection/disconnection

- Rated pressure range (sensor head) -100.0~0.0kPa

Model code	Price (\$)
SED-31N	89.09
SED-31P	89.09

Bracket for LCD

ACPG Angle bracket



Model code	Price (\$)
ACPG-31-B9	3.00

※ including 2 mounting screws