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Vacuum Components

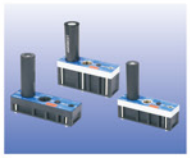
AIRBEST


ABM,ABX


ABM, ABX-BA


ABM, ABX (Combined type)

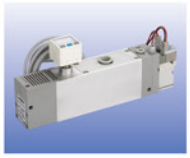

ASM,ASX


AM


AL

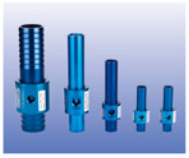

AH

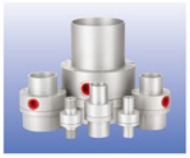

AM, AL, AH (Combined type)


AZL112


AZL212


ACP


ACPF


ACPS


ACV


AQV


AZH


AZU

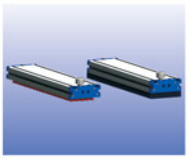

ASBP


AZFC


ABF


ALF


BF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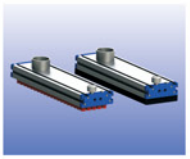
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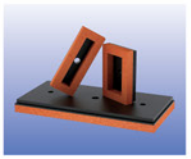

SNP


SOP

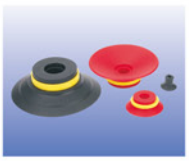

SB


SBF


SBL


SBLP

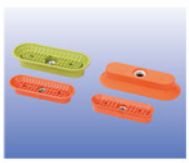

SF


SU

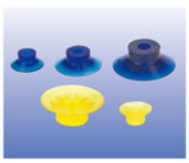

STC


SFF


SOB


SOF


SOG


SFP


SBP


SXP

SGP

SD

SH

SHB

AZP

SPAG

SPCG

SPFG

SPJG

SPJG(No-mark)

SPS

SPUG

SNT

Spring Plungers

Fittings for Vacuum Pads

Vacuum Accessories

Contents

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Vacuum Technology

Introduction

Vacumm Degree

Vacuum uses ambient pressure as the refernce point and lies below the atmospheric pressure(0 mbar).Its values have a negative sign.

Pressure Unit

Positive pressure conversion table

	Pa(N/m^2)	bar	kg/cm^2	Torr	psi(ibf/in^2)	kPa	inHg
1Pa	1	0.00001	$10.1792x10^{-6}$	$7.50062x10^{-3}$	$0.145038x10^{-3}$	0.001	$0.3x10^{-3}$
1 kPa	1000	0.01	$10.1792x10^{-3}$	7.50062	0.145038	1	0.3
1 bar	100000	1	1.01972	750.062	14.5038	100	30
1 kg/cm^2	98066.5	0.980665	1	735.559	14.2233	98.0665	29.42
1 torr	133.322	$1.33322x10^{-3}$	$1.35951x10^{-3}$	1	$19.3368x10^{-3}$	0.133322	0.04
1 Psi	6894.76	$68.9476x10^{-3}$	$70.3096x10^{-3}$	51.7149	1	6.89476	2.07

Negative pressure conversion table

	mbar	kPa	-kPa	%vacuum	Torr	-mmHg	-inHg
Atmosphere	1013	101.3	0	0	760	0	0
	913	91.3	10	9.9	685	75	3
	813	81.3	20	19.7	610	150	6
	713	71.3	30	29.6	535	225	9
	613	61.3	40	39.5	460	300	12
	513	51.3	50	49.3	385	375	15
	413	41.3	60	59.2	310	450	18
	313	31.3	70	69.1	235	525	21
	213	21.3	80	79	160	600	24
	113	11.3	90	89	85	675	27
Absolute Vacuum	0	0	101.3	100	0	760	30

Flow

Volume flows per unit time

Flow conversion table

	m^3/s	m^3/h	l/min	l/s	Ft^3/min(scfm)
1 m^3/s	1	3600	60000	1000	2118.9
1 m^3/h	$0.28x10^{-3}$	1	16.6667	0.2778	0.5885
1 l/min	$16.67x10^{-6}$	0.06	1	0.0167	0.035
1 l/s	$1x10^{-3}$	3.6	60	1	2.1189
1 ft^3/min	$0.472x10^{-3}$	1.6992	28.32	0.4720	1

How to produce vacuum

Compressed air flows in high speed, which sucks the air in vacuum chamber, then vacuum chamber has negative pressure.

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Instructions for vacuum pads' applications

We separated applications in vacuum applied to sealed and unsealed systems.
Sealed systems are all applications where there is no leakage between the vacuum pad and the substrate.

Examples:–Handling of glass plates
–Handling of smooth surface metal plates
–Evacuation of containers
–Tests of tightness

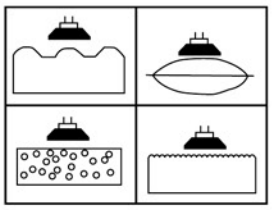
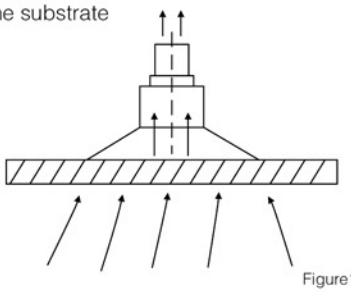


Figure1.1–Types of surface

Unsealed systems applications are that where there is leaking through the pad and the substrate, where the product is porous, or through the edge of the pad in the case of rough substrates. There is the possibility of applications where leakage occurs by both ways.

Leakage through the substrate



Leakage through the edge

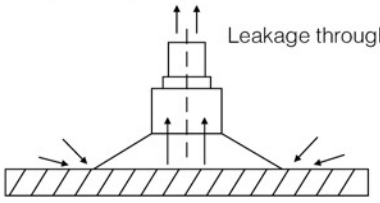


Figure1.2–Unsealed System

Examples:–Arm cardboard box
–Handling of foam
–Handling of rough ceramic floor by back side
–Rotary joint
–Transfer roll

Types of vacuum pads

Flat and flat with internal support

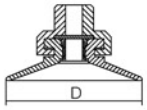


Figure1.3–Suction–flat

- Good for handling flat objects
- Little or no tolerance to the radius of curvature of the piece
- Small course of work
- Excellent for large vertical and horizontal loads

Bellows

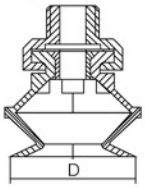


Figure1.4–Bellows Vacuum Pad

- Good for handling flat and curved objects
- Good tolerance for radius of curvature
- Good working course, which allows level adjustment between products of different heights
- Limited vertical and horizontal load capacity

Multiple Bellows

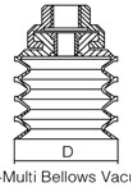


Figure1.5–Multi Bellows Vacuum Pad

- Good for handling flat and curved objects
- Huge working course, allowing great compensation level between products with very different heights
- Vertical load–very limited, not suitable for horizontal loading.It does not allow working with high vacuum level, because the vacuum pad may collapse.

Examples:–Handing breads, fruits and vegetables
–Manipulation of small plastic bags
–Handling packet of biscuits

Profile Vacuum Pads

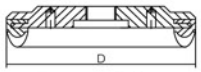


Figure1.6–Profile

- Good for handling rough or smooth flat objects
- Little or no–tolerance for radium of curvature
- Reduced working course
- Excellent for large vertical loads
- Can be built in different ways to best suit the application

Examples:–Handling concrete blocks, stone and ceramics
–Handling sheet metal with rough surface

Due to the energy required to create vacuum beyond–80% raises up tremendously and as the premature wear of the suction caused by a vacuum level above–60%, we assume that most applications should work between –40 to –60% of vacuum(–20% for multiple Bellows.)

Safety factor(K)

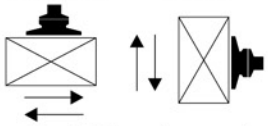


Figure1.7–Types of movements

We can divide the vacuum pads applications in horizontal applications, where the object is lifted(subject) and then moved parallel to the plane or vertical applications, where the object is lifted and moved perpendicular to the plane and then can be driven in any direction.

Due to some factors inherent in handling systems, such as friction,gravity and acceleration, it is required to implement the safety factor to prevent slipping or detachments during the movement.
Below is a table with suggested values:

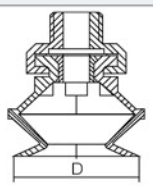
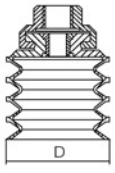
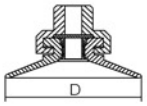
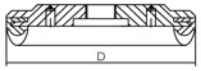
Table1.1– Safety factor

K(Safety Factor)	Kind of manipulation
2	Horizontal movement
4	Vertical movement
4	Horizontal movement with Robots
6	Vertical movement with Robots

Diameter of the vacuum pads

After selecting the type of the vacuum pad according to the stability and geometry of the object to be manipulated, we can proceed to calculate its approximate diameter required to do the work, based in one of the following formulas.
where:
D=diameter of vacuum pad(in mm)
K=safety factor(see table 1.1)
V=vacuum level(–kPa)
n=number of vacuum pads in the application
m=mass(in kg)to be manipulated.

Table 1.2 – Formulas for diameter for type of vacuum pad

Bellows		$D=152.\sqrt{\frac{m.k}{V.n}}$	Multiple–Bellows		$D=223,4.\sqrt{\frac{m.k}{V.n}}$ Up to $D=558,5.\sqrt{\frac{m.k}{V.n}}$
Flat and flat with internal support		$D=139,5.\sqrt{\frac{m.k}{V.n}}$	Profile		$D=122,08.\sqrt{\frac{m.k}{V.n}}$
			Theoretical (Without deformation)		$D=117.\sqrt{\frac{m.k}{V.n}}$

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Examples

Sealed systems

1)Determine the type and number of vacuum pads for handling a flat aluminum plate of dimensions 2000x2000 mm and mass of 260 kg. The manipulation will be done through a pulley in the horizontal direction at low speed.

Response:
Manipulation of flat sheet
Suction will be the appropriate flat(Flat)
Safety factor is 2, taken from Table 1.1
Let's select–60 kPa and 8 pads for sake of stability and distribution of forces
From Table 1.2 we have

m=260kg
k=2
v=60–kPa
n=8

$$D=139,5.\sqrt{\frac{m.k}{V.n}} \begin{cases} \\ \end{cases} D=139,5.\sqrt{\frac{260.2}{60.8}} \qquad D=145,19mm \approx \boxed{150mm}$$

For this diameter we should use the flat vacuum pad AIRBEST PFG–150

Material and characteristic of vacuum pad

Material	Temperature ℃	Durability	Oil Resistance	weather & ozone
N–NBR	–20~+110	◎	◎	○
S–Silicone	–40~+200	△	×	◎
C.S–Conductive(Special material)	–45~+90	◎	◎	○
PU–Poly Urethane	+10~+50	◎	◎	◎
F–Fluoride Rubber	–10~+230	◎	○	○
CR–Chloroprene Rubber	–40~+110	◎	×	△
E–EPDM	0~+150	○	×	◎
HS–High Temp.Silicone	–70~+280	△	×	◎

◎: Excellent ○: Very Good △: Good ×: Unsuitable

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Vacuum Pumps A

Specifications

Max.vacuum level	−85kPa
Max.vacuum flow rate	220l/m
Air supply pressure	4−6bar Max.7bar
Air supply pressure(opt)	4.5bar
Air supply type	Dry compressed air
Working temperature	−20℃ to +80℃
Noise level	50−68dBA

Features

☆ These pumps are compact and low weight design.Because the pumps are too small they can be mounted locally to the vacuum requirement even directly onto the back of suction cups if required.

☆ They use a Multi Stage Ejector principal for generating the vacuum, provide large capacity vacuum flow combined with high grade plastic, making the pumps resilient to most hazardous vapours

☆ The pump can have seal materials options of Viton® & EPDM for corrosive and acidic applications.

How to Order

ABM5 – B – V
① ② ③

① Model−Capacity equivalent to electricity motor pump size

ABM5	0.05kW
ABM10	0.10kW
ABM20	0.20kW
ABM30	0.30kW

② Air Supply, Vacuum, Exhaust Port

	Air Supply	Vacuum	Exhaust
A	M5−Φ6	G1/8"	Internal silencer
NA	M5−Φ6	NPSF1/8"	Internal silencer
B	G1/8"	G3/8"	Internal silencer
BA	G1/8"	G3/8"	Internal silencer
			connection plate−AL
NB	NPSF1/8"	NPSF3/8"	Internal silencer
NBA	NPSF1/8"	NPSF3/8"	Internal silencer
			connection plate−AL
C	G1/8"	G3/8"	External silencer
NC	NPSF1/8"	NPSF3/8"	External silencer

※ Standard pump model
ABM5−A, NA, B, BA, NB, NBA, C, NC ABM10−A, NA, B, BA, NB, NBA, C, NC ABM20−B, BA, NB, NBA,C, NC ABM30−B, BA, NB, NBA,C, NC

③ Sealing

No mark	Standard (NBR)
V	VITON
E	EPDM

Technical Parameters

Model	Max.vacuum level (−kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Noise level (dBA)	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	Exhaust
ABM5	85	37	12–20	50–65	>2	>5	>8
ABM10		75	28–42	55–68	>2	>8	>10
ABM20		150	55–85	60–68	>4	>10	>12
ABM30		220	87–125	60–68	>6	>12	>15

※ Remarks: type weight= ABM5–A (B,BA,NBA,C,NC) :32.5g (38g,58g,58g,38g,38g)
ABM10–A (B,BA,NBA,C,NC) :32g (37.5g,57.5g,57.5g,37.5g,37.5g)
ABM20–B (BA,NB,NBA,C,NC) :50g (70g,70g,70g,50g,50g)
ABM30–B (BA,NB,NBA,C,NC) :62.5g (82.5g,82.5g,82.5g,62.5g,62.5g)

Vacuum flow(l/min)at different vacuum levels(−kPa)

Model \ −kPa	Air supply pressure	0	10	20	30	40	50	60	70	80	Max.vacuum level
ABM5	4.5bar	35	20.5	12	10.5	8.5	6.5	4.5	2.5	0.8	−85kPa
ABM10		70	40.5	25	21	18	14	9.5	5	1.3	
ABM20		141	77	45	39.5	29.5	25	17.5	12	3	
ABM30		175	105	70	63	53	40	26	14	6.5	

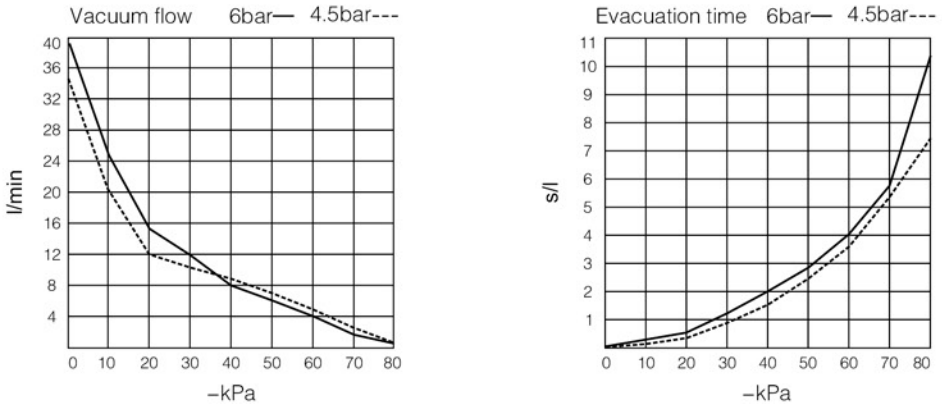
Model \ −kPa	Air supply pressure	0	10	20	30	40	50	60	70	80	Max.vacuum level
ABM5	6bar	37	25	15.5	12	8	6	4	2.7	0.6	−85kPa
ABM10		75	55	27	20	18	12	9	5	2	
ABM20		150	100	55	38	30	24	16	11	3.2	
ABM30		220	150	81	65	50	38	27	18	5	

Evacuation time(s/l)to reach different vacuum levels(−kPa)

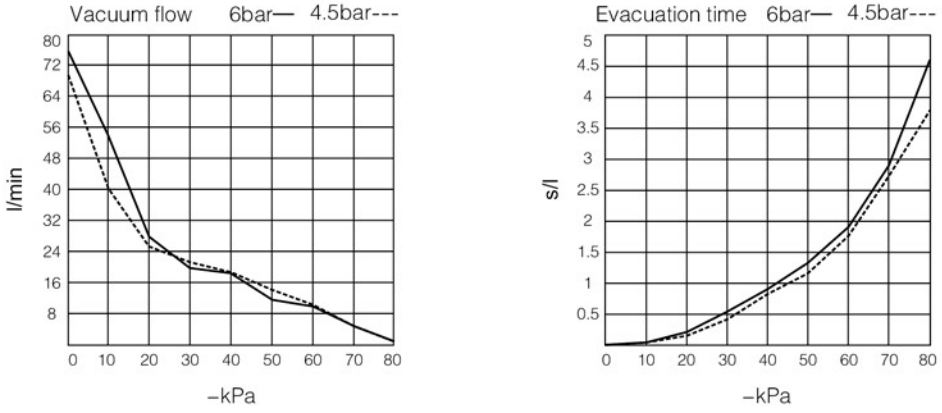
Model \ −kPa	Air supply pressure	10	20	30	40	50	60	70	80
ABM5	4.5bar	0.11	0.42	0.95	1.66	2.5	3.65	5.25	7.89
ABM10		0.08	0.2	0.44	0.8	1.24	1.8	2.55	3.8
ABM20		0.04	0.12	0.23	0.41	0.65	0.93	1.33	2.03
ABM30		0.03	0.09	0.16	0.27	0.43	0.66	0.95	1.43

Model \ −kPa	Air supply pressure	10	20	30	40	50	60	70	80
ABM5	6bar	0.13	0.51	1.15	1.93	2.87	4.09	5.84	10.46
ABM10		0.029	0.23	0.53	0.92	1.37	1.95	2.77	4.62
ABM20		0.023	0.15	0.28	0.46	0.71	1.02	1.48	2.55
ABM30		0.015	0.077	0.138	0.308	0.49	0.69	1.02	1.75

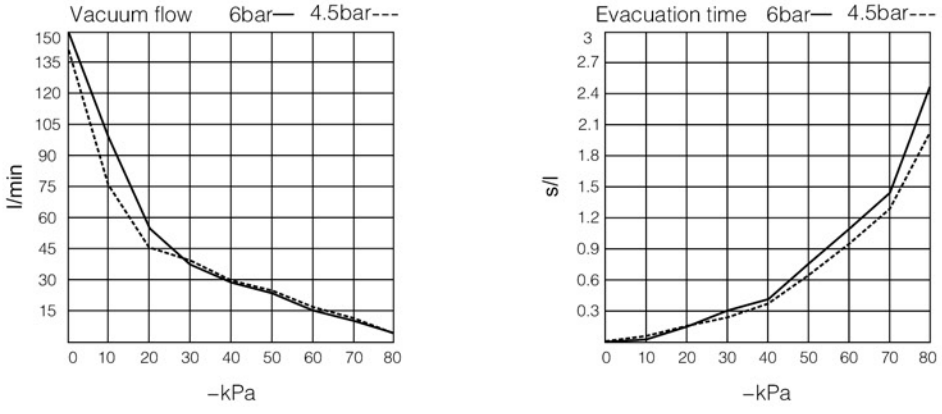
• ABM5



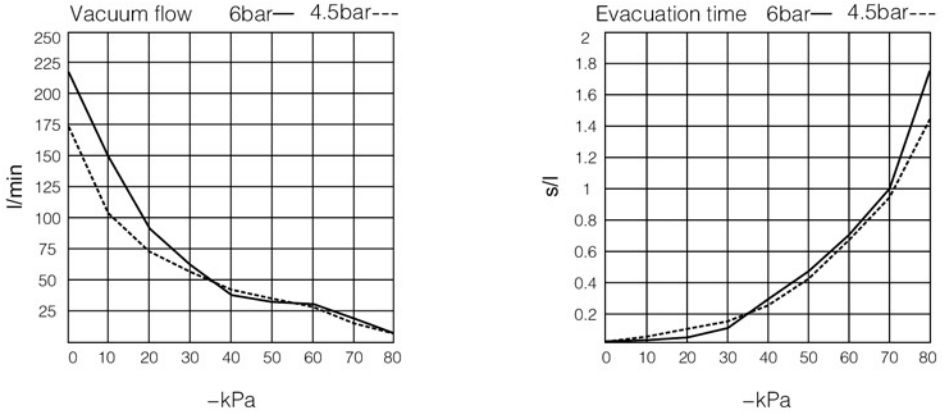
• ABM10



• ABM20

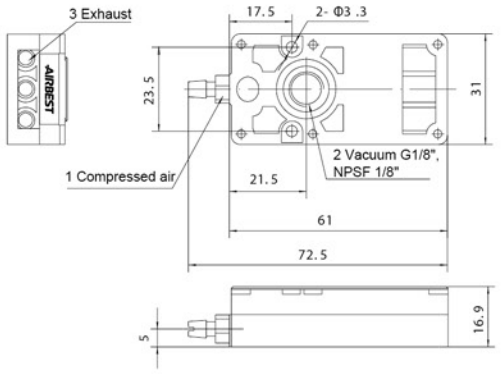


• ABM30

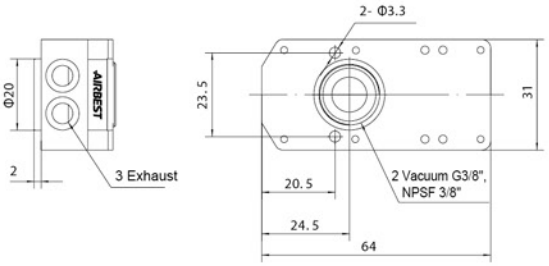


Dimensions (mm)

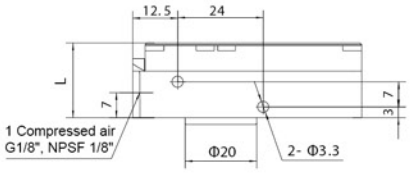
5
ABM(10)-A(NA)



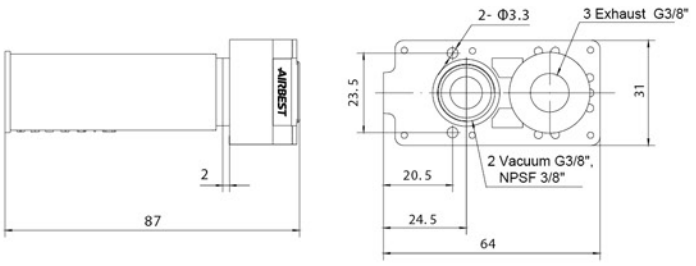
5 B
ABM(10)-(BA)
20 NB
30 NBA

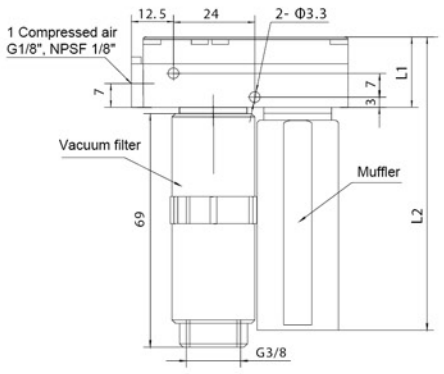


Model	L(mm)
ABM5	20.7
ABM10	20.7
ABM20	28
ABM30	35



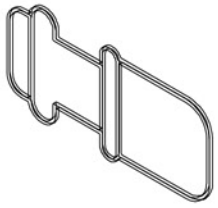
5
ABM(10)-C(NC)
20
30





Model	L1(mm)	L2(mm)
ABM5	20.7	87
ABM10	20.7	87
ABM20	28	94.2
ABM30	35	101.5

How to order(Sealing elements)

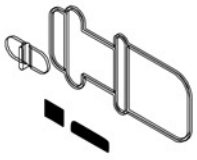


Sealing gasket

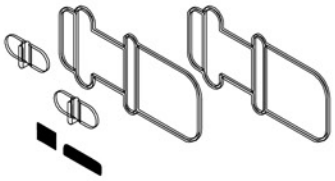
Valve plate

Specification	Sealing gasket	Valve plate
Standard(NBR)	02.0050.419	02.0050.421
VITON	02.0050.420	02.0050.422
EPDM	02.0050.465	02.0050.466

Repair kits



5 10



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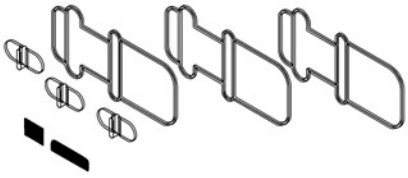


30

Model	Ordering Code		
	NBR	VITON	EPDM
ABM5–A(B、C)	01.0005.402	01.0005.602	01.0005.802
ABM10–A(B、C)	01.0010.402	01.0010.602	01.0010.802
ABM20–B(C)	01.0020.404	01.0020.604	01.0020.804
ABM30–B(C)	01.0030.406	01.0030.606	01.0030.806

Specifications

Max.vacuum level		−93kPa
Max.vacuum flow rate		185l/m
Air supply pressure		4−6bar Max.7bar
Air supply pressure(opt)	ABX5−ABX20	4.5bar
	ABX30	5bar
Air supply type		Dry compressed air
Working temperature		−20℃ to +80℃
Noise level		50−68dBA

Features

☆ These pumps are compact and low weight design.Because the pumps are too small they can be mounted locally to the vacuum requirement even directly onto the back of suction cups if required.

☆ They use a Multi Stage Ejector principal for generating the vacuum, provide large capacity vacuum flow combined with high grade plastic, making the pumps resilient to most hazardous vapours

☆ ABX has the same extemal dimensions to that of ABM however the internal ejector system is different to enable higher levels of vacuum to be achieved.

☆ The pump can have seal materials options of Viton® & EPDM for corrosive and acidic, applications.

How to Order

ABX5 – B – V
① ② ③

① Model−Capacity equivalent to electricity motor pump size

ABX5	0.05kW
ABX10	0.10kW
ABX20	0.20kW
ABX30	0.30kW

② Air Supply, Vacuum, Exhaust Port

	Air Supply	Vacuum	Exhaust
A	M5−Φ6	G1/8"	Internal silencer
NA	M5−Φ6	NPSF1/8"	Internal silencer
B	G1/8"	G3/8"	Internal silencer
BA	G1/8"	G3/8"	Internal silencer
			connection plate−AL
NB	NPSF1/8"	NPSF3/8"	Internal silencer
NBA	NPSF1/8"	NPSF3/8"	Internal silencer
			connection plate−AL
C	G1/8"	G3/8"	External silencer
NC	NPSF1/8"	NPSF3/8"	External silencer

※ Standard pump model
ABX5−A, NA, B, BA, NB, NBA, C, NC ABX10−A, NA, B, BA, NB, NBA, C, NC ABX20−B, BA, NB, NBA,C, NC
ABX30−B, BA, NB, NBA, C, NC:

③ Sealing

No mark	Standard (NBR)
V	VITON
E	EPDM

Technical Parameters

Model	Max.vacuum level (−kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Noise level (dBA)	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	Exhaust
ABX5	92	32	18–22	50–65	>2	>5	>8
ABX10		63	31–40	55–68	>2	>8	>10
ABX20		125	79–89	60–68	>4	>10	>12
ABX30		185	128–137	60–68	>6	>12	>15

※ Remarks: type weight= ABX5–A (B,BA,NBA,C,NC) :32.5g (38g,58g,58g,38g,38g)
ABX10–A (B,BA,NBA,C,NC) :32g (37.5g,57.5g,57.5g,37.5g,37.5g)
ABX20–B (BA,NB,NBA,C,NC) :50g (70g,70g,70g,50g,50g)
ABX30–B (BA,NB,NBA,C,NC) :62.5g (82.5g,82.5g,82.5g,62.5g,62.5g)

Vacuum flow(l/min)at different vacuum levels(−kPa)

Model \ −kPa	Air supply pressure	0	10	20	30	40	50	60	70	80	90	Max.vacuum level
ABX5	4.5bar	30	13	7.5	7	6	5	4	3.2	1.8	0.4	−92kPa
ABX10		52	24	18	15	13	10.5	8	6	2.5	0.8	
ABX20		100	46	34	30.5	25	21	17	10.5	5	1.6	
ABX30	5bar	180	95	55	45.5	40.5	30.5	25	19	11.5	3	

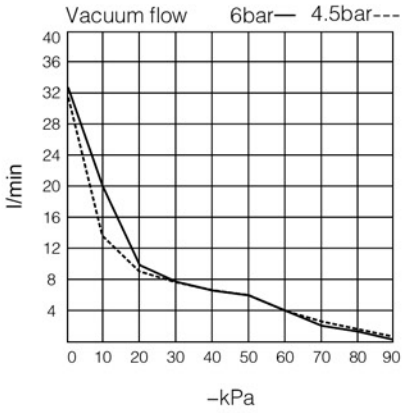
Model \ −kPa	Air supply pressure	0	10	20	30	40	50	60	70	80	90	Max.vacuum level
ABX5	6bar	32	20	8.5	7.5	6	5	4	3	1.5	0.15	−93kPa
ABX10		63	36	18	16	12.5	10.5	8.5	6	3.5	0.5	
ABX20		125	73	35	30	25	22	18	12	7	0.9	
ABX30		185	103	51	46	38	31	25	19	12	1.8	

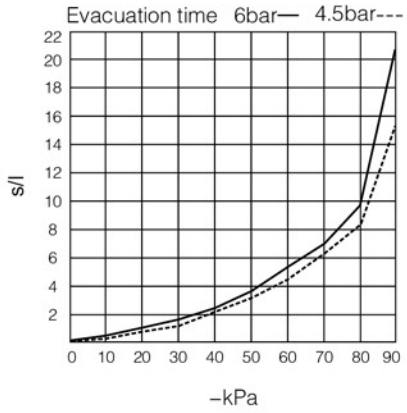
Evacuation time(s/l)to reach different vacuum levels(−kPa)

Model \ −kPa	Air supply pressure	10	20	30	40	50	60	70	80	90
ABX5	4.5bar	0.13	0.6	1.26	2.3	3.2	4.5	6.15	8.5	15.5
ABX10		0.11	0.3	0.65	1.1	1.55	2.15	2.85	4.7	10.2
ABX20		0.09	0.16	0.32	0.55	0.8	1.5	1.8	2.7	5
ABX30		0.06	0.12	0.23	0.36	0.53	0.76	1.1	1.6	2.9

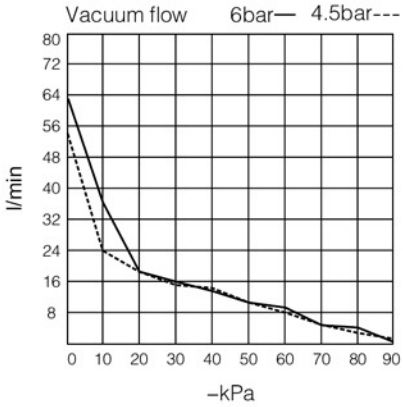
Model \ −kPa	Air supply pressure	10	20	30	40	50	60	70	80	90
ABX5	6bar	0.15	0.71	1.52	2.54	3.72	5.12	6.95	9.7	21
ABX10		0.09	0.32	0.71	1.18	1.74	2.4	3.26	4.55	10.2
ABX20		0.046	0.15	0.31	0.52	0.77	1.08	1.54	2.15	4.92
ABX30		0.025	0.123	0.23	0.38	0.58	0.82	1.11	1.54	3

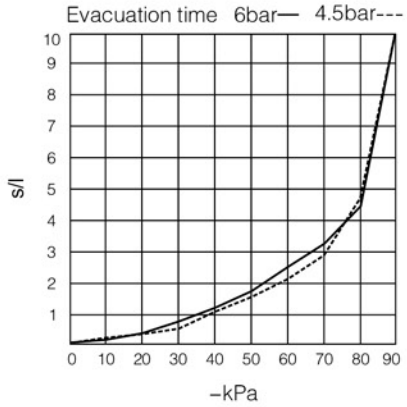
• ABX5



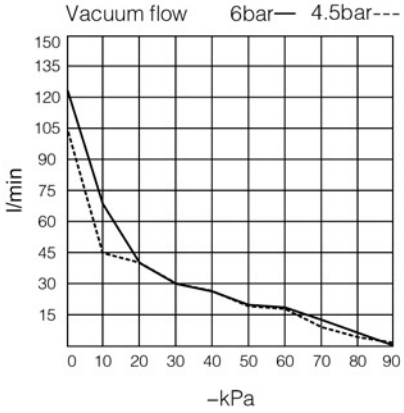


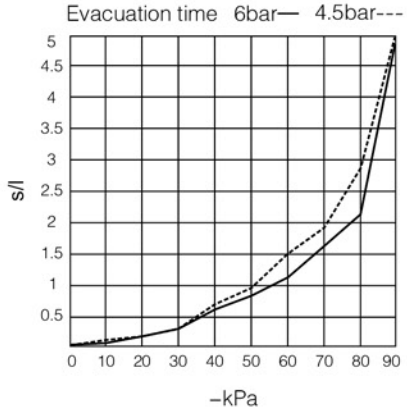
• ABX10



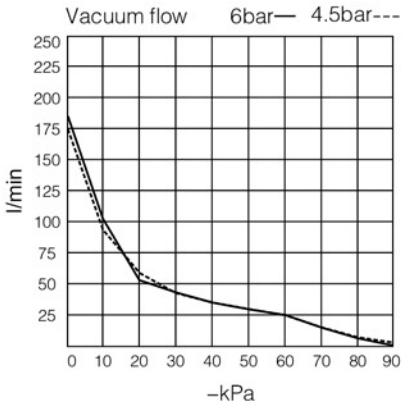


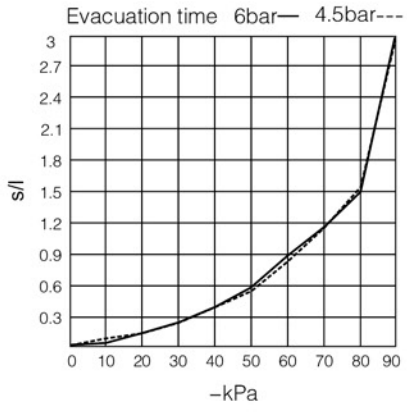
• ABX20





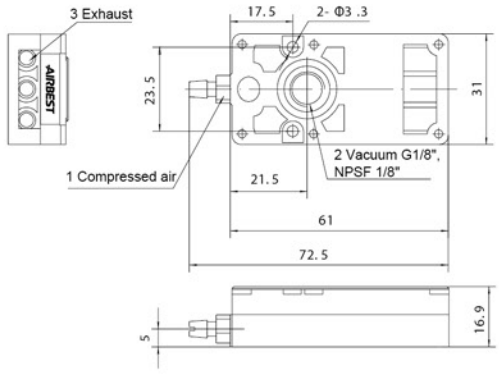
• ABX30



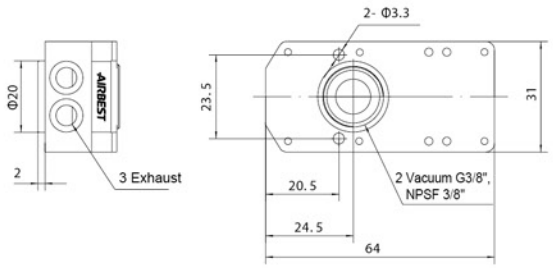


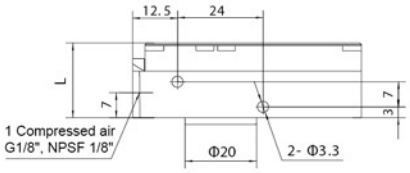
Dimensions (mm)

5
ABX(10)–A(NA)



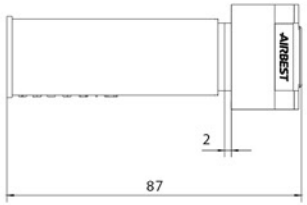
5 B
ABX(10)–(BA)
20 NB
30 NBA

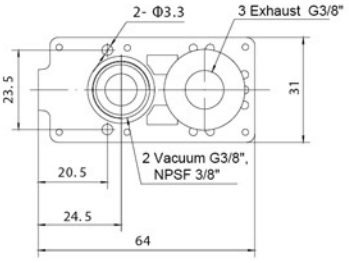


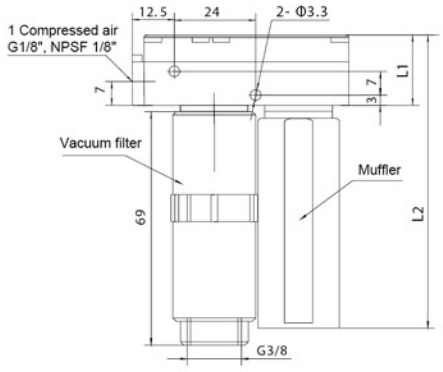


Model	L(mm)
ABX5	20.7
ABX10	20.7
ABX20	28
ABX30	35

5
ABX(10)–C(NC)
20
30

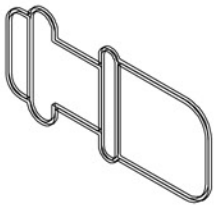






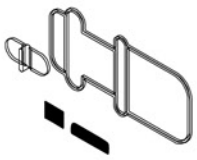
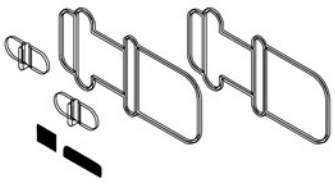
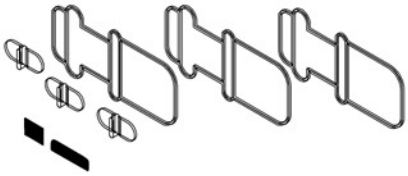
Model	L1(mm)	L2(mm)
ABX5	20.7	87
ABX10	20.7	87
ABX20	28	94.2
ABX30	35	101.5

How to order(Sealing elements)

 Sealing gasket	 Valve plate

Specification	Sealing gasket	Valve plate
Standard(NBR)	02.0050.419	02.0050.421
VITON	02.0050.420	02.0050.422
EPDM	02.0050.465	02.0050.466

Repair kits

 5 10	 20	 30

Model	Ordering Code		
	NBR	VITON	EPDM
ABX5–A(B、C)	01.0005.402	01.0005.602	01.0005.802
ABX10–A(B、C)	01.0010.402	01.0010.602	01.0010.802
ABX20–B(C)	01.0020.404	01.0020.604	01.0020.804
ABX30–B(C)	01.0030.406	01.0030.606	01.0030.806

Specifications

Max.Vacuum Level	–86kPa
Max.Vacuum flow rate	35l/m
Air supply pressure	4–6bar Max.7bar
Air supply type	Dry compressed air

Features

☆ This vacuum pump uses individual pumps to make up the complete unit,each pump is in itself a multistage ejector unit. Each individual pump can be stacked together this creating a modular manifold based system.

☆ It can be operated using just one control valve whilst retaining individual vacuum lines separate to one another,therefore if any leakage or surface deformation occurs and one pad loses its vacuum, it does not effect the vacuum level in the other pads. Pumps can be stacked up from 2–16 unit depending upon requirements.The pumps can have seal material options of Viton® & EPDM for corrosive and acidic applications.

How to Order

ABM5 x 5 – 4 – V
① ② ③ ④

① Model

ABM5
ABM10

② Vacuum stack

2、3、4、5、6、7、8、9、10
11、12、13、14、15、16

③ Vacuum port,inner dia. of tube

4–Φ4

④ Sealing

No mark–Standard(NBR)
V–VITON
E–EPDM

Remark: ABM5–the most 16 stacks (can use 2 silencers between 12–16 stacks)
ABM10–the most 12 stacks (can use 2 silencers between 6–12 stacks)

Vacuum flow(l/min)at different vacuum levels(–kPa)

Model	Vacuum flow(l/min)at different vacuum levels(–kPa)								
	0	10	20	30	40	50	60	70	80
ABM5x1	27	15	12.5	11	10	7.5	5.5	2	0.6
ABM10x1	35	28	24	22	18	15	11	5	1.35

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Model	Evacuation time(s/l)to reach different vacuum levels(–kPa)							
	10	20	30	40	50	60	70	80
ABM5x1	0.2	0.59	1.10	1.58	2.4	3.52	5.3	10.25
ABM10x1	0.12	0.28	0.60	0.81	1.18	1.82	2.65	5.21

Model	Max.vacuum level (−kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Min tube inner Φ (within 2m)		
				Air supply	Vacuum	Exhaust
ABM5×2	86	25×2	29–41	>2	>2.5	3/8×1
ABM5×3		25×3	44–64	>2	>2.5	3/8×1
ABM5×4		25×4	61–85	>4	>2.5	3/8×1
ABM5×5		25×5	71–104	>4	>2.5	3/8×1
ABM5×6		25×6	89–125	>4	>2.5	3/8×1
ABM5×7		25×7	104–145	>4	>2.5	3/8×1
ABM5×8		25×8	120–168	>6	>2.5	3/8×1
ABM5×9		25×9	132–190	>6	>2.5	3/8×1
ABM5×10		25×10	148–211	>6	>2.5	3/8×1
ABM5×11		25×11	165–232	>6	>2.5	3/8×1
ABM5×12		25×12	180–252	>6	>2.5	3/8×2
ABM5×13		25×13	195–275	>6	>2.5	3/8×2
ABM5×14		25×14	208–293	>4	>2.5	3/8×2
ABM5×15		25×15	225–316	>4	>2.5	3/8×2
ABM5×16		25×16	241–335	>4	>2.5	3/8×2
ABM10×2	86	32×2	61–85	>4	>4	3/8×1
ABM10×3		32×3	91–125	>4	>4	3/8×1
ABM10×4		32×4	121–167	>6	>4	3/8×1
ABM10×5		32×5	151–212	>6	>4	3/8×1
ABM10×6		32×6	185–255	>6	>4	3/8×2
ABM10×7		32×7	211–295	>8	>4	3/8×2
ABM10×8		32×8	241–335	>8	>4	3/8×2
ABM10×9		32×9	271–376	>10	>4	3/8×2
ABM10×10		32×10	301–421	>10	>4	3/8×2
ABM10×11		32×11	332–463	>10	>4	3/8×2
ABM10×12		32×12	361–505	>10	>4	3/8×2

Specifications

Max.Vacuum Level	–92kPa
Max.Vacuum flow rate	32l/m
Air supply pressure	4–6bar Max.7bar
Air supply type	Dry compressed air

How to Order

ABX5 x 5 – 4 – V
① ② ③ ④

① Model

ABX5
ABX10

② Vacuum stack

2、3、4、5、6、7、8、9、10
11、12、13、14、15、16

③ Vacuum port,inner dia. of tube

4–Φ4

④ Sealing

No mark–Standard(NBR)
V–VITON
E–EPDM

Features

☆ This vacuum pump uses individual pumps to make up the complete unit,each pump is in itself a multistage ejector unit. It has the same external dimentions to that of the ABX minimultiple pump. However the internal ejector systerm is different to enable higher levels of vacuum to achieved. Each individual pump can be stacked together this creating a modular manifold based system.

☆ It can be operated using just one control valve whilst retaining individual vacuum lines separate to one another,therefore if any leakage or surface deformation occurs and one pad loses its vacuum, it does not effect the vacuum level in the other pads. Pumps can be stacked up from 2–16 unit depending upon requirements.The pumps can have seal material options of Viton® & EPDM for corrosive and acidic applications.

Remark: ABX5–the most 16 stacks (can use 2 silencers between 12–16 stacks)
ABX10–the most 12 stacks (can use 2 silencers between 6–12 stacks)

Vacuum flow(l/min)at different vacuum levels(–kPa)

Model	ABX series Vacuum flow(l/min)at different vacuum levels(–kPa)									
	0	10	20	30	40	50	60	70	80	90
ABX5x1	25	14	10	9	7.5	6	4	2.8	1.5	0.44
ABX10x1	32	21	18	16	14	11	9.5	5.5	2.5	1.1

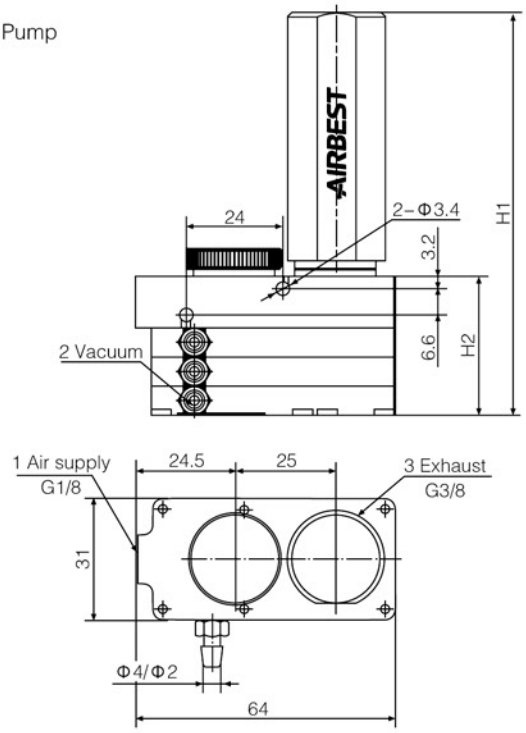
Evacuation time(s/l)to reach different vacuum levels(–kPa)

Model	ABX series Evacuation time(s/l)to reach different vacuum levels(–kPa)								
	10	20	30	40	50	60	70	80	90
ABX5x1	0.21	0.81	1.52	2.35	3.48	4.85	6.57	10.5	19.27
ABX10x1	0.14	0.40	0.78	1.22	1.77	2.4	3.3	4.95	9.62

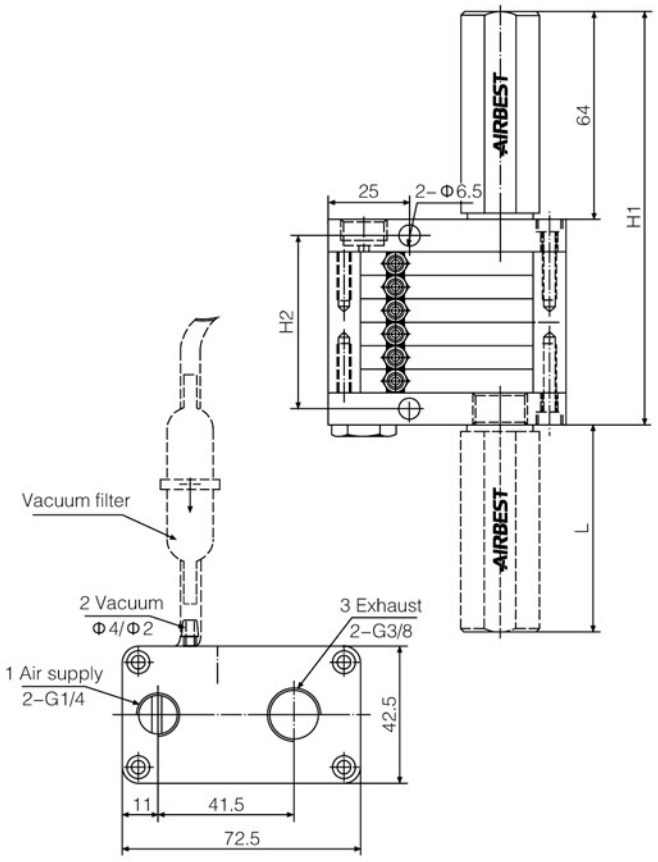
Model	Max.vacuum level (−kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Min tube inner Φ (within 2m)		
				Air supply	Vacuum	Exhaust
ABX5 × 2	92	23 × 2	43–49	>2	>5	3/8 × 1
ABX5 × 3		23 × 3	65–73	>2	>8	3/8 × 1
ABX5 × 4		23 × 4	85–96	>4	>10	3/8 × 1
ABX5 × 5		23 × 5	106–121	>4	>12	3/8 × 1
ABX5 × 6		23 × 6	130–144	>4	>12	3/8 × 1
ABX5 × 7		23 × 7	151–167	>4	>12	3/8 × 1
ABX5 × 8		23 × 8	173–193	>6	>12	3/8 × 1
ABX5 × 9		23 × 9	195–217	>6	>10	3/8 × 1
ABX5 × 10		23 × 10	215–241	>6	>8	3/8 × 1
ABX5 × 11		23 × 11	238–265	>6	>8	3/8 × 1
ABX5 × 12		23 × 12	260–289	>6	>10	3/8 × 2
ABX5 × 13		23 × 13	281–313	>6	>12	3/8 × 2
ABX5 × 14		23 × 14	303–335	>4	>12	3/8 × 2
ABX5 × 15		23 × 15	325–361	>4	>12	3/8 × 2
ABX5 × 16		23 × 16	346–385	>4	>12	3/8 × 2
ABX10 × 2	92	32 × 2	87–96	>4	>4	3/8 × 1
ABX10 × 3		32 × 3	130–145	>4	>4	3/8 × 1
ABX10 × 4		32 × 4	173–193	>6	>4	3/8 × 1
ABX10 × 5		32 × 5	215–241	>6	>4	3/8 × 1
ABX10 × 6		32 × 6	260–288	>6	>4	3/8 × 2
ABX10 × 7		32 × 7	303–337	>6	>4	3/8 × 2
ABX10 × 8		32 × 8	346–385	>8	>4	3/8 × 2
ABX10 × 9		32 × 9	389–433	>10	>4	3/8 × 2
ABX10 × 10		32 × 10	433–481	>10	>4	3/8 × 2
ABX10 × 11		32 × 11	476–529	>10	>4	3/8 × 2
ABX10 × 12		32 × 12	519–578	>10	>4	3/8 × 2

Dimensions (mm)

ABM/ABX Combined Type Vacuum Pump



ABM5(10) ABX5(10)	H1	H2
2 Layer	91.5	27.5
3 Layer	99	35



ABM5(10) ABX5(10)	H1	H2
4 Layer	113	39
5 Layer	121	47
6 Layer	128	54
7 Layer	135	61
8 Layer	142	68
9 Layer	150	76
10 Layer	157	83
11 Layer	164	90
12 Layer	172	98
13 Layer	179	105
14 Layer	186	112
15 Layer	194	120
16 Layer	201	127

Features

☆Integrate with control, filter and silence
☆Multistage nozzles take advantage of compressed air more efficiently
☆Thin design, easy installation
☆Many options for combination of control valve and vacuum switch
☆Digital vacuum monitoring unit is available, LED display, east adjustment

Model

Model	Specification	Combination mode	Vacuum stack quantity	Control valve	Vacuum switch (Optional)
ASM–Large flow	05 10 15 20	Nil–Single body Z–Combined type with concentrated air supply M–Combined type with concentrated air supply and exhaust	1 2 3 4 5 6 7 8	NO–Normally open NC–Normally close	N_1–2NPN output & Analog output N_2–2NPN output N_3–2PNP output & Analog output N_4–2PNP output

△ASM05–Z4–NC–N_1

Technical parameters

Model	Max. vacuum level –kPa	Max. vacuum flow l/min	Air supply pressure bar	Air consumption l/m	Noise dB	Weight g
ASM05	85	48	4~6	32~42	50~65	250
ASM10		85		40~75	50~65	250
ASM15		115		70~90	50~65	250
ASM20		132		96~122	50~65	250

Vacuum flow (l/min) at different vacuum levels (–kPa)

Vacuum / Model	0 –kPa	10 –kPa	20 –kPa	30 –kPa	40 –kPa	50 –kPa	60 –kPa	70 –kPa	80 –kPa	Max. vacuum level –KPa
ASM05	41	20	12	10	8.5	7	4.5	2.6	0.5	85
ASM10	75	48	25	19	15	12	7	2.5	0.8	
ASM15	102	65	41	28	22	18	12	5	1.5	
ASM20	120	74	45	35	27	22	16	9	2.5	

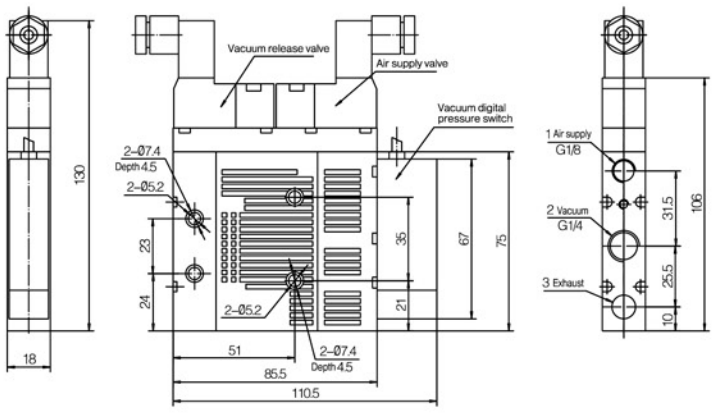
Evacuation time (s/l) to reach different vacuum levels (–kPa)

Vacuum / Model	10 –kPa	20 –kPa	30 –kPa	40 –kPa	50 –kPa	60 –kPa	70 –kPa	80 –kPa
ASM05	0.12	0.36	0.9	1.4	2.2	3.4	4.2	7
ASM10	0.1	0.31	0.56	0.9	1.5	2.3	3.2	4.7
ASM15	0.07	0.25	0.43	0.76	1.2	1.9	2.6	4
ASM20	0.05	0.14	0.32	0.68	0.98	1.6	2.1	2.8

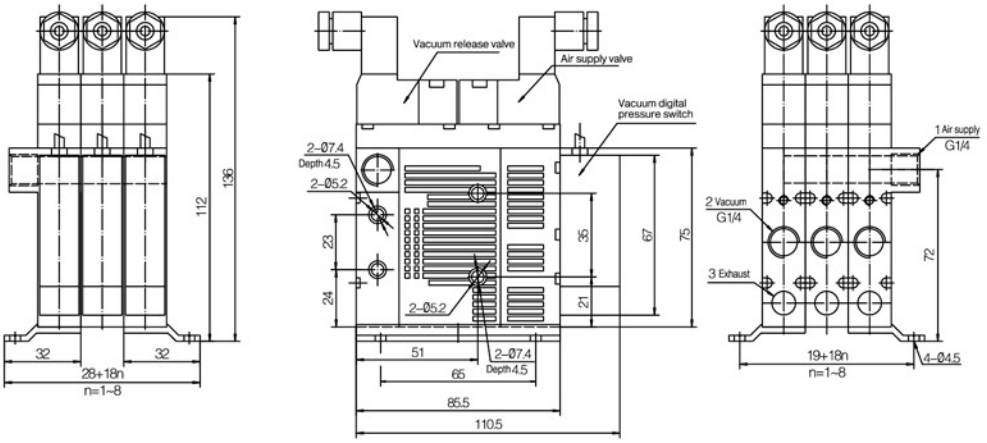
How to order

Vacuum stack / Model	1	2	3	4	5	6	7	8
ASM05–NC	131.0501.0000	--	--	--	--	--	--	--
ASM05–Z–NC	--	131.0512.0000	131.0513.0000	131.0514.0000	131.0515.0000	131.0516.0000	131.0517.0000	131.0518.0000
ASM05–M–NC	--	131.0522.0000	131.0523.0000	131.0524.0000	131.0525.0000	131.0526.0000	131.0527.0000	131.0528.0000
ASM05–NO	131.0501.1000	--	--	--	--	--	--	--
ASM05–Z–NO	--	131.0512.1000	131.0513.1000	131.0514.1000	131.0515.1000	131.0516.1000	131.0517.1000	131.0518.1000
ASM05–M–NO	--	131.0522.1000	131.0523.1000	131.0524.0000	131.0525.1000	131.0526.1000	131.0527.1000	131.0528.1000
ASM10–NC	131.1001.0000	--	--	--	--	--	--	--
ASM10–Z–NC	--	131.1012.0000	131.1013.0000	131.1014.0000	131.1015.0000	131.1016.0000	131.1017.0000	131.1018.0000
ASM10–M–NC	--	131.1022.0000	131.1023.0000	131.1024.0000	131.1025.0000	131.1026.0000	131.1027.0000	131.1028.0000
ASM10–NO	131.1001.1000	--	--	--	--	--	--	--
ASM10–Z–NO	--	131.1012.1000	131.1013.1000	131.1014.1000	131.1015.1000	131.1016.1000	131.1017.1000	131.1018.1000
ASM10–M–NO	--	131.1022.1000	131.1023.1000	131.1024.1000	131.1025.1000	131.1026.1000	131.1027.1000	131.1028.1000
ASM15–NC	131.1501.0000	--	--	--	--	--	--	--
ASM15–Z–NC	--	131.1512.0000	131.1513.0000	131.1514.0000	--	--	--	--
ASM15–M–NC	--	131.1522.0000	131.1523.0000	131.1524.0000	--	--	--	--
ASM15–NO	131.1501.1000	--	--	--	--	--	--	--
ASM15–Z–NO	--	131.1512.1000	131.1513.1000	131.1514.1000	--	--	--	--
ASM15–M–NO	--	131.1522.1000	131.1523.1000	131.1524.1000	--	--	--	--
ASM20–NC	131.2001.0000	--	--	--	--	--	--	--
ASM20–Z–NC	--	131.2012.0000	131.2013.0000	131.2014.0000	--	--	--	--
ASM20–M–NC	--	131.2022.0000	131.2023.0000	131.2024.0000	--	--	--	--
ASM20–NO	131.2001.1000	--	--	--	--	--	--	--
ASM20–Z–NO	--	131.2012.1000	131.2013.1000	131.2014.1000	--	--	--	--
ASM20–M–NO	--	131.2022.1000	131.2023.1000	131.2024.1000	--	--	--	--

Dimensions



Single body



Combined type

Features

☆Integrate with control, filter and silence
☆Multistage nozzles take advantage of compressed air more efficiently
☆Thin design, easy installation
☆Many options for combination of control valve and vacuum switch
☆Digital vacuum monitoring unit is available, LED display, east adjustment

Model

Model	Specification	Combination mode	Vacuum stack quantity	Control valve	Vacuum switch (Optional)
ASX–High vacuum	05 10 15 20	Nil–Single body Z–Combined type with concentrated air supply M–Combined type with concentrated air supply and exhaust	1 2 3 4 5 6 7 8	NO–Normally open NC–Normally close	N_1–2NPN output & Analog output N_2–2NPN output N_3–2PNP output & Analog output N_4–2PNP output

△ASX05–Z4–NO–N_1

Technical parameters

Model	Max. vacuum level –kPa	Max. vacuum flow l/min	Air supply pressure bar	Air consumption l/m	Noise dB	Weight g
ASX05	92	46	4~6	24~30	50~65	250
ASX10		72		45~78	50~65	250
ASX15		103		70~92	50~65	250
ASX20		110		98~125	50~65	250

Vacuum flow (l/min) at different vacuum levels (–KPa)

Vacuum / Model	0 –kPa	10 –kPa	20 –kPa	30 –kPa	40 –kPa	50 –kPa	60 –kPa	70 –kPa	80 –kPa	90 –kPa	Max. vacuum level –KPa
ASX05	38	19	11	7.5	6	5	3.8	2.7	1.6	0.3	92
ASX10	58	25	18	15	12	10	7	5	2	0.5	
ASX15	75	48	27	20	16	13	10	7	3.7	1	
ASX20	95	54	32	28	22	18	15	9	4.6	1.8	

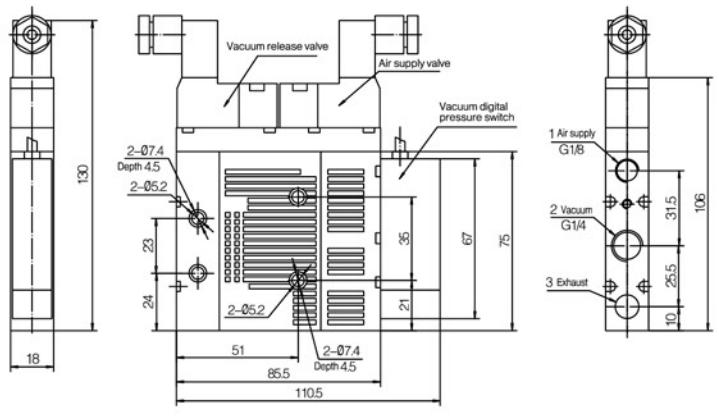
Evacuation time (s/l) to reach different vacuum levels (–kPa)

Vacuum / Model	10 –kPa	20 –kPa	30 –kPa	40 –kPa	50 –kPa	60 –kPa	70 –kPa	80 –kPa	90 –kPa
ASX05	0.15	0.5	1.1	1.8	2.6	3.8	5.2	7	12
ASX10	0.12	0.38	0.75	1.4	1.8	2.5	3.2	4.8	9
ASX15	0.1	0.28	0.47	0.76	1.2	2	2.7	3.5	7.5
ASX20	0.09	0.18	0.36	0.6	0.9	1.3	2	2.6	5.2

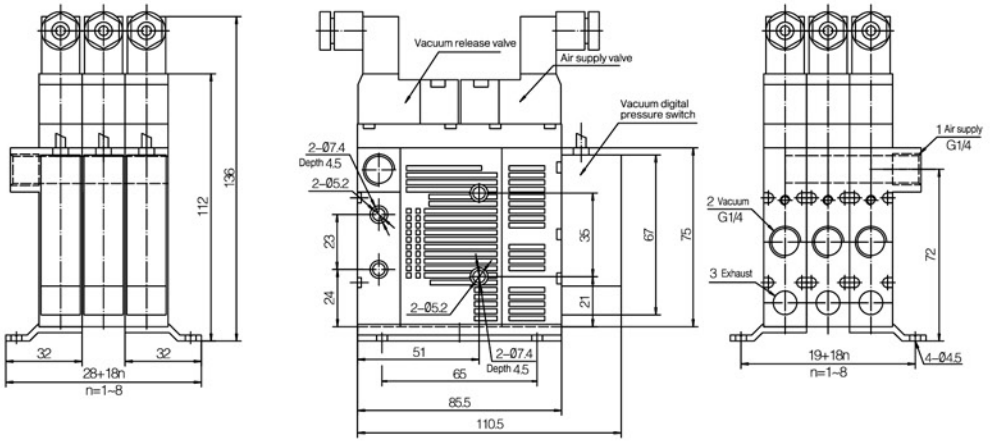
How to order

Vacuum stack / Model	1	2	3	4	5	6	7	8
ASX05–NC	132.0501.0000	--	--	--	--	--	--	--
ASX05–Z–NC	--	132.0512.0000	132.0513.0000	132.0514.0000	132.0515.0000	132.0516.0000	132.0517.0000	132.0518.0000
ASX05–M–NC	--	132.0522.0000	132.0523.0000	132.0524.0000	132.0525.0000	132.0526.0000	132.0527.0000	132.0528.0000
ASX05–NO	132.0501.1000	--	--	--	--	--	--	--
ASX05–Z–NO	--	132.0512.1000	132.0513.1000	132.0514.1000	132.0515.1000	132.0516.1000	132.0517.1000	132.0518.1000
ASX05–M–NO	--	132.0522.1000	132.0523.1000	132.0524.0000	132.0525.1000	132.0526.1000	132.0527.1000	132.0528.1000
ASX10–NC	132.1001.0000	--	--	--	--	--	--	--
ASX10–Z–NC	--	132.1012.0000	132.1013.0000	132.1014.0000	132.1015.0000	132.1016.0000	132.1017.0000	132.1018.0000
ASX10–M–NC	--	132.1022.0000	132.1023.0000	132.1024.0000	132.1025.0000	132.1026.0000	132.1027.0000	132.1028.0000
ASX10–NO	132.1001.1000	--	--	--	--	--	--	--
ASX10–Z–NO	--	132.1012.1000	132.1013.1000	132.1014.1000	132.1015.1000	132.1016.1000	132.1017.1000	132.1018.1000
ASX10–M–NO	--	132.1022.1000	132.1023.1000	132.1024.1000	132.1025.1000	132.1026.1000	132.1027.1000	132.1028.1000
ASX15–NC	132.1501.0000	--	--	--	--	--	--	--
ASX15–Z–NC	--	132.1512.0000	132.1513.0000	132.1514.0000	--	--	--	--
ASX15–M–NC	--	132.1522.0000	132.1523.0000	132.1524.0000	--	--	--	--
ASX15–NO	132.1501.1000	--	--	--	--	--	--	--
ASX15–Z–NO	--	132.1512.1000	132.1513.1000	132.1514.1000	--	--	--	--
ASX15–M–NO	--	132.1522.1000	132.1523.1000	132.1524.1000	--	--	--	--
ASX20–NC	132.2001.0000	--	--	--	--	--	--	--
ASX20–Z–NC	--	132.2012.0000	132.2013.0000	132.2014.0000	--	--	--	--
ASX20–M–NC	--	132.2022.0000	132.2023.0000	132.2024.0000	--	--	--	--
ASX20–NO	132.2001.1000	--	--	--	--	--	--	--
ASX20–Z–NO	--	132.2012.1000	132.2013.1000	132.2014.1000	--	--	--	--
ASX20–M–NO	--	132.2022.1000	132.2023.1000	132.2024.1000	--	--	--	--

Dimensions



Single body



Combined type

Features

☆ Medium vacuum levels to −90 kPa
☆ Operates at 3.4bar
☆ Good for handling porous materials or if leakage is present
☆ Energy−Saving(ES)available
☆ Available with connection plate in aluminium(AD)and composite PPS(D)
☆ Supplies with a push−in connector for compressed air,through−flow silencer and mounting brackets

Specifications

Air supply pressure max	bar	7
Air supply pressure(opt)	bar	3.4
Noise level	dBA	60~65
Temperature range	℃	~20−80
Weight	g	750−120
Material		AL, PPS, SS, PA, NBR

Technical Parameters

Model	Max.vacuum level (−kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight(PPS materials) g	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	EXhaust
AM25L	92	420	116−185	675	>4	>12	>12
AM50L		700	230−370	675	>6	>15	>15
AM75L		950	365−610	837	>8	>19	>22
AM100L		1010	445−720	837	>8	>19	>22
AM125L		1400	545−780	1075	>10	>25	>32
AM150L		1500	655−810	1075	>10	>25	>32

How to Order

AM25L − D − N − A − ES
① ② ③ ④ ⑤

① Model
AM25L AM100L
AM50L AM125L
AM75L AM150L

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non−Return Valve

A	Yes
−	No

② Connection Plate
AM25L−AM100L

	Air Supply	Vacuum	Exhaust	Material
D	NPSF1/8"	G3/4"	G3/4"	PPS
B	NPSF1/8"	NPT3/4"	NPT3/4"	PPS
AD	G1/4"	G3/4"	G3/4"	Aluminum
E	NPT1/4"	NPT3/4"	NPT3/4"	Aluminum

AM125L−AM150L

	Air Supply	Vacuum	Exhaust	Material
D	G1/4"	G1*	G1*	PPS
B	NPT1/4"	NPT1*	NPT1*	PPS
AD	G1/4"	G1*	G1*	Aluminum
E	NPT1/4"	NPT1*	NPT1*	Aluminum

⑤ Control device

PD	Electric air supply	PVD	Electric control(air supply+vacuum breaking)Combination
PQ	Pneumatic air supply	PVQ	Pneumatic control(air supply+vacuum breaking)Combination
VD	Electric control vacuum breaking	ES	Energy−saving
VQ	Pneumatic control vacuum breaking	−	NO

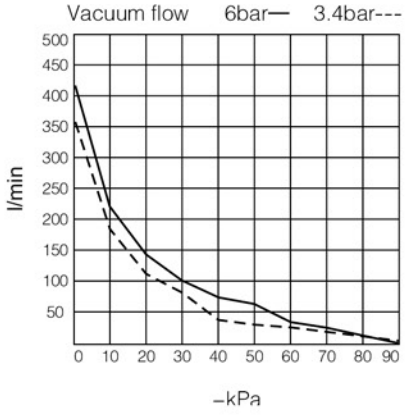
• AM25L

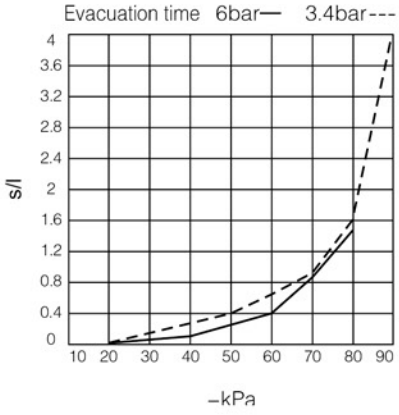
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	116	360	180	115	80	43	30	22.5	15.5	7.5	1.2	92
6	185	420	240	125	100	82	65	38	12.5	3.5	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	116	0.022	0.06	0.11	0.21	0.4	0.65	0.95	1.60	4	92
6	185	0.018	0.05	0.08	0.18	0.25	0.40	0.62	1.55	–	89





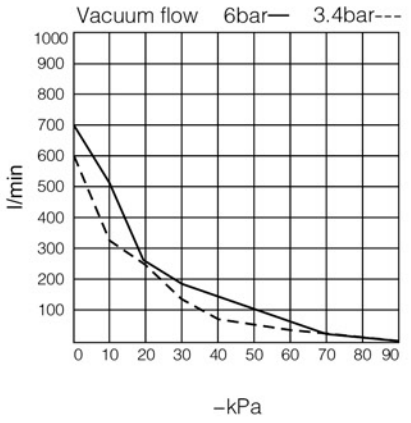
• AM50L

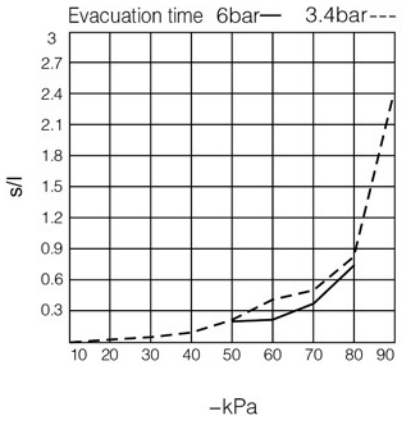
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	230	600	320	250	135	75	60	46	30	13	1.5	92
6	370	700	510	290	195	160	115	70	22	8	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	230	0.014	0.031	0.06	0.10	0.20	0.34	0.50	0.80	2.5	92
6	370	0.01	0.022	0.048	0.08	0.11	0.20	0.35	0.78	–	89





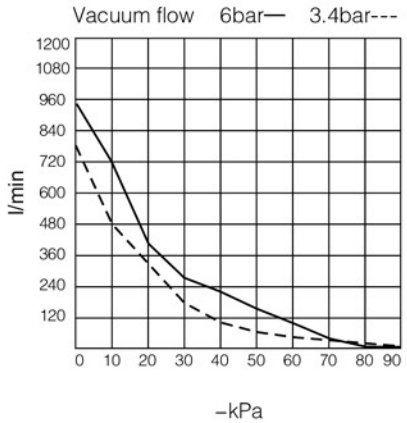
• AM75L

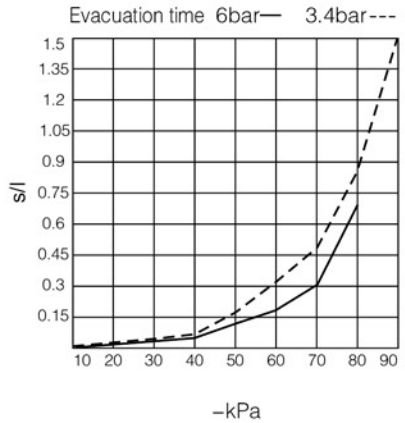
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	365	760	445	340	175	110	85	70	43	20	1.8	92
6	610	950	710	380	285	230	170	100	32	11	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	365	0.012	0.029	0.058	0.095	0.18	0.31	0.46	0.89	1.5	92
6	610	0.009	0.019	0.045	0.075	0.13	0.18	0.31	0.70	–	89





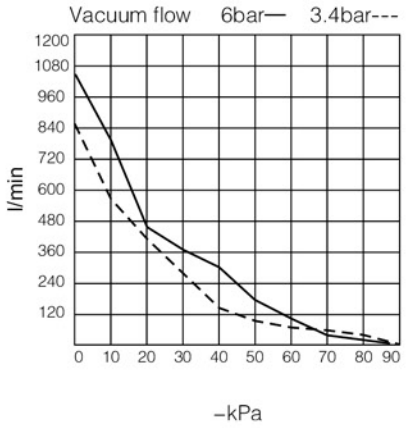
• AM100L

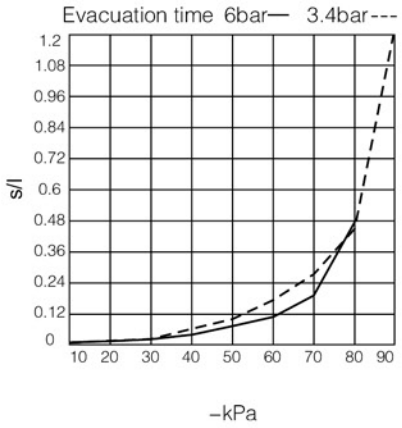
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	445	850	550	430	280	145	115	85	60	28	2.2	92
6	720	1010	800	460	385	310	215	125	42	15.5	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	455	0.010	0.025	0.043	0.075	0.11	0.19	0.27	0.45	1.2	92
6	720	0.007	0.018	0.038	0.055	0.08	0.12	0.19	0.47	–	89





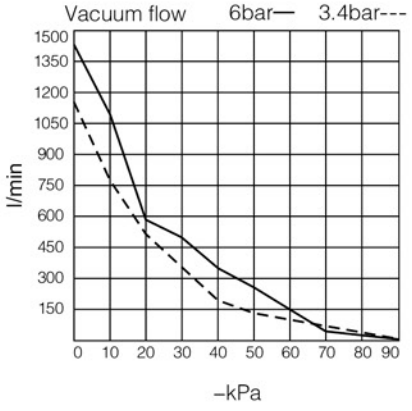
• AM125L

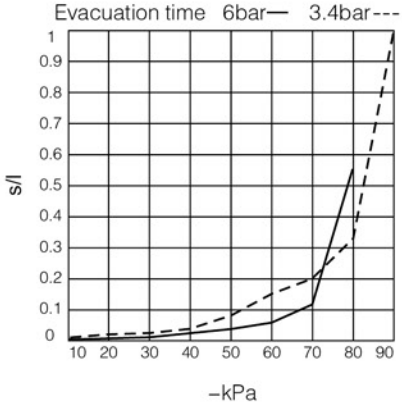
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	545	1150	760	530	350	180	148	115	78	34.5	3.5	92
6	780	1400	1120	560	490	355	260	150	50	25	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	545	0.006	0.015	0.029	0.052	0.085	0.145	0.202	0.330	1	92
6	780	0.005	0.013	0.026	0.045	0.062	0.115	0.194	0.56	–	89





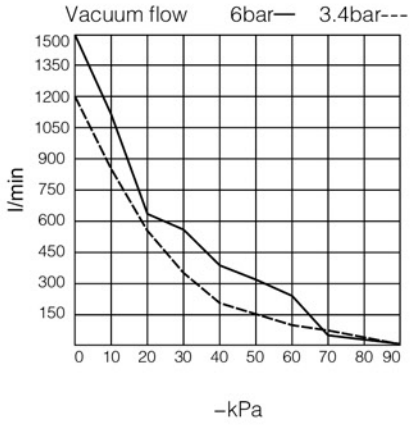
• AM150L

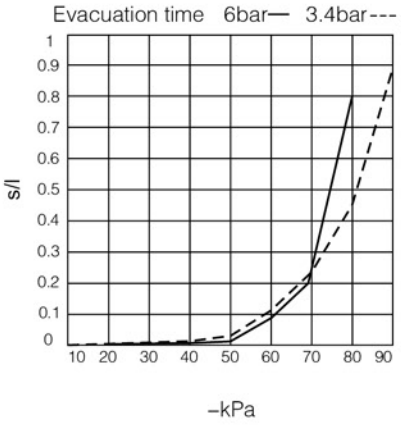
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max vacuum level –kPa
		0	10	20	30	40	50	60	70	80	90	
3.4	655	1200	830	550	360	215	170	130	90	36	5	92
6	810	1500	1110	630	560	385	315	210	65	26	–	89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

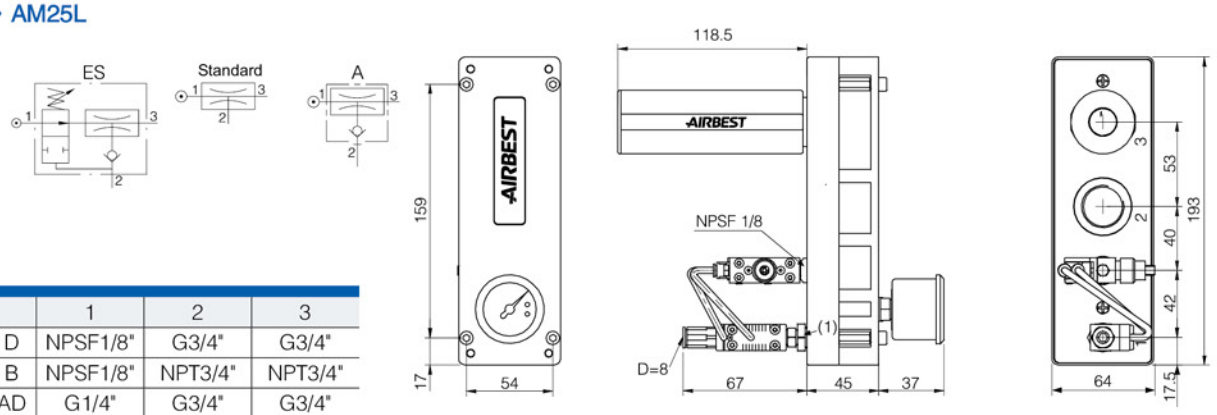
Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max vacuum level –kPa
		10	20	30	40	50	60	70	80	90	
3.4	655	0.005	0.013	0.027	0.045	0.070	0.105	0.23	0.46	0.9	92
6	810	0.003	0.009	0.014	0.030	0.060	0.095	0.20	0.8	–	89





Dimensions (mm)

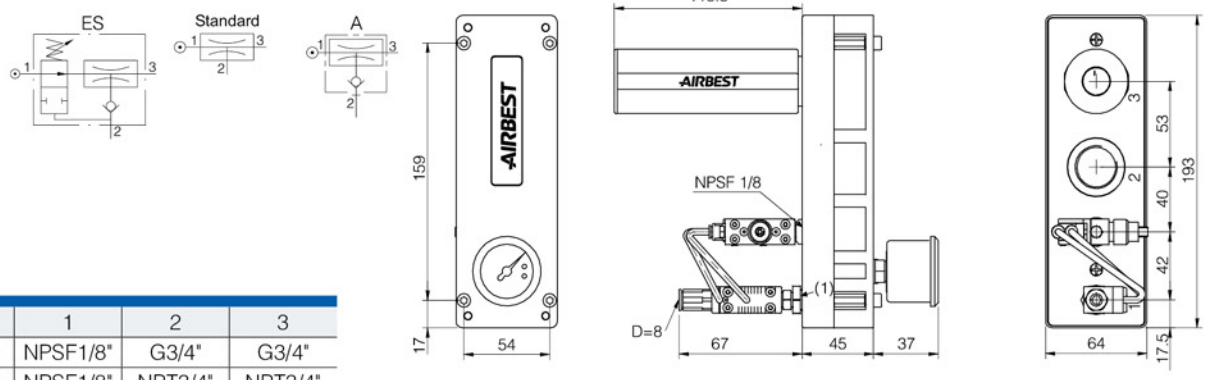
• AM25L



	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

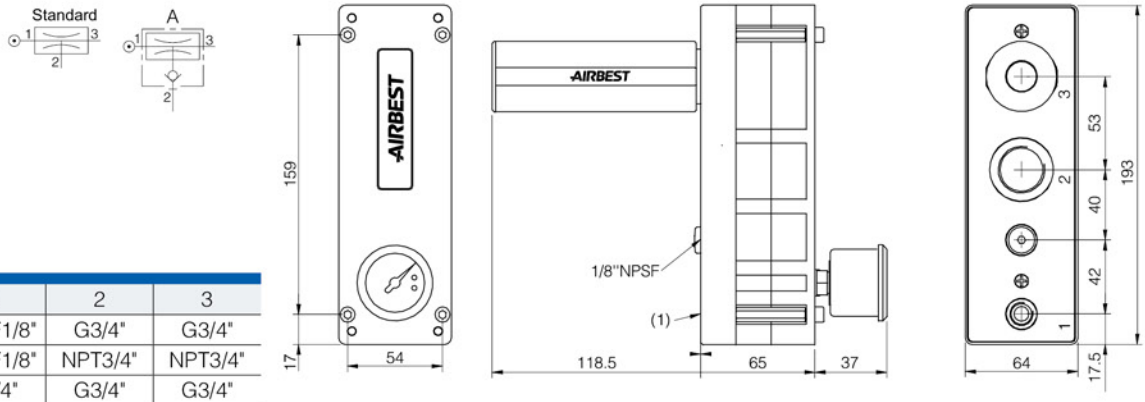
Dimensions (mm)

• AM50L



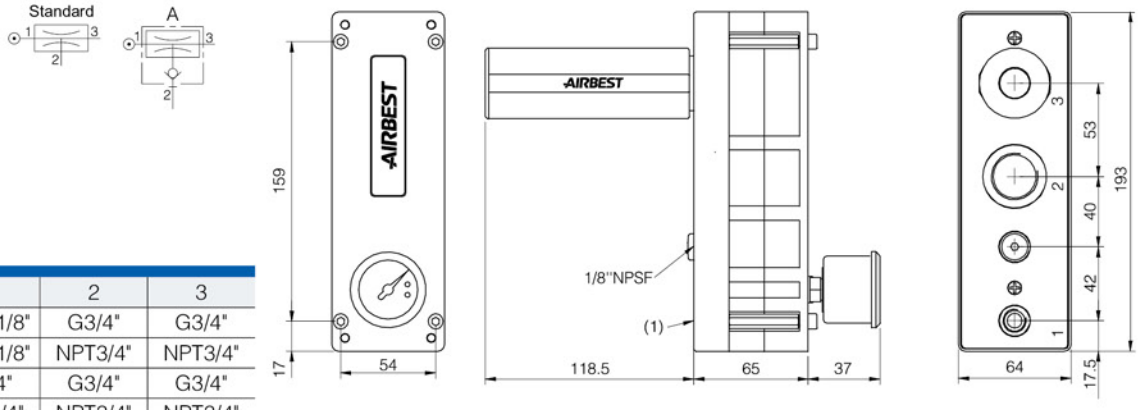
	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

• AM75L



	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

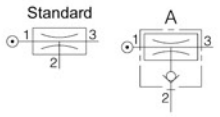
• AM100L

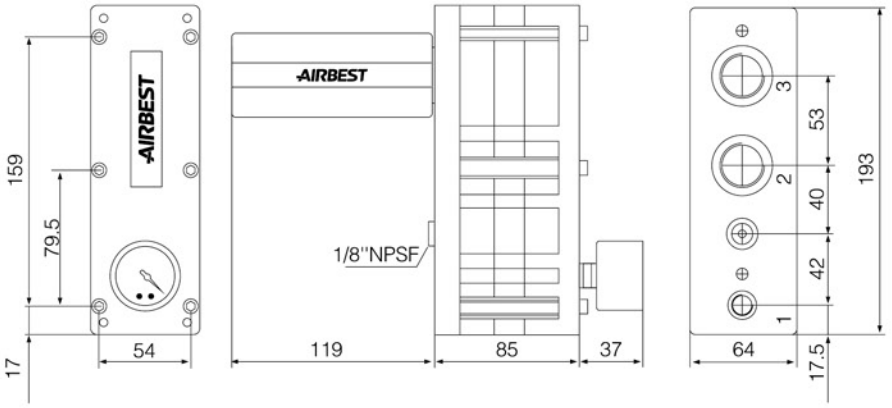


	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

Dimensions (mm)

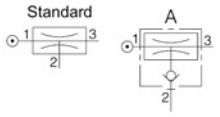
• AM125L

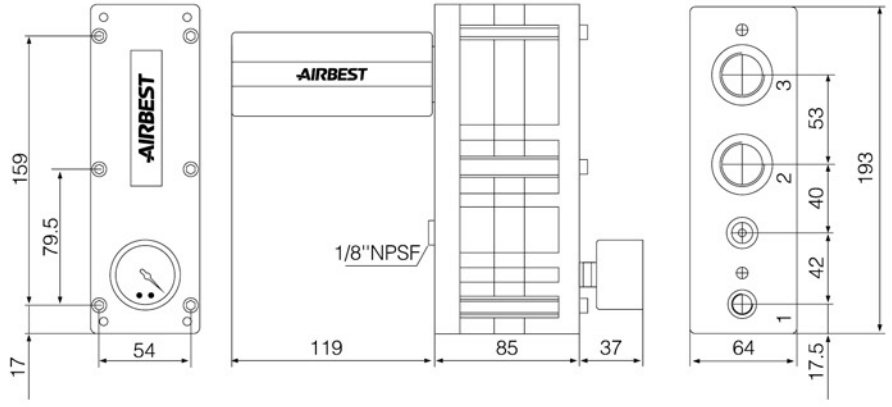




	1	2	3
D	G1/4"	G1*	G1*
B	NPT1/4"	NPT1*	NPT1*
AD	G1/4"	G1*	G1*
E	NPT1/4"	NPT1*	NPT1*

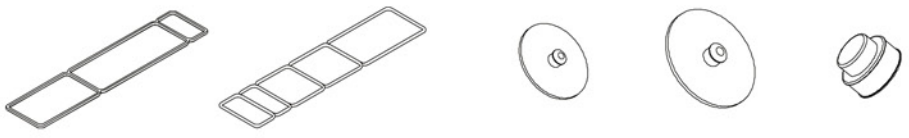
• AM150L





	1	2	3
D	G1/4"	G1*	G1*
B	NPT1/4"	NPT1*	NPT1*
AD	G1/4"	G1*	G1*
E	NPT1/4"	NPT1*	NPT1*

Repair kits



Model	Ordering Code		
	NBR	VITON	EPDM
AM25L	01.0025.402	01.0025.602	01.0025.802
AM50L	01.0025.402	01.0025.602	01.0025.802
AM75L	01.0075.404	01.0075.604	01.0075.804
AM100L	01.0075.404	01.0075.604	01.0075.804
AM125L	01.0125.404	01.0125.604	01.0125.804
AM150L	01.0150.404	01.0150.604	01.0150.804

Features

☆ Large vacuum flows
☆ Short evacuation time
☆ Good for handling porous materials or if leakage is present
☆ Energy-Saving(ES)available
☆ Available with connection plate in aluminium(AD) and composite PPS(D)
☆ Supplies with a push-in connector for compressed air,through-flow silencer and mounting brackets

Specifications

Air supply pressure max	bar	7
Air supply pressure(opt)	bar	4~6
Noise level	dBA	60~65
Temperature range	℃	-20~80
Weight	g	750~1200
Material		AL, PPS, SS, PA, NBR

Technical Parameters

Model	Air supply pressure bar	Max.vacuum level (-kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight(PPS materials) g	Min tube inner Φ (within 2m)		
						Air supply	Vacuum	EXhaust
AL25	6	81	360	105	675	>4	>12	>12
AL50			640	215	675	>6	>15	>15
AL75			850	320	837	>8	>19	>22
AL100			990	390	837	>8	>19	>22
AL125			1170	480	1075	>10	>25	>32
AL150			1230	620	1075	>10	>25	>32

How to Order

AL25 – D – N – A – ES
① ② ③ ④ ⑤

① Model

AL25	AL100
AL50	AL125
AL75	AL150

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non-Return Valve

A	Yes
–	No

② Connection Plate

AL25-AL100

	Air Supply	Vacuum	Exhaust	Material
D	NPSF1/8"	G3/4"	G3/4"	PPS
B	NPSF1/8"	NPT3/4"	NPT3/4"	PPS
AD	G1/4"	G3/4"	G3/4"	Aluminum
E	NPT1/4"	NPT3/4"	NPT3/4"	Aluminum

AL125-AL150

	Air Supply	Vacuum	Exhaust	Material
D	G1/4"	G1*	G1*	PPS
B	NPT1/4"	NPT1*	NPT1*	PPS
AD	G1/4"	G1*	G1*	Aluminum
E	NPT1/4"	NPT1*	NPT1*	Aluminum

⑤ Control device

PD	Electric air supply	PVD	Electric control(air supply+vacuum breaking)Combination
PQ	Pneumatic air supply	PVQ	Pneumatic control(air supply+vacuum breaking)Combination
VD	Electric control vacuum breaking	ES	Energy-saving
VQ	Pneumatic control vacuum breaking	–	NO

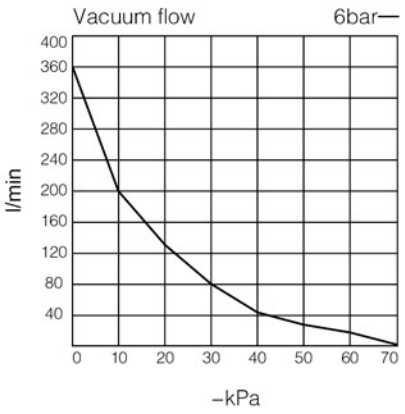
Vacuum flow(l/min)at different vacuum levels(–kPa)

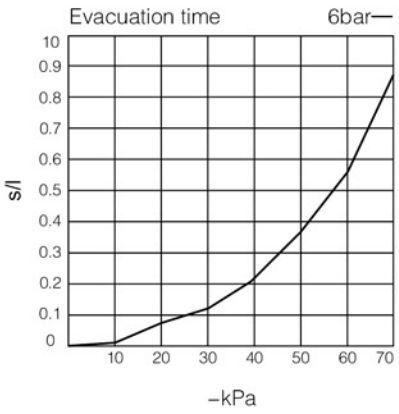
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	Max.vacuum level
AL25	6 bar	105 l/min	360	196	135	85	45	36	27	17	–81kPa
AL50		215 l/min	640	320	205	145	95	65	45	25	
AL75		320 l/min	850	430	320	190	130	105	65	40	
AL100		390 l/min	990	580	460	300	185	130	95	52	
AL125		480 l/min	1170	720	541	350	200	150	125	65	
AL150		620 l/min	1230	760	560	410	210	160	148	85	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

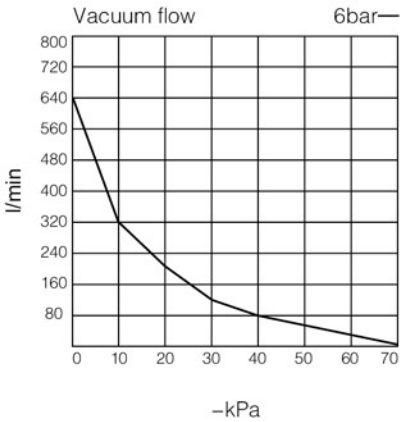
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	70	Max.vacuum level
AL25	6 bar	105 l/min	0.03	0.06	0.1	0.2	0.39	0.58	0.87	–81kPa
AL50		215 l/min	0.018	0.039	0.066	0.12	0.20	0.31	0.51	
AL75		320 l/min	0.01	0.02	0.04	0.08	0.12	0.2	0.31	
AL100		390 l/min	0.008	0.017	0.032	0.05	0.09	0.13	0.22	
AL125		480 l/min	0.006	0.016	0.026	0.045	0.078	0.11	0.18	
AL150		620 l/min	0.005	0.014	0.024	0.04	0.071	0.1	0.16	

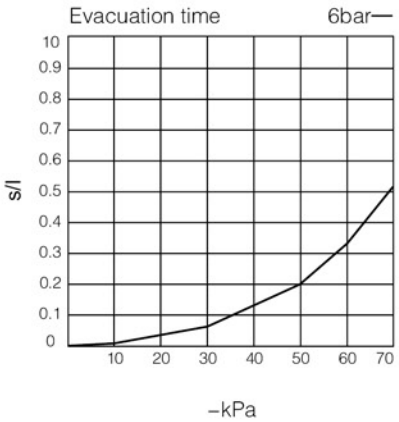
• AL25



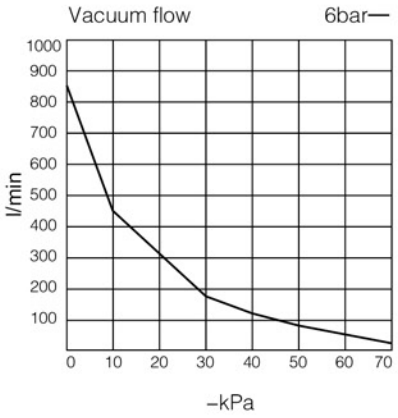


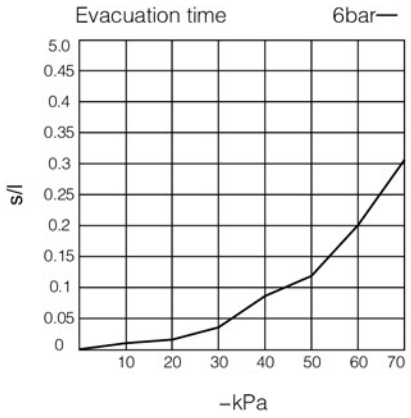
• AL50



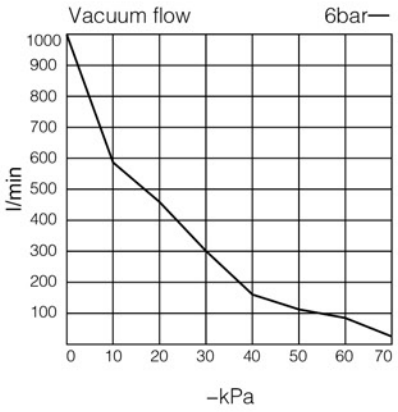


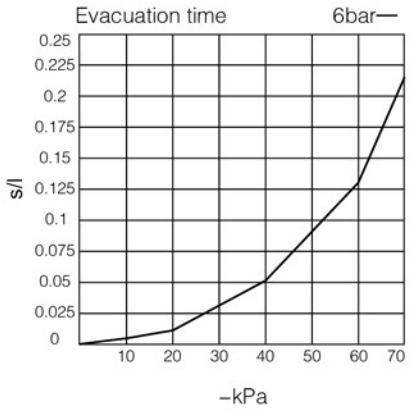
• AL75



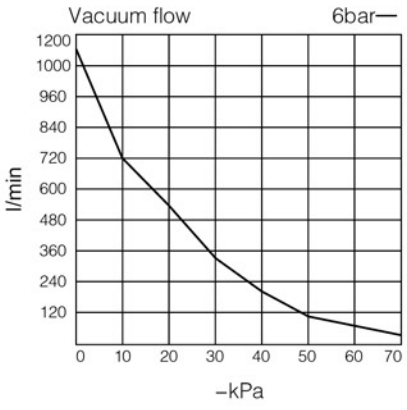


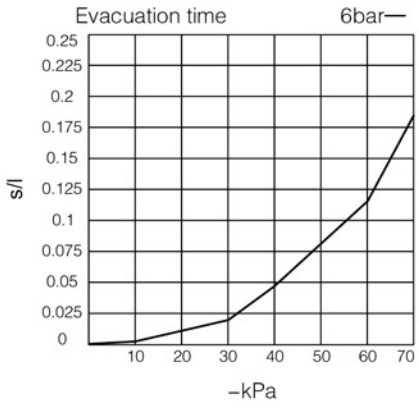
• AL100



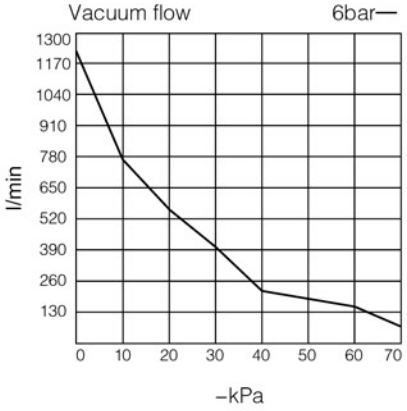


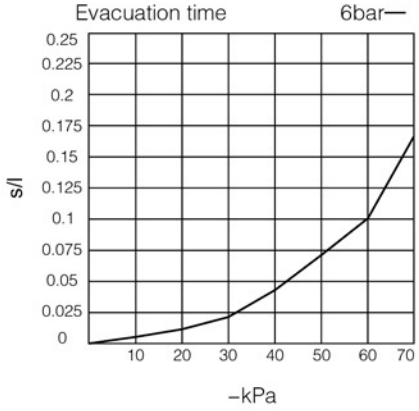
• AL125





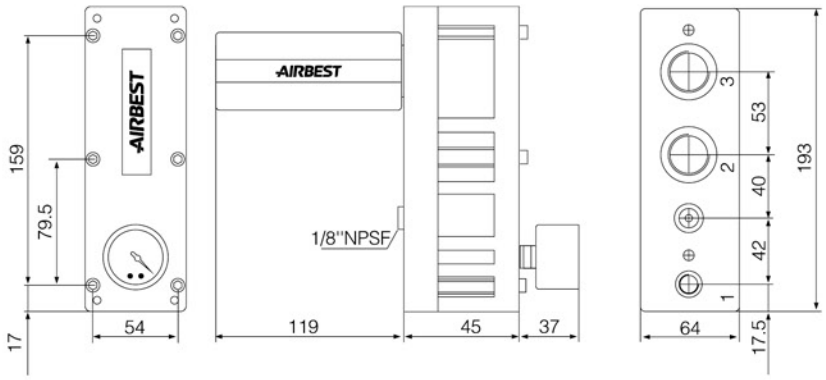
• AL150

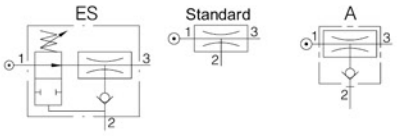




Dimensions (mm)

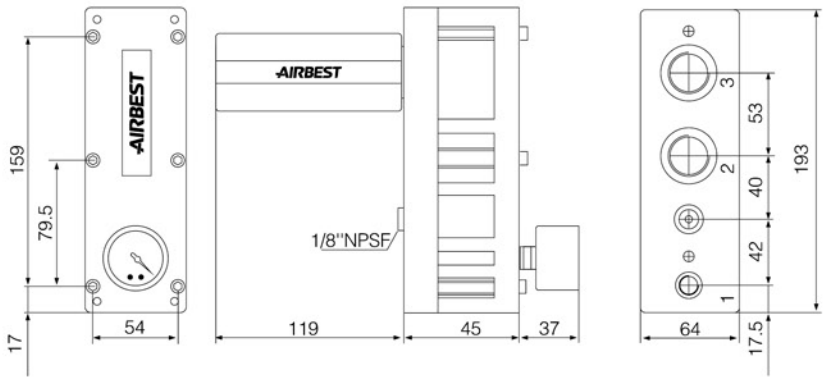
• AL25

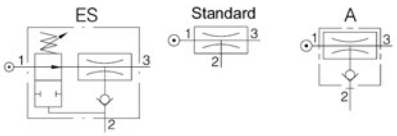




	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

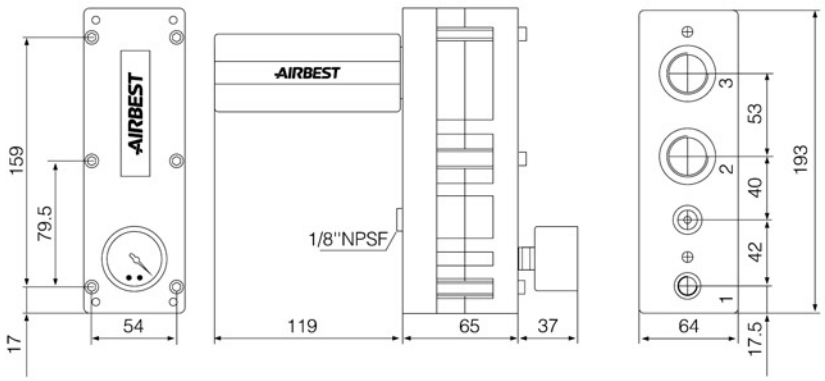
• AL50

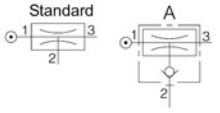




	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

• AL75

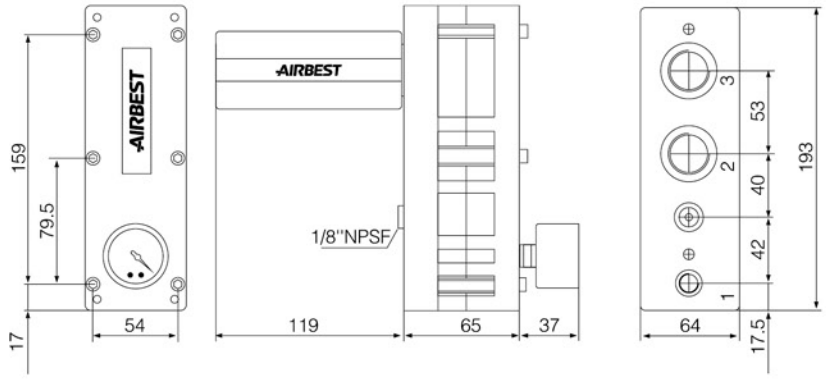


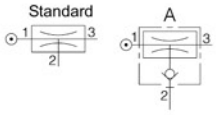


	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

Dimensions (mm)

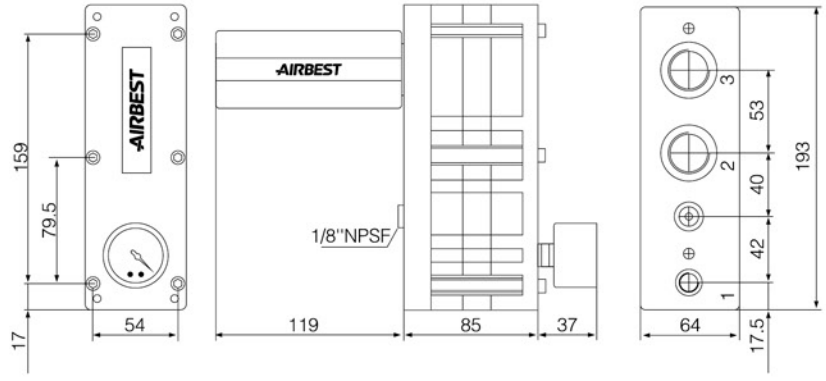
• AL100

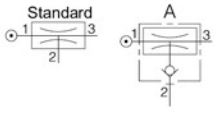




	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

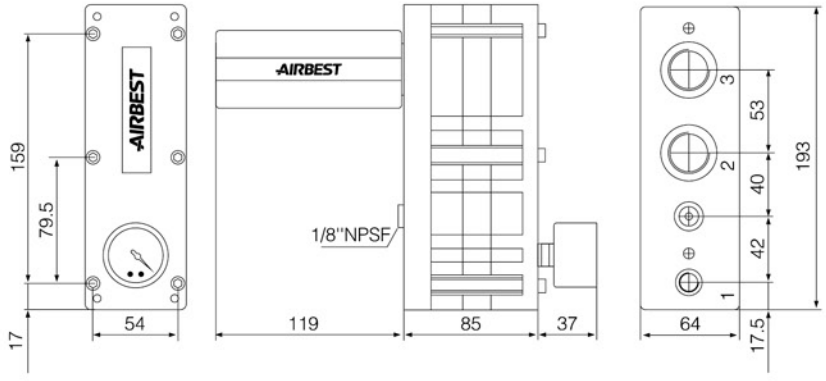
• AL125

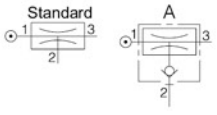




	1	2	3
D	G1/4"	G1*	G1*
B	NPT1/4"	NPT1*	NPT1*
AD	G1/4"	G1*	G1*
E	NPT1/4"	NPT1*	NPT1*

• AL150





	1	2	3
D	G1/4"	G1*	G1*
B	NPT1/4"	NPT1*	NPT1*
AD	G1/4"	G1*	G1*
E	NPT1/4"	NPT1*	NPT1*

Repair kits

Model	Ordering Code		
	NBR	VITON	EPDM
AL25	01.0025.402	01.0025.602	01.0025.802
AL50	02.0025.402	02.0025.602	02.0025.802
AL75	02.0075.404	02.0075.604	02.0075.804
AL100	02.0075.404	02.0075.604	02.0075.804
AL125	02.0125.404	02.0125.604	02.0125.804
AL150	01.0150.404	01.0150.604	01.0150.804

Features

☆ Use with practically zero leakage present and non-porous applications
☆ Available with connection plate in aluminium (AD) and composite PPS(D)
☆ Supplies with a push-in connector for compressed air, through-flow silencer and mounting brackets

Specifications

Air supply pressure max	bar	7
Noise level	dBA	60-65
Temperature range	℃	-20-80
Weight	g	530-620,690-780
Material		AL,PPS,NBR,SS

Technical Parameters

Model	Air supply pressure bar	Max.vacuum level (-kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight(PPS materials) g	Min tube inner Φ (within 2m)		
						Air supply	Vacuum	EXhaust
AH40	6	99.8	150	155	675	>6	>8	>10
AH120		100.8	530	440	837	>9	>15	>19

How to Order

AH40 – D – N – A
① ② ③ ④

① Model
AH40
AH120

② Connection Plate

	Air Supply	Vacuum	Exhaust	Material
D	NPSF1/8"	G3/4"	G3/4"	PPS
B	NPSF1/8"	NPT3/4"	NPT3/4"	PPS
AD	G1/4"	G3/4"	G3/4"	AL
E	NPT1/4"	NPT3/4"	NPT3/4"	AL

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non-Return Valve

A	Yes
–	No

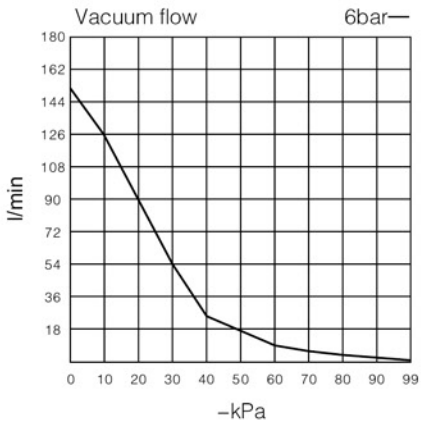
Vacuum flow(l/min)at different vacuum levels(–kPa)

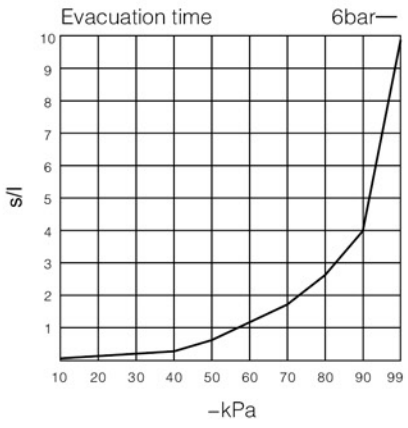
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	80	90	99	Max.vacuum level
AH40	6 bar	155 l/min	150	145	105	52.5	27.5	20.5	15	8.5	5.5	3	0.2	–99.8kPa
AH120		440 l/min	530	420	265	141	85	65	45	33	21.5	6	0.5	–100.8kPa

Evacuation time(s/l)to reach different vacuum levels(–kPa)

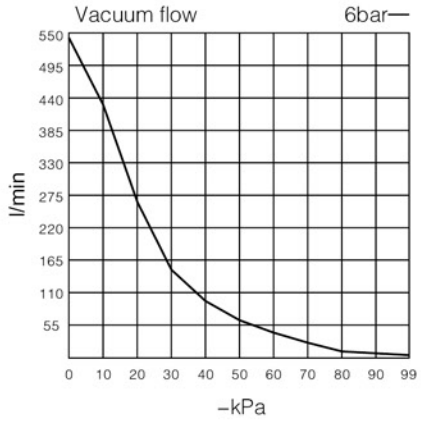
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	70	80	90	99	Max.vacuum level
AH40	6 bar	155 l/min	0.035	0.078	0.18	0.32	0.64	1.3	1.8	2.6	3.9	9.8	–99.8kPa
AH120		440 l/min	0.02	0.036	0.08	0.14	0.25	0.38	0.66	1.08	3.6	8.5	–100.8kPa

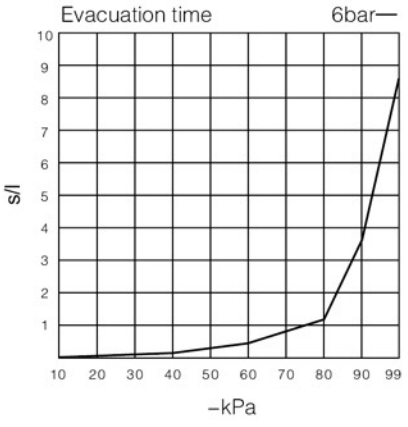
• AH40





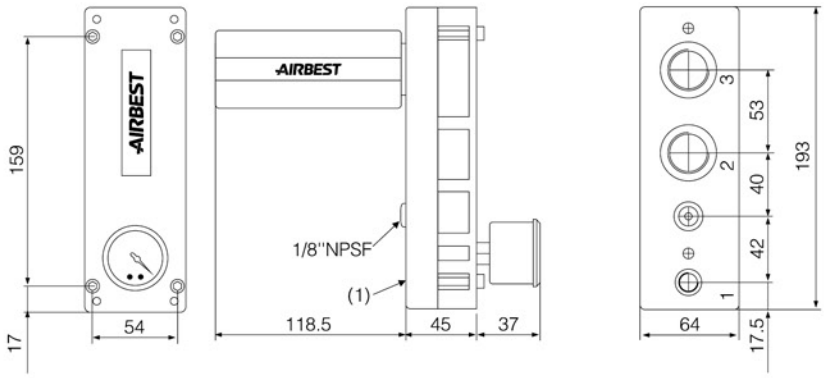
• AH120

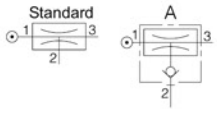




Dimensions (mm)

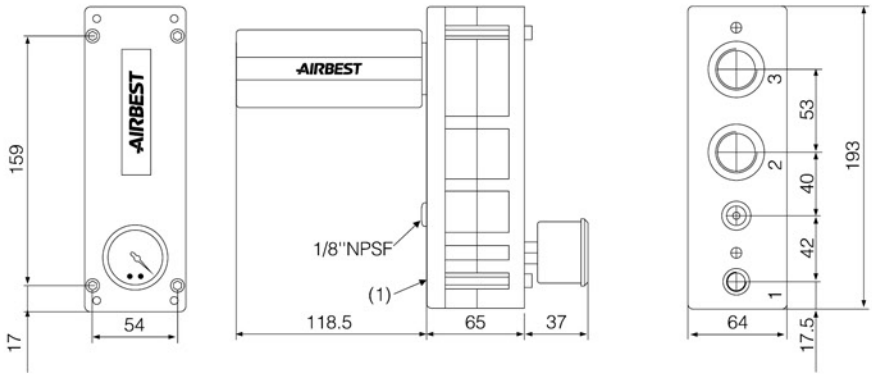
• AH40

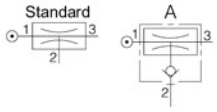




	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

• AH120





	1	2	3
D	NPSF1/8"	G3/4"	G3/4"
B	NPSF1/8"	NPT3/4"	NPT3/4"
AD	G1/4"	G3/4"	G3/4"
E	NPT1/4"	NPT3/4"	NPT3/4"

Repair kits

Model	Ordering Code		
	NBR	VITON	EPDM
AH40	01.0025.402	01.0025.602	01.0025.802
AH120	01.0075.404	01.0075.604	01.0075.804

Features

The AM combined type high flow vacuum pump can produce very high vacuum flow. This type of pump can be used in many applications especially in high leakage systems, porous materials vacuum system and large vacuum circuits. The vacuum gauge, air pressure gauge,1"silencer and mounting bracket are also supplied together with the pump.

Specifications

Max.vacuum level	–kPa	92
Max.vacuum flow	l/min	4570
Air supply pressure	bar	3.4~6 Max.7
Temperature range	℃	–20~80
Weight	g	3724~7929
Noise level	dBA	55~68

Technical Parameters

Model	Max.vacuum level (–kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight g	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	EXhaust
AM150M	92	1880	720~1120	3724	> 10	> 32	> 40
AM200M		2200	930~1460	3892	> 10	> 32	> 40
AM300M		3150	1420~2290	5525	> 12	> 40	> 60
AM400M		3710	1680~2790	6447	> 12	> 40	> 60
AM500M		4570	2440~3520	7929	> 14	> 45	> 70

How to Order

AM150M P– N – A
① ② ③ ④

① Model

AM150M	AM400M
AM200M	AM500M
AM300M	

② Exhaust specification

Nil	Standard
P	Side exhaust

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non–Return Valve

A	Yes
–	No

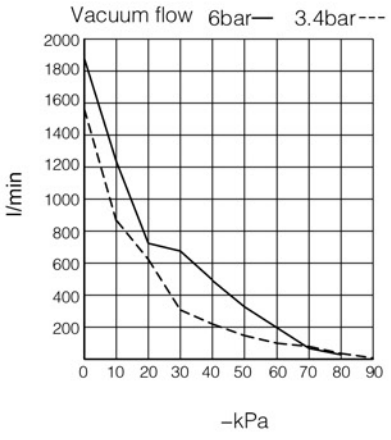
• AM150M

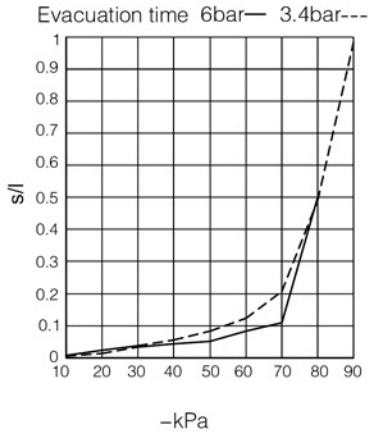
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure	Air consumption	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max.vacuum level
bar	l/min	0	10	20	30	40	50	60	70	80	90	–kPa
3.4	720	1550	840	610	315	205	150	95	80	36	2.5	92
6	1120	1880	1210	730	640	490	340	200	75	25		89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max.vacuum level
bar	l/min	10	20	30	40	50	60	70	80	90	–kPa
3.4	720	0.009	0.02	0.03	0.06	0.09	0.14	0.21	0.47	0.93	92
6	1120	0.007	0.017	0.026	0.04	0.06	0.08	0.12	0.5		89





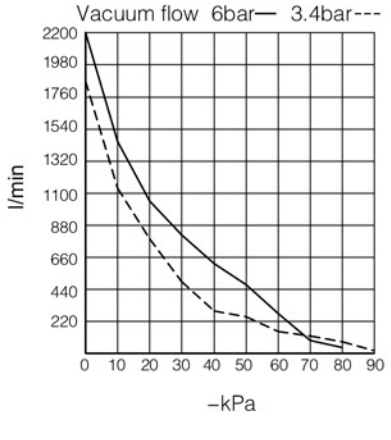
• AM200M

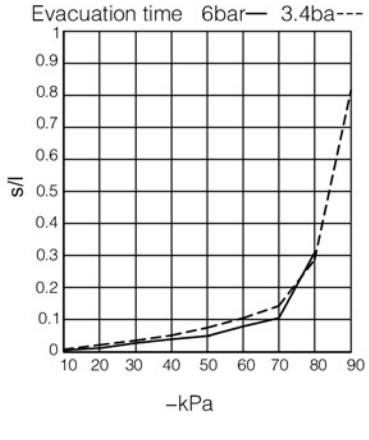
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure	Air consumption	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max.vacuum level
bar	l/min	0	10	20	30	40	50	60	70	80	90	–kPa
3.4	930	1840	1090	770	470	280	210	155	95	50	4	92
6	1460	2200	1490	930	800	650	490	245	85	11		89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max.vacuum level
bar	l/min	10	20	30	40	50	60	70	80	90	–kPa
3.4	930	0.006	0.016	0.028	0.04	0.06	0.11	0.16	0.27	0.82	92
6	1460	0.005	0.012	0.022	0.03	0.04	0.06	0.11	0.33		89





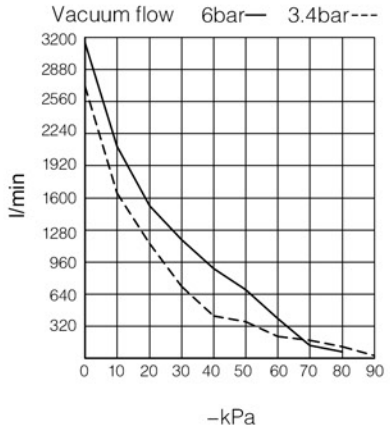
• AM300M

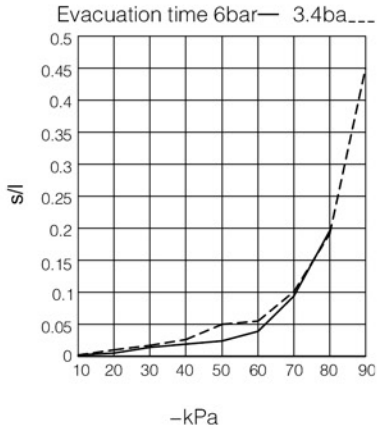
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure	Air consumption	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max.vacuum level
bar	l/min	0	10	20	30	40	50	60	70	80	90	–kPa
3.4	1420	2750	1610	1160	760	470	325	270	185	80	7.5	92
6	2290	3150	2100	1410	1180	930	660	365	105	75		89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max.vacuum level
bar	l/min	10	20	30	40	50	60	70	80	90	–kPa
3.4	1420	0.004	0.014	0.02	0.03	0.05	0.07	0.11	0.17	0.45	92
6	2290	0.004	0.01	0.013	0.023	0.03	0.04	0.08	0.19		89





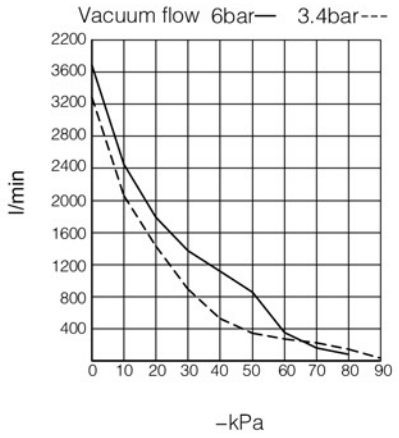
• AM400M

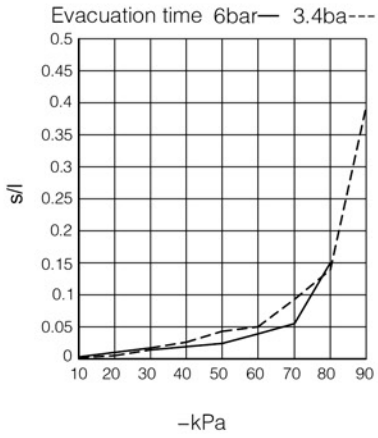
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure	Air consumption	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max.vacuum level
bar	l/min	0	10	20	30	40	50	60	70	80	90	–kPa
3.4	1680	3290	2080	1420	870	620	372	335	215	100	11.5	92
6	2790	3710	2480	1800	1450	1100	870	370	195	80		89

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels(–kPa)									Max.vacuum level
bar	l/min	10	20	30	40	50	60	70	80	90	–kPa
3.4	1680	0.004	0.01	0.015	0.023	0.03	0.05	0.08	0.13	0.37	92
6	2790	0.003	0.008	0.012	0.02	0.025	0.03	0.06	0.15		89

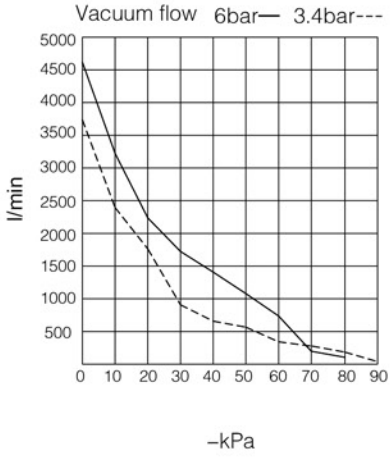




• AM500M

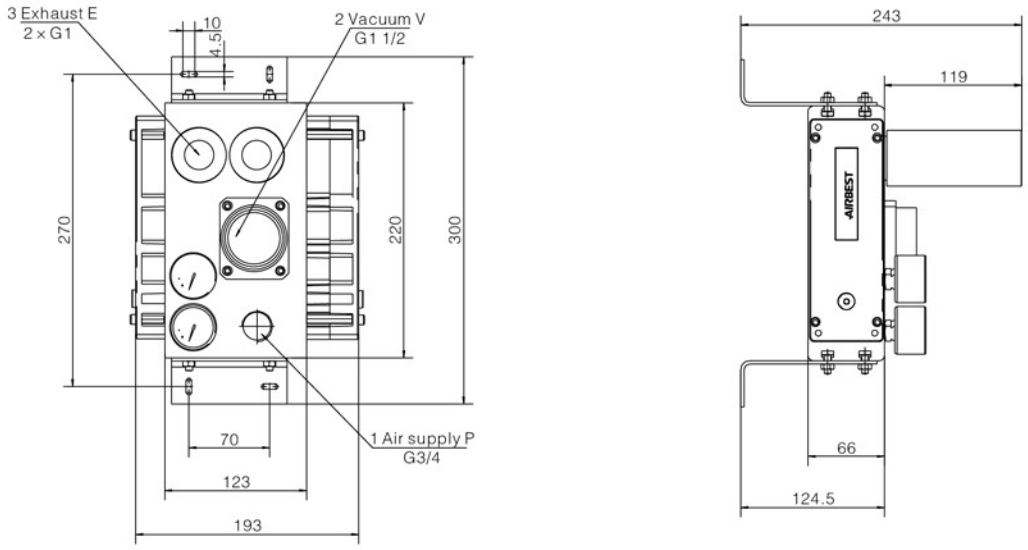
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure	Air consumption	Vacuum flow (l/min) at different vacuum levels(–kPa)										Max.vacuum level
bar	l/min	0	10	20	30	40	50	60	70	80	90	–kPa
3.4	2440	3740	2420	1800	970	710	590	360	270	130	15.5	92
6	3520	4570	3240	2330	1800	1470	1140	700	205	115		89

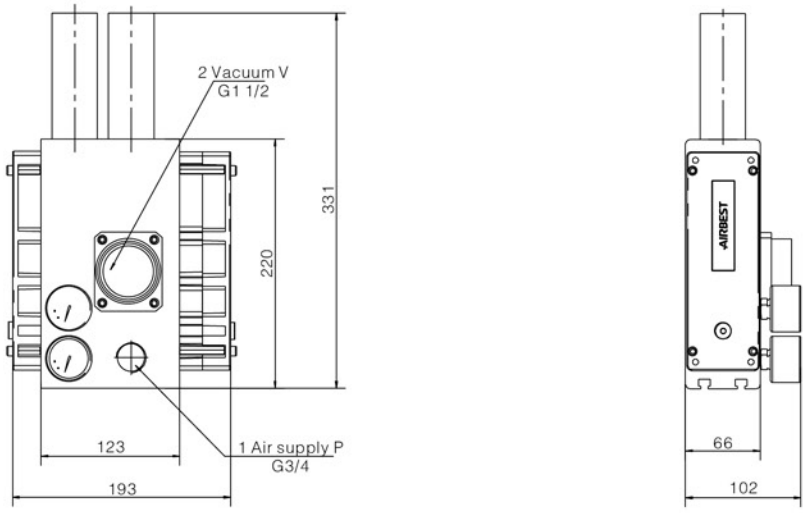


Dimensions (mm)

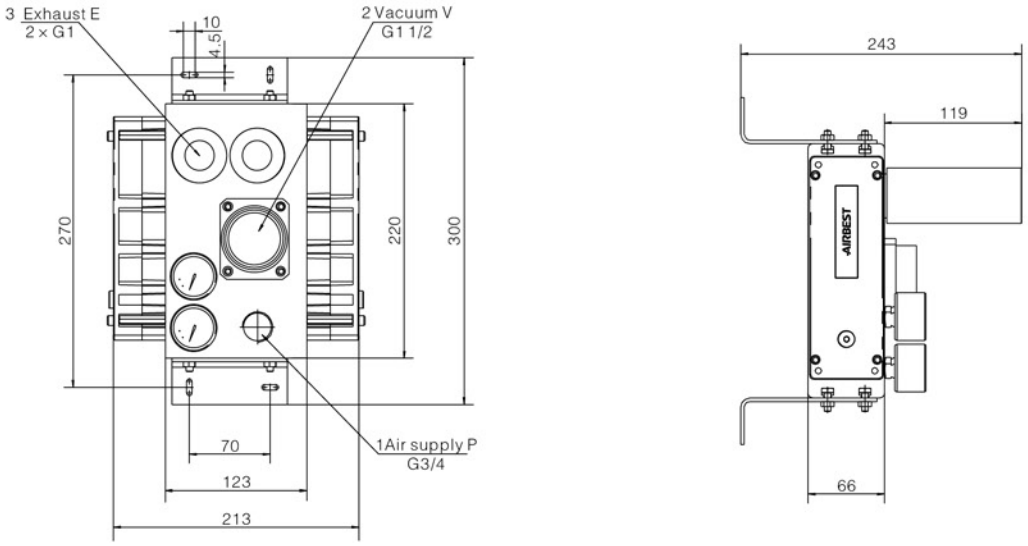
• AM150M



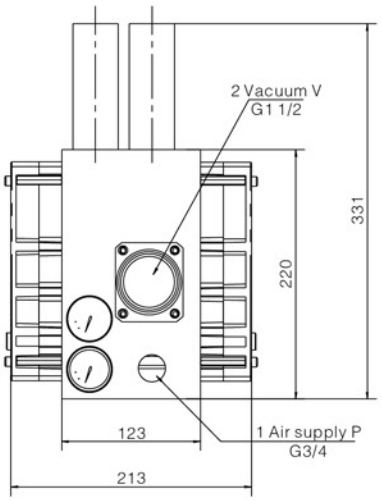
• AM150MP

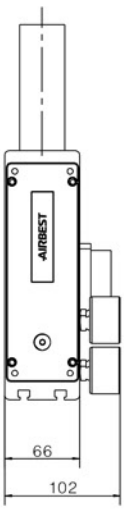


• AM200M

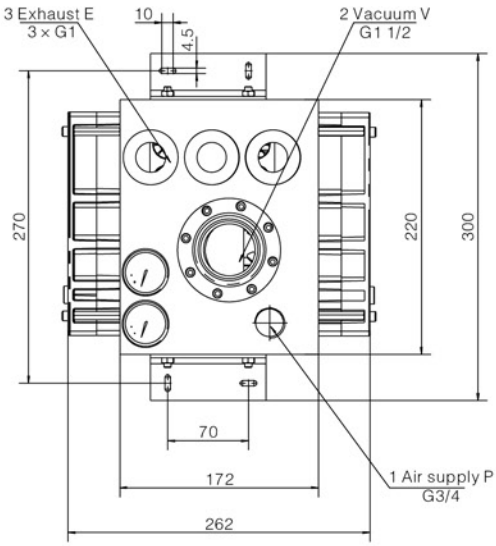


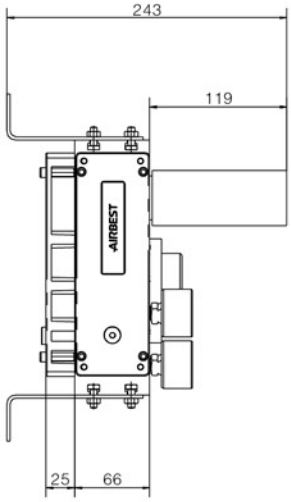
• AM200MP



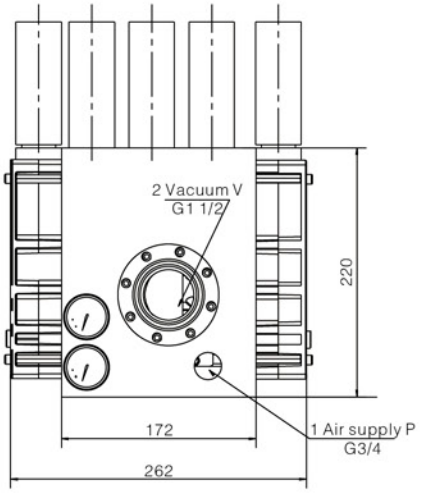


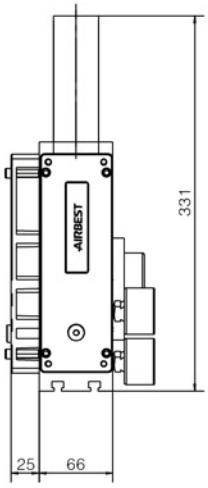
• AM300M



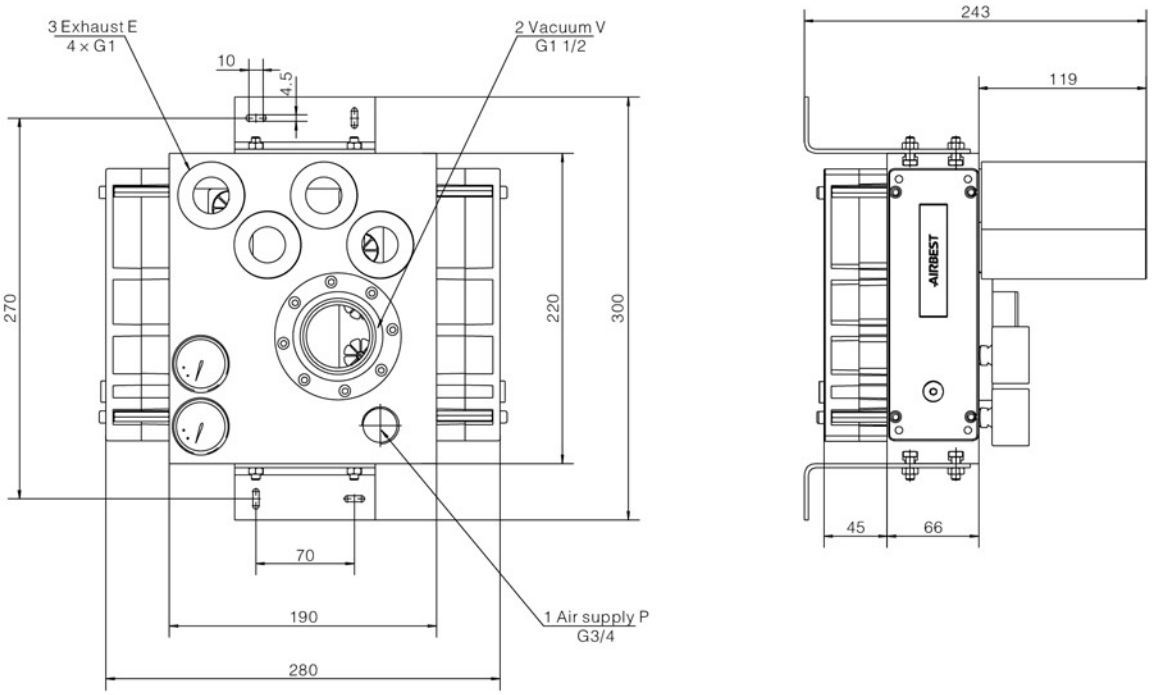


• AM300MP

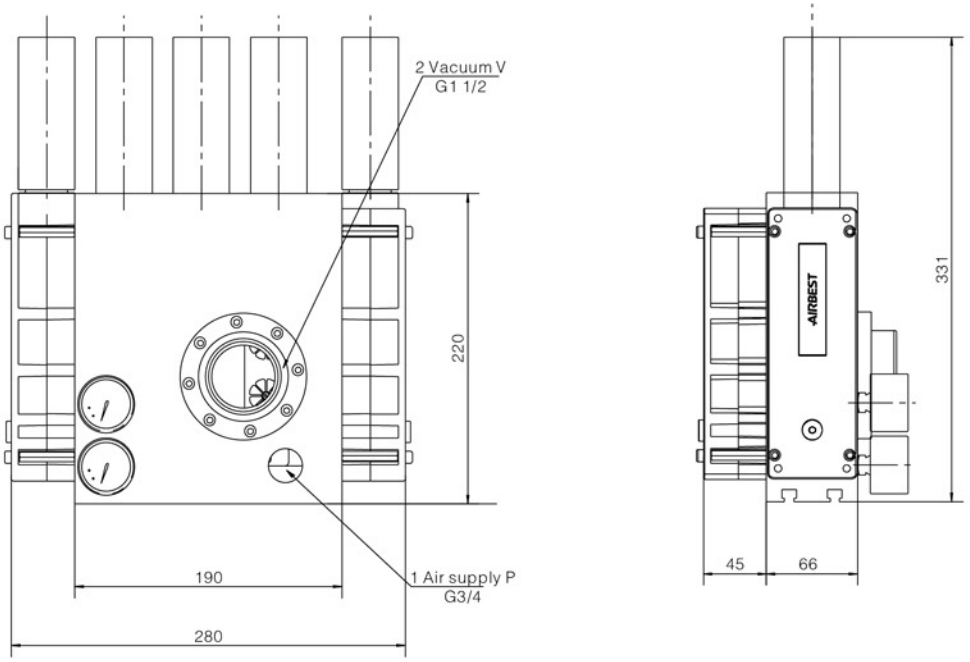




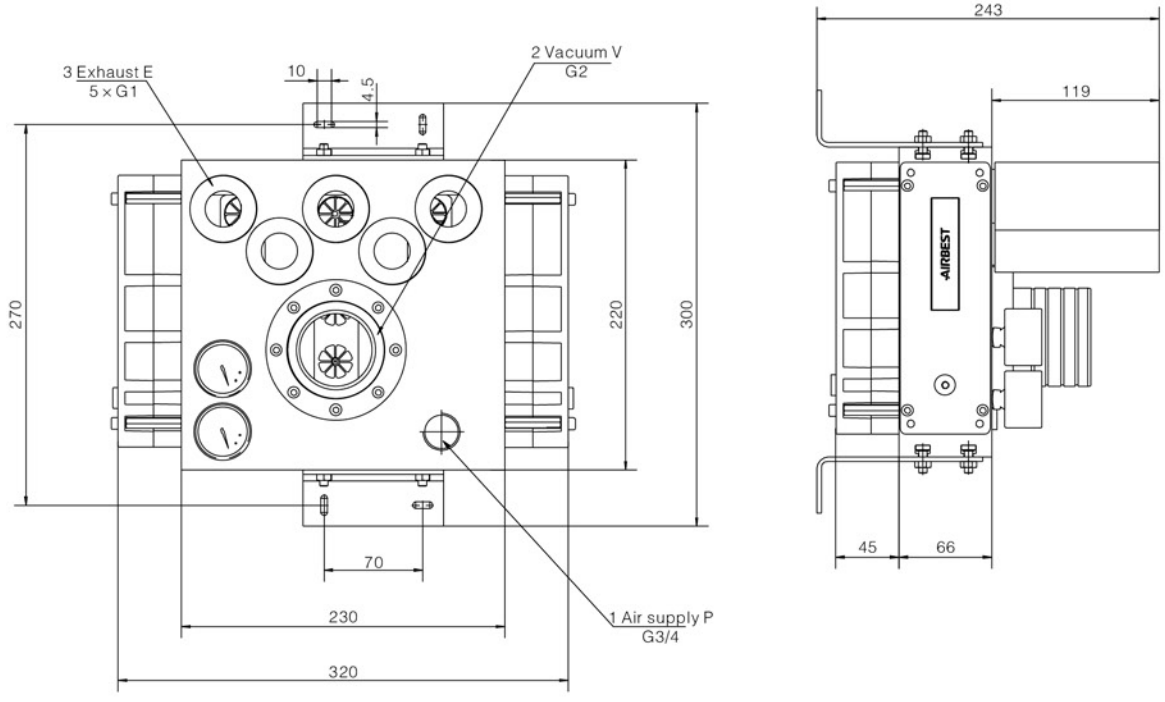
• AM400M



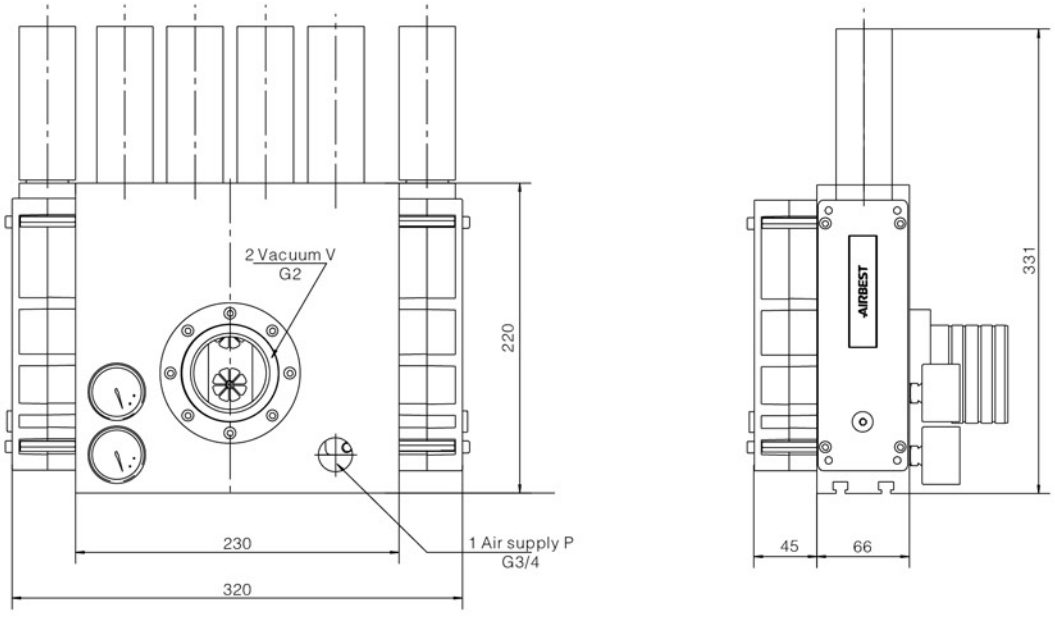
• AM400MP



• AM500M



• AM500MP



Features

The AL combined type high flow vacuum pump can produce very high vacuum flow. This type of pump can be used in many applications especially in high leakage systems, porous materials vacuum system and large vacuum circuits. The vacuum gauge, air pressure gauge,1"silencer and mounting bracket are also supplied together with the pump.

Specifications

Max.vacuum level	–kPa	81
Max.vacuum flow	l/min	3970
Air supply pressure	bar	3.4~6 max.7
Temperature range	℃	–20~80
Weight	g	3724~7929
Noise level	dBA	55~68

Technical Parameters

Model	Max.vacuum level (–kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight g	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	EXhaust
AL150M	81	1660	650	3724	> 10	> 32	> 40
AL200M		1950	830	3892	> 10	> 32	> 40
AL300M		2840	1240	5525	> 12	> 40	> 60
AL400M		3340	1650	6447	> 12	> 40	> 60
AL500M		3970	2100	7929	> 14	> 45	> 70

How to Order

AL150M P– N – A
① ② ③ ④

① Model

AL150M	AL400M
AL200M	AL500M
AL300M	

② Exhaust specification

Nil	Standard
P	Side exhaust

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non–Return Valve

A	Yes
–	No

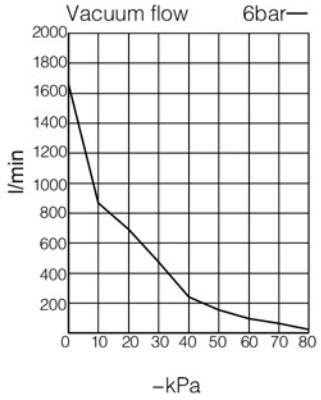
Vacuum flow(l/min)at different vacuum levels(–kPa)

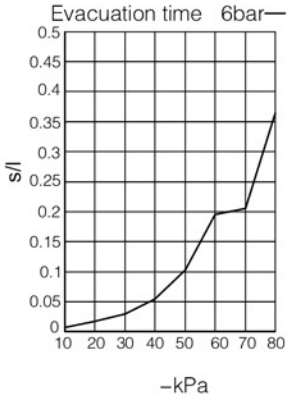
Model	Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)									Max.vacuum level –kPa
			0	10	20	30	40	50	60	70	80	
AL150M	6	650	1660	870	720	450	240	160	115	70	32	81
AL200M		830	1950	1140	870	520	305	230	160	105	38	81
AL300M		1240	2840	1660	1330	810	580	360	265	155	45	81
AL400M		1650	3340	2200	1730	1110	630	590	370	225	80	81
AL500M		2100	3970	2710	1990	1320	790	660	360	270	92	81

Evacuation time(s/l)to reach different vacuum levels(–kPa)

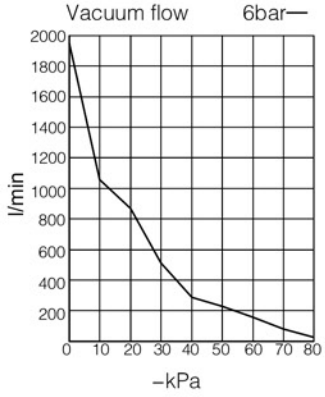
Model	Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)								Max.vacuum level –kPa
			10	20	30	40	50	60	70	80	
AL150M	6	650	0.007	0.019	0.028	0.051	0.105	0.198	0.21	0.37	81
AL200M		830	0.005	0.013	0.023	0.04	0.06	0.098	0.15	0.3	81
AL300M		1240	0.004	0.011	0.018	0.03	0.04	0.07	0.1	0.2	81
AL400M		1650	0.003	0.008	0.01	0.015	0.03	0.06	0.08	0.15	81
AL500M		2100	0.002	0.005	0.008	0.01	0.022	0.04	0.06	0.1	81

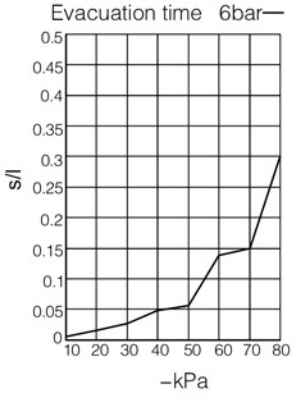
• AL150M



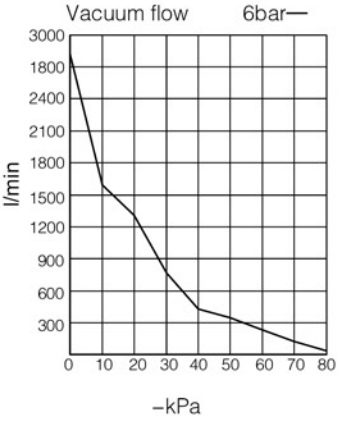


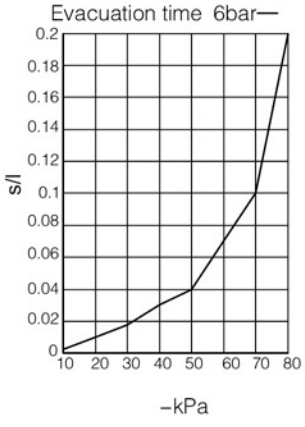
• AL200M



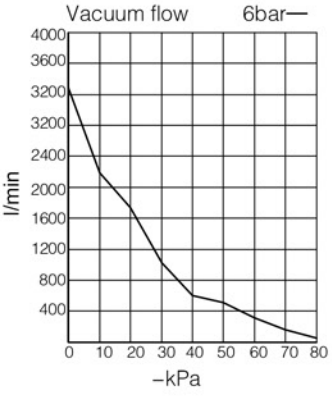


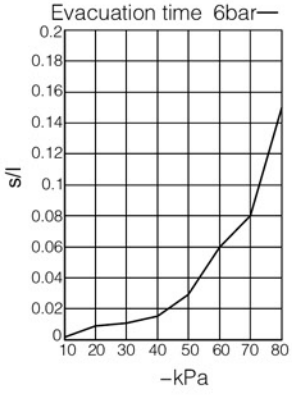
• AL300M



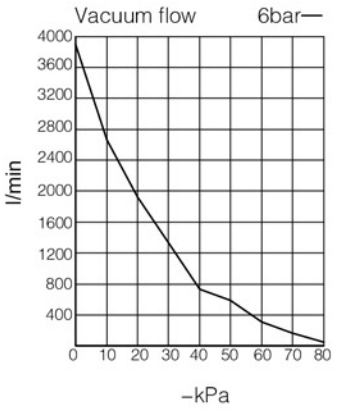


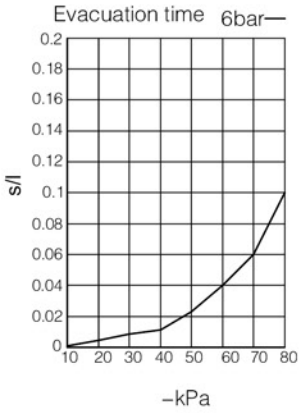
• AL400M





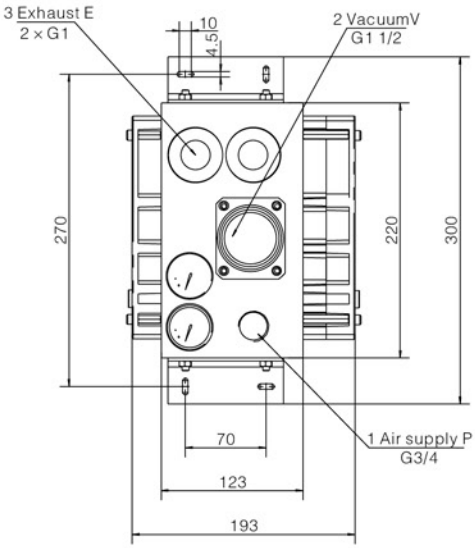
• AL500M

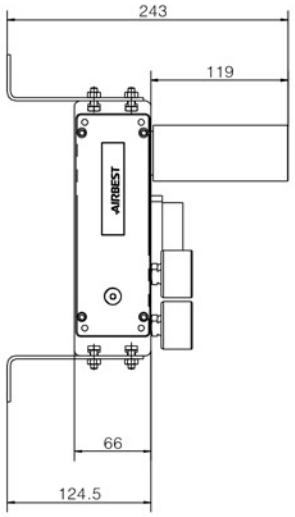




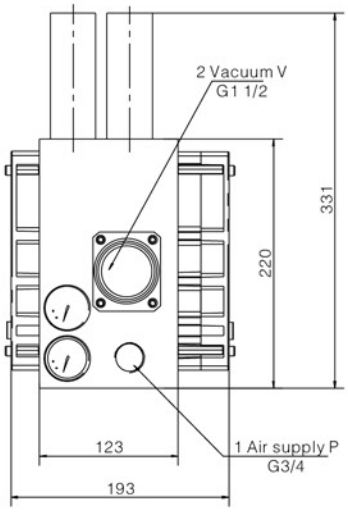
Dimensions (mm)

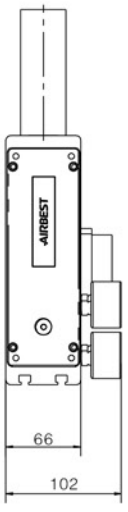
• AL150M



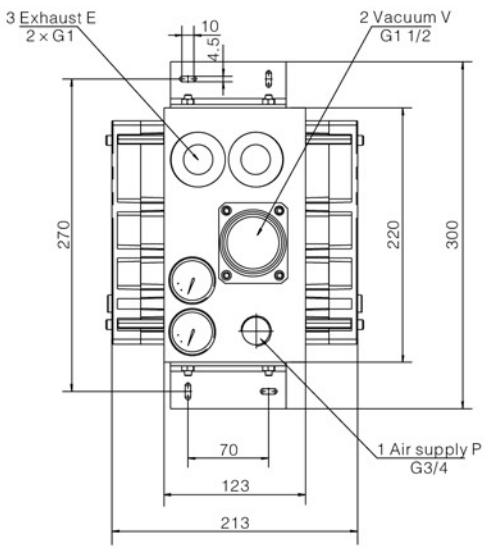


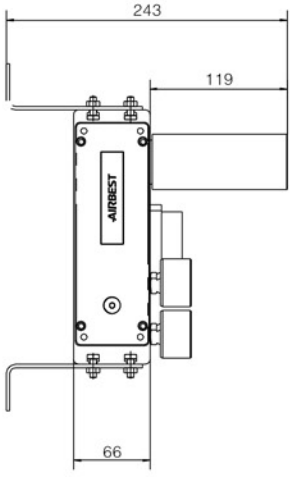
• AL150MP



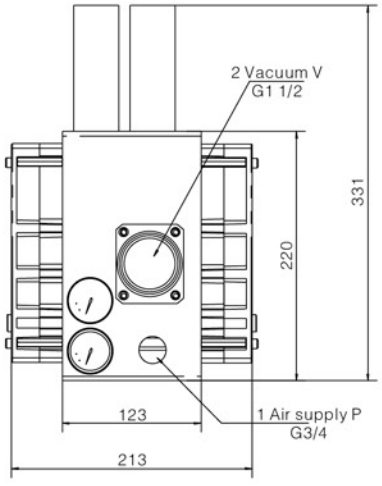


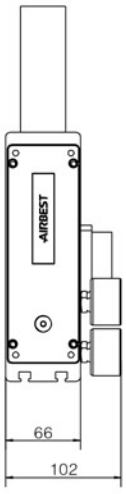
• AL200M



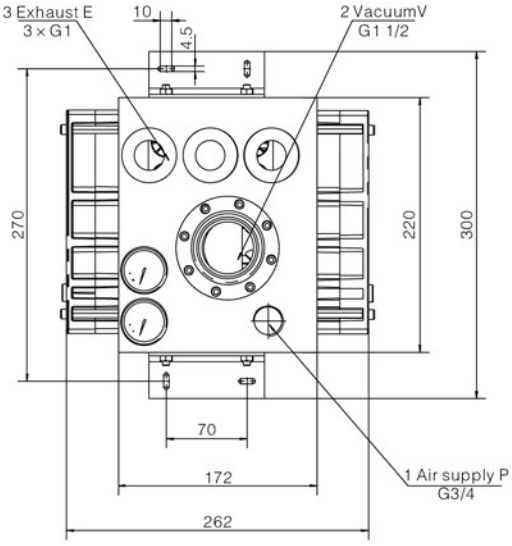


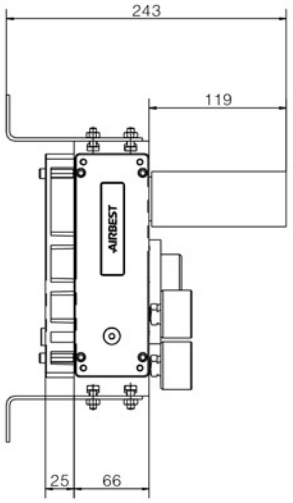
• AL200MP



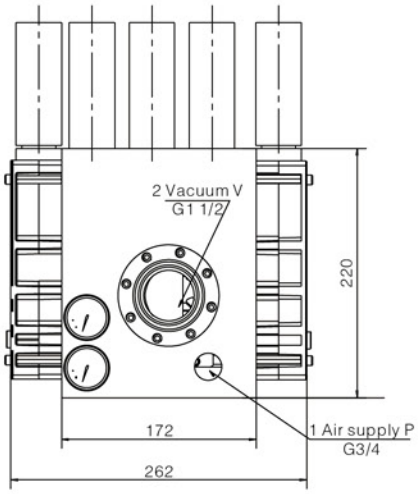


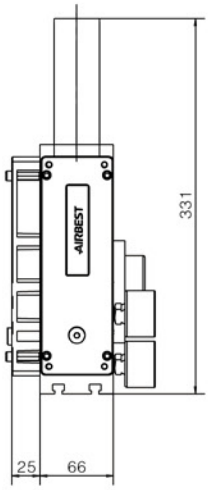
• AL300M



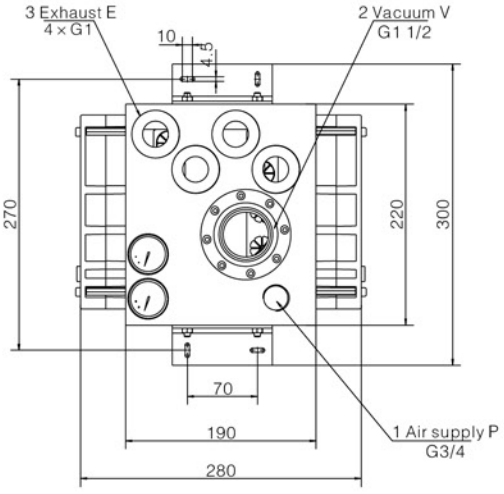


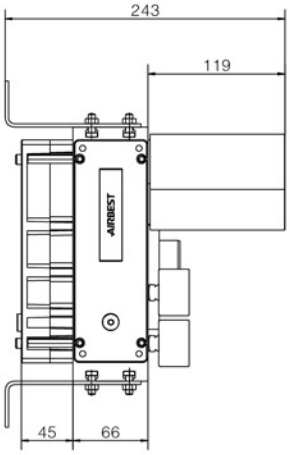
• AL300MP





• AL400M





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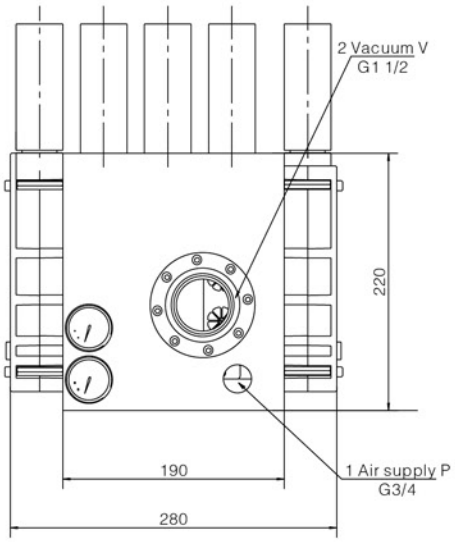
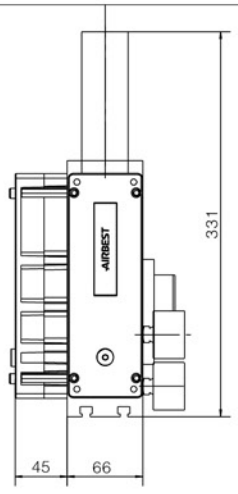
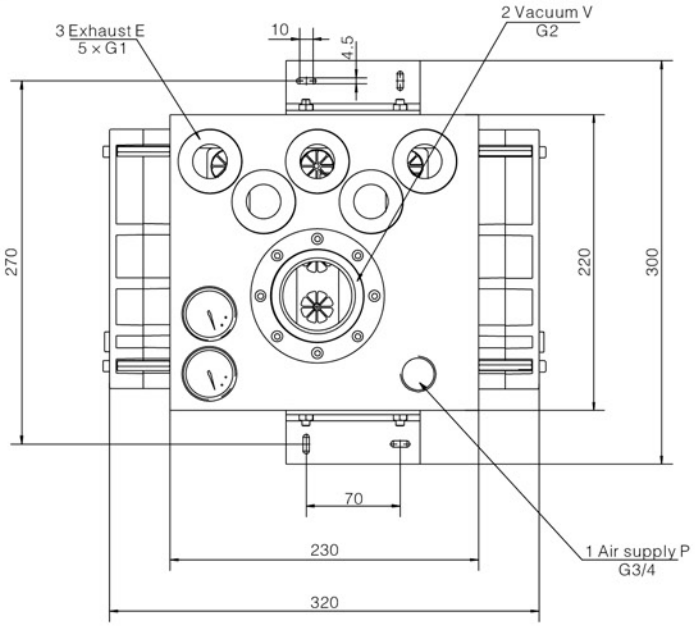
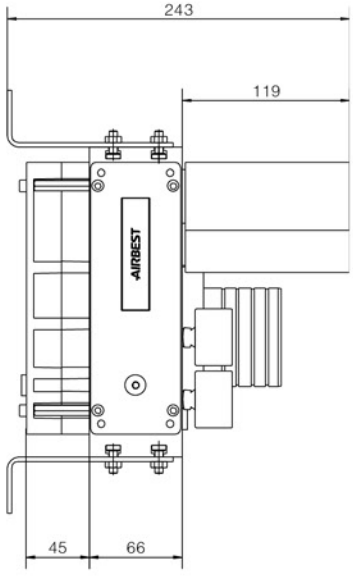


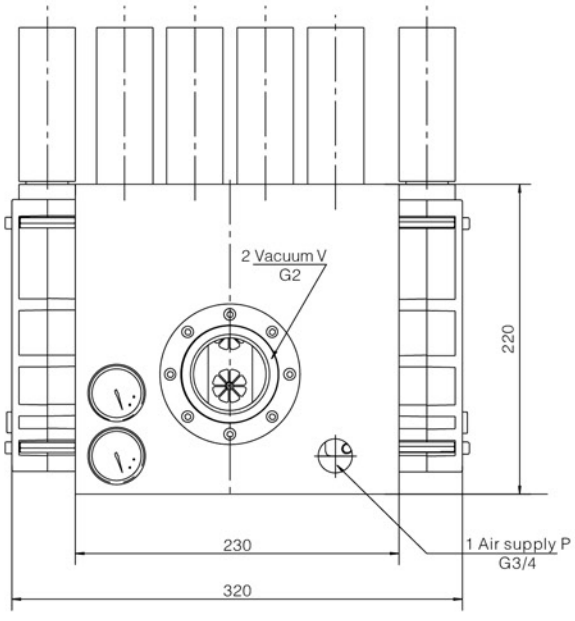


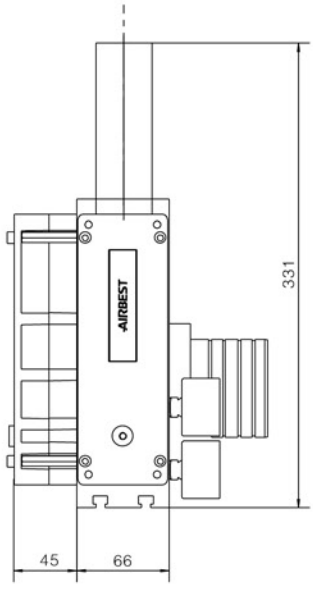
• AL500M





• AL500MP





Features

The AH combined type vacuum pump can produce very high vacuum level, meanwhile maintaining good flow rates for quick evacuation time. The vacuum gauge, air pressure gauge, 1"silencer and mounting bracket are also supplied together with the pump.

Specifications

Max.vacuum level	–kPa	100.5
Max.vacuum flow	l/min	2040
Air supply pressure	bar	3.4~6 Max.7
Temperature range	℃	–20~80
Weight	g	3892~6447
Noise level	dBA	60~65

Technical Parameters

Model	Max.vacuum level (–kPa)	Max.vacuum flow (l/min)	Air consumption (l/min)	Weight g	Min tube inner Φ (within 2m)		
					Air supply	Vacuum	EXhaust
AH240M	100.5	1050	960	3892	> 10	> 20	> 20
AH480M	100.5	2040	1860	6447	> 12	> 25	> 30

How to Order

AH240M P – N – A
① ② ③ ④

① Model

AH240M
AH480M

② Exhaust specification

Nil	Standard
P	Side exhaust

③ Sealing

N	NBR
E	EPDM
V	VITON

④ Non–Return Valve

A	Yes
–	No

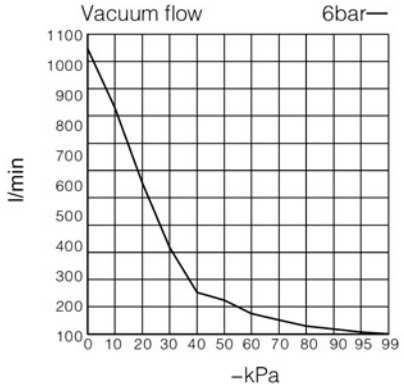
Vacuum flow(l/min)at different vacuum levels(–kPa)

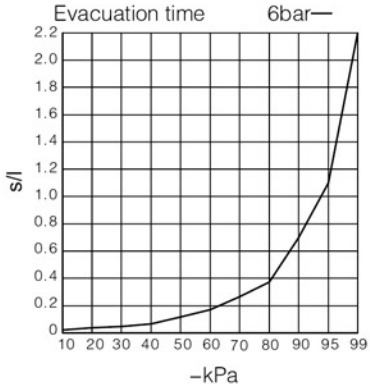
Model	Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)												Max.vacuum level –kPa
			0	10	20	30	40	50	60	70	80	90	95	99	
AH240M	6	960	1050	820	560	310	155	125	85	70	39	20	8	1.3	100.5
AH480M		1860	2040	1600	1150	690	345	270	210	120	110	19	15	2.5	100.5

Evacuation time(s/l)to reach different vacuum levels(–kPa)

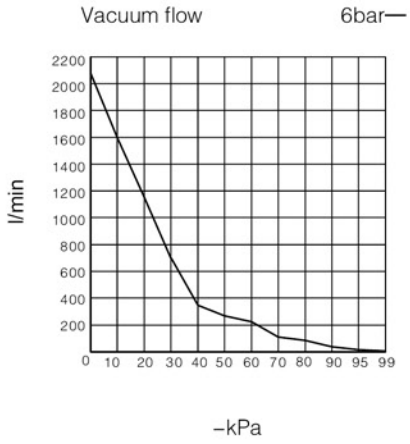
Model	Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)											Max.vacuum level –kPa
			10	20	30	40	50	60	70	80	90	95	99	
AH240M	6	960	0.006	0.014	0.03	0.06	0.11	0.17	0.25	0.38	0.7	1.1	2.2	100.5
AH480M		1860	0.004	0.01	0.02	0.03	0.05	0.08	0.13	0.2	0.37	0.55	1.2	100.5

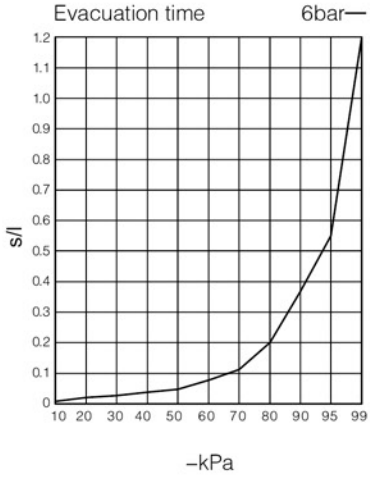
• AH240M





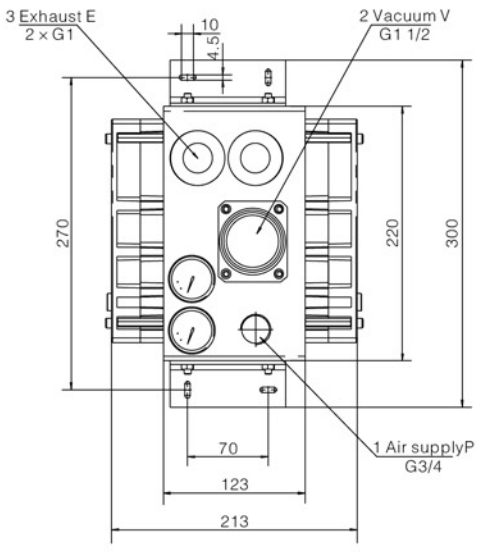
• AH480M

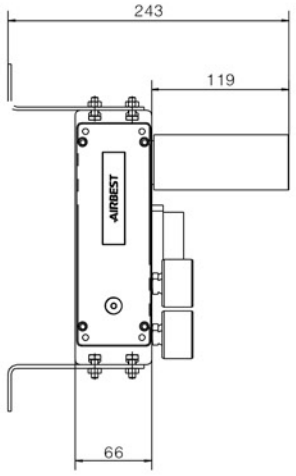




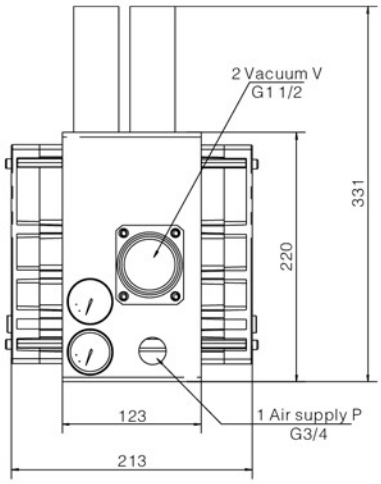
Dimensions (mm)

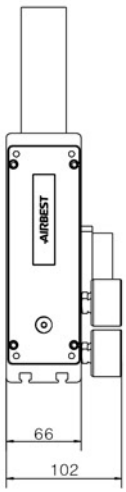
• AH240M



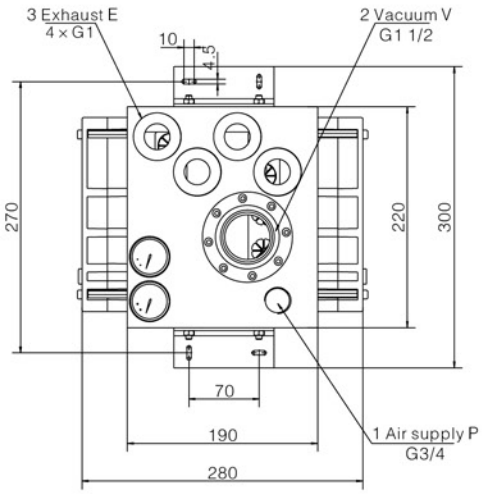


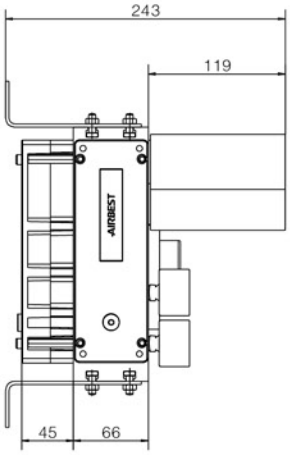
• AH240MP



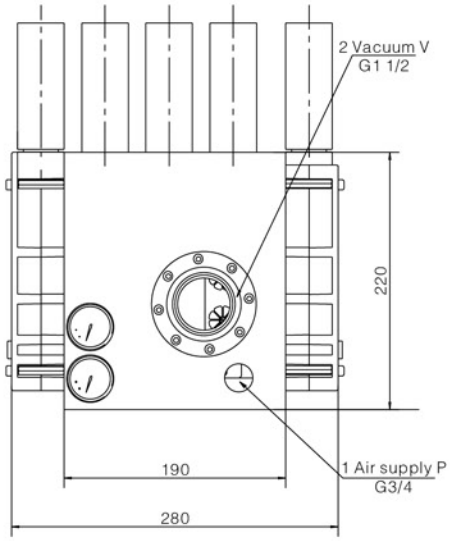


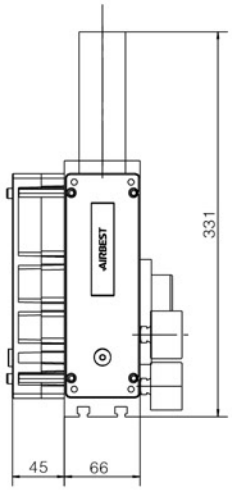
• AH480M





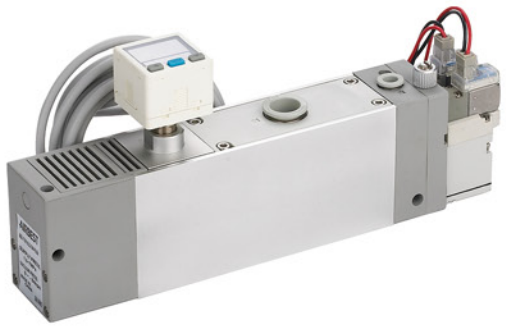
• AH480MP





Features

- ☆ Adopt 3 levels rise pressure pipe,vacuum flow rate can amplify 250%
- ☆ Can be with valve,vacuum gauge and vacuum pressure switch
- ☆ Can replace filter element
- ☆ Built–in vacuum filter and silencer
- ☆ Can be installed at 3 directions(top,bottom,side)



Specifications

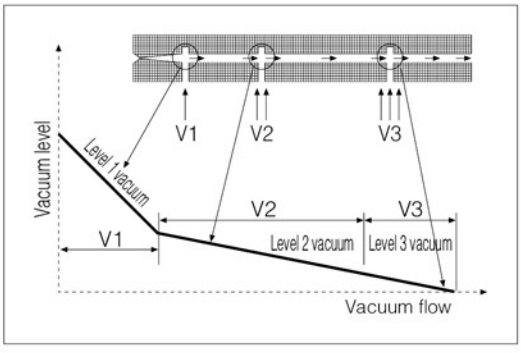
Nozzle diameter	Φ1.2mm
Max.vacuum flow rate	100l/min
Air consumption	63l/min
Max.vacuum pressure	–84kPa
Max.operating pressure	7bar
Supply pressure range	2~5bar
Standard supply pressure	4bar
Operating temperature range	5~50℃

Supply/Release Valve Specifications

Part Number	APJ514–□□□
Type of valve actuation	Internal pilot type N.C.
Operating pressure range	2~5bar
Ambient and fluid temperature	5~50℃
Response time(for 0.5MPa)	25ms or less
Max.operating frequency	5Hz
Manual operation	Non–locking push type slotted locking type
Pilot exhaust type	Pilot valve individual exhaust type. Main valve/Pilot valve common exhaust
Lubrication	Not required
Mounting position	Unrestricted
Impact/Vibration resistance	150/30m/s^2
Enclosure	Dust proof

Energy saving

3 Levels rise pressure pipe design



How to Order

Without valve AZL 112□□

With valve AZL 112□□K15LZD – GN RL5C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Nozzle diameter
12: Φ1.2mm

① Exhaust specifications

Nil	Built–in silencer
P	Port exhaust

② Exhaust port thread specification (port exhaust only)

Nil	Rc 1/2
F	G 1/2
N	1/2–14NPT
T	1/2–14NPTF

③ Supply valve/Release valve combination

K1	With supply and release valves
K2	With supply valve

④ Rated Voltage

DC Specification		AC Specification	
5	24V	1	100V
6	12V	2	200V
V	6V	3	110V
S	5V	4	220
R	3V		

⑤ Lead wire type

G	Direct lead out type	Lead wire length 0.3m
L	L type plug connector	Lead wire length 0.3m

⑥ Light/Surge voltage suppressor

Nil	Without light/surge Voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

⑦ Manual override

D	Slotted locking type

⑧ Vacuum pressure sensor

Nil	None
GN	Vacuum adapter Rc1/8

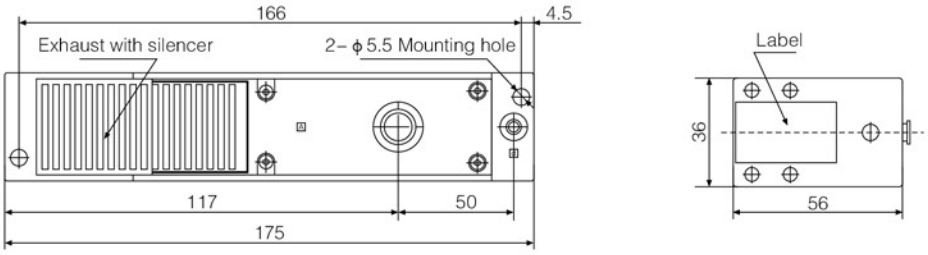
⑨ Digital vacuum pressure switch specification

RL5C

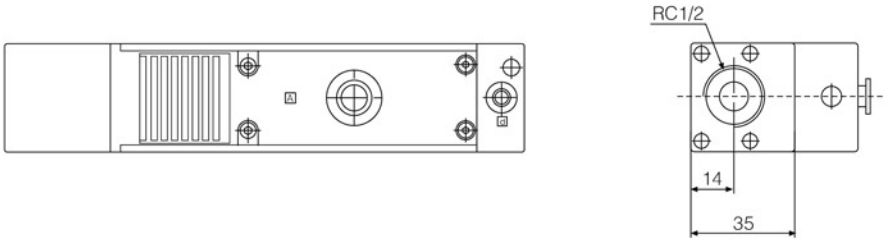
RL5C(–100~100kPa)		
RL5C–02	NPN Output	lead wire
RL5C–04	PNP Output	length2m
RL5V(0~–100kPa)		
RL5V–02	NPN Output	lead wire
RL5V–04	PNP Output	length2m

Dimensions (mm)

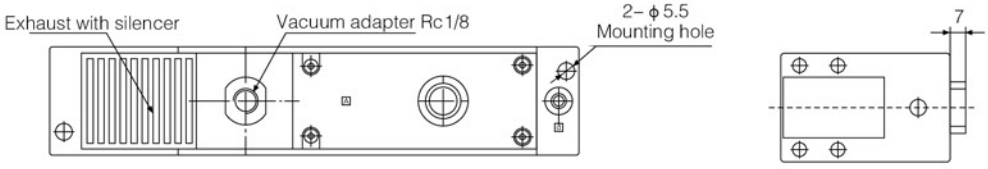
Standard
AZL112



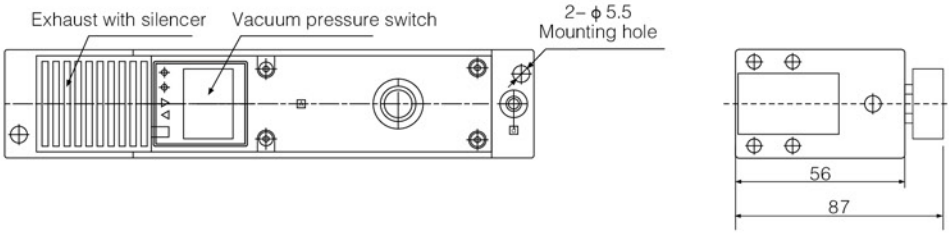
Port exhaust
AZL112P



With vacuum adapter
AZL112–GN

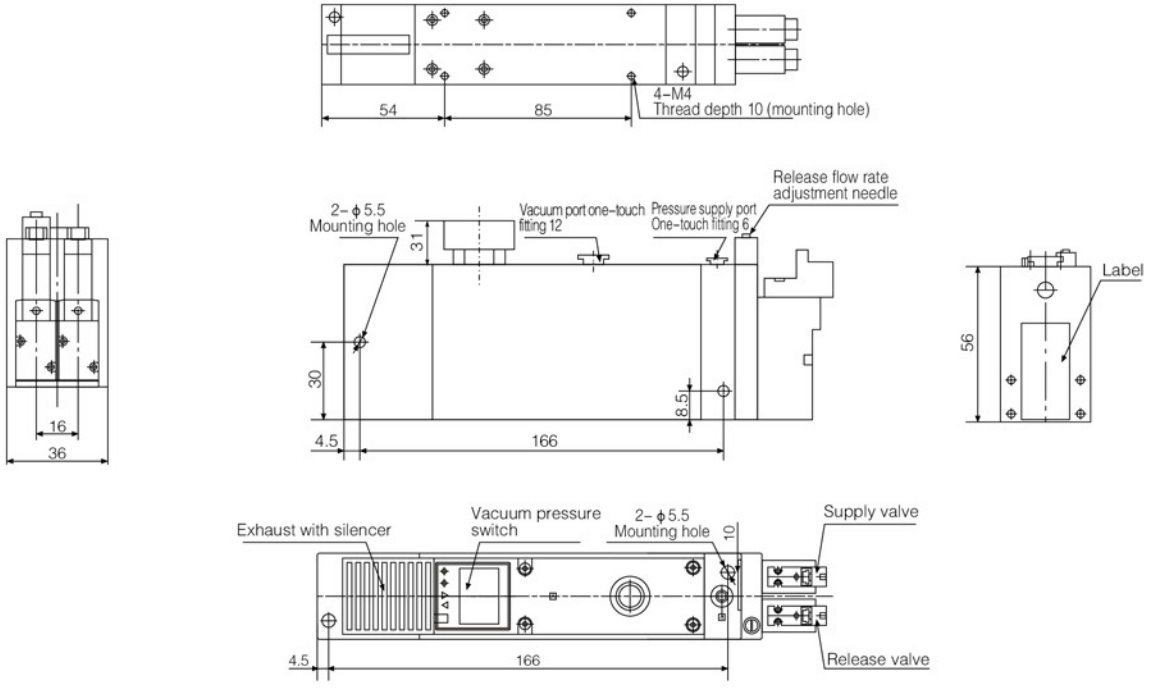


With digital vacuum pressure switch
AZL112–GN–RL5



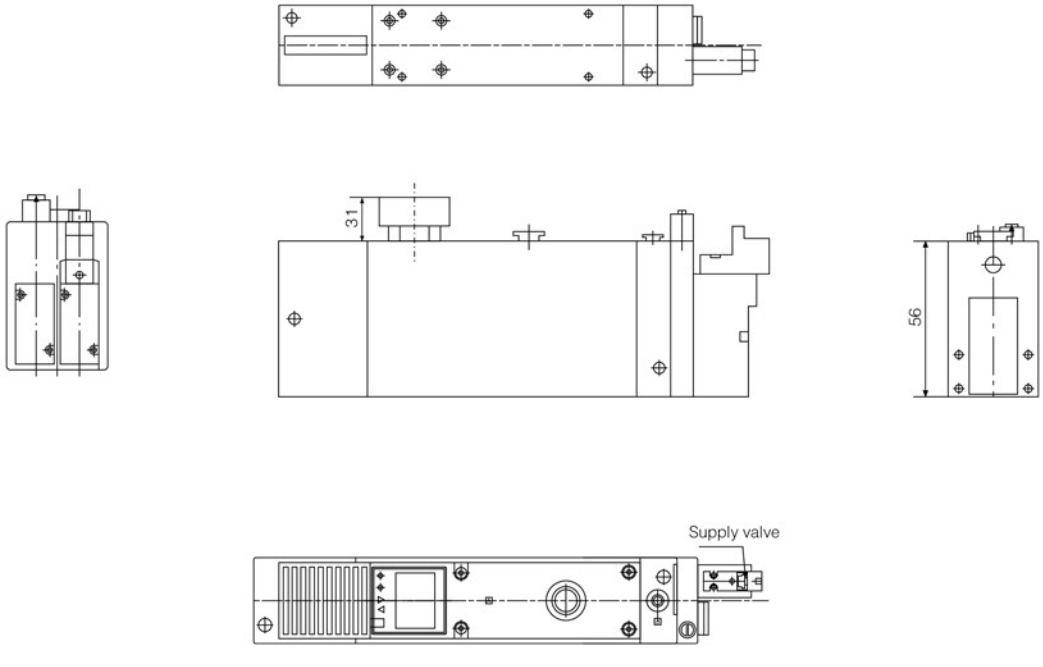
With supply valve and release valve

AZL112-K1□L□□-GN-RL5



With supply valve

AZL112-K2□L□□-GN-RL5



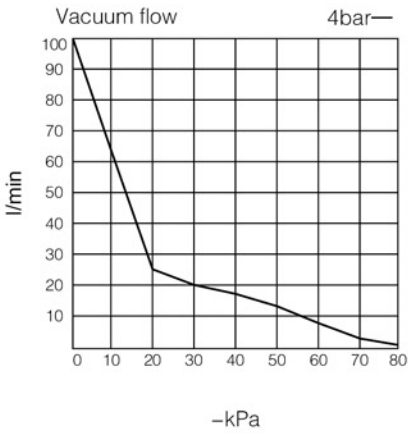
• AZL112

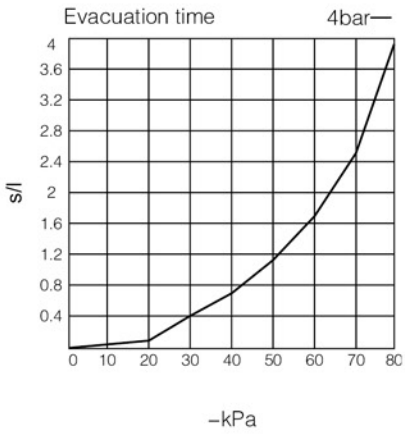
Vacuum flow(l/min)at different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(–kPa)									Max.vacuum level –kPa
		0	10	20	30	40	50	60	70	80	
4	63	100	65	26	20	18.5	13	8	5	2.8	84

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(–kPa)								Max.vacuum level –kPa
		10	20	30	40	50	60	70	80	
4	63	0.05	0.172	0.4	0.67	1.07	1.63	2.46	3.9	84





Features

☆ Adopt 2 fluctuation overlap 3 levels rise pressure pipe,the flow rate saving and vacuum flow rate is 2 times of AZL112
☆ Can be with vacuum pressure switch
☆ Built-in silencer
☆ Can be installed at 2 directions(bottom,side)

How to Order

AZL 2 12 □ □ □
① ② ③ ④

① Nozzle diameter

12	Φ1.2mm

② Exhaust specifications

Nil	Built-in silencer
P	Port exhaust

③ Vacuum pressure sensor

Nil	None
GN	Adaptor Rc1/8

④ Digital vacuum pressure switch specifications

RL5

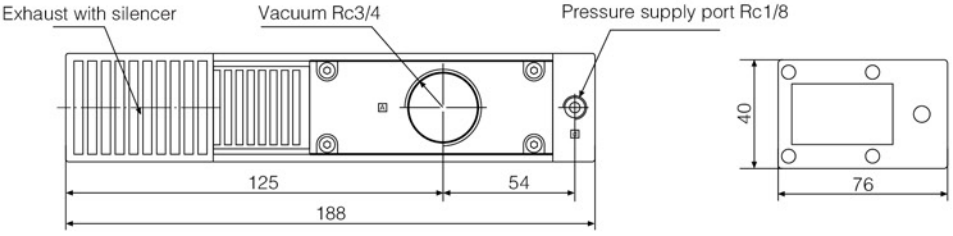
RL5C(-100~100kPa)		
RL5C-02	NPN Output	Lead wire Length 2m
RL5C-04	PNP Output	
RL5V(0~-100kPa)		
RL5V-02	NPN Output	Lead wire Length 2m
RL5V-04	PNP Output	

Specifications

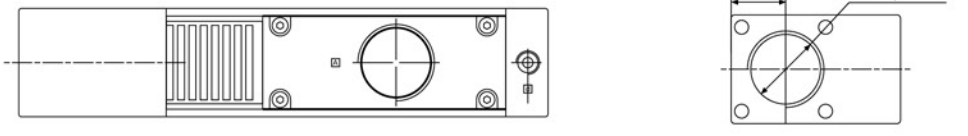
Nozzle diameter	Φ1.2mm × 2
Max.vacuum flow rate	200l/min
Air consumption	126l/min
Max.vacuum pressure	-84kPa
Max.operating pressure	7bar
Supply pressure range	2~5bar
Standard supply pressure	4bar
Operating temperature range	5~50℃

Dimensions (mm)

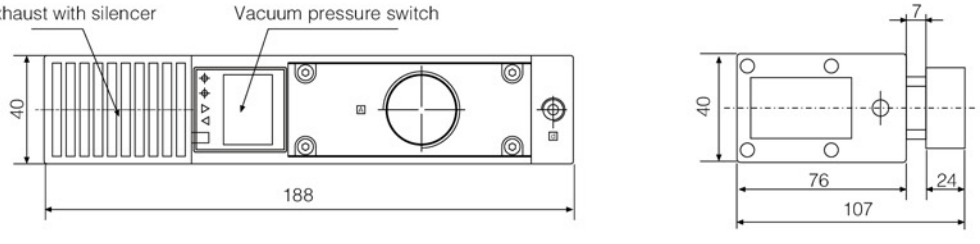
Standard
AZL212



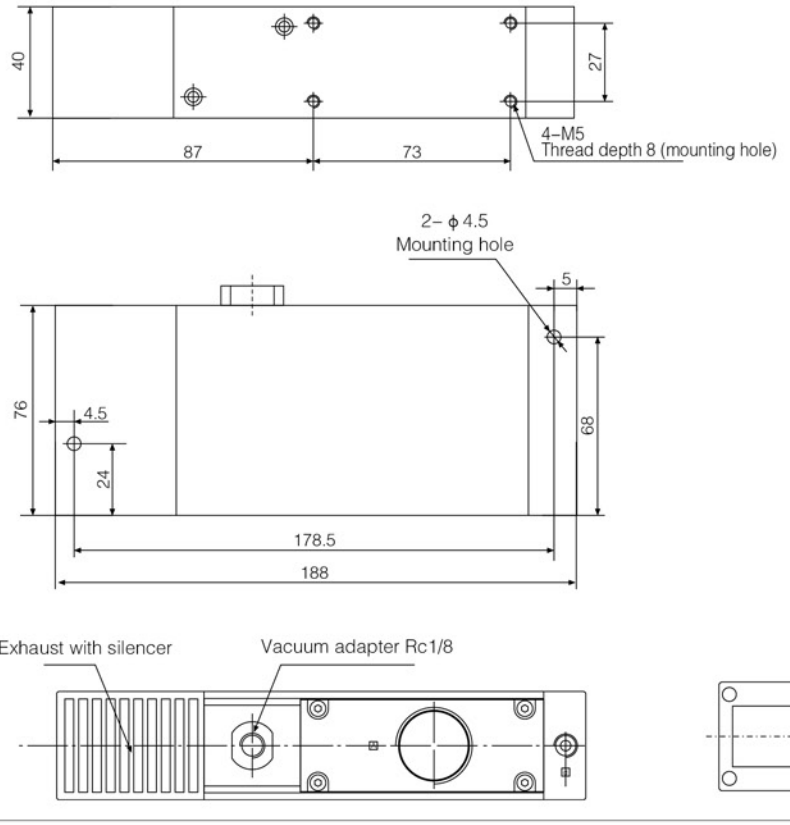
Port exhaust
AZL212P



With digital vacuum pressure switch
AZL212-GN-RL5



With vacuum adapter
AZL212-GN



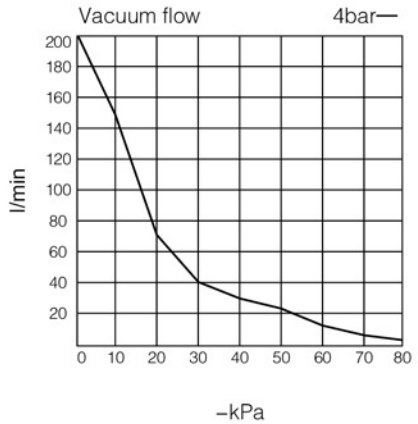
• AZL212

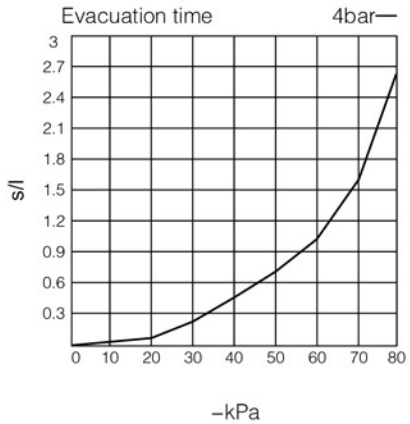
Vacuum flow(l/min)at different vacuum levels(-kPa)

Air supply pressure bar	Air consumption l/min	Vacuum flow (l/min) at different vacuum levels(-kPa)									Max.vacuum level -kPa
		0	10	20	30	40	50	60	70	80	
4	126	200	150	52	40	30	25	15	8	3	84

Evacuation time(s/l)to reach different vacuum levels(-kPa)

Air supply pressure bar	Air consumption l/min	Evacuation time (s/l) to reach different vacuum levels(-kPa)								Max.vacuum level -kPa
		10	20	30	40	50	60	70	80	
4	126	0.011	0.076	0.246	0.415	0.646	0.98	1.52	2.46	84





Features

This is an adjustable flow rate single stage vacuum pump.The design of this pump enables particles and small debris to pass directly through the pump.

Specifications

Max.vacuum level	-84kPa
Max.vacuum flow rate	3390l/m
Air supply pressure	4-6bar Max.7bar
Air supply type	Dry Compressed air

How to Order

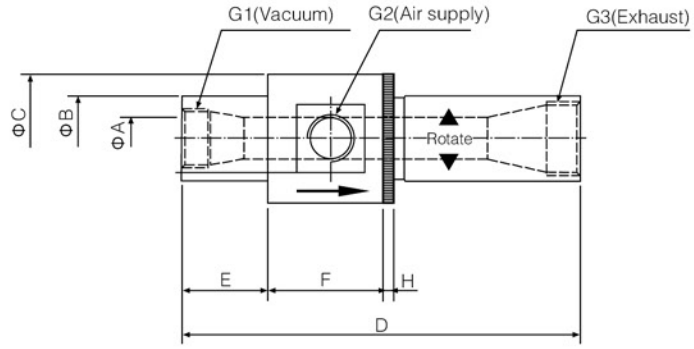
ACP 250 – AL
① ②

① Specification

250	500
375	750

② Material

AL-Aluminum
SS-Stainless steel



Model	Dimension									
	ΦA	ΦB	ΦC	D	E	F	H	G1	G2	G3
ACP250	6.5	19	32	94-105	22	32	5	G1/4	G1/8	G1/4
ACP375	10	25	45	155-165	38	45	5	G3/8	G3/8	G1/2
ACP500	13	32	51	155-160	38	51	5	G1/2	G3/8	G3/4
ACP750	19	38	58	175-189	38	51	5	G3/4	G1/2	G1

Model	Air supply pressure bar	ACP series Air Consumption(L/m)at different vacuum levels(-kPa)				
		17	34	50	68	84
ACP250	5.5	112	169	233	276	342
ACP375		176	327	485	595	825
ACP500		340	625	795	940	1280
ACP750		650	875	1250	1790	2550

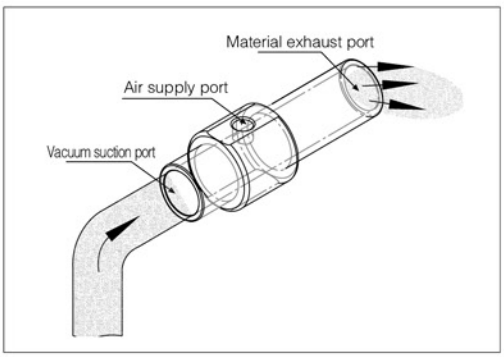
Model	ACP series Vacuum flow(L/m)at different Vacuum levels(-kPa)				
	17	34	50	68	84
ACP250	280	240	200	162	125
ACP375	846	735	620	520	395
ACP500	1695	1325	1130	990	650
ACP750	3390	2460	1970	1440	1130

Features

The vacuum pump has a straight through design,hence they are non-clogging and maintenance fee,and it is particular for transfering particles,powders.High flow can be achieved with in line bore sizes up to 38mm.

Specifications

Max.vacuum level	-35kPa
Max.vacuum flow rate	5610l/m
Air supply pressure	4-6bar Max.7bar
Air supply type	Dry Compressed air



How to Order

ACPF 2-3 - AL
① ②

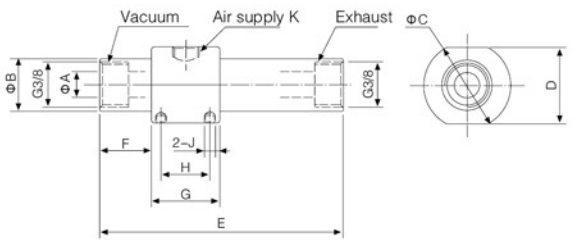
① Model ② Material

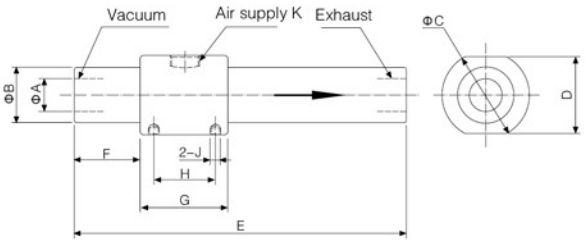
2-3	7-6	AL-Aluminum
3-3	15-3	SS-Stainless steel
5-6	15-6	

Applications

- ☆ Transfering materials
- ☆ Seledge removal intrimming operation
- ☆ Convy wheat,corn
- ☆ Transfer powder detargent and plastic powder
- ☆ Chip removal in drilling operation
- ☆ Powder removal in grinding operation

ACPF3-3





Model	Dimension									
	ΦA	ΦB	ΦC	D	E	F	G	H	J	K
ACPF2-3	6.5	18.5	32	30	89	19	25	18	M4	G1/8
ACPF3-3	9.5	18.5	32	30	89	19	25	18	M4	G1/8
ACPF5-6	12.5	24	38	34	140	25.5	32	23	M4	G1/4
ACPF7-6	19	32	50	45	190	38	50	35	M4	G3/8
ACPF15-3	25	38	59	55	198	40	56	40	M4	G3/8
ACPF15-6	38	49.6	69	65	205	40	60	42	M4	G3/8

ACPF Series Vacuum flow(L/m)、Vacuum level(-kPa)、Air Consumption(L/m)

Model	Air velocity	Vacuum flow	Vacuum level	Air consumption(l/m)	
	ft/s	l/m	-kPa	2.8bar	5.5bar
ACPF2-3	485	295	26	85	160
ACPF3-3	328	425	16	95	170
ACPF5-6	361	870	35	395	680
ACPF7-6	325	1825	28	790	1365
ACPF15-3	223	4400	4.4	405	695
ACPF15-6	270	5610	9	790	1365

Features

◇Various models, suitable for different applications
◇With straight vacuum passage, low vacuum level, high vacuum flow

Applications

◇Transport of porous materials such as foams, textiles, paper and so on
◇Transport of granule materials such as powder, beans, rice, coffee bean and other bulk goods

Model

Model	Nozzle diameter (mm)	Material
ACPS	100–10 200–20 400–40 750–75	AL – Aluminum Alloy

△ACPS100

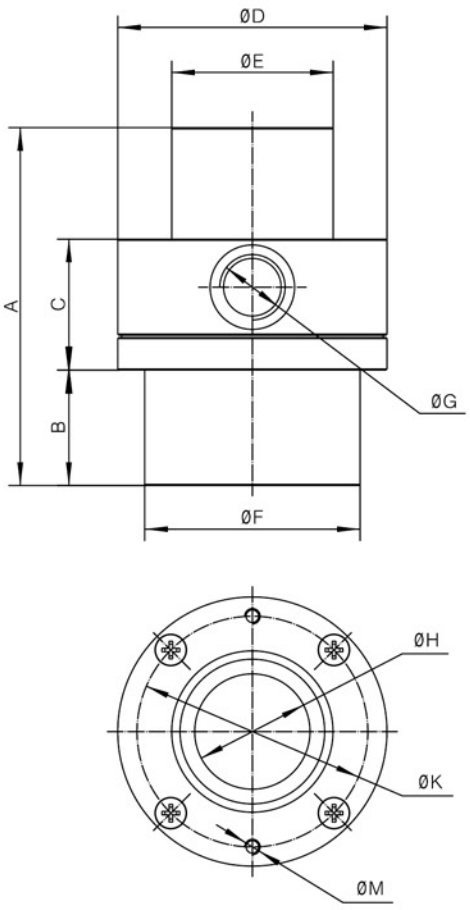
How to order

Model \ Specification	A	B
ACPS100	111.1001.0000	111.1002.0000
ACPS200	111.2001.0000	111.2002.0000
ACPS400	111.4001.0000	111.4002.0000
ACPS750	111.7501.0000	111.7502.0000

Technical parameters

Model	Max. vacuum flow l/m (5bar)	Max. vacuum level –kPa	Operating pressure bar	Air consumption l/m (5bar)	Operating temperature ℃	Weight g
ACPS100	655	12	2~6	118	–20~80	76.5
ACPS200	1950	2~8		221		189
ACPS400	2900			430		522
ACPS750	8588			876		2308

Dimensions



ACPS100~ACPS750

Model \ Dimension(mm)	A	B	C	D	E	F	G	H	K	M
ACPS100	70	23	21	37	19	19	G1/8	10	29	M4
ACPS200	90	30	30	50	32	38	G1/4	20	41.5	M4
ACPS400	96	35	35	84	52	75	G3/8	40	72	M4
ACPS750	180	35	65	140	100	125	G1/2	75	126	M6

Specifications

Model		Unit	ACV-05		ACV-10			ACV-15			ACV-20			ACV-25		ACV-30	
			HS	LS	HS	LS	HR	HS	LS	HR	HS	LS	HR	HS	LS	HS	LS
Fluid			No oil compressed air														
Ambient temperature		℃	0~60(No freezing)														
Operating pressure range		bar	1~6														
Nozzle diameter		Φmm	0.5		1.0			1.5			2.0			2.5		3.0	
Rated pressure		bar	5		5		3.5	5		3.5	5		3.5	5		5	
Vacuum flow rate		l/min	7	10	27	36	25	63	95	54	110	170	88	160	250	225	350
Max.vacuum pressure		kPa	-87	-57	-92	-57	-91	-92	-57	-91	-92	-57	-91	-92	-57	-92	-57
Air consumption flow rate		l/min	13		44			100			180			265		385	
Net weight	Without pressure switch	g	80		80			140			350			730		870	
	With pressure switch	g	120		120			190			460			–		–	

How to Order

ACV – 05 H S CK
① ② ③ ④

① Nozzle diameter

05	Φ0.5
10	Φ1.0
15	Φ1.5
20	Φ2.0
25	Φ2.5
30	Φ3.0

② Max.vacuum pressure

H	-87kPa(Pressure type)
L	-53kPa(Flow type)

③ Rated pressure

S	5bar
R	3.5bar

④ Pressure switch

Nil	Standard(no pressure switch)
CK	With adjustable pressure switch
C	With unadjustable pressure switch

Note: When nozzle diameter is 30, only standard type is available (no pressure switch)

Model of spare parts

• Silencer

PSU01	ACV-05, ACV-10
PSU02	ACV-15
PSU04	ACV-20
ABS06	ACV-25, ACV-30

• Pressure switch
ACV-CK

• Combination table

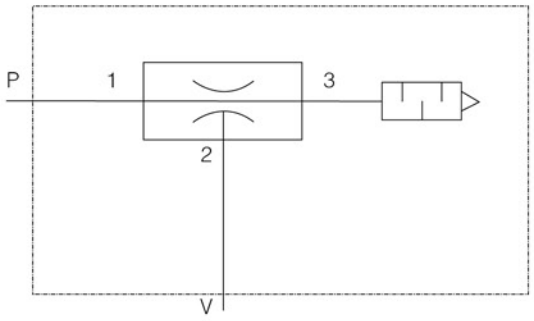
①	②	③		④
		S	R	
05	H	○	×	○
	L	○	×	○
10	H	○	○	○
	L	○	×	○
15	H	○	○	○
	L	○	×	○
20	H	○	○	○
	L	○	×	○
25	H	○	×	○
	L	○	×	○
30A	H	○	×	×
	L	○	×	×

Pressure switch specifications

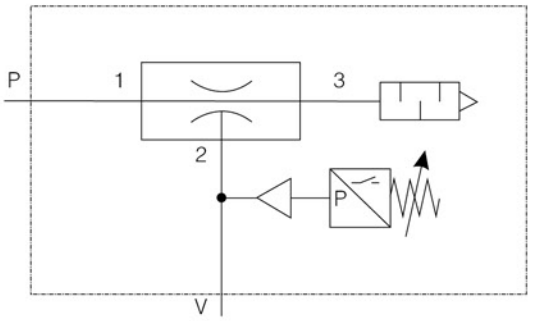
Model	Unit	CK	
Fluid		Air	
Setting pressure range	kPa	−20~−53	
Ambient temperature	℃	0~60(No freezing)	
Operating accuracy	kPa	±5.3	
Hysteresis	kPa	4.0~13.3	
Service voltage	V	AC250V below	DC24V below
Load current	A	3	0.2

Symbol

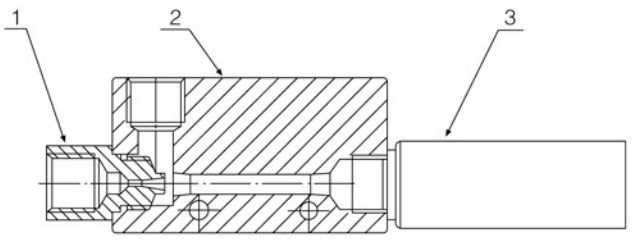
ACV(Standard)



ACV−**CK(with pressure switch)



Structure diagram



• Main spare parts

No.	Name	Material
1	Nozzle	Brass
2	Body	AL
3	Silencer	PE

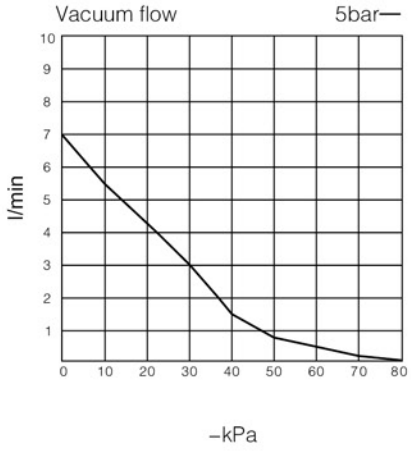
Vacuum flow(l/min)at different vacuum levels(–kPa)

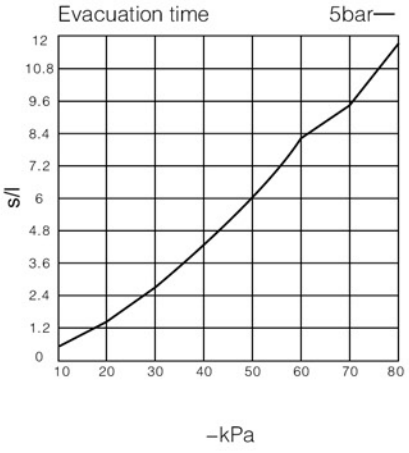
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	80	Max.vacuum level
ACV–05HS	5 bar	13 l/min	7	5.5	4.2	3	1.5	0.8	0.5	0.2	0.05	–87kPa
ACV–10HS		44 l/min	27	19	16	14.5	13	10.5	8	6.5	2.5	–92kPa
ACV–15HS		100 l/min	63	55	44	37	32.5	25	18	14	9	
ACV–20HS		180 l/min	110	100	85	75	55	40.5	30	20	12	
ACV–25HS		265 l/min	160	155	140	120	95	72	47	28	15	
ACV–30HS		385 l/min	225	200	160	135	105	78	55	33	19	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

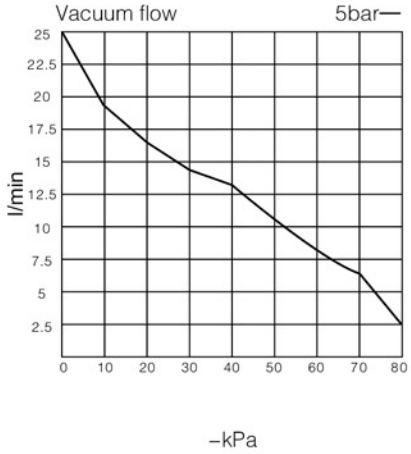
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	70	80	Max.vacuum level
ACV–05HS	5 bar	13 l/min	0.676	1.384	2.769	4.323	6.015	8.246	9.438	11.820	–87kPa
ACV–10HS		44 l/min	0.2	0.492	0.815	1.246	1.738	2.323	2.953	4	–92kPa
ACV–15HS		100 l/min	0.078	0.187	0.32	0.477	0.692	0.924	1.384	1.953	
ACV–20HS		180 l/min	0.043	0.1	0.167	0.23	0.338	0.492	0.707	0.923	
ACV–25HS		265 l/min	0.03	0.069	0.112	0.168	0.241	0.345	0.494	0.753	
ACV–30HS		385 l/min	0.029	0.058	0.092	0.136	0.196	0.265	0.406	0.625	

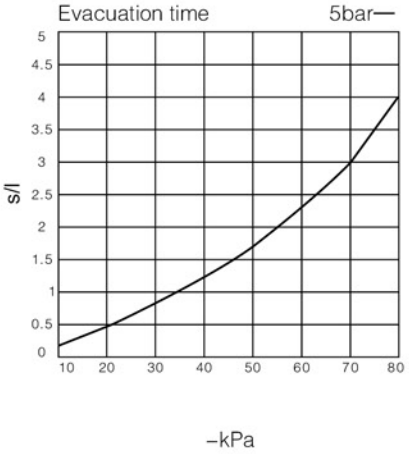
• ACV–05HS



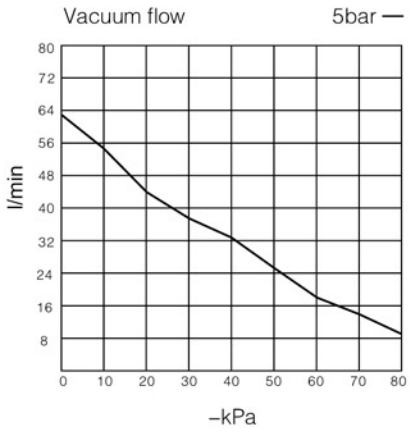


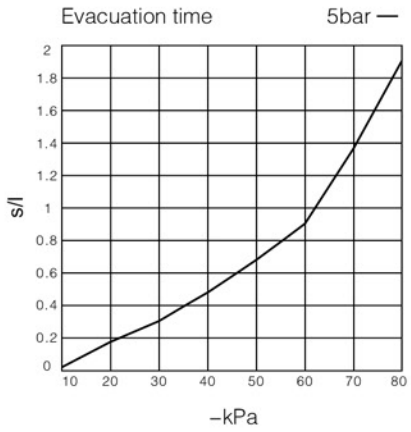
• ACV–10HS



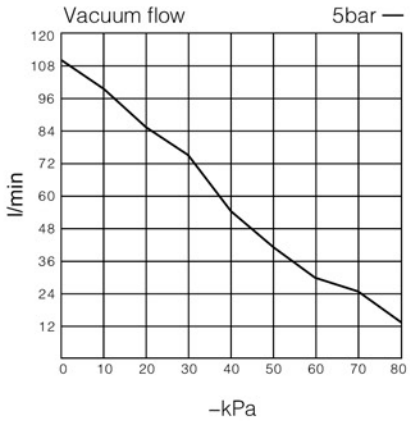


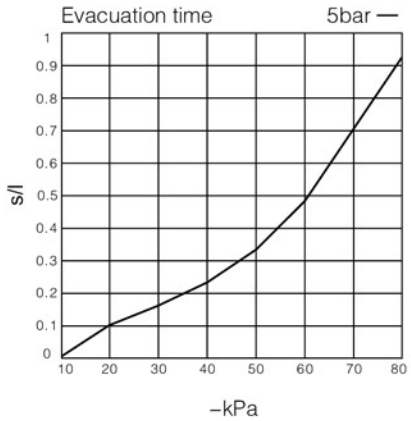
• ACV–15HS



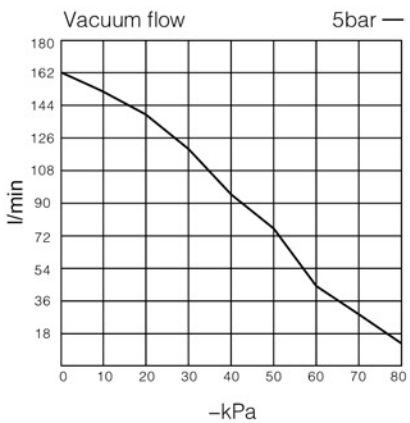


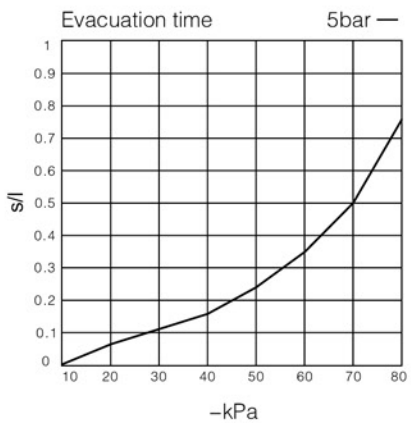
• ACV–20HS



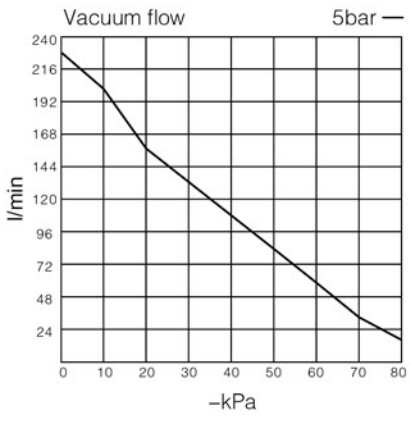


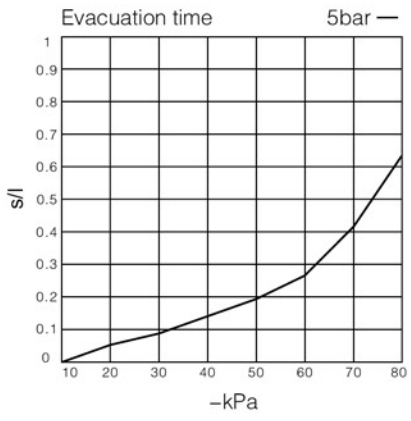
• ACV–25HS





• ACV–30HS





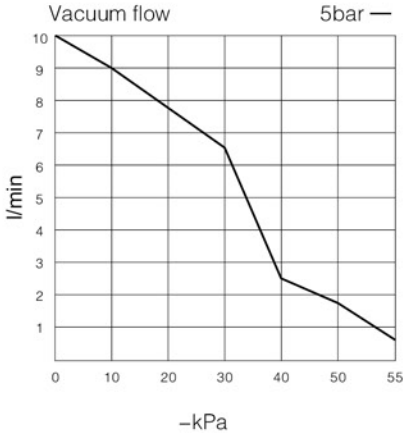
Vacuum flow(l/min)at different vacuum levels(–kPa)

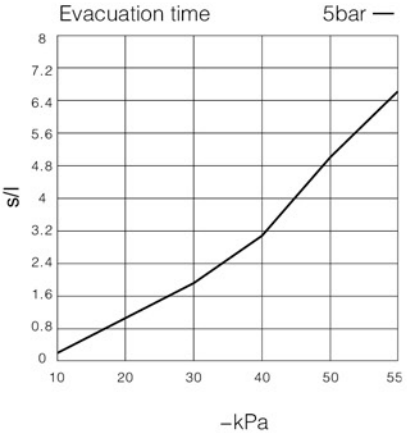
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	55	Max.vacuum level
ACV–05LS	5 bar	13 l/min	10	9	8	6.5	2.5	1.8	0.7	–57kPa
ACV–10LS		44 l/min	36	31.5	23.5	16.5	10	6.5	2.5	
ACV–15LS		100 l/min	95	85	70	47.5	30.5	15.5	5.5	
ACV–20LS		180 l/min	170	125	115	95	70	35.5	7.5	
ACV–25LS		265 l/min	250	215	200	150	105	60	36	
ACV–30LS		385 l/min	350	295	267	215	150	85	41	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

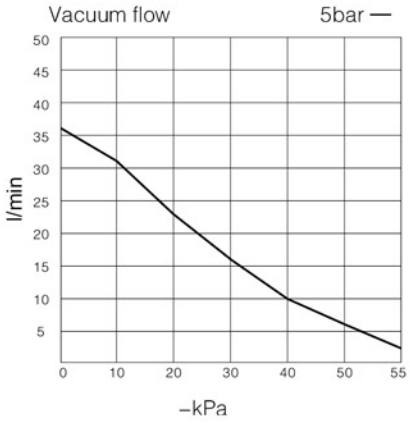
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	55	Max.vacuum level
ACV–05LS	5 bar	13 l/min	0.307	0.984	1.892	3.169	5.123	6.66	–57kPa
ACV–10LS		44 l/min	0.107	0.277	0.507	0.830	1.323	1.414	
ACV–15LS		100 l/min	0.044	0.102	0.153	0.261	0.415	0.553	
ACV–20LS		180 l/min	0.029	0.062	0.105	0.138	0.246	0.338	
ACV–25LS		265 l/min	0.021	0.046	0.076	0.123	0.184	0.3	
ACV–30LS		385 l/min	0.017	0.035	0.058	0.086	0.132	0.219	

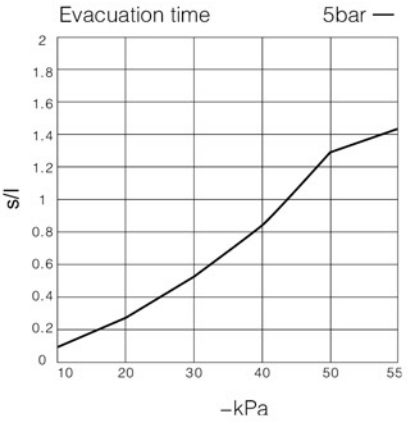
• ACV–05LS



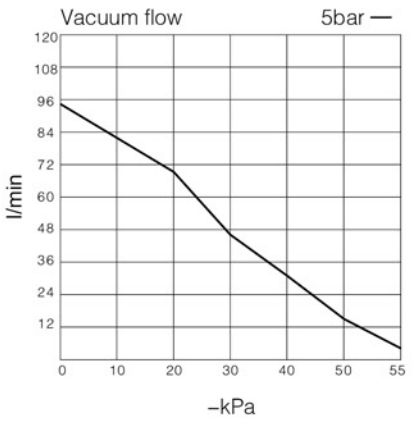


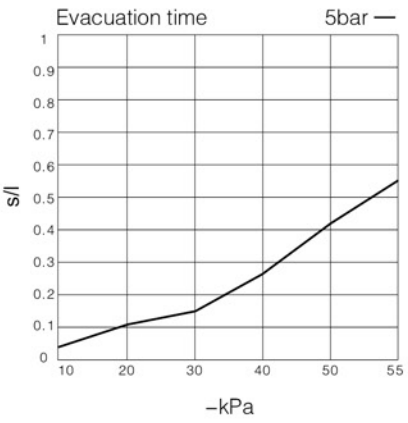
• ACV–10LS



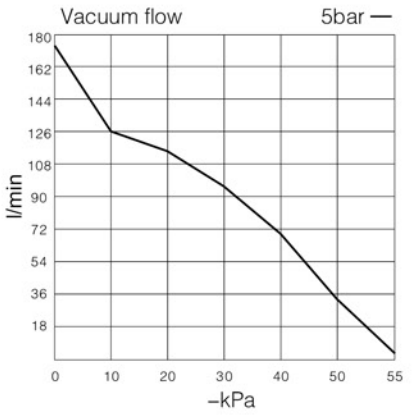


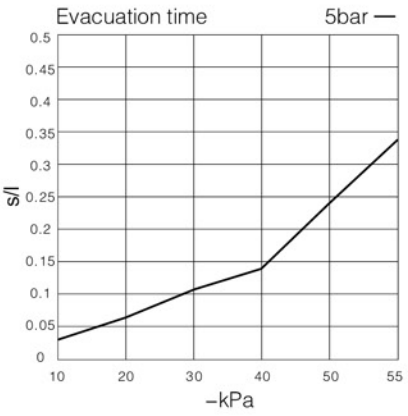
• ACV–15LS



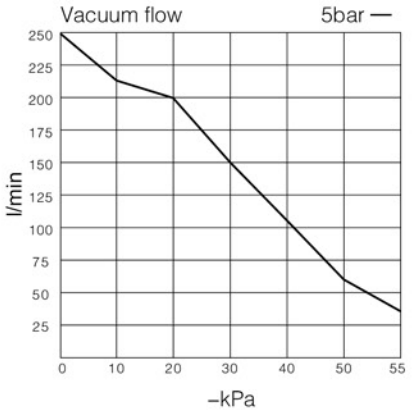


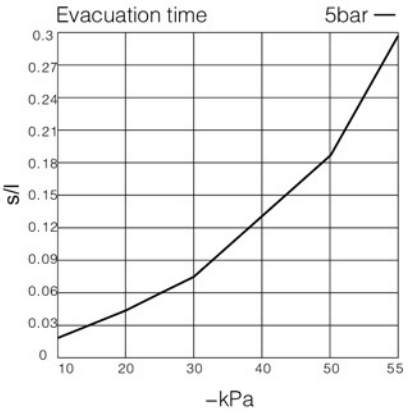
• ACV–20LS



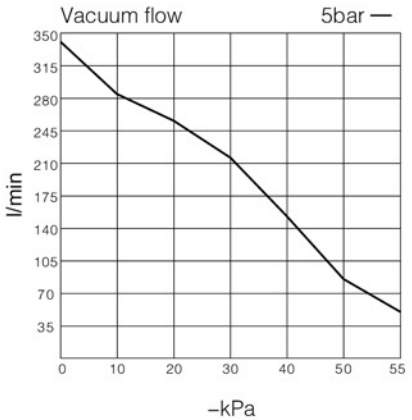


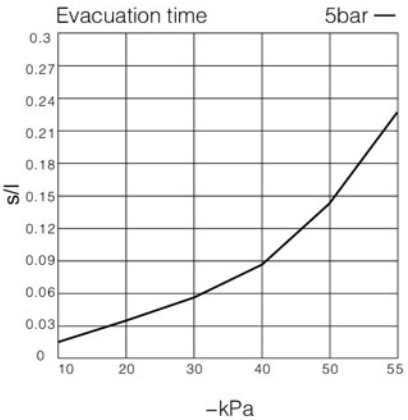
• ACV–25LS





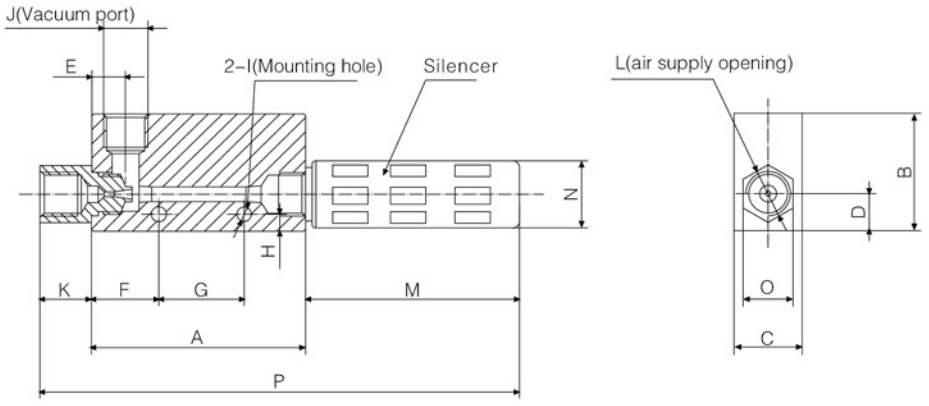
• ACV–30LS





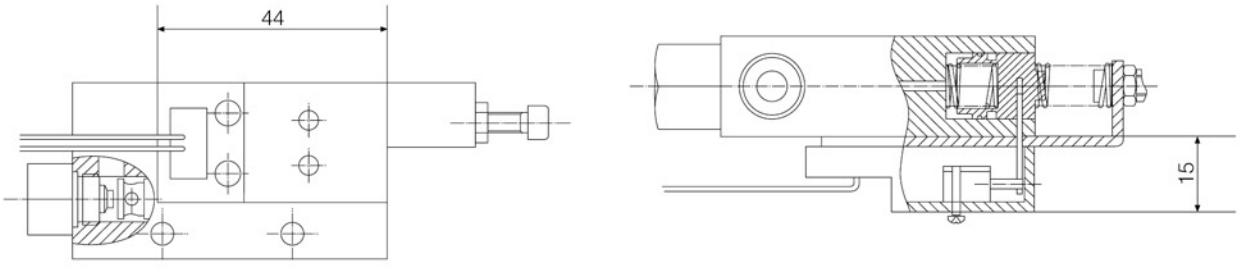
Dimensions (mm)

• ACV-□□Standard (without pressure switch)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Silencer mounting screw
ACV-05	45	33	16	10	8	14	20	4.5	2-Φ4.5	Rp1/8	10	Rp1/8	30	Φ15	14	85	Rp1/8
ACV-10	45	33	16	10	8	14	20	4.5	2-Φ4.5	Rp1/8	10	Rp1/8	30	Φ15	14	85	Rp1/8
ACV-15	63	35	20	11	10	20	25	5	2-Φ4.5	Rp1/4	15	Rp1/4	51	Φ19	17	129	Rp1/4
ACV-20	85	40	30	15	13	28	32	7	2-Φ6	Rp3/8	20	Rp1/4	56	Φ28	24	161	Rp1/2
ACV-20CK	85	50	30	15	13	28	32	7	2-Φ6	Rp3/8	20	Rp1/4	56	Φ28	24	161	Rp1/2
ACV-25	100	60	40	20	16	20	50	5.5	2-Φ6	Rc1/2	17	Rc3/8	119	Φ40	27	236	Rp3/4
ACV-30	118	60	40	20	20	33	50	5.5	2-Φ6	Rc3/4	20	Rc1/2	119	Φ40	30	257	Rp3/4

• ACV-CK (with adjustable pressure switch)



Features

◇Small volume, easy to install
◇Low air consumption, produce vacuum quickly
◇Several connection type with vacuum pad can be selective

Model

Model	Connection thread (Male thread)	Connection type with vacuum pad
AQV	M5 M8 G1/8 G1/4	A–Push into the vacuum pad directly B–Male thread connection C–Stardard

△AQV–M5–C

How to order

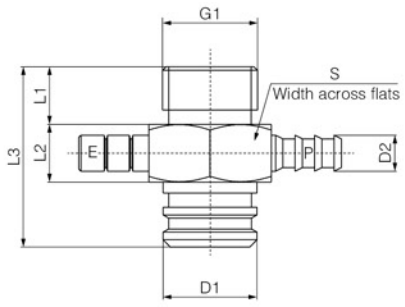
Model \ Connection type with vacuum pad	A–Push into the vacuum pad directly	B–Male thread connection		C–Stardard	
		Without mesh filter	Built–in mesh filter	Without mesh filter	Built–in mesh filter
AQV–M5	108.2050.0000	108.2051.0000	––	108.2052.0000	––
AQV–M8	108.2080.0000	108.2081.0000	108.2081.0000	108.2082.0000	––
AQV–G1/8	108.1010.0000	108.1011.0000	108.1011.0000	108.1012.0000	108.1012.1000
AQV–G1/4	108.1020.0000	108.1021.0000	108.1021.0000	108.1022.0000	108.1022.1000

Technical parameters

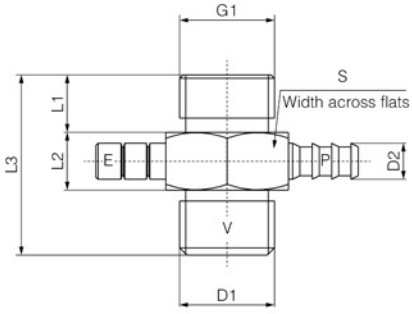
Model	Max. vacuum flow l/min (6bar)	Max. vacuum level (–kPa)	Air supply pressure (bar)	Air consumption l/min (6bar)
AQV–M5	4	81	6	12
AQV–M8	1	83		11
AQV–G1/8	3.5	78		14.5
AQV–G1/4	11.5	82		27

Dimensions

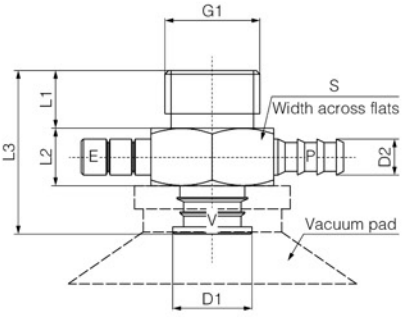
A–Push into the vacuum pad directly



B–Male thread connection



C–Stardard



Dimension(mm) / Model	L1	L2	L3	D1	D2	S	G1
AQV–M5–A	5	7	16	Φ6	Φ3.5	10	M5
AQV–M5–B	5	7	17	M5	Φ3.5	10	M5
AQV–M5–C	5	7	19.5	Φ5.3	Φ3.5	10	M5
AQV–M8–A	8	17.5	28	Φ2.5	Φ5	13	M8
AQV–M8–B	8	17.5	27.5	M8	Φ5	13	M8
AQV–M8–C	8	17.5	28	Φ3.1	Φ5	13	M8
AQV–G1/8–A	7	7	19.5	Φ7.3	Φ5	14	G1/8
AQV–G1/8–B	7	7	20	G1/8	Φ5	14	G1/8
AQV–G1/8–C	7	7	19.3	Φ8	Φ5	14	G1/8
AQV–G1/4–A	8	8	25	Φ13	Φ5	17	G1/4
AQV–G1/4–B	8	8	25	G1/4	Φ5	17	G1/4
AQV–G1/4–C	8	8	22.7	Φ11	Φ5	17	G1/4

△Remark：AQV–M5–C Match with the vacuum pad –– SU10、SU15、SF15、SB12、SB15;
AQV–M8–C Match with the vacuum pad –– SU4、SU6、SU8、SB5、SB8;
AQV–G1/8–C Match with the vacuum pad –– SU20、SU25、SU30、SF20、SF25、SF30、SB17、SB20、SBL20;
AQV–G1/4–C Match with the vacuum pad –– SU40、SF40、SB30、SB40、SBL30、SBL40;
Pls refer to our catalogue P102–117 about the vacuum pad model.



How to Order

AZH 07 B S – 06 – 06
AZH 07 D S – 01 – 01 – 01
① ② ③ ④ ⑤

① Nozzle diameter(mm)

05	0.5
07	0.7
10	1.0
13	1.3
15	1.5
18	1.8
20	2.0

② Max.vacuum pressure

S	–88kPa
L	–48kPa

③ (Note)SUP. Port size

Symbol	Size	Style
06	Φ6	One–touch
08	Φ8	One–touch
10	Φ10	One–touch
12	Φ12	One–touch
01	Rc 1/8	Screw–in
02	Rc 1/4	Screw–in
03	Rc 3/8	Screw–in

④ (Note)VAC. Port size

Symbol	Size	Style
06	Φ6	One–touch
10	Φ10	One–touch
12	Φ12	One–touch
16	Φ16	One–touch
01	Rc 1/8	Screw–in
02	Rc 1/4	Screw–in
03	Rc 3/8	Screw–in
04	Rc 1/2	Screw–in

⑤ (Note)EXH. Port size

Symbol	Size	Style
06	Φ6	One–touch
08	Φ8	One–touch
10	Φ10	One–touch
12	Φ12	One–touch
16	Φ16	One–touch
01	Rc 1/8	Screw–in
02	Rc 1/4	Screw–in
03	Rc 3/8	Screw–in
04	Rc 1/2	Screw–in

Specifications

Model	Nozzle diameter Φmm	Body style	Max.vacuum pressure(kpa)		Max.vacuum flow l/min		Air consumption l/min	Connection (One–touch/Screw–in)		
			S style	L style	S style	L style	S style/L style	SUP	VAC	EXH
AZH05B□	0.5	Box style (Built–in silencer)	–88	–48	5	9	13.5	Φ6/Rc 1/8	Φ6/Rc 1/8	––
AZH07B□	0.7				12	22	23.5			
AZH10B□	1.0				24	34	46			
AZH13B□	1.3				40	75	78	Φ8/Rc 1/8	Φ10/Rc 1/4	
AZH05D□	0.5	Body ported style (without silencer)	–88	–48	7.5	9	13.5	Φ6/Rc 1/8	Φ6/Rc 1/8	Φ6/Rc 1/8
AZH07D□	0.7				12	22	23.5			
AZH10D□	1.0				24	34	46	Φ6/Rc 1/8	Φ6/Rc 1/8	Φ8/Rc 1/8
AZH13D□	1.3				40	75	78	Φ8/Rc 1/8	Φ10/Rc 1/4	Φ10/Rc 1/4
AZH15D□	1.5	Body ported style (without silencer)	–88	–53	60	80	97	Φ10/Rc 1/4	Φ12/Rc 3/8	Φ12/Rc 3/8
AZH18D□	1.8				70	110	150	Φ12/Rc 3/8		
AZH20D□	2.0				85	140	185	Φ12/Rc 3/8	Φ16/Rc 1/2	Φ16/Rc 1/2

*Supply pressure:4.5bar

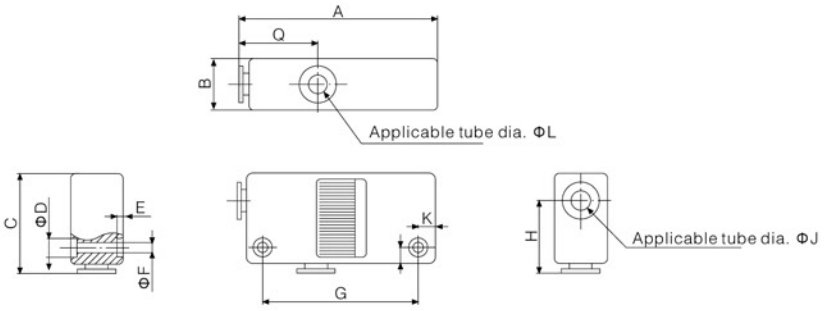
Table ① Combination of connection				
Body		SUP	VAC	EXH
Box style (Buit–in silencer)	①	One–touch	One–touch	––
	②	One–touch	Screw–in	––
	③	Screw–in	Screw–in	––
Body ported style (without silencer)	①	One–touch	One–touch	One–touch
	②	One–touch	Screw–in	One–touch
	③	Screw–in	Screw–in	Screw–in

Table ② port size			
Model	SUP	VAC	EXH
AZH05B	Φ6/Rc 1/8	Φ6/Rc 1/8	––
AZH07B			
AZH10B			
AZH13B	Φ8/Rc 1/8	Φ10/Rc 1/4	
AZH05D	Φ6/Rc 1/8	Φ6/Rc 1/8	Φ6/Rc 1/8
AZH07D			
AZH10D	Φ6/Rc 1/8	Φ6/Rc 1/8	Φ8/Rc 1/8
AZH13D	Φ8/Rc 1/8	Φ10/Rc 1/4	Φ10/Rc 1/4
AZH15D	Φ10/Rc 1/4	Φ12/Rc 3/8	Φ12/Rc 3/8
AZH18D	Φ12/Rc 3/8		
AZH20D	Φ12/Rc 3/8	Φ16/Rc 1/2	Φ16/Rc 1/2

Dimensions (mm)

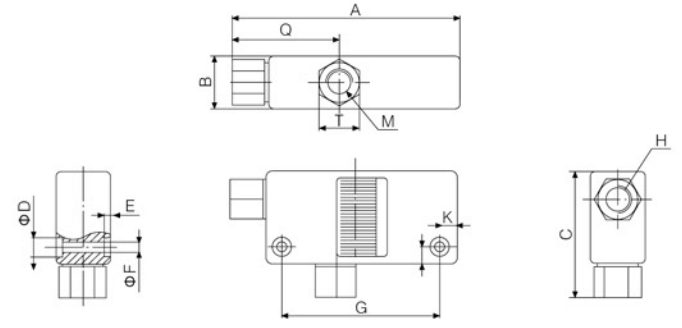
Box style (Buit–in silencer)

• One–touch connection



Model	A	B	C	D	E	F	G	H	Q	L	K	J
AZH05B–06–06	60	16	31	5.8	2	3.2	47	22	24	6	5	6
AZH07B–06–06	60	16	31	5.8	2	3.2	47	22	24	6	5	6
AZH10B–06–06	63	18	32	5.8	2	3.2	50	23	26	6	5	6
AZH13B–08–10	78	23	38.5	7.5	3	4.2	61	27.5	28	10	7	8

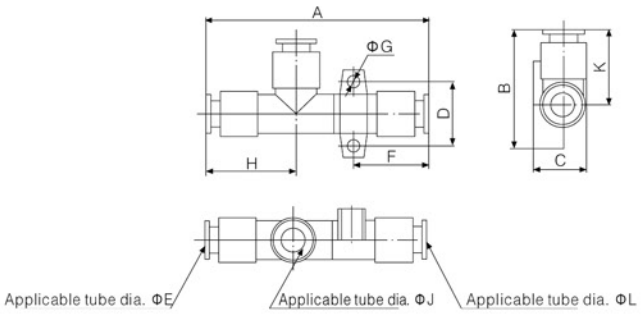
• Screw–in connection



Model	A	B	C	D	E	F	G	H	Q	M	K	T
AZH05B–01–01	68	16	39	5.8	2	3.2	47	Rc1/8	31.5	Rc1/8	5	12
AZH07B–01–01	68	16	39	5.8	2	3.2	47	Rc1/8	31.5	Rc1/8	5	12
AZH10B–01–01	71	18	40	5.8	2	3.2	50	Rc1/8	33.5	Rc1/8	5	12
AZH13B–01–02	86.5	23	50	7.5	3	4.2	61	Rc1/8	36.5	Rc1/4	7	14

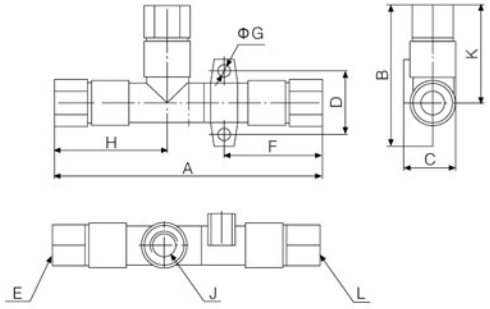
Body ported style (without silencer)

• One-touch connection



Model	A	B	C	D	E	F	G	H	L	K	J
AZH05D-06-06-06	58.5	34	14.2	17	6	21	3.2	24	6	22	6
AZH07D-06-06-06	61	34	14.2	17	6	22	3.2	24	6	22	6
AZH10D$^{S}_{L}$-06-06-08	$^{66}_{70}$	37	17.2	20	6	24.5	4.2	26	8	23	6
AZH13D$^{S}_{L}$-08-10-10	$^{74}_{79.5}$	42.5	20	22	8	27	4.2	28	10	27.5	10
AZH15D-10-12-12	93.3	47	22.5	27	10	32.8	4.2	31.5	12	29.5	12
AZH18D-12-12-12	114	41	21	10	12	50	3.5	35.5	12	30.5	12
AZH20D-12-16-16	124.6	46	27	12	12	54.3	3.5	38.5	16	32.7	16

• Screw-in connection



Model	A	B	C	D	E	F	G	H	L	K	J
AZH05D-01-01-01	73.5	41.5	14.2	17	Rc1/8	28.5	3.2	31.5	Rc1/8	22	Rc1/8
AZH07D-01-01-01	76	41.5	14.2	17	Rc1/8	29.5	3.2	31.5	Rc1/8	22	Rc1/8
AZH10D$^{S}_{L}$-01-01-01	$^{82}_{86}$	44.5	17.2	20	Rc1/8	33	4.2	33.5	Rc1/8	23	Rc1/8
AZH13D$^{S}_{L}$-01-02-02	$^{94.5}_{99.5}$	54	20	22	Rc1/8	38.5	4.2	36.5	Rc1/4	27.5	Rc1/4
AZH15D-02-03-03	116.5	58.5	22.5	27	Rc1/4	44.5	4.2	43	Rc3/8	29.5	Rc3/8
AZH18D-03-03-03	133	52.5	21	10	Rc3/8	57.5	3.5	47	Rc3/8	30.5	Rc3/8
AZH20D-03-04-04	151	61	27	12	Rc3/8	69.3	3.5	50	Rc1/2	32.7	Rc1/2

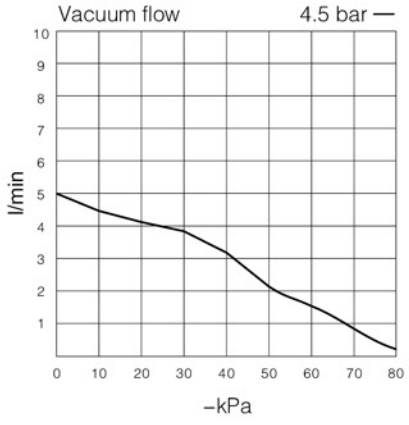
Vacuum flow(l/min)at different vacuum levels(–kPa)

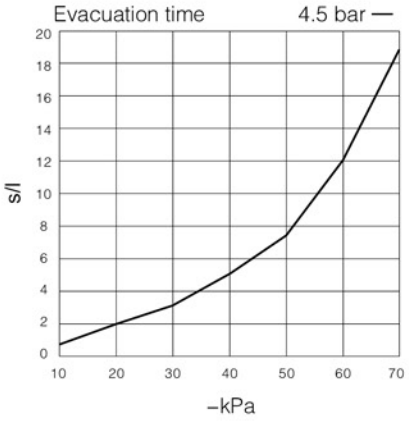
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	80	Max.vacuum level
AZH05S	4.5 bar	13.5 l/min	5	4.5	4.1	3.8	3.3	2.3	1.6	0.9	0.3	–88kPa
AZH07S		23.5 l/min	12	11	10	9	8	7	5.5	2.1	0.8	
AZH10S		46 l/min	24	23	20.5	17.5	13	11.5	9.5	7	2.5	
AZH13S		78 l/min	40	35	32.5	28	23	19.5	13	9	4.5	
AZH15S		97 l/min	60	52.5	45.5	38	28.5	20.5	15.5	11.5	5	
AZH18S		150 l/min	70	62	52	45	38	26	22	16.5	8.5	
AZH20S		185 l/min	85	76	67	58	47.5	38	33.5	19	12	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	70	Max.vacuum level
AZH05S	4.5 bar	13.5 l/min	0.89	1.7	3.2	5	7.8	12	19	–88kPa
AZH07S		23.5 l/min	0.37	1	1.9	3	5.4	6.7	15	
AZH10S		46 l/min	0.25	0.6	1.25	2	2.9	4.6	7.3	
AZH13S		78 l/min	0.1	0.27	0.53	1	1.75	4.2	7.3	
AZH15S		97 l/min	0.04	0.21	0.35	0.63	1.23	4.1	6.5	
AZH18S		150 l/min	0.02	0.15	0.29	0.46	0.78	1.38	3.51	
AZH20S		185 l/min	0.02	0.12	0.21	0.34	0.55	0.85	1.58	

• AZH05S





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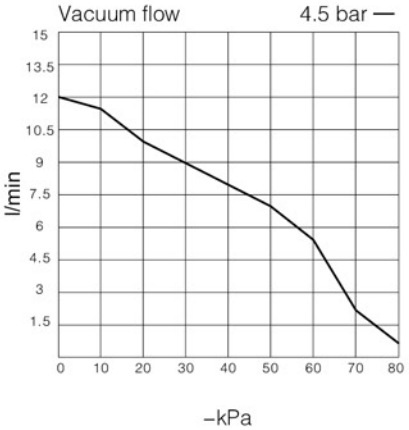

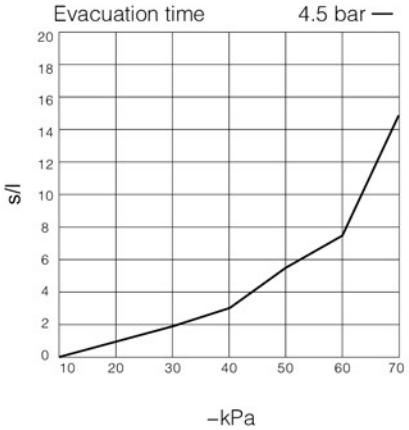

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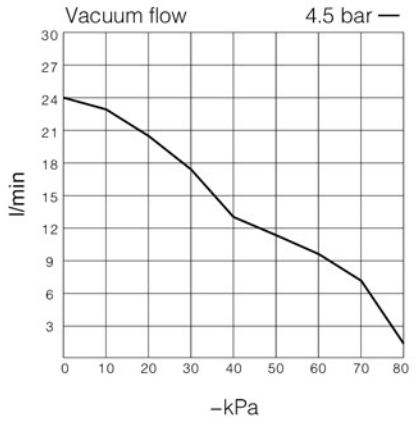

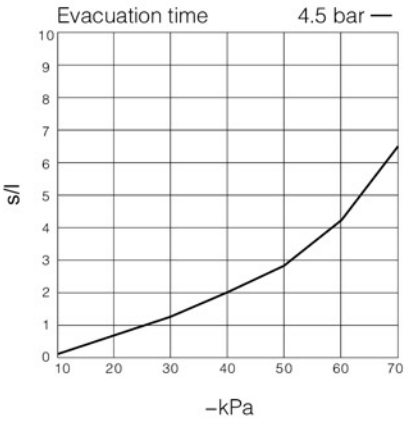

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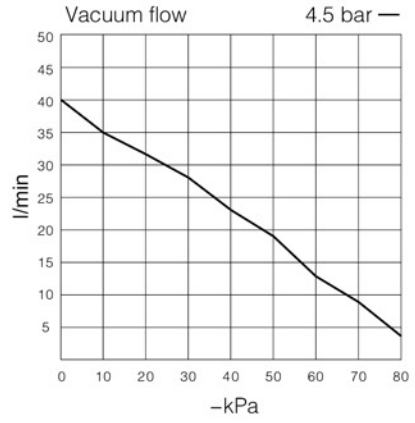

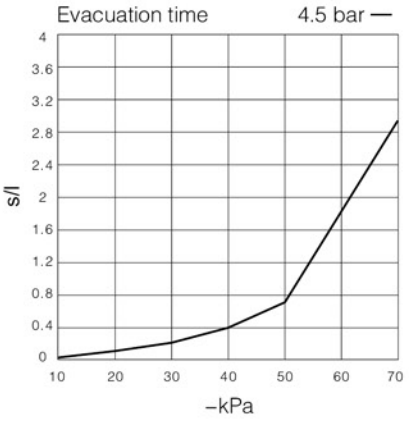

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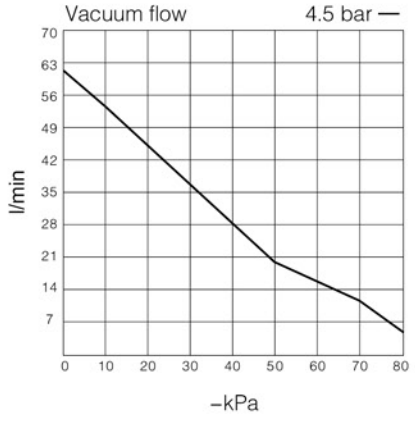

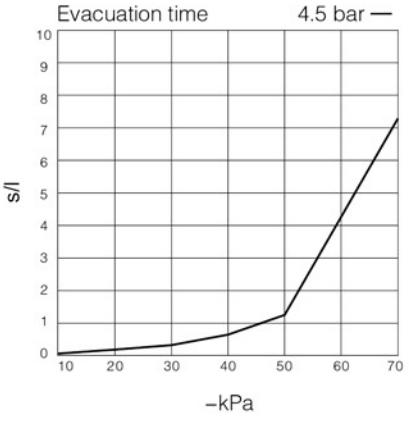

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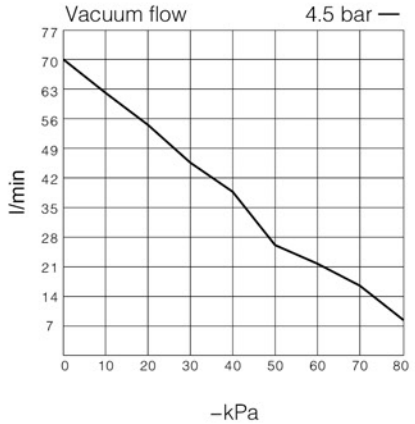

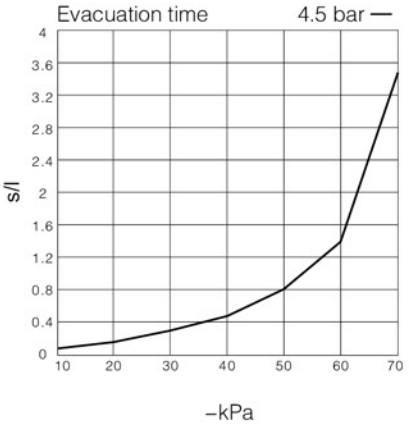

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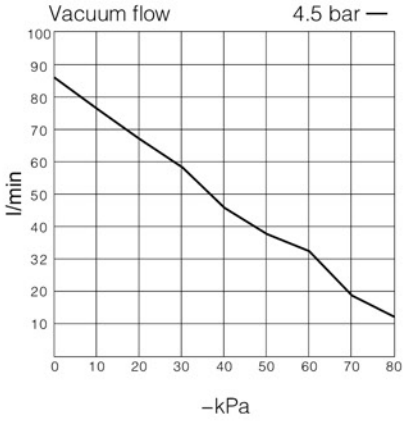
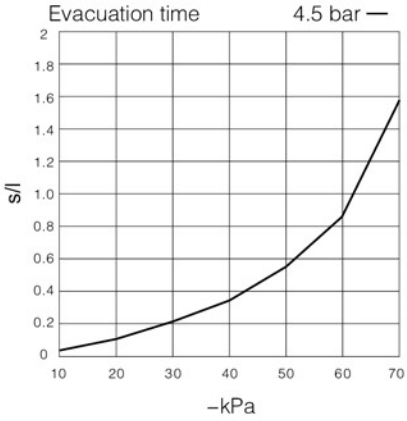




Vacuum flow(l/min)at different vacuum levels(–kPa)

Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	45	Max.vacuum level
AZH05L	4.5 bar	13.5 l/min	9	8	7	6	3	1.9	–48kPa
AZH07L		23.5 l/min	22	21	20.5	15.5	10.5	6.8	
AZH10L		46 l/min	34	32	26	19	12	8	
AZH13L		78 l/min	75	72	65	43	19	9	

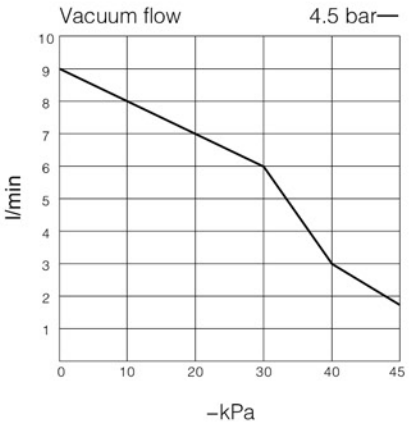
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	Max.vacuum level
AZH15L	4.5 bar	97 l/min	80	72	60	45	36.5	16	–53kPa
AZH18L		150 l/min	110	105	95	80	55	30	
AZH20L		185 l/min	140	130	120	100	80	62	

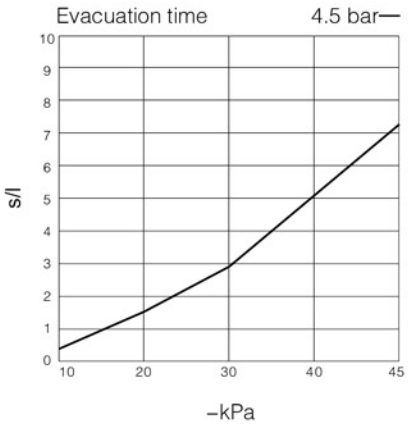
Evacuation time(s/l)to reach different vacuum levels(–kPa)

Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	45	Max.vacuum level
AZH05L	4.5 bar	13.5 l/min	0.49	1.5	2.9	5.1	7.2	–48kPa
AZH07L		23.5 l/min	0.28	0.75	1.5	2.5	3.5	
AZH10L		46 l/min	0.14	0.4	0.81	1.4	1.8	
AZH13L		78 l/min	0.04	0.12	0.24	0.62	2.4	

Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	Max.vacuum level
AZH15L	4.5 bar	97 l/min	0.03	0.15	0.23	0.4	0.92	–53kPa
AZH18L		150 l/min	0.02	0.10	0.18	0.32	0.67	
AZH20L		185 l/min	0.01	0.08	0.14	0.2	0.3	

• AZH05L





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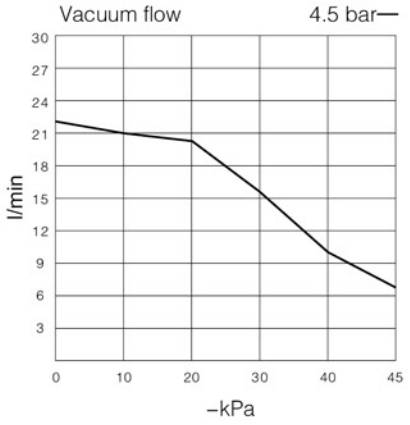

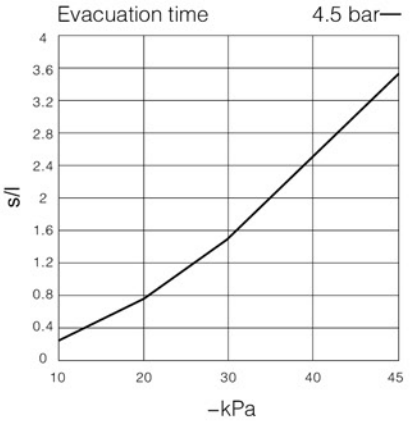

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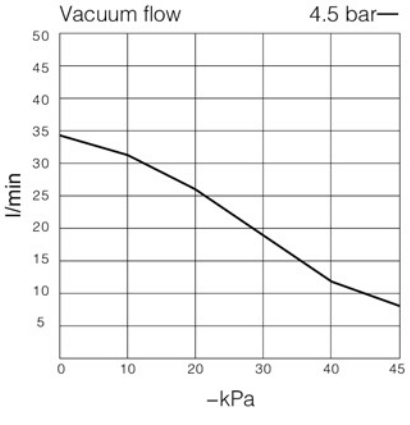

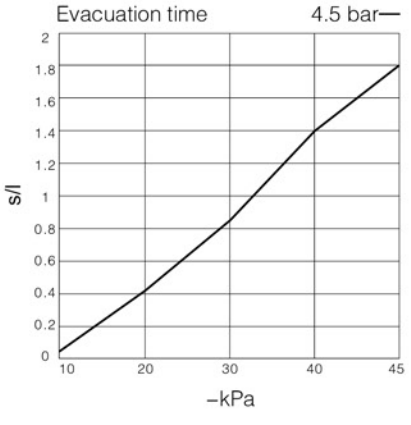

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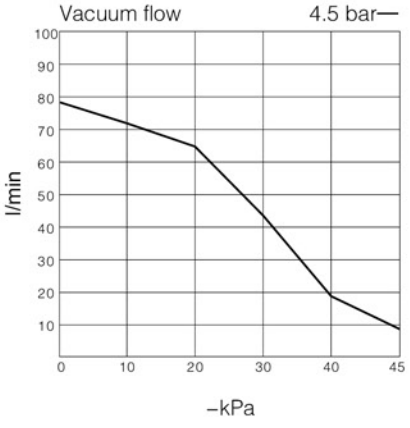

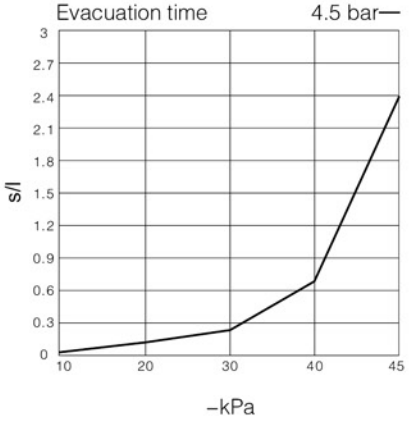

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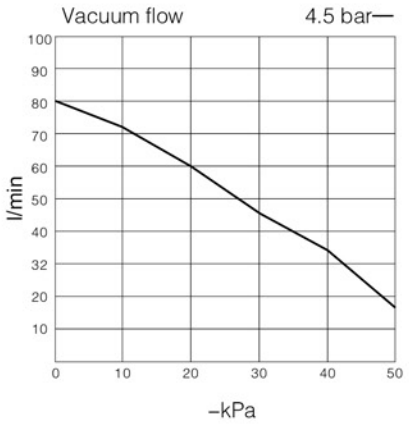

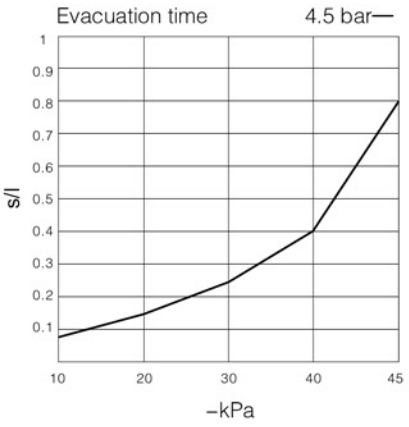

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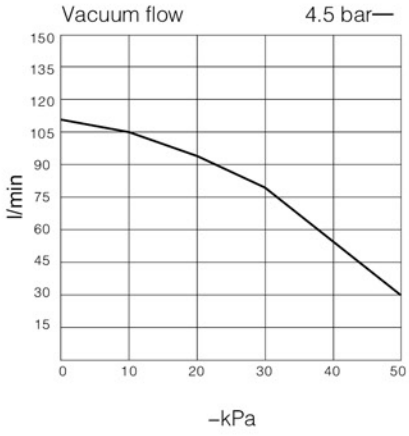

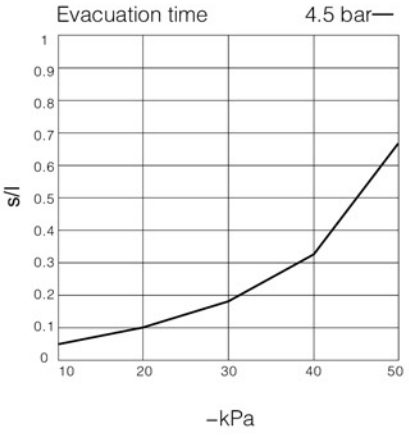

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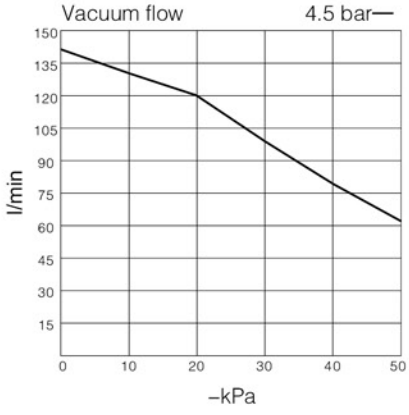
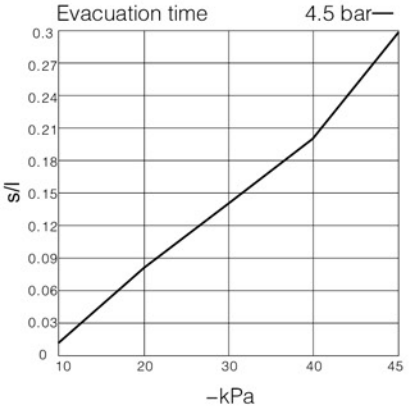




Features

Vacuum port and supply port are located collinearly to facilitate piping built-in one-touch fittings, suitable for copper-free and fluorine-free applications. Light weight, use resin as material

Specifications

Model	Style	Nozzle dia. Φmm	Max.vacuum pressure(kpa)	Max.vacuum flow l/min	Air consumption l/min	weight (g)
AZU05S	High vacuum	0.5	-85	7	10	6.5
AZU07S		0.7	-85	12	19	7.0
AZU05L	Large flow capcity	0.5	-48	12	10	6.5
AZU07L		0.7	-48	21	19	7.0

Technical Parameters

Fluid	Air
Max.operating pressure	7bar
Standard supply pressure	4.5bar
Operating temperature range	5~60℃
Applicable tube O.D.	SUP port: Φ6 VAC port: Φ6

How to Order

AZU 05 S

① ②

① Nozzle diameter

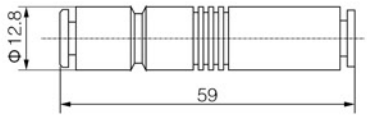
05	Φ0.5mm
07	Φ0.7mm

② Max.vacuum pressure

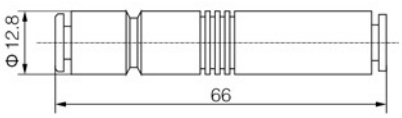
S	-85kPa
L	-48kPa

Dimensions (mm)

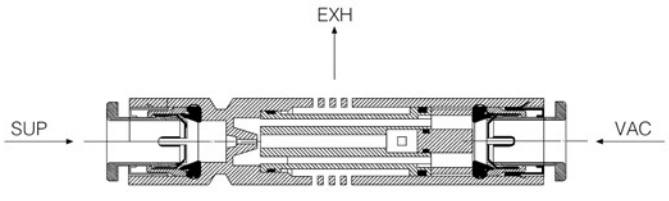
• AZU05S
AZU05L



• AZU07S
AZU07L



Construction



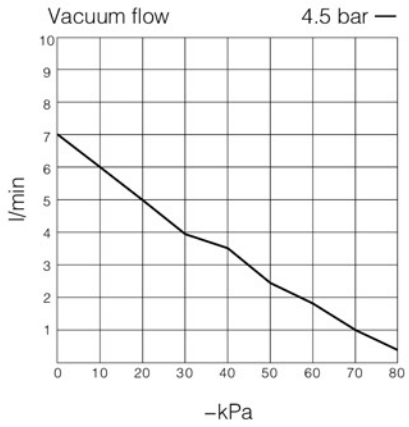
Vacuum flow(l/min)at different vacuum levels(–kPa)

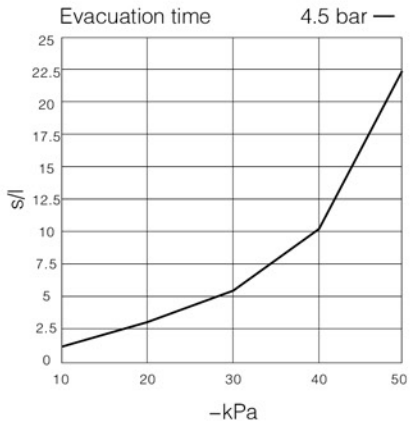
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	80	Max.vacuum level
AZU05S	4.5 bar	9 l/min	7	6	5	4	3.5	2.5	1.8	1	0.4	–85kPa
AZU07S		19 l/min	12	9.5	8.5	7.2	6	5.5	4	2	0.4	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	Max.vacuum level
AZU05S	4.5 bar	9 l/min	0.9	2.6	5.2	10	22.5	–	–85kPa
AZU07S		19 l/min	0.53	1.4	2.7	5	8.7	18	

• AZU05S





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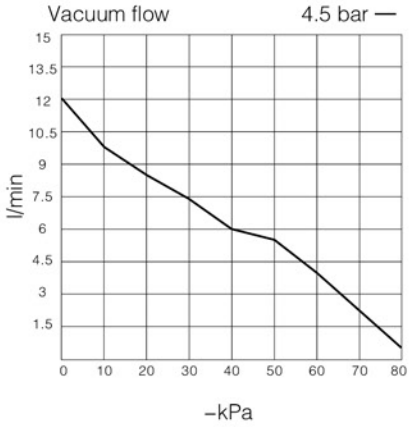
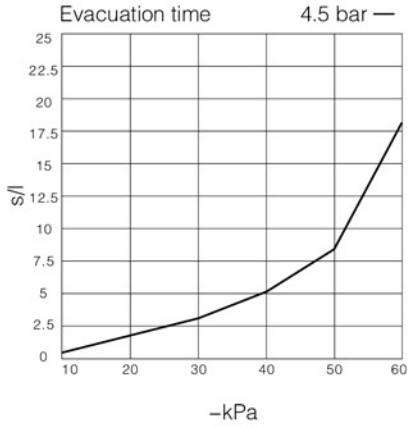




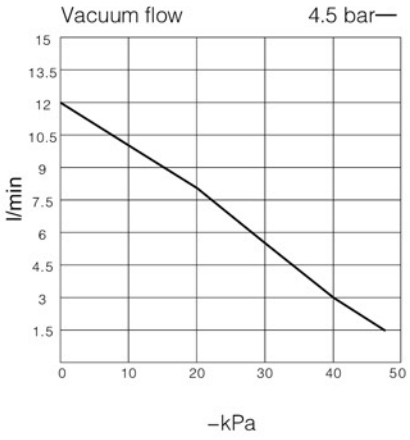
Vacuum flow(l/min)at different vacuum levels(–kPa)

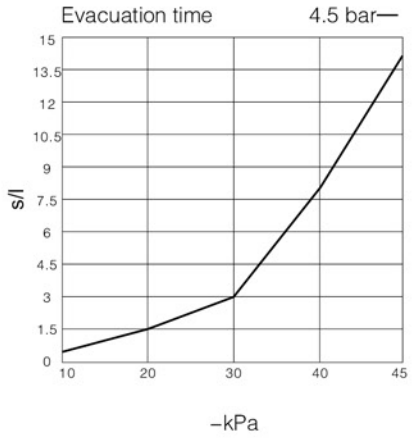
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	48	Max.vacuum level
AZU05L	4.5 bar	9 l/min	12	10	8	5.5	3	1	–48kPa
AZU07L		19 l/min	21	18.5	15.5	11.5	8	1.5	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

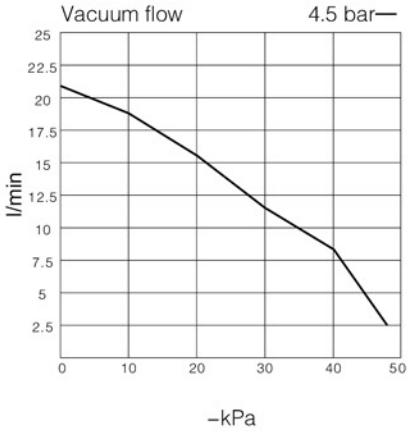
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	45	Max.vacuum level
AZU05L	4.5 bar	9 l/min	0.6	1.5	2.9	8	14	–48kPa
AZU07L		19 l/min	0.34	0.9	2	7.5	13	

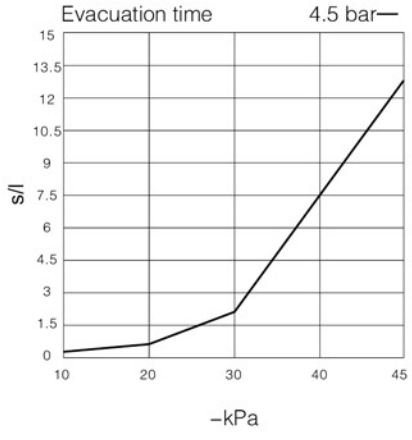
• AZU05L





• AZU07L





Features

☆ Plastic housing optimized for minimum weight and size
☆ Connections with thread holes
☆ Open type silencer

Advantages

☆ Ideal for decentralized vacuum generation in highly dynamic processes
☆ Various power ratings for minimum air consumption
☆ Space-saving and easy to install
☆ Low noise levels and minimum maintenance requirements

Applications

☆ Use in feeder systems
☆ Handling of electronic components
☆ Use in separation systems for plastic and sheet-metal machining
☆ Construction of ejector blocks for decentralized individual control of suction pads

Construction

☆ One-piece housing made of light, impact-resistant plastic
☆ Connection of compressed air and vacuum with threaded holes
☆ Pleasing industrial design
☆ Can be fixed horizontal with mounting holes or vertical with the base on a mounting plate
☆ Optional mounting with mounting plate and mounting kit on DIN top-hat rails

Specifications

Model	Nozzle diameter (mm)	Vacuum level (-kPa)	Max. vacuum flow [l/min]	Air consumpt. during evac. [l/min]*	Noise level workp. gripped [db(A)]
ASBP 10 SDA	1.0	-85	38	50	59
ASBP 15 SDA	1.5	-85	72	110	65

*For max. length 2m

Model	Noise level free [db(A)]	Operating pressure [bar]	Recomm. int. tube diameter compr. air [mm]*	Recomm. int. tube diameter vacuum [mm]*	Weight [g]*	Operating temperature [℃]
ASBP 10 SDA	65	4.5	4	6	22.0	0-60
ASBP 15 SDA	72	4.5	4	6	22.0	0-60

*For max. length 2m

How to Order

ASBP 15 G2 SDA
① ② ③

① Nozzle size

10	Φ1.0
15	Φ1.5

②

Thread hole	G2(see the table)

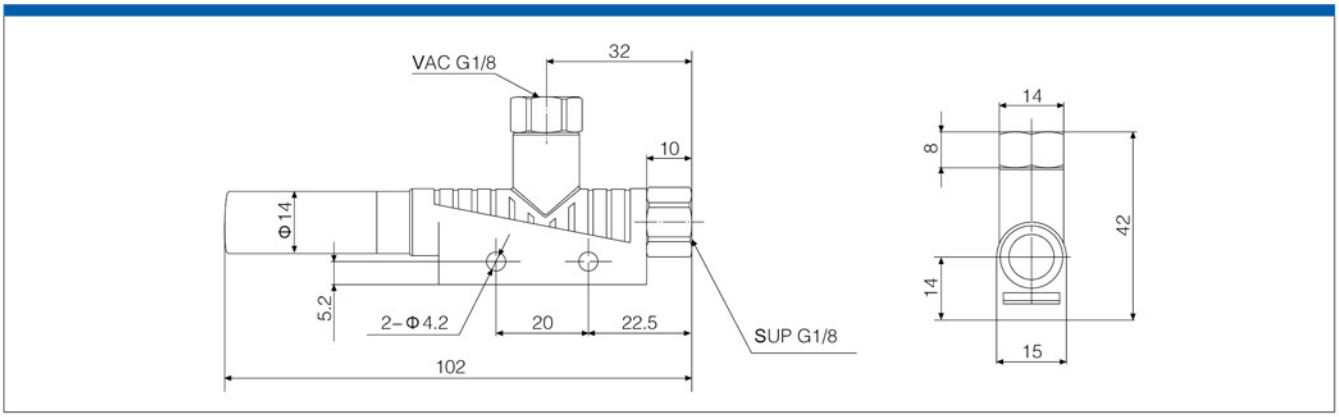
③

Blank	Nil
SDA	With axial silencer

• Connection Thread

Model	Connection:quick-action push-in coupling/Thread hole	
	SUP	VAC
ASBP 10 G2	G 1/8	G 1/8
ASBP 15 G2		

Dimensions (mm)



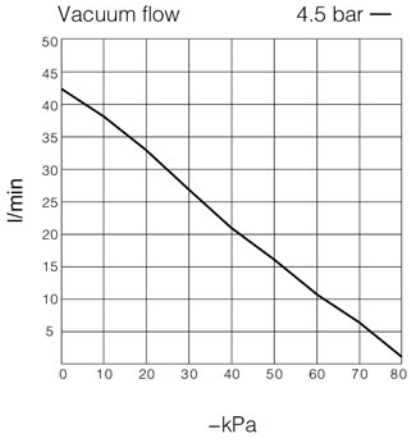
Vacuum flow(l/min)at different vacuum levels(–kPa)

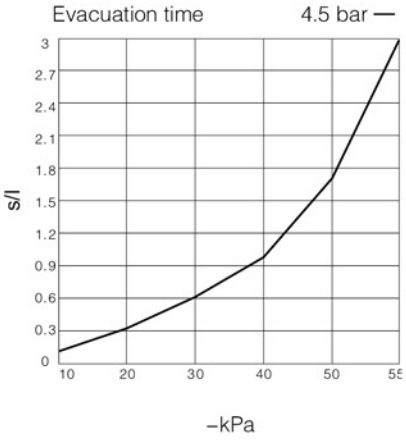
Model \ –kPa	Air supply pressure	Air consumption	0	10	20	30	40	50	60	70	80	Max.vacuum level
ASBP10	4.5 bar	50 l/min	38	30	26	23	18.6	16	11	7	1.8	–85kPa
ASBP15		110 l/min	72	60	52	44	36	30	24	15.5	2.2	

Evacuation time(s/l)to reach different vacuum levels(–kPa)

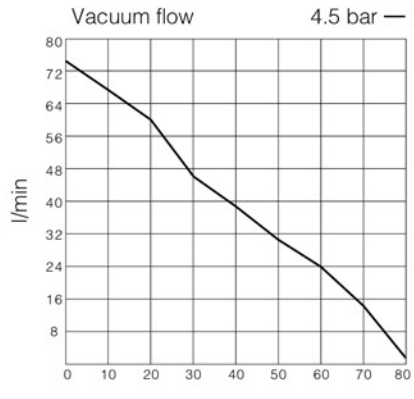
Model \ –kPa	Air supply pressure	Air consumption	10	20	30	40	50	60	70	Max.vacuum level
ASBP10	4.5 bar	50 l/min	0.123	0.323	0.6	1	1.72	3	–	–85kPa
ASBP15		110 l/min	0.06	0.18	0.32	0.52	0.81	1.32	2.7	

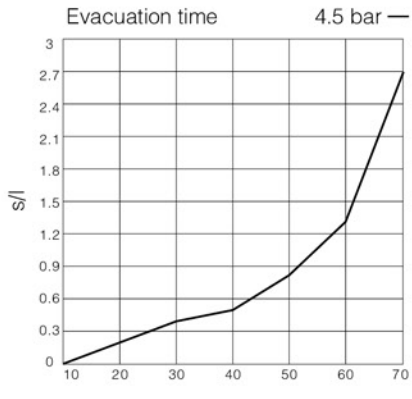
• ASBP10





• ASBP15





Vacuum Filters

B

Specifications

Model	AZFC100-04B	AZFC100-06B	AZFC200-06B	AZFC200-08B
Applicable tube O.D.	Φ4	Φ6	Φ6	Φ8
Flow l/min	10	20	30	50
Fluid	Air、Nitrogen			
Operating pressure	−100~0kPa			
Filtration degree	10μm			
Operating and ambient temperature range	0~60℃(with no freezing)			
Element differential pressure resistance	1.5bar			
Applicable tubing material	Nylon、Soft nylon、polyurethane、Soft polyurethane			
Filter element(spare parts)	FC-100		FC-200	

Features

- ☆ Compact and low weight design
- ☆ One-touch quick fitting and convenient assembly
- ☆ Filter element is replaceable
- ☆ Adopt easy assembled and disassemble structure filter element can be replaced without tools
- ☆ Straight through type,inlet and outlet are in the same line, it is easy to assemble
- ☆ Standard type is with bracket

How to Order

AZFC 100 – 04 B
① ② ③

① Recommend flow rate

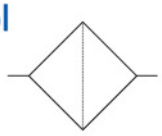
100	Max.20l/min
200	Max.50l/min

② IN OUT Applicable tube O.D

Symbol	Tube O.D	Applicable model
04	Φ04	AZFC100
06	Φ06	AZFC100 AZFC200
08	Φ08	AZFC200

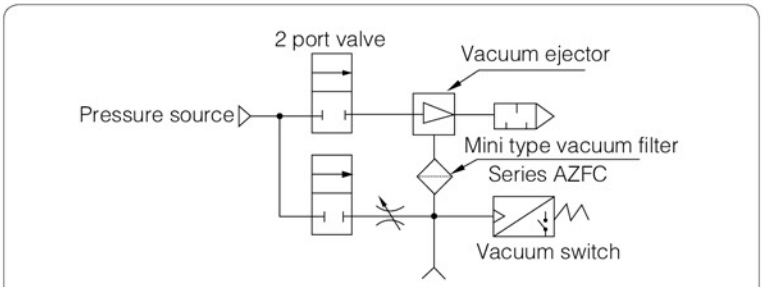
③ With bracket

Symbol

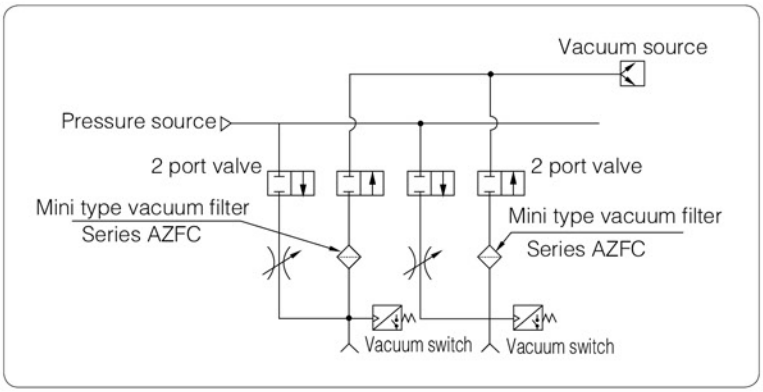


Application Example

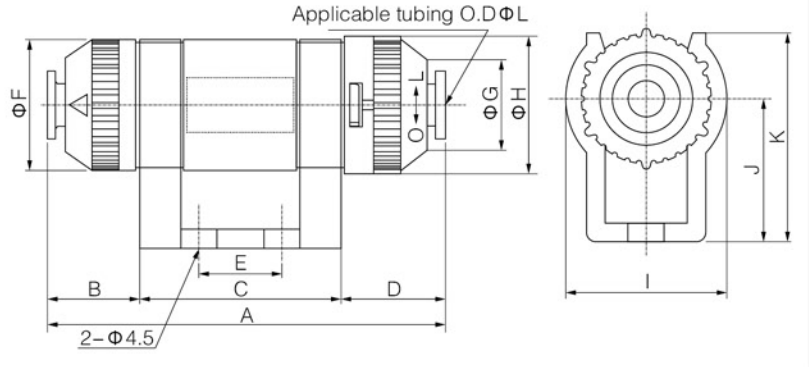
• Vacuum ejector system application



• Vacuum pump system application



Dimensions (mm)



Model	AZFC-100-04B	AZFC-100-06B	AZFC-200-06B	AZFC-200-08B
A	53.2	53.2	67	67
B	9.1	9.1	15.5	15.5
C	30	30	34	34
D	14.1	14.1	17.5	17.5
E	10	10	14	14
F	18	18	22	22
G	11.6	11.6	15.6	15.6
H	19.5	19.5	23.1	23.1
I	23	23	27	27
J	20	20	24	24
K	29	29	35	35
L	4	6	6	8




Features

☆To filter dust and other small particles from the vacuum flow.
☆Reduces the risk of operation breakdown or stoppage in the pump.
☆Replaceable filter element.
☆Available with special filter element with increased filter area.

Specifications

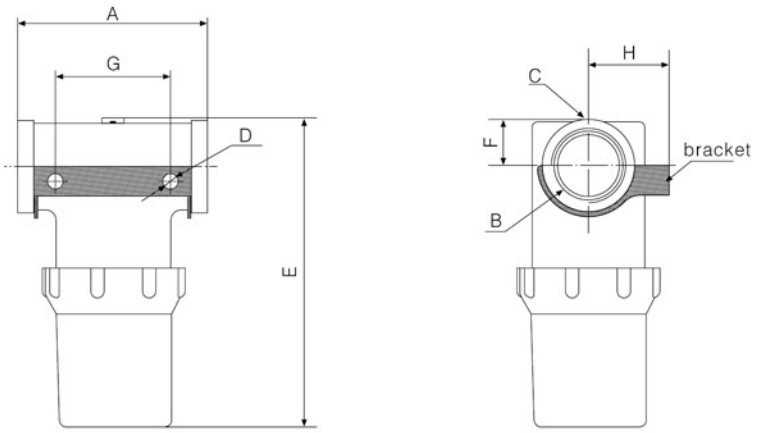
		ABF-10	ABF-15	ABF-20	ABF-25	ABF-40
Pressure range	bar	-1~0bar				
Material		PA, PC, PE				
Temperature range	℃	-20~80				
Removal efficiency	μm	10				
Weight	g	70	168	170	424	550
Flow nominal	l/m	150	900	900	2520	5100
Volume internal	cm^3	45	195	205	495	675
Filter area	m^2	0.003	0.010	0.010	0.019	0.023

How to Order

ABF – 10
①

① Model	
ABF-10	G3/8"
ABF-15	G1/2"
ABF-20	G3/4"
ABF-25	G1"
ABF-40	G1 1/2"

Dimensions (mm)



Model	ABF10	ABF15	ABF20	ABF25	ABF40
A	76	91	91	126	126
B	2-G3/8''	2-G1/2''	2-G3/4''	2-G1''	2-G1 1/2''
C	NPSF1/8	NPSF1/8	NPSF1/8	NPSF1/8	NPSF1/8
D	2-Φ6.5	2-Φ8.5	2-Φ8.5	2-Φ10.5	2-Φ10.5
E	71.3	131.5	138.5	167	209.5
F	14	16	18.5	23	31
G	45	50	50	80	80
H	27	40	40	56	56

How to Order

F – 10

①

① Model	
F10	G3/8"
F20	1/2" & 3/4"
F25	1"
F40	1 1/2"

Remarks:Fiter element 1/2" & 3/4"(special)、 1 1/2"(special)are optional. Their removal efficiency is 5

Technical data of filter element

		F-10	F-20	F-25	F-40
Weight	g	7	26	50	74
Filter area	m^2	0.003	0.010	0.019	0.023
Removal efficiency	μm	10	10	10	10

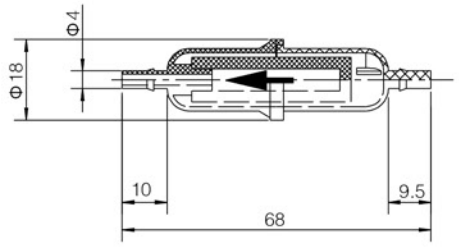
Features

☆These filters provide a cost effective in line vacuum filteration method.
☆The 6mm diameter is suitable for all kinds of system especially linear pump and combined vacuum pump。
☆The 3/8"Version can be screwed directly into the Mini type vacuum pump as well as any other port using a 3/8"–BSP connection. when used with the mini pumps & mid multiple pumps it provides a very compact set up.

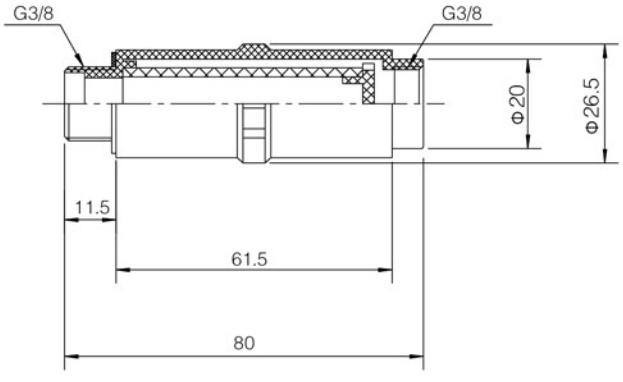
Technical Parameters

Model	Port Size	Internal volume cm^3	Removal efficiency μ	Material	Working temperature	Weight g
ALF–06–IN	Φ4	4	20	PP, PE	0℃~80℃	3.5
ALF–10–IN	G3/8	20	20	PP, PE	0℃~80℃	13

▼ ALF–06–IN



▼ ALF–10–IN



Features

Be widely used in vacuum systems. Effciently protect the pump from the product entering it. Also protect the system components(valves, gauges)

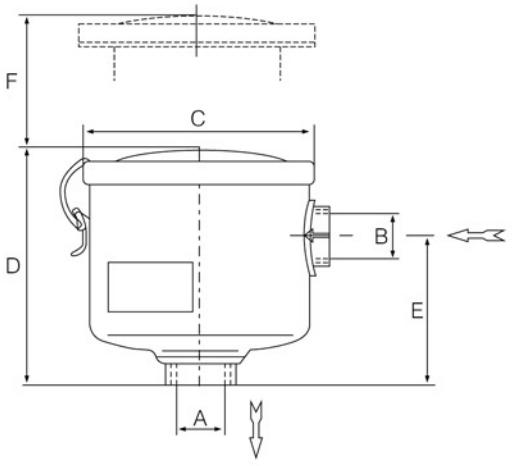
Consist of a steel housing and a lid with quick locking clips. Rugged all steel construction for heavy duty applications. Quickly exchangeable cartridge. Large dirt holding capacity and easy cleaning. High separation efficiency: 99% removal for 5 micron, Brazed fittings for high vacuum duty(F002–F006) Low pressure drop

Technical Parameters

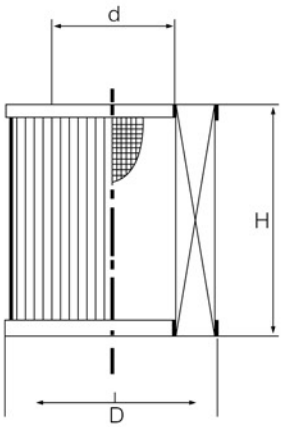
Model	BF002	BF002–1	BF004	BF003	BF006
Rated flow rate m^3/h	32	42	100	120	300
*A(Inch)	G1/2"	G3/4"	G1 1/4"	G1 1/4"	G2"
*B(Inch)	G1/2"	G3/4"	G1 1/4"	G1 1/4"	G2"
C	Φ101	Φ101	Φ146	Φ185	Φ222
D	90	90	110	170	258
E	53	53	70	115	125
F	70	70	75	130	240
Weight	1	1	1.4	2.3	6.9
Dimension A.B is pipe thread, G.America is NP, Britain is BSP					
Filtration consumables	FE002	FE002	FE004	FE003	FE006
O.D	Φ65	Φ65	Φ98	Φ128	Φ150
I.D	Φ38	Φ38	Φ60	Φ64	Φ88
Height	69	69	70	125	222

Dimensions (mm)

Filter outline dimension



Filter element dimension



AIRBEST

Vacuum Pads

C

Large–area Vacuum Gripping System

Vacuum Pads

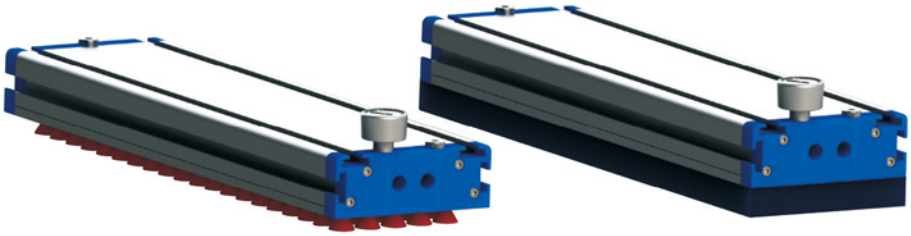
Spring Plunger

Fittings for Vacuum Pads

Universal Holder

Bulkhead Connector

Ball Joint



Vacuum pad type **Sealing gasket (Sponge) type**

Features

☆Easy to change the worn sealer or vacuum pad quickly, cheap cost
☆Adopt aluminum alloy material, strong structure and light weight
☆Inside vacuum pump, compact structure
☆Inside vacuum flow adjusting unit (non return valve), automatically adjust vacuum flow
☆Intelligent vacuum ejector is energy saving and short cycle time
☆Only one vacuum gripper can automatically stack, destack and pick different sizes of work piece transport work piece with different materials, for example: paper, wood and dry metal plate or plastic plate with holes or without holes
☆Module design can combine several vacuum gripper systems together to form a complete system, in order to satisfy different handling needs
☆Vacuum break function

Specifications

Model	Dimensions (mm)	Adsorbing type
TXC	120×60	A–Sealing gasket (Sponge) type B–Vacuum pad type
	120×300	
	120×400	
	120×600	
	120×800	
	120×1000	
	120×1200	

△TXC120X300–A

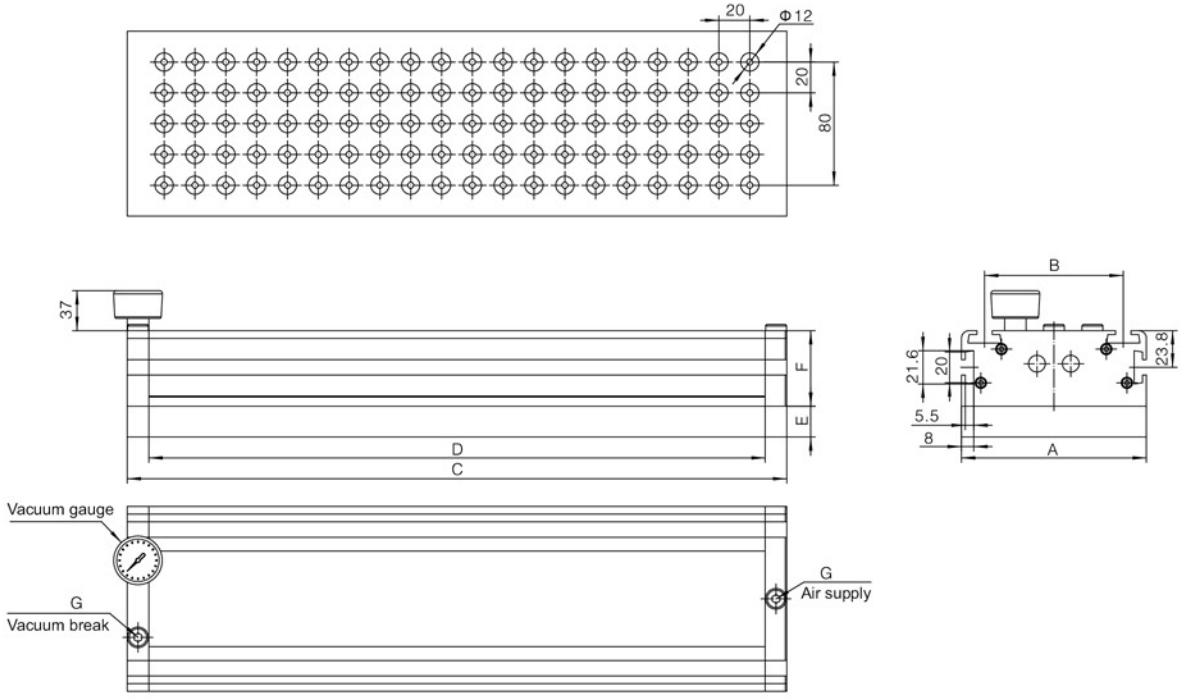
How to Order

Model \ Ordering code	A (Sealing gasket)	B (Vacuum pad)
TXC120×60	217.0061.0000	217.0062.0000
TXC120×300	217.0301.0000	217.0302.0000
TXC120×400	217.0401.0000	217.0402.0000
TXC120×600	217.0601.0000	217.0602.0000
TXC120×800	217.0801.0000	217.0802.0000
TXC120×1000	217.1001.0000	217.1002.0000
TXC120×1200	217.1201.0000	217.1202.0000

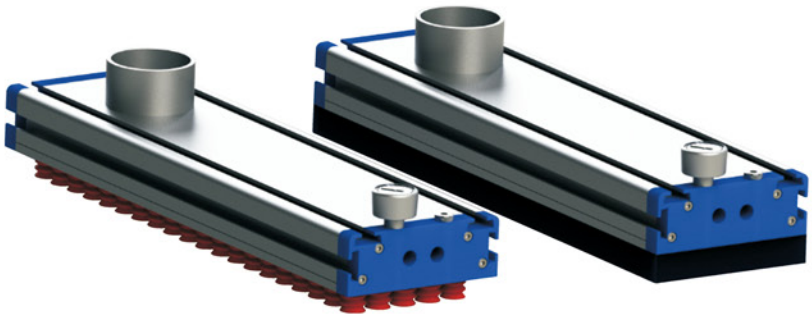
Technical parameters

Model	Air supply pressrue (Bar)	Max. vacuum level (–kPa)	Max. vacuum flow (l/min)	Air consumption (l/min)	Suction force (N) (–60kPa)	Suction plate thickness (mm)
TXC120×60	4~6	80	120	55	81	10
TXC120×300	4~6	80	580	215	555	20
TXC120×400	4~6	80	580	215	750	20
TXC120×600	4~6	80	580	215	1100	20
TXC120×800	4~6	80	800	320	1486	20
TXC120×1000	4~6	80	940	390	1949	20
TXC120×1200	4~6	80	940	390	2260	20

Dimensions (mm)



Dimensions (mm) / Model	A	B	C	D	E	F	G
TXC120×60	120	–	60	–	10	32.5	G1/8
TXC120×300	120	90	328	300	20	50	G1/8
TXC120×400	120	90	428	400	20	50	G1/8
TXC120×600	120	90	628	600	20	50	G1/8
TXC120×800	120	90	828	800	20	50	G1/8
TXC120×1000	120	90	1028	1000	20	50	G1/8
TXC120×1200	120	90	1228	1200	20	50	G1/8



Vacuum pad type **Sealing gasket (Sponge) type**

Features

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☆Inside vacuum flow adjusting unit (non return valve), automatically adjust vacuum flow
☆Intelligent vacuum ejector is energy saving and short cycle time
☆Only one vacuum gripper can automatically stack, destack and pick different sizes of work piece transport work piece with different materials, for example: paper, wood and dry metal plate or plastic plate with holes or without holes
☆Module design can combine several vacuum gripper systems together to form a complete system, in order to satisfy different handling needs
☆Vacuum break function

Specifications

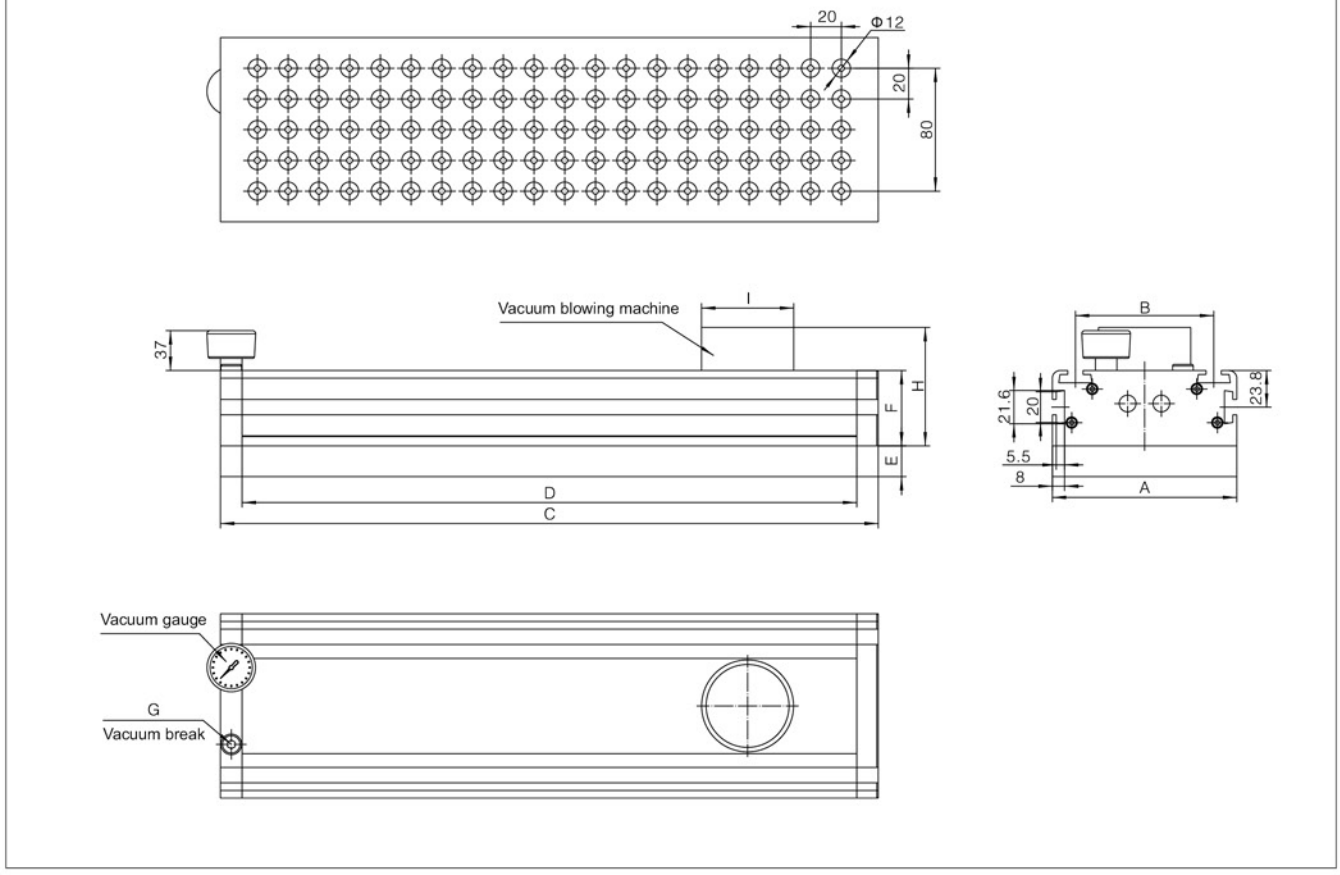
Model	Dimensions (mm)	Adsorbing type
TXM	120 × 300	A–Sealing gasket (Sponge) type B–Vacuum pad type
	120 × 400	
	120 × 600	
	120 × 800	
	120 × 1000	
	120 × 1200	

△TXM120X300–A

How to Order

Model \ Ordering code	A (Sealing gasket)	B (Vacuum pad)
TXM120 × 300	218.0301.0000	218.0302.0000
TXM120 × 400	218.0401.0000	218.0402.0000
TXM120 × 600	218.0601.0000	218.0602.0000
TXM120 × 800	218.0801.0000	218.0802.0000
TXM120 × 1000	218.1001.0000	218.1002.0000
TXM120 × 1200	218.1201.0000	218.1202.0000

Dimensions (mm)



Model \ Dimensions (mm)	A	B	C	D	E	F	G	H	I
TXM120×300	120	90	328	300	20	50	G1/8	70.5	Φ32
TXM120×400	120	90	428	400	20	50	G1/8	70.5	Φ32
TXM120×600	120	90	628	600	20	50	G1/8	70.5	Φ32
TXM120×800	120	90	828	800	20	50	G1/8	70.5	Φ60
TXM120×1000	120	90	1028	1000	20	50	G1/8	70.5	Φ60
TXM120×1200	120	90	1228	1200	20	50	G1/8	70.5	Φ60

Features

☆Suitable for very rough and uneven surfaces (marble, uneven plates, textured or non-slip metal sheets, tiles, cement board, etc.) and in all other applications in which traditional pads can't be used.
☆The working temperature is -20℃~+80℃.

Model

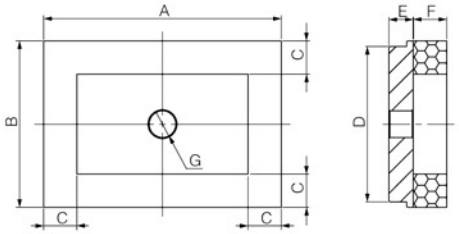
Model	Dimensions	Material and color
SNP	107 × 75	Material: OF=Geranium foam rubber(Orange) NF=Neoprene foam rubber(Black)
	135 × 50	
	135 × 60	
	290 × 68	
	290 × 140	

How to Order

Model	Ordering code(Orange)	Ordering code(Black)
SNP107 × 75	225.7500.0000	225.7501.0000
SNP135 × 50	225.5000.0000	225.5001.0000
SNP135 × 60	225.6000.0000	225.6001.0000
SNP290 × 68	225.6800.0000	225.6801.0000
SNP290 × 140	225.1400.0000	225.1401.0000

Pad with support dimensions (mm)

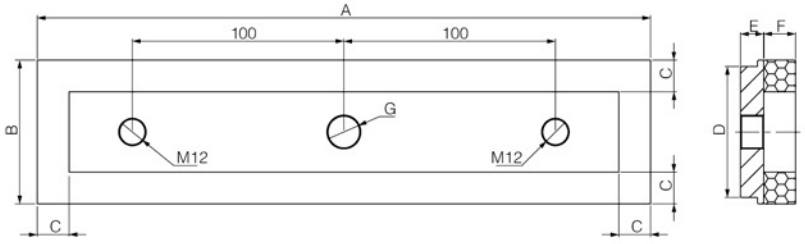
SNP107 × 75、SNP135 × 50、SNP135 × 60



Adsorption force

Model	Adsorption force(kg)
SNP107 × 75	9
SNP135 × 50	6
SNP135 × 60	8
SNP290 × 68	25
SNP290 × 140	72

SNP290 × 68、SNP290 × 140



Model \ Dimensions	A	B	C	D	E	F	G
SNP107 × 75	107	75	15	70	11	15	M12
SNP135 × 50	135	50	15	45	11	15	M12
SNP135 × 60	135	60	15	55	11	15	M12
SNP290 × 68	290	68	15	62	11	15	G3/8
SNP290 × 140	290	140	15	134	11	15	G1/2

Features

☆Suitable for very rough and uneven surfaces (marble, uneven plates, textured or non-slip metal sheets, tiles, cement board, etc.) and in all other applications in which traditional pads can't be used.
☆The working temperature is -20℃~+80℃.

Model

Model	Diameter(mm)	Material and color
SOP	40	Material: OF=Geranium foam rubber(Orange) NF=Neoprene foam rubber(Black)
	64	
	92	
	127	
	180	

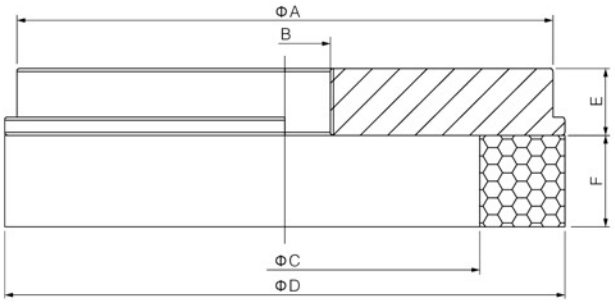
How to Order

SOP 40 – M12 (①: Model; ②: Support thread type;)
① ②

Model	Thread type(Female thread)	Ordering code(Orange)	Ordering code(Black)
SOP40	M12	224.4001.0000	224.4003.0000
SOP40	G1/4	224.4002.0000	224.4004.0000
SOP64	M12	224.6401.0000	224.6403.0000
SOP64	G1/4	224.6402.0000	224.6404.0000
SOP92	M12	224.9201.0000	224.9204.0000
SOP92	G3/8	224.9202.0000	224.9205.0000
SOP92	G1/4	224.9203.0000	224.9206.0000
SOP127	M12	224.1271.0000	224.1273.0000
SOP127	G1/4	224.1272.0000	224.1274.0000
SOP180	M12	224.1801.0000	224.1803.0000
SOP180	G1/4	224.1802.0000	224.1804.0000

Pad with support dimensions (mm)

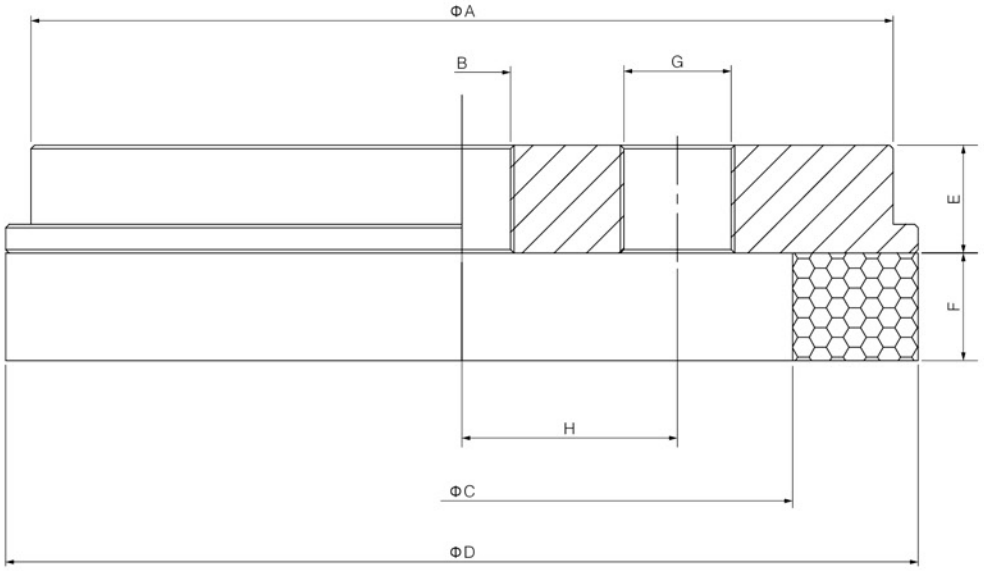
SOP40、SOP64、SOP92



Adsorption force

Model	Adsorption force(kg)
SOP40	0.78
SOP64	3.5
SOP92	8.5
SOP127	17.5
SOP180	38.5

SOP127、SOP180



Model	A	B	C	D	E	F	G	H
SOP40	40	M12	20	40	10	15	–	–
SOP40	40	G1/4	20	40	10	15	–	–
SOP64	60	M12	40	64	10	15	–	–
SOP64	60	G1/4	40	64	10	15	–	–
SOP92	88	M12	64	92	11	15	–	–
SOP92	88	G3/8	64	92	11	15	–	–
SOP92	88	G1/4	64	92	11	15	–	–
SOP127	120	M12	92	127	15	15	G3/8	30
SOP127	120	G1/4	92	127	15	15	G3/8	30
SOP180	160	M12	140	180	12	15	G3/8	60
SOP180	160	G1/4	140	180	12	15	G3/8	60

Features

☆1.5 bellow vacuum pad
☆The vacuum pad can be horizontal adjustment, It is suitable for transfering objects with height difference
☆It is particularly good for use on curved surface and for separating thin sheets of materials.

Applications

◇Veneer sheet
◇Steel plate
◇Carton box
◇Thin sheet
◇Electronic components

How to Order

SB12 N F – 18F EH – KE1820–A16 –BH–G1/8
① ② ③ ④ ⑤ ⑥ ⑦

① Model

SB5	Φ5	SB30	Φ30
SB6X	Φ6	SB40	Φ40
SB8	Φ8	SB50	Φ50
SB10	Φ10	SB75	Φ75
SB12	Φ12	SB110	Φ110
SB15	Φ15	SB150	Φ150
SB17	Φ17		
SB20	Φ20		

② Material (Shore hardness)

N	NBR(55°)
S	Silicone(50°)
WS	White silicone(50°)

③ Filter

F	With filter(PE) (SB30,40,30,50,75,110)
–	No

⑤ Vacuum efficiency valve

EH	Vacuum efficiency valve (SB17,20,30,40, 50)
–	No

④ Connection thread

18–F	G1/8 Female thread (SB17,SB20,SB30,SB40,SB50,SB75)
5 × 18F	5 × G1/8 Female thread (SB30,SB40,SB50)
15–FL	G1/8 Female thread (SB30,SB40)
14–F	G1/4 Female thread (SB75)
38–F	G3/8 Female thread (SB75)
12–F	G1/2 Female thread (SB75,SB110,SB150)
M5–M	M5 Male thread (SB5,SB8,SB10,SB12,SB15)
M5/18MF	M5 Female thread and G1/8 Male thread (SB17,SB20)
M5/18–MFL	M5 Female thread and G1/8 Male thread (SB17,SB20)
5 × M5–F	5 × M5 Female thread (SB17,SB20)
18–M	G1/8 Male thread (SB30,SB40)
14–M	G1/4 Male thread (SB30, SB40,SB50)
38–M	G3/8 Male thread (SB50)

* Refer to the fittings for vacuum pads on page 208–211
Remark: SB30~150 fittings are including mesh filter.
only for silicone material.

Accessories

KE1820–A16 BH–G1/8
⑥ ⑦

*Not available with ball joint.

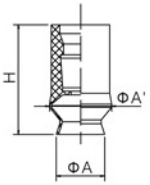
⑥Spring plunger		⑦Ball Joint
Model	Buffer stroke(mm)	
KE510–A12, KE510–Y–A12	10	–
KE520–A12, KE20–Y–A12	20	
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06	
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10	
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25	
KI507–V–A10	7	
KI515–V–A10	15	
KI520–V–A10	20	
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10	BH–G1/8
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20	
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30	
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50	
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10	
KI1820, KI1820–L–A16, KI1820–V–A16*	20	
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30	
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50	
KE1210–L–A20, KE1210–A20	10	BH–G1/2
KE1220–L–A20, KE1220–A20	20	
KE1230–L–A20, KE1230–A20	30	
KE1250–L–A20, KE1250–A20	50	
KI1210–L–A20, KI1210–A18, KI1210–A22	10	
KI1220–L–A20, KI1220–A18, KI1220–A22	20	
KI1230–L–A20, KI1230–A18, KI1230–A22	30	
KI1250–L–A20, KI1250–A18, KI1250–A22	50	

Recommended(Max.)lifting force(N)

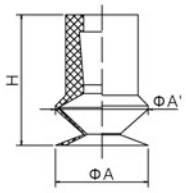
Model	Volume cm^3	Vertical lifting force(N)		
		−20kPa	−60kPa	−90kPa
SB5	0.05	0.295	0.786	0.99
SB6X	0.09	0.5	1.076	1.375
SB8	0.15	0.786	1.7	2.45
SB10	0.48	1.7	3.5	5.1
SB12	0.59	2.2	4.2	7.2
SB15	1.1	3.3	6	8.9
SB17	1.5	3.93	7.82	9.7
SB20	2.7	5.8	10.6	15
SB30	10	13	25	28
SB40	15	22.5	42	50.2
SB50	32	34	65	83
SB75	110	74	166.4	226
SB110	310	136.5	343	460.5
SB150	650	295	686	883

Dimensions (mm)

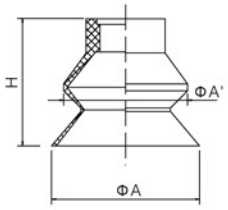
▼SB6X



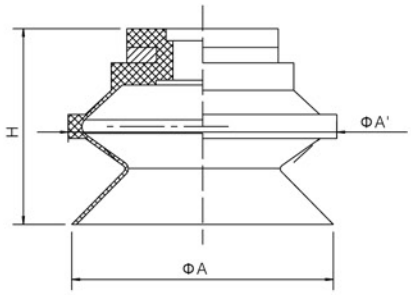
▼SB5 SB8 SB10 SB12 SB15



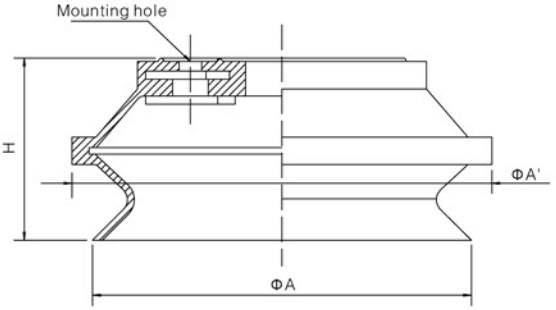
▼SB17



▼SB20 SB30 SB40 SB50



▼SB75 SB110 SB150

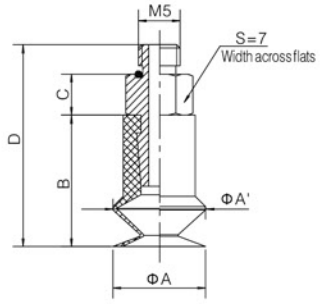


(mm)

Model	ΦA	ΦA'	H
SB6X	7	9	13.5
SB5	5.8	6.2	9.2
SB8	8.8	9.6	11.9
SB10	11	12	16
SB12	12	14	16.5
SB15	15.5	17.5	19.5
SB17	18.5	16.6	15.6

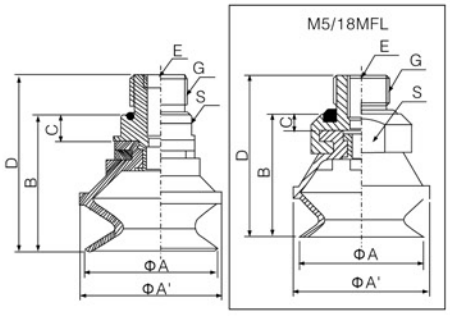
(mm)

Model	ΦA	ΦA'	H	Mounting hole
SB20	22	24	19	–
SB30	34	36	26	–
SB40	43	46	28	–
SB50	53	58	35	–
SB75	78	83	37	4–Φ6.5 circle diameter Φ35
SB110	115	124	54	8–Φ6 circle diameter Φ55
SB150	155	166	71	8–Φ6 circle diameter Φ70.5



Male thread connection(mm)

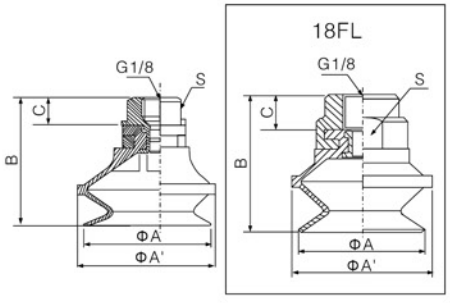
Model	ΦA	ΦA'	B	C	D
SB5–M5	5.6	6.2	9.2	4	16.7
SB8–M5	8.8	9.6	11.9	4	19.4
SB10–M5	11	12	16	5	25
SB12–M5	12	14	16.5	5	25.5
SB15–M5	15.5	17.5	19.5	5	28.5



Male thread connection(mm)

Model	ΦA	ΦA'	B	C	D	E	G	S
SB17–M5/18MF	18.5	16.6	17.1	1.5	23.1	M5	G1/8	S12
SB20–M5/18MF	22	24	20.5	1.5	26.5	M5	G1/8	S12
SB20–M5/18MFL*	22	24	22	3	29	M5	G1/8	S16
SB30–18M	34	36	31	5	38	–	G1/8	S17
SB30–14M	34	36	32	6	41	–	G1/4	S17
SB40–18M	43	46	33	5	40	–	G1/8	S17
SB40–14M	43	46	34	6	43	–	G1/4	S17
SB50–14M	53	58	41	6	50	–	G1/4	S24
SB50–38M	53	58	41	6	51	–	G3/8	S24

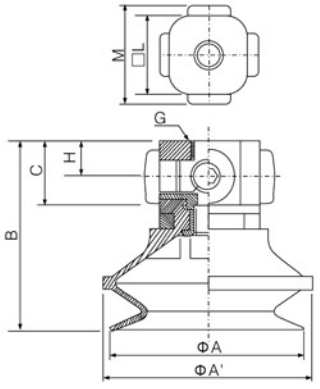
*only for S (Silicone) material



Female thread connection(mm)

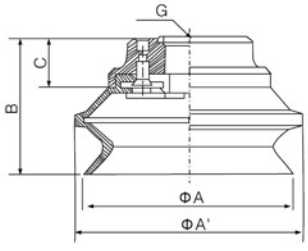
Model	ΦA	ΦA'	B	C	S
SB17–18F	18.5	16.6	23.6	8	S15
SB20–18F	22	24	27	8	S15
SB30–18F	34	36	34	8	S17
SB30–18FL*	34	36	35	9	S21
SB40–18F	43	46	36	8	S17
SB40–18FL*	43	46	37	9	S21
SB50–18F	53	58	44	9	S24

*only for S (Silicone) material



Female thread connection × 5(mm)

Model	ΦA	ΦA'	B	C	G	H	□L	M
SB17–5 × M5F	18.5	16.6	24.6	9	5 × M5	5	15	22
SB20–5 × 5F	22	24	28	9	5 × M5	5	15	22
SB30–5 × 18F	34	36	34	18	5 × G1/8	10	22	30
SB40–5 × 18F	43	46	46	18	5 × G1/8	10	22	30
SB50–5 × 18F	53	58	53	18	5 × G1/8	10	28	36



Female thread connection × 5(mm)

Model	ΦA	ΦA'	B	C	G
SB75–18F	78	83	50	18	G1/8
SB75–14F	78	83	50	18	G1/4
SB75–38F	78	83	50	18	G3/8
SB75–12F	78	83	50	18	G1/2
SB110–12F	115	124	63	15	G1/2
SB150–12F	155	166	78	14	G1/2

Features

☆1.5 bellow & flat vacuum pad
☆Transfer objects in the vertical plane steadily and safely, there is good lifting force.
☆Strong adsorptive power, good wear resistance.

Applications

◇Stamping equipment
◇Flat steel plate
◇Glass
◇Carton box transfering
◇Steel plate supplying
◇Automotive panels
◇Plywood
◇Sheet metal stamping

Model

Model	Diameter(mm)	Connection thread	Shore hardness
SBF	30 40 50 60 80 100	18F(G1/8 Female thread) 14F(G1/4 Female thread) 14M(G1/4 Male thread) 38F(G3/8 Female thread) 12F(G1/2 Female thread) M10M(M10 × 1.5Male thread) RA Rectangular adapter	Material: PU Shore hardness 60

△ SBF30PU-18F

How to Order

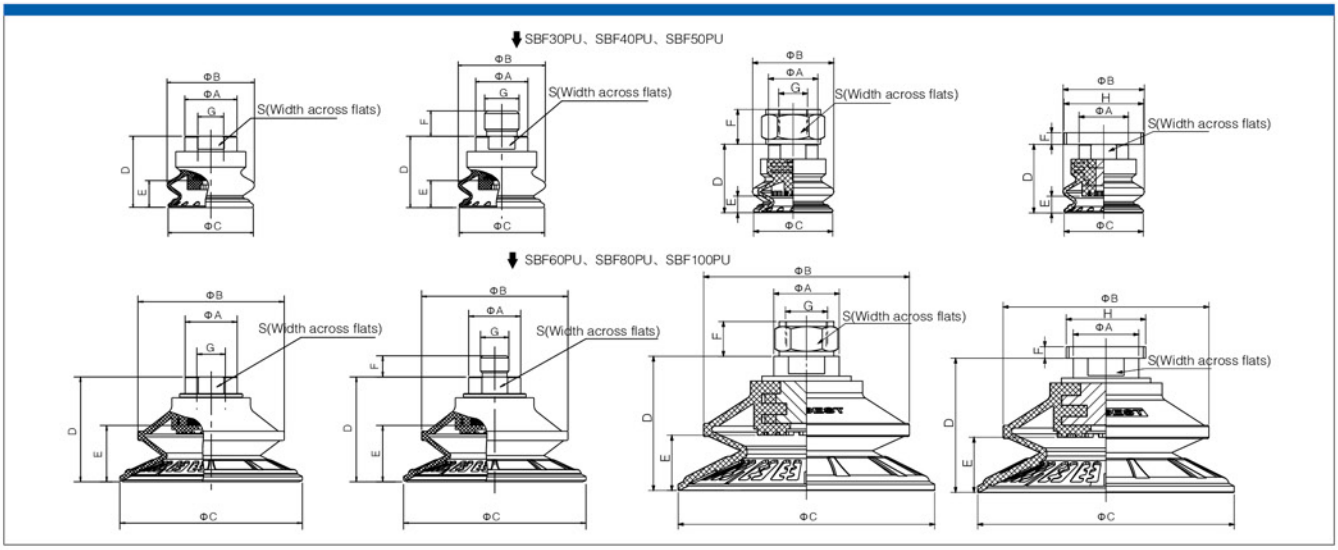
Thread / Model	18F	14F	14M	38F	12F	M10M	RA
SBF30PU	206.0305.1100	206.0305.1200	206.0305.0200	206.0305.1300	–	206.0305.1000	206.0305.0932
SBF40PU	206.0405.1100	206.0405.1200	206.0405.0200	206.0405.1300	–	206.0405.1000	206.0405.0932
SBF50PU	206.0505.1100	206.0505.1200	206.0505.0200	206.0505.1300	–	206.0505.1000	206.0505.0932
SBF60PU	206.0605.1100	206.0605.1200	206.0605.0200	206.0605.1300	206.0605.1400	206.0605.1000	206.0605.0932
SBF80PU	206.0805.1100	206.0805.1200	206.0805.0200	206.0805.1300	206.0805.1400	206.0805.1000	206.0805.0932
SBF100PU	206.1005.1100	206.1005.1200	206.1005.0200	206.1005.1300	206.1005.1400	–	206.1005.0932

Recommended (max.) Lifting Force (N)

Model	Volume(cm^3)	Vertical lifting force			Parallel lifting force		
		-20kPa	-60kPa	-90kPa	-20kPa	-60kPa	-90kPa
SBF30	6	11	60.2	91	8.4	30.5	76
SBF40	7.2	17.5	93	119.8	11.3	63.8	110.8
SBF50	11	25	128.5	157.8	20.5	94	144
SBF60	22	87.3	156.2	189.2	67	125.6	165.8
SBF80	59.5	118.6	210.5	252.6	89	167.8	221.2
SBF100	103.5	149	269.5	310.4	111.8	209.8	276.5

△Workpiece is with smooth, dry surface, the above pull-out force datas don't include a safety factor.
Values may change according to different workpiece surfaces.

Dimensions (mm)



Model	ΦA	ΦB	ΦC	D	E	F	G	S Width across flats	H
SBF 30PU–18F	19.8	32	32	28	7	14	G1/8 Female thread	17	–
SBF 30PU–14F	19.8			28		–	G1/4 Female thread	17	–
SBF 30PU–38F	19.8			28		14	G3/8 Female thread	22	–
SBF 30PU–14M	19.8			28		13.5	G1/4 Male thread	17	–
SBF 30PU–M10M	19.8			28		12	M10x1.5 Male thread	17	–
SBF 30PU–RA	19.8			28		4.7	–	17	32
SBF 40PU–18F	19.8	32	42	29	9	14	G1/8 Female thread	17	–
SBF 40PU–14F	19.8			29		–	G1/4 Female thread	17	–
SBF 40PU–38F	19.8			29		14	G3/8 Female thread	22	–
SBF 40PU–14M	19.8			29		13.5	G1/4 Male thread	17	–
SBF 40PU–M10M	19.8			29		12	M10x1.5 Male thread	17	–
SBF 40PU–RA	19.8			29		4.7	–	17	32
SBF 50PU–18F	25	40	51.5	37	11.5	14	G1/8 Female thread	22	–
SBF 50PU–14F	25			37		14	G1/4 Female thread	22	–
SBF 50PU–38F	25			37		–	G3/8 Female thread	22	–
SBF 50PU–14M	25			37		13.5	G1/4 Male thread	22	–
SBF 50PU–M10M	25			37		12	M10x1.5 Male thread	22	–
SBF 50PU–RA	25			37		4.7	–	22	32
SBF 60PU–18F	22	50	64	41.5	15	14	G1/8 Female thread	22	–
SBF 60PU–14F	22			41.5		14	G1/4 Female thread	22	–
SBF 60PU–38F	24			41.5		–	G3/8 Female thread	21	–
SBF 60PU–12F	24			41.5		14	G1/2 Female thread	24	–
SBF 60PU–14M	24			41.5		13.5	G1/4 Male thread	21	–
SBF 60PU–M10M	24			41.5		12	M10x1.5 Male thread	21	–
SBF 60PU–RA	24			41.5		4.7	–	21	32
SBF 80PU–18F	24	68	84	49.5	22.5	14	G1/8 Female thread	22	–
SBF 80PU–14F	24			49.5		14	G1/4 Female thread	22	–
SBF 80PU–38F	24			49.5		–	G3/8 Female thread	21	–
SBF 80PU–12F	24			49.5		14	G1/2 Female thread	24	–
SBF 80PU–14M	24			49.5		13.5	G1/4 Male thread	21	–
SBF 80PU–M10M	24			49.5		12	M10x1.5 Male thread	21	–
SBF 80PU–RA	24			49.5		4.7	–	21	32
SBF 100PU–18F	24	83	103	55	20.5	14	G1/8 Female thread	22	–
SBF 100PU–14F	24			55		14	G1/4 Female thread	22	–
SBF 100PU–38F	24			55		–	G3/8 Female thread	22	–
SBF 100PU–12F	24			55		14	G1/2 Female thread	24	–
SBF 100PU–14M	24			55		13.5	G1/4 Male thread	22	–
SBF 100PU–RA	24			55		4.7	–	22	32

Features

☆4.5 bellow vacuum pad.
☆Transfering fragile objects,highsafety.
☆Transfering objects with height differences.
☆Transfering foods with plastic package.

Applications

◇Eggs
◇Glass
◇Bread
◇Foods with plastic package

How to Order

SBL40 N – M5/18MF – EH – KE510–A12
① ② ③ ④ ⑤

① Model

SBL15	Φ15
SBL20	Φ20
SBL30	Φ30
SBL35M	Φ35
SBL40	Φ40
SBL40B	Φ40
SBL50	Φ50

② Material (Shore hardness)

N	NBR(55°)
S	Silicone(50°)
WS	White silicone(50°)
CS	Conductive(Special mat'l)(50°)

③ Connection thread

M5–M	M5 Male thread (SBL15)
18–M	G1/8 Male thread (SBL30, SBL40)
14–M	G1/4 Male thread (SBL30, SBL40, SBL50)
38–M	G3/8 Male thread (SBL50)
M5/18MF	M5 Female thread G1/8 Male thread (SBL20)
M5/18MFL*	M5 Female thread G1/8 Male thread (SBL20)
5×M5F	5×M5 Female thread (SBL20)
18–F	G1/8 Female thread (SBL20, SBL30, SBL40,SBL50)
18–FL	G1/8 Female thread (SBL30, SBL40)
5×18F	5×G18 Female thread (SBL30, SBL40, SBL50)

④ Valve

EH	Vacuum efficiency valve (SBL20,30,40,50)
–	No

* Refer to the fittings for vacuum pads on page 208–211

Accessories

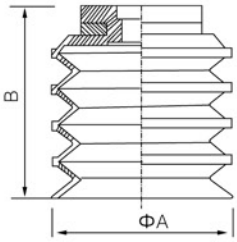
KE510–A12
⑤

⑤ Spring plunger	
Model	Buffer stroke(mm)
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25
KI507–V–A10	7
KI515–V–A10	15
KI520–V–A10	20
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10
KI1820–A16, KI1820–L–A16, KI1820–V–A16*	20
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50

*Not available with ball joint.

Recommended(Max.)lifting force(N)

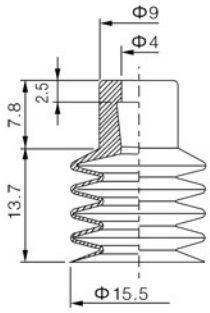
Model	Volume cm^3	Vertical lifting force(N)	
		–20kPa	–60kPa
SBL15	1.95	0.24	0.48
SBL20	4	0.3	0.6
SBL30	13	0.6	1.55
SBL35M	21	0.79	1.87
SBL40	27	1.05	2.15
SBL40B	26	10	20.53
SBL50	55	1.68	4.22



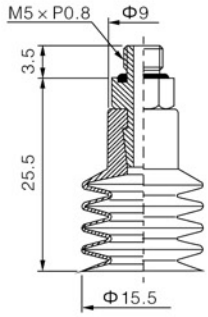
◀ SBL20 SBL30 SBL40 SBL50

Model	ΦA	B
SBL20	20	23
SBL30	30	32
SBL40	40	42
SBL50	50	52

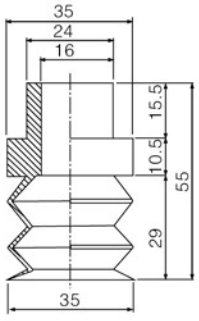
▼ SBL15



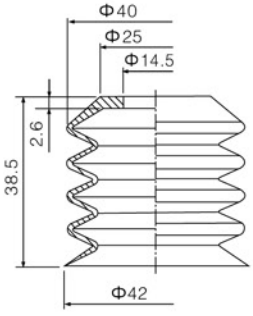
▼ SBL 15M5M

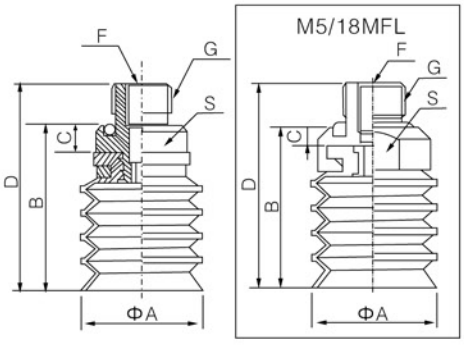


▼ SBL35M



▼ SBL40B

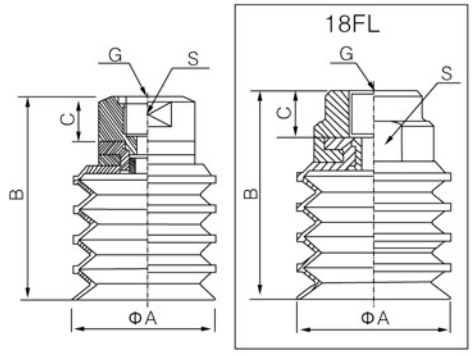




Male thread connection(mm)

Model	ΦA	B	C	D	F	G	S
SBL20–M5/18MF	20	24.5	1.5	30.5	M5	G1/8	S12
SBL20–M5/18MFL*	20	26	3	27	M5	G1/8	S16
SBL30–18M	30	37	5	44	–	G1/8	S17
SBL30–14M	30	38	6	47	–	G1/4	S17
SBL40–18M	40	17	5	24	–	G1/8	S17
SBL40–14M	40	48	6	57	–	G1/4	S17
SBL50–14M	50	58	6	67	–	G1/4	S24
SBL50–38M	50	58	6	68	–	G3/8	S24

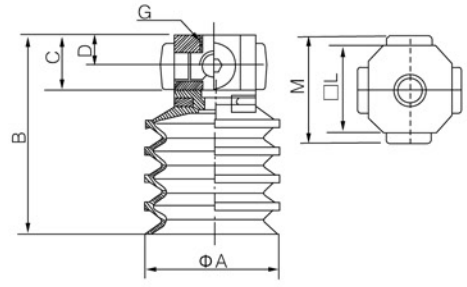
*only for S (Silicone) material



Female thread connection(mm)

Model	ΦA	B	C	G	S
SBL20–18F	20	31	8	G1/8	S15
SBL30–18F	30	40	8	G1/8	S17
SBL30–18FL*	30	41	9	G1/8	S21
SBL40–18F	40	50	8	G1/8	S17
SBL40–18FL*	40	51	9	G1/8	S21
SBL50–18F	50	60	9	G1/8	S24

*only for S (Silicone) material



Female thread connection x5(mm)

Model	ΦA	B	C	D	G	□L	M
SBL20–5 × M5F	20	32	9	5	5 × M5	15	22
SBL30–5 × 18F	30	50	18	10	5 × G1/8	22	30
SBL40–5 × 18F	40	60	18	10	5 × G1/8	22	30
SBL50–5 × 18F	50	70	18	10	5 × G1/8	28	36

Features

◇Long bellows, suitable for level compensation in the process of handling
◇Good sealing properties with long and thin lip
◇High flow, handling objects quickly
◇Suitable for bags with irregular shapes e.g. frozen food bags, water bags and so on
◇Silicone material, wide working temperature range (−40℃~200℃)

Model

Model	Diameter (mm)	Material and hardness	Connection thread
SBLP	30 40 50	S−Silicone(40)	G1/4M
			N1/4M
			G3/8M
			N3/8M
			G1/2M
			N1/2M

△ SBLP30−G1/4M G−gthread N−NPT thread M−Male thread

How to order

Model \ Connection	G1/4−M	NPT1/4−M	G3/8−M	NPT3/8−M	G1/2−M	NPT1/2−M
SBLP30S	214.3012.0000	214.3032.0000	−−	−−	−−	−−
SBLP40S	−−	−−	214.4013.0000	214.4033.0000	−−	−−
SBLP50S	−−	−−	−−	−−	214.5014.0000	214.5034.0000

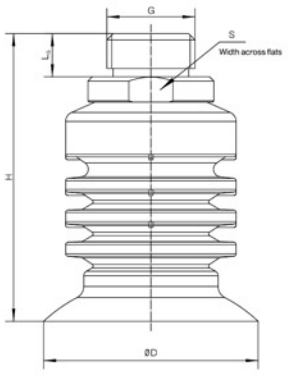
Technical parameters

Model	Lifting force N (−60kPa)	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Weight of rubber part (g)
SBLP30	9	8.5	17	14.5
SBLP40	15	14	22	10
SBLP50	25	26	30	29

△Workpiece is with smooth, dry surface, the above pull−out force datas don't include a safety factor.
Values may change according to different workpiece surfaces.

Dimensions

SBLP30~SBLP50 (Male thread)



Model \ Dimension(mm)	D	H	G	L_G	S
SBLP30−G1/4M	30.5	51.5	G1/4	9	19
SBLP30−N1/4M	30.5	51.5	NPT1/4	11.5	19
SBLP40−G3/8M	40	56	G3/8	10	22
SBLP40−N3/8M	40	57.5	NPT3/8	11.5	22
SBLP50−G1/2M	50	69	G1/2	10	28
SBLP50−N1/2M	50	69	NPT1/2	16	28

Features

☆Flat vacuum pad.
☆Suitable for transfering flat objects.
☆When lifting force is parallel to the surface of objects, it is recommended.

Applications

◇Household appliances
◇Electronic components
◇Glass
◇Plywood
◇Flat steel plate
◇Plastic plate

How to Order

SF40 N – 18F EH – KE1820–A16 – BH–G1/8
① ② ③ ④ ⑤ ⑥

① Model

SF15	Φ15	SF75	Φ75
SF20	Φ20	SF90	Φ90*
SF25	Φ25	SF110	Φ110
SF30	Φ30	SF150	Φ150
SF40	Φ40	SF200	Φ200
SF50	Φ50	SF300	Φ300

② Material (Shore hardness)

N	NBR(55°)
S	Silicone(50°)
WS	White silicone(50°)
CS	Conductive(Special mat'l)(50°)

④ Valve

EH	Vacuum efficiency valve (SF20,25,30,40,50)
EB	Cone valve(SF20,25,30, 40,50,75,90,110,150)
–	No

③ Connection thread

18–F	G1/8 Female thread (SF20,25,30,40,50,75,90)
18–FA	G1/8 Female thread (SF40)
5 × 18F	G1/8 Female thread (SF40,SF50)
14–F	G1/4 Female thread (SF75,90)
38–F	G3/8 Female thread (SF75,90)
12–F	G1/2 Female thread (SF75,90,110,150,200)
34–F	G3/4 Female thread (SF300)
M5–M	M5 Male thread (SF15)
M5/18–MF	M5 Female thread and G1/8 Male thread (SF20,25,30)
M5/18–MFL	M5 Female thread and G1/8 Male thread (SF20,25,30)
5 × M5F	5 × M5 Female thread (SF20,25,30)
18–M	G1/8 Male thread (SF50)
14–M	G1/4 Male thread (SF40,50)
38–M	G3/8 Male thread (SF50)

*Refer to the fittings for vacuum pads on page 208–211
Remark:SF40~SF200 fittings are including mesh filter.
only for silicone material.

Accessories

KE1820–A16 BH–G1/8
⑤ ⑥

⑤Spring plunger		⑥Ball Joint
Model	Buffer stroke(mm)	
KE510–A12, KE510–Y–A12	10	–
KE520–A12, KE20–Y–A12	20	
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06	
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10	
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25	
KI507–V–A10	7	
KI515–V–A10	15	
KI520–V–A10	20	
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10	BH–G1/8
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20	
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30	
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50	
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10	
KI1820, KI1820–L–A16, KI1820–V–A16*	20	
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30	
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50	
KE1210–L–A20, KE1210–A20	10	BH–G1/2
KE1220–L–A20, KE1220–A20	20	
KE1230–L–A20, KE1230–A20	30	
KE1250–L–A20, KE1250–A20	50	
KI1210–L–A20, KI1210–A18, KI1210–A22	10	
KI1220–L–A20, KI1220–A18, KI1220–A22	20	
KI1230–L–A20, KI1230–A18, KI1230–A22	30	
KI1250–L–A20, KI1250–A18, KI1250–A22	50	

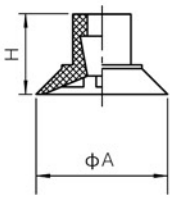
*Not available with ball joint.

Recommended(Max.)lifting force(N)

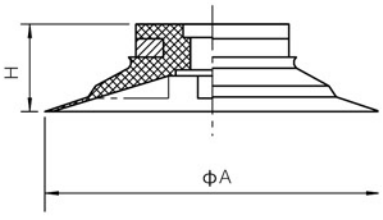
Model	Volume cm^3	Vertical lifting force(N)			Parallel lifting force(N)		
		−20kPa	−60kPa	−90kPa	−20kPa	−60kPa	−90kPa
SF15	0.037	3.25	8.4	11	3.45	6.48	7.5
SF20	1	6	15	18.7	5	7.95	8.45
SF25	1.1	9.2	19.3	24.9	7.95	8.95	10
SF30	2	13	24.8	30.8	11	15.98	20
SF40	4.8	20	40	50	15	25	29.5
SF50	10	37	74	96	24	40	50
SF75	20	80	201	272	60	110	140
SF90	50	99.8	272.8	365.8	86.8	156.5	193.5
SF110	70	141	418.5	562	140	24.8	299.7
SF150	160	300	845	1098	250	600	800
SF200	460	749	1899.5	2702	375.5	949.8	1347.8
SF300	820	1598	4293	6398	1323	3008	4665

Dimensions (mm)

▼SF15

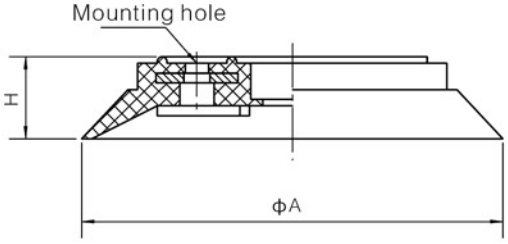


▼SF20 25 30 40 50



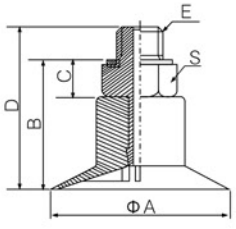
Model	ΦA	H
SF15	16.5	11
SF20	22	8
SF25	27	9
SF30	32	10
SF40	42	13
SF50	53	17.5

▼SF75 90 110 150 200



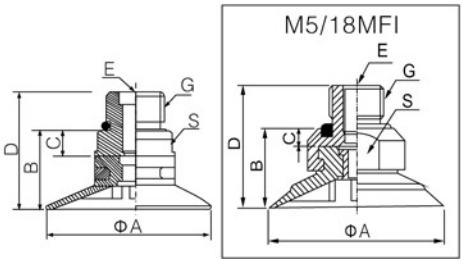
Model	ΦA	H	Mounting hole
SF75	77	13	4−Φ5 Circle diameter Φ35
SF90	92	12.5	4−Φ5 Circle diameter Φ35
SF110	112	20	8−Φ5 Circle diameter Φ55
SF150	152	26	8−Φ5 Circle diameter Φ70
SF200	200	41	−

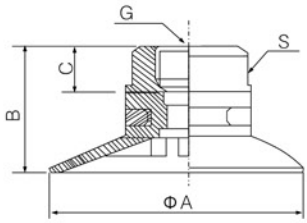
SF15−M5M

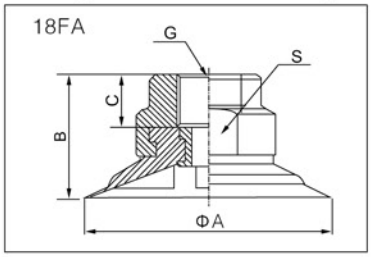


Male(female)thread connection(mm)

Model	ΦA	B	C	D	E	G	S
SF15−M5M	16.5	11	5	19.5	M5	−	S7





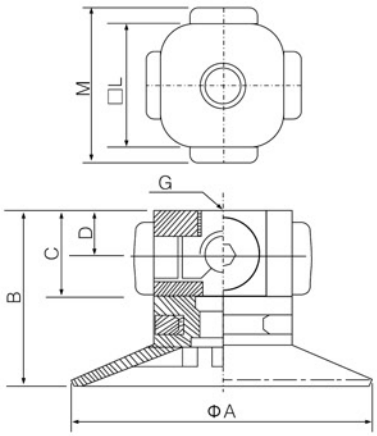


Male(female)thread connection(mm)

Model	ΦA	B	C	D	E	G	S
SF20–M5/18MF	22	9.5	1.5	15.5	M5	G1/8	S12
SF20–M5/18MFI	22	11	3	18	M5	G1/8	S16
SF25–M5/18MF	27	10.5	1.5	16.5	M5	G1/8	S12
SF25–M5/18MFI	27	12	3	19	M5	G1/8	S16
SF30–M5/18MF	32	11.5	1.5	17.5	M5	G1/8	S12
SF30–M5/18MFI	32	13	3	20	M5	G1/8	S16
SF40–18M	42	18	5	25	–	G1/8	S17
SF40–14M	42	19	6	28	–	G1/4	S17
SF50–14M	53	22.5	6	32.5	–	G1/4	S24
SF50–38M	53	23.5	6	33.5	–	G3/8	S24

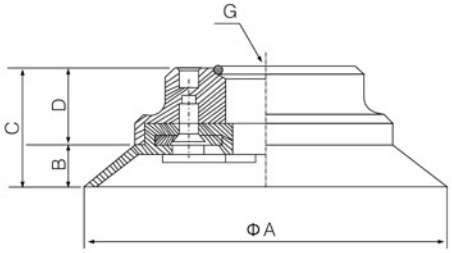
Female thread connection(mm)

Model	ΦA	B	C	G	S
SF20–18F	22	16	8	G1/8	S15
SF25–18F	27	17	8	G1/8	S15
SF30–18F	32	18	8	G1/8	S15
SF40–18F	43	21	8	G1/4	S17
SF40–18FI	42	22	9	G1/8	S21
SF50–18F	53	26.5	9	G1/8	S21



Female thread connection x5(mm)

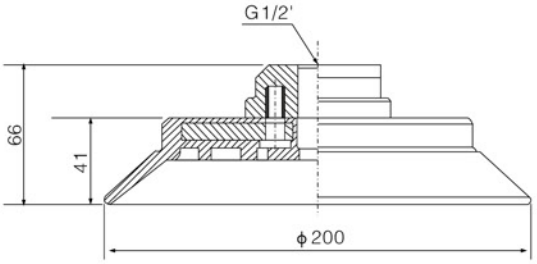
Model	ΦA	B	C	D	G	□L	M
SF20–5 × M5F	22	17	9	5	M5 × 5	15	22
SF25–5 × M5F	27	18	9	5	M5 × 5	15	22
SF30–5 × M5F	32	19	9	5	G1/8 × 5	15	22
SF40–5 × 18F	42	31	18	10	G1/8 × 5	22	30
SF50–5 × 18F	53	35.5	18	10	G1/8 × 5	28	36



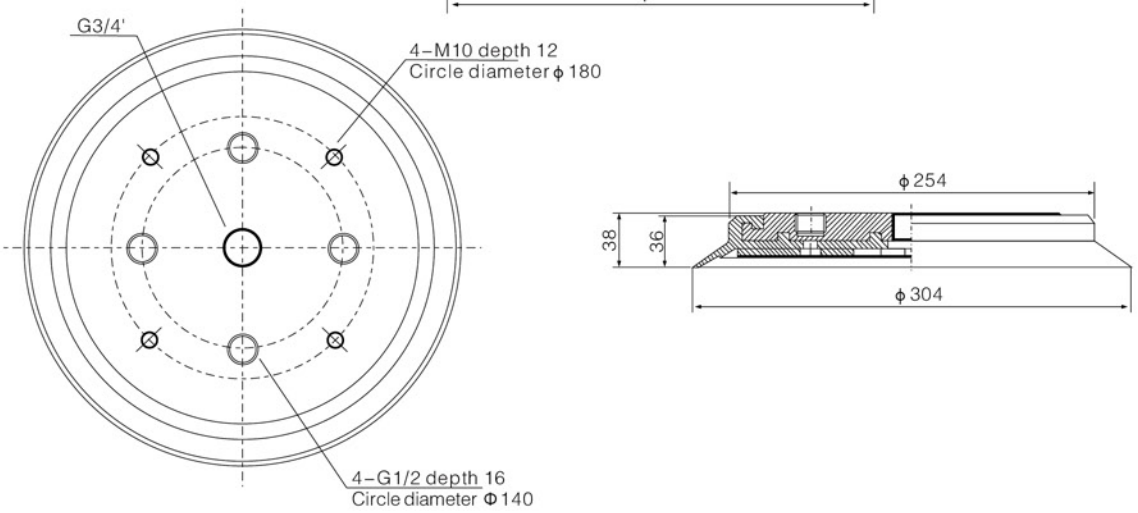
Female thread connection(mm)

Model	ΦA	B	C	D	G
SF75–18F	77	8	26	18	G1/8
SF75–14F	77	8	26	18	G1/4
SF75–38F	77	8	26	18	G3/8
SF75–12F	77	8	26	18	G1/2
SF90–18F	92	7.5	25.5	18	G1/8
SF90–14F	92	7.5	25.5	18	G1/4
SF90–38F	92	7.5	25.5	18	G3/8
SF90–12F	92	7.5	25.5	18	G1/2
SF110–12F	112	14	29	15	G1/2
SF150–12F	152	18	33	14	G1/2

▼ SF200-12F

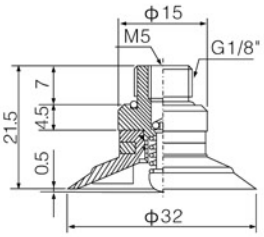


▼ SF300-34F

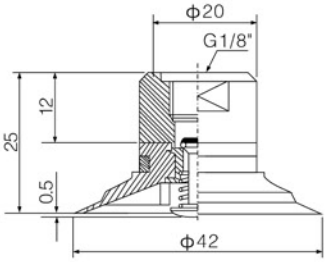


Cone valve Dimensions

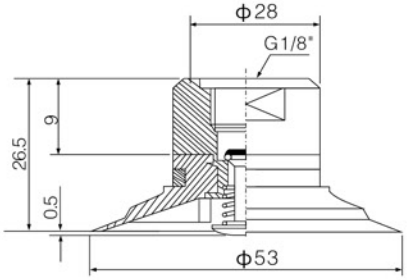
▼ SF30-EB



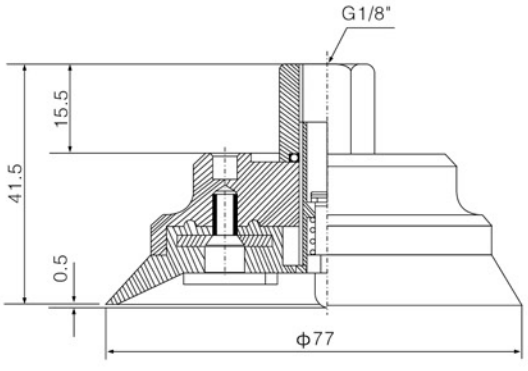
▼ SF40-EB



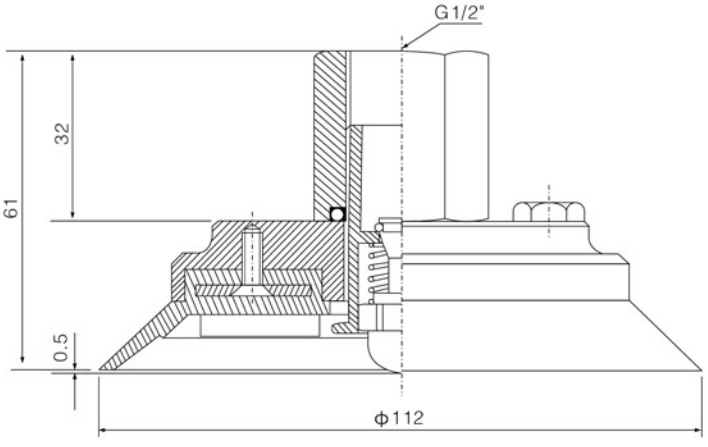
▼ SF50-EB

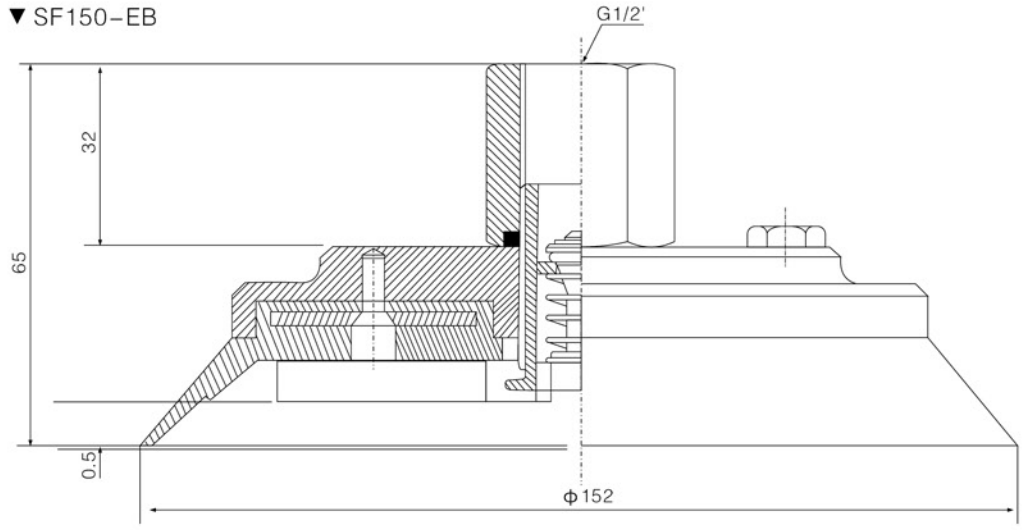


▼ SF75-EB



▼ SF110-EB

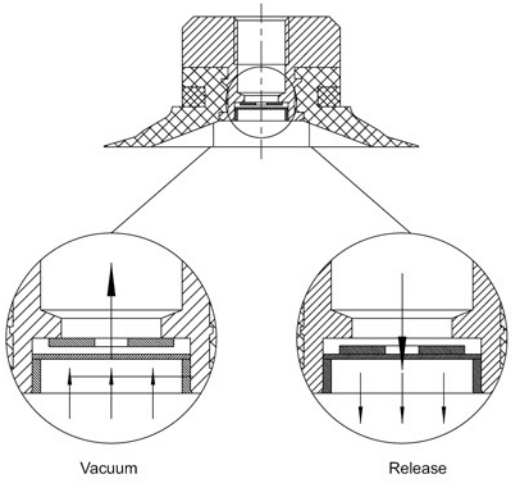




Accessories

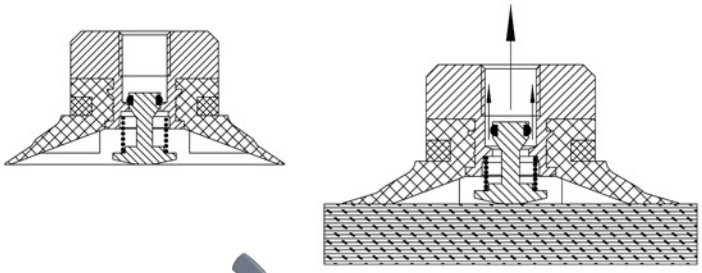
Vacuum Efficiency valve (EH)

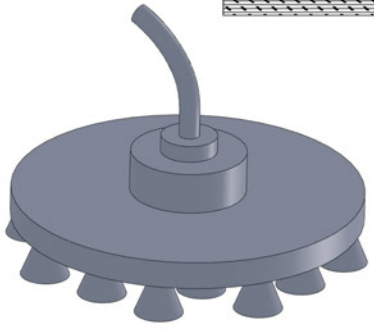
It can compensate the level differences of the lifting objects. When the shape,dimension and location of the lifting object is not the same, the valve can work as an absorber.When the vacuum pad is not in contact with the object, the vacuum efficiency valve fitting can reduce leakage minimally.



Cone Valve (EB)

When the vacuum pad is not in contact with the object, the valve closes the opening in the fitting. It prevents vacuum leakage. When the vacuum pad contacts with the object, the valve first opens, then vacuum is created in the pad.





SU Series(Standard Flat Vacuum Pad)

Features

☆Standard flat vacuum pad.
☆Suitable for concave and convex objects.
☆Suitable for flat and smooth surface objects.
☆Suitable for a little bending objects.

Applications

◇Steel plate
◇paper box packaging
◇Small semiconductor material

How to Order

SU30 N 18M – EH – KI1810–A16 – BH–G1/8
① ② ③ ④ ⑤ ⑥

① Model

SU1.5X	Φ1.5	SU10	Φ10
SU2	Φ2	SU15	Φ15
SU2X	Φ2	SU20	Φ20
SU3	Φ3	SU25	Φ25
SU4	Φ4	SU30	Φ30
SU4X	Φ4	SU40	Φ40
SU6	Φ6	SU50	Φ50
SU8	Φ8	SU80	Φ80

② Material (Shore hardness)

N	NBR(55°)
S	Silicone(50°)
WS	White silicone(50°)
CS	Conductive(Special mat'l)(50°)

④ Cone Valve

EH	Vacuum efficiency valve (SU20,SU25,SU30,SU40,SU50)
–	No

③ Connection thread

M2.5–M	M2.5 Male thread (SU2,SU3)
M5–M	M5 Male thread (SU2,SU3,SU4,SU6,SU8,SU10,SU15)
18–M	G1/8 Male thread (SU40)
14–M	G1/4 Male thread (SU40,SU50)
38–M	G3/8 Male thread (SU50)
M5/18–MF	M5 Female thread and G1/8 Male thread (SU20,SU25,SU30)
M5/18–MFI*	M5 Female thread and G1/8 Male thread (SU20,SU25,SU30)
5xM5F	5 × M5 Female thread (SU20,SU25,SU30)
18–F	G1/8 Female thread (SU30,SU40,SU50,SU80)
5x18F	5 × G1/8 Female thread (SU40,SU50)
8	Φ8 Inner hole (SU80)
18–FA*	G1/8 Female thread (SU40)

*Refer to the fittings for vacuum pads on page 208–211.
Remark:SU40 SU50 fittings are including mesh filter.
Only for silicone material.

Accessories

KI1810–A14 BH–G1/8
⑤ ⑥

⑤Spring plunger		⑥Ball Joint
Model	Buffer stroke(mm)	
KE510–A12, KE510–Y–A12	10	–
KE520–A12, KE20–Y–A12	20	
KI506–R–A8, KI506–B–A8, KI506–E–A8, KI506–S–A8	06	
KI510–R–A8, KI510–B–A8, KI510–E–A8, KI510–S–A8	10	
KI525–R–A8, KI525–B–A8, KI525–E–A8, KI525–S–A8	25	
KI507–V–A10	7	
KI515–V–A10	15	
KI520–V–A10	20	
KE1810–A16, KE1810–L–A14, KE1810–V–A16	10	BH–G1/8
KE1820–A16, KE1820–L–A14, KE1820–V–A16	20	
KE1830–A16, KE1830–L–A14, KE1830–V–A16	30	
KE1850–A16, KE1850–L–A14, KE1850–V–A16*	50	
KI1810–A16, KI1810–L–A16, KI1810–V–A16	10	
KI1820, KI1820–L–A16, KI1820–V–A16*	20	
KI1830–A16, KI1830–L–A16, KI1830–V–A16	30	
KI1850–A16, KI1850–L–A16, KI1850–V–A16*	50	

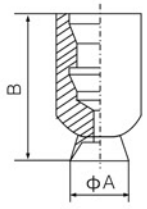
*Not available with ball joint.

Recommended(Max.)lifting force(N)

Model	Volume cm^3	Vertical lifting force(N)			Parallel lifting force(N)		
		−20kPa	−60kPa	−90kPa	−20kPa	−60kPa	−90kPa
SU1.5X	0.0015	0.0077	0.029	0.04	–	–	–
SU2	0.0025	0.03	0.97	0.148	–	–	–
SU2X	0.0025	0.03	0.97	0.148	–	–	–
SU3	0.005	0.089	0.395	0.59	–	–	–
SU4	0.03	0.198	0.885	1.275	0.198	0.78	1
SU4X	0.03	0.198	0.885	1.275	0.198	0.78	1
SU6	0.05	0.5	1.68	2.5	0.295	1.48	1.98
SU8	0.1	1	2.55	3.8	1	2.85	3.35
SU10	0.18	1.48	4.4	6.85	1.5	4.4	4.9
SU15	0.5	3.2	8.5	11.5	3.5	5.4	5.9
SU20	1	5.9	12.2	16	5.9	8.8	9.8
SU25	1.5	9	20.2	19.5	6.88	9.2	10.2
SU30	2	13	25	33	7.8	9.8	11
SU40	5.5	20	37.5	60	13.8	22	27.5
SU50	12	35.5	74	95	20	37	44
SU80	32	76	194	247	44	124.5	166

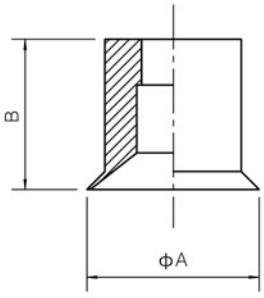
Dimensions (mm)

▼SU1.5X~ SU4X



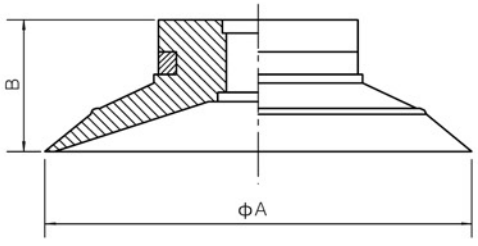
Model	ΦA	B
SU1.5X	1.9	12
SU2X	2.6	12
SU4X	4.6	12

▼ SU2~ SU15

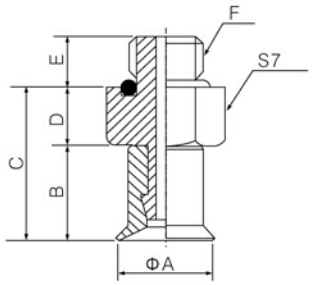


Model	ΦA	B
SU2	2.6	3.5
SU3	3.8	4.5
SU4	5	6.1
SU6	7	6.5
SU8	9	7

▼ SU20~ SU50

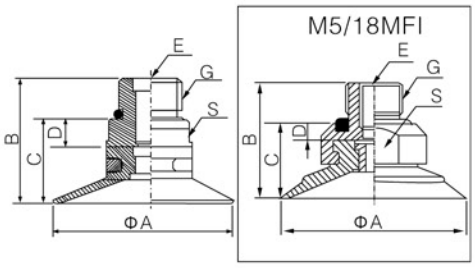


Model	ΦA	B
SU10	11	10.5
SU15	16.5	11
SU20	22	8
SU25	27	9
SU30	32	9.5
SU40	42	13
SU50	53	17.5



Male thread connection(mm)

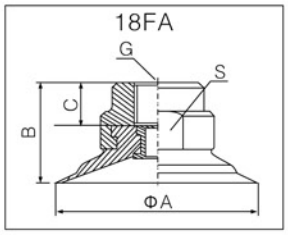
Model	ΦA	B	C	D	E	F
SU2–M2.5M/M5M	2.6	3.5	6/8.1	2.5/4.6	3/4.2	M2.5/M5
SU3–M2.5M/M5M	3.8	4.5	7/9.1	2.4/4.6	3/4.2	M2.5/M5
SU4–M5M	5	6.1	10.1	4	3.5	M5
SU6–M5M	7	6.5	10.5	4	3.5	M5
SU8–M5M	9	7	11	4	3.5	M5
SU10–M5M	11	10.5	15.5	5	3.5	M5
SU15–M5M	16.5	11.5	16	5	3.5	M5

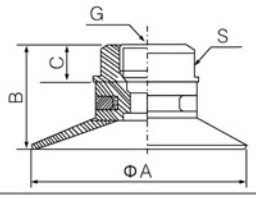


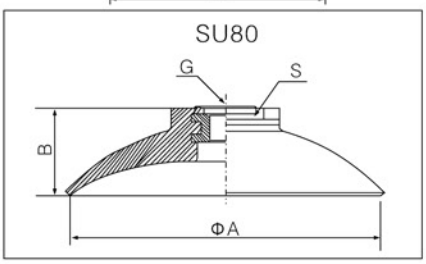
Female thread connection(mm)

Model	ΦA	B	C	D	E	G	S
SU20–M5/18MF	22	15.5	9.5	1.5	M5	G1/8	S12
SU20–M5/18MFI*	22	18	11	3	M5	G1/8	S16
SU25–M5/18MF	27	16.5	10.5	1.5	M5	G1/8	S12
SU25–M5/18MFI*	27	19	12	3	M5	G1/8	S16
SU30–M5/18M	32	17	11	1.5	M5	G1/8	S12
SU30–M5/18MFI*	32	16.5	12.5	3	M5	G1/8	S16
SU40–18M	42	25	18	5	–	G1/8	S17
SU40–14M	42	28	19	6	–	G1/4	S17
SU50–14M	53	32.5	23.5	6	–	G1/4	S24
SU50–38M	53	33.5	23.5	6	–	G3/8	S24

*only for S (Silicone) material



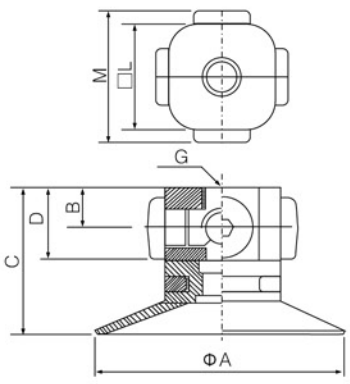




Female thread connection(mm)

Model	ΦA	B	C	G	S
SU20–18F	22	16	8	G1/8	S15
SU25–18F	27	17	8	G1/8	S15
SU30–18F	32	17.5	8	G1/8	S15
SU40–18F	42	21	8	G1/8	S17
SU40–18FA*	42	22	9	G1/8	S21
SU50–18F	53	26.5	9	G1/8	S24
SU80–18F	78	21.5	–	G1/8	S19
SU80–8	78	21.5	–	Φ8	S19

*only for S (Silicone) material



Female thread connection x5(mm)

Model	ΦA	B	C	D	G	□L	M
SU20–5×M5F	22	5	17	9	5×M5	15	22
SU25–5×M5F	27	5	18	9	5×M5	15	22
SU30–5×M5F	32	5	18.5	9	5×M5	15	22
SU40–5×18F	42	10	31	18	5×G1/8	22	30
SU50–5×18F	53	10	35.5	18	5×G1/8	28	36

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Large inner support structure protects the metal sheets from deformation and damage during handling process
◇Slot structure efficiently increases the friction force between vacuum pad and workpiece in order to prevent the oily metal sheets from slipping during the process of handling
◇1.5 bellows structure has good sealing and buffer to workpiece with uneven surface
◇Vacuum pads are available with various connection types

Applications

◇Car stamped steel plates with irregular shapes
◇Steel plates with oily surface
◇Glass, stamping parts, plywood
◇Handling normal sheet metal (in order to avoid deformation)

Model

Model	Diameter(mm)	Material and Hardness	Connection thread
STC	22 30 40 50 60 80 100	N-60(Orange)(N-NBR)	G1/4M (M-Male thread) G1/4F (F-Female thread) G3/8F M10M M14X1.5M RA Rectangular adapter

△STC80N-60-G3/8F

How to order

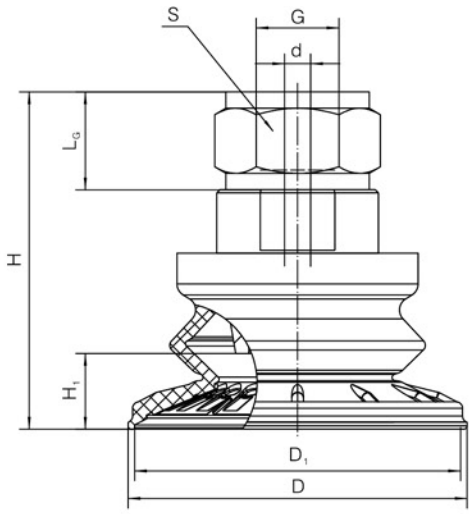
Model \ Connection	G1/4M (Male thread)	G1/4F (Female thread)	G3/8F (Female thread)	M10M (Male thread)	M14X1.5M (Male thread)	RA Rectangular adapter
STC22N-60	202.0260.0102	202.0260.1102	202.0260.1103	202.0260.0210	202.0260.0214	202.0260.0932
STC30N-60	202.0360.0102	202.0360.1102	202.0360.1103	202.0360.0210	202.0360.0214	202.0360.0932
STC40N-60	202.0460.0102	202.0460.1102	202.0460.1103	202.0460.0210	202.0460.0214	202.0460.0932
STC50N-60	202.0560.0102	202.0560.1102	202.0560.1103	202.0560.0210	202.0560.0214	202.0560.0932
STC60N-60	202.0660.0102	202.0660.1102	202.0660.1103	202.0660.0210	202.0660.0214	202.0660.0932
STC80N-60	202.0860.0102	202.0860.1102	202.0860.1103	202.0860.0210	202.0860.0214	202.0860.0932
STC100N-60	202.1060.0102	202.1060.1102	202.1060.1103	202.1060.0210	202.1060.0214	202.1060.0932

Technical parameters

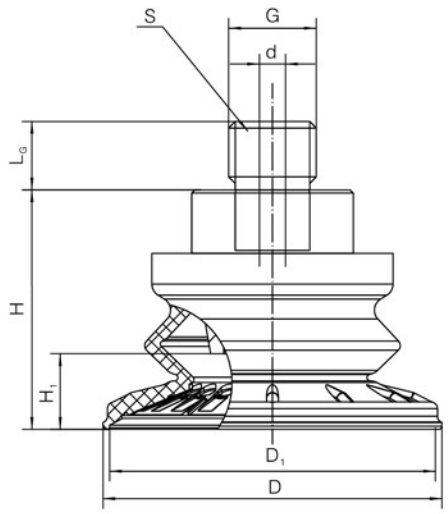
Model	Vertical pull-out force (N) -60kPa	Lateral pull-out force (N) -60kPa	Lateral pull-out force on oily surface (N) -60kPa	Inner volume (cm^3)	Min.curve radius of workpiece (cm)	Recommended tube Diameter (mm)	Weight (g)
STC22	23	20	6.5	1.5	20	4	8.6
STC30	35	28	12	6.3	35	4	12-23
STC40	62	37	34	7.2	35	4	13.5-24
STC50	85	58	55	11.2	45	6	21-31
STC60	141	88	83	22.5	52	6	29-39
STC80	236	141	136	57	70.5	6	51-61
STC100	371	228	221	92	95	6	77-87

△Workpiece is with smooth, dry surface, the above pull-out force datas don't include a safety factor.
Values may change according to different workpiece surfaces.

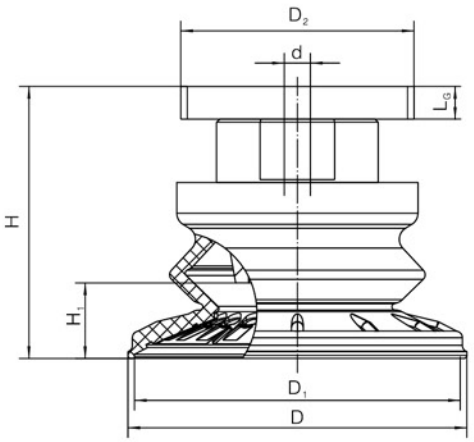
Dimensions



STC22—STC100(Female thread)



STC22—STC100(Male thread)



STC22-STC100 RA(Rectangular adapter)

Dimensions

Size (mm) / Model	D	D_1	d	G	H	L_G	D_2	S	H_1
STC22N-60-G1/4F	22	20	4	G1/4F	25	12	--	16	5.5
STC22N-60-G1/4M	22	20	4	G1/4M	25	12	--	16	5.5
STC22N-60-G3/8F	22	20	4	G3/8F	39	11	--	22	5.5
STC22N-60-M10M	22	20	4	M10M	25	12	--	16	5.5
STC22N-60-M14M	22	20	4	M14X1.5M	25	12	--	16	5.5
STC22N-60-RA	22	20	4	--	33	4.7	32	--	5.5
STC30N-60-G1/4F	32	30	4	G1/4F	28	12	--	17	9.5
STC30N-60-G1/4M	32	30	4	G1/4M	28	12	--	17	9.5
STC30N-60-G3/8F	32	30	4	G3/8F	42	11	--	22	9.5
STC30N-60-M10M	32	30	4	M10M	28	12	--	17	9.5
STC30N-60-M14M	32	30	4	M14X1.5M	28	12	--	17	9.5
STC30N-60-RA	32	30	4	--	33	4.7	32	--	9.5
STC40N-60-G1/4F	42	40	4	G1/4F	28.5	12	--	17	10
STC40N-60-G1/4M	42	40	4	G1/4M	28.5	12	--	17	10
STC40N-60-G3/8F	42	40	4	G3/8F	42.5	11	--	22	10
STC40N-60-M10M	42	40	4	M10M	21.5	12	--	17	10
STC40N-60-M14M	42	40	4	M14M	21.5	12	--	17	10
STC40N-60-RA	42	40	4	--	33.5	4.7	32	--	10
STC50N-60-G1/4F	52	50	6	G1/4F	51	11	--	22	11.5
STC50N-60-G1/4M	52	50	6	G1/4M	37	12	--	22	11.5
STC50N-60-G3/8F	52	50	6	G3/8F	37	15	--	22	11.5
STC50N-60-M10M	52	50	4	M10M	37	12	--	22	11.5
STC50N-60-M14M	52	50	6	M14M	37	12	--	22	11.5
STC50N-60-RA	52	50	6	--	42	4.7	32	--	11.5
STC60N-60-G1/4F	62.5	60	6	G1/4F	55	11	--	22	14.5
STC60N-60-G1/4M	62.5	60	6	G1/4M	41	12	--	22	14.5
STC60N-60-G3/8F	62.5	60	6	G3/8F	41	15	--	22	14.5
STC60N-60-M10M	62.5	60	4	M10M	41	12	--	22	14.5
STC60N-60-M14M	62.5	60	6	M14M	41	12	--	22	14.5
STC60N-60-RA	62.5	60	6	--	46	4.7	32	--	14.5
STC80N-60-G1/4F	82	80	6	G1/4F	64.5	11	--	22	22.5
STC80N-60-G1/4M	82	80	6	G1/4M	50.5	12	--	22	22.5
STC80N-60-G3/8F	82	80	6	G3/8F	50.5	15	--	22	22.5
STC80N-60-M10M	82	80	4	M10M	50.5	12	--	22	22.5
STC80N-60-M14M	82	80	6	M14M	50.5	12	--	22	22.5
STC80N-60-RA	82	80	6	--	55.5	4.7	32	--	22.5
STC100N-60-G1/4F	102.5	100	6	G1/4F	70	11	--	22	25
STC100N-60-G1/4M	102.5	100	6	G1/4M	56	12	--	22	25
STC100N-60-G3/8F	102.5	100	6	G3/8F	56	15	--	22	25
STC100N-60-M10M	102.5	100	4	M10M	56	12	--	22	25
STC100N-60-M14M	102.5	100	6	M14M	56	12	--	22	25
STC100N-60-RA	102.5	100	6	--	61.5	4.7	32	--	25

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Large inner support structure, protects the metal sheets from deformation and damage during handling process
◇Slot structure efficiently increases the friction force between vacuum pad and workpiece in order to prevent the oily metal sheets from slipping during the process of handling
◇Two material shore hardness are available(45 shore and 60 shore), suitable for metal sheets with different thickness and shapes
◇Vacuum pads are available with various connection types

Applications

◇Car stamped steel
◇Steel plates with oily surface
◇Glass, stamping parts, plywood
◇Handling normal sheet metal (in order to avoid deformation)

Model

Model	Diameter(mm)	Material and Hardness	Connection thread
SFF	30 40 50 60 80 100	N–45(Green)(N–NBR) N–60(Orange)(N–NBR)	G1/4M (M–Male thread) G1/4F (F–Female thread) G3/8F M10M M14X1.5M RA Rectangular adapter

△SFF80N–60–G3/8F

How to order

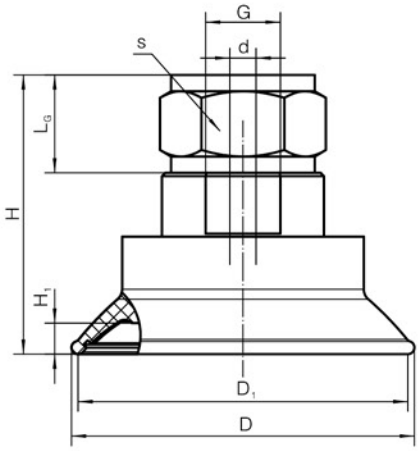
Model \ Connection	G1/4M (Male thread)	G1/4F (Female thread)	G3/8F (Female thread)	M10M (Male thread)	M14X1.5M (Male thread)	RA Rectangular adapter
SFF30N–45	201.0340.0102	201.0340.1102	201.0340.1103	201.0340.0210	201.0340.0214	201.0340.0932
SFF30N–60	201.0360.0102	201.0360.1102	201.0360.1103	201.0360.0210	201.0360.0214	201.0360.0932
SFF40N–45	201.0440.0102	201.0440.1102	201.0440.1103	201.0440.0210	201.0440.0214	201.0440.0932
SFF40N–60	201.0460.0102	201.0460.1102	201.0460.1103	201.0460.0210	201.0460.0214	201.0460.0932
SFF50N–45	201.0540.0102	201.0540.1102	201.0540.1103	201.0540.0210	201.0540.0214	201.0540.0932
SFF50N–60	201.0560.0102	201.0560.1102	201.0560.1103	201.0560.0210	201.0560.0214	201.0560.0932
SFF60N–45	201.0640.0102	201.0640.1102	201.0640.1103	201.0640.0210	201.0640.0214	201.0640.0932
SFF60N–60	201.0660.0102	201.0660.1102	201.0660.1103	201.0660.0210	201.0660.0214	201.0660.0932
SFF80N–45	201.0840.0102	201.0840.1102	201.0840.1103	201.0840.0210	201.0840.0214	201.0840.0932
SFF80N–60	201.0860.0102	201.0860.1102	201.0860.1103	201.0860.0210	201.0860.0214	201.0860.0932
SFF100N–45	201.1040.0102	201.1040.1102	201.1040.1103	201.1040.0210	201.1040.0214	201.1040.0932
SFF100N–60	201.1060.0102	201.1060.1102	201.1060.1103	201.1060.0210	201.1060.0214	201.1060.0932

Technical parameters

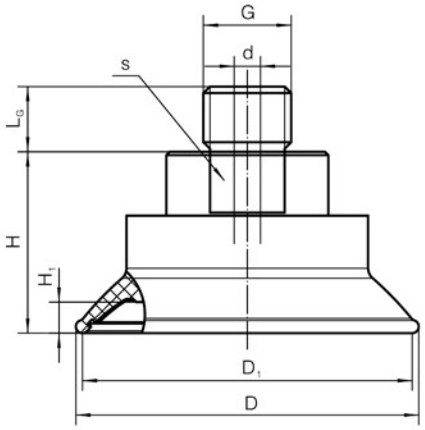
Model	Vertical pull-out force (N) -60kPa	Lateral pull-out force (N) -60kPa	Lateral pull-out force on oily surface (N) -60kPa	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Recommended tube Diameter (mm)	Weight (g)
SFF30	45	35	33	1.6	35	4	11-21
SFF40	72	54	51	3.5	47.5	4	13-23
SFF50	112	90	86	7.5	70	6	20-30
SFF60	145	102	93	12.6	81	6	26-36
SFF80	288	212	190	35	115	6	43-53
SFF100	445	322	308	60	141	6	57-67

△Workpiece is with smooth, dry surface, the above pull-out force datas don't include a safety factor.
Values may change according to different workpiece surfaces.

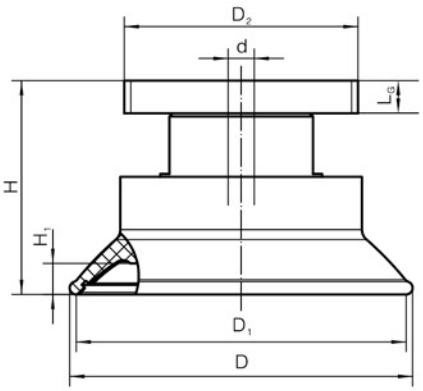
Dimensions



SFF30—SFF100(Female thread)



SFF30—SFF100(Male thread)



SFF30—SFF100 RA(Rectangular adapter)

Dimensions

Size (mm) / Model	D	D_1	d	G	H	L_G	D_2	S	H_1
SFF30N-45-G1/4F	32	30	4	G1/4F	20	12	--	17	2.7
SFF30N-45-G1/4M	32	30	4	G1/4M	20	12	--	17	2.7
SFF30N-45-G3/8F	32	30	4	G3/8F	34	11	--	22	2.7
SFF30N-45-M10M	32	30	4	M10M	20	12	--	17	2.7
SFF30N-45-M14M	32	30	4	M14X1.5M	20	12	--	17	2.7
SFF30N-45-RA	32	30	4	--	25	4.7	32	--	2.7
SFF40N-45-G1/4F	42	40	4	G1/4F	22	12	--	17	3.7
SFF40N-45-G1/4M	42	40	4	G1/4M	22	12	--	17	3.7
SFF40N-45-G3/8F	42	40	4	G3/8F	36	11	--	22	3.7
SFF40N-45-M10M	42	40	4	M10M	22	12	--	17	3.7
SFF40N-45-M14M	42	40	4	M14M	22	12	--	17	3.7
SFF40N-45-RA	42	40	4	--	27	4.7	32	--	3.7
SFF50N-45-G1/4F	52	50	6	G1/4F	42	11	--	22	4.7
SFF50N-45-G1/4M	52	50	6	G1/4M	28	12	--	22	4.7
SFF50N-45-G3/8F	52	50	6	G3/8F	28	15	--	22	4.7
SFF50N-45-M10M	52	50	4	M10M	28	12	--	22	4.7
SFF50N-45-M14M	52	50	6	M14M	28	12	--	22	4.7
SFF50N-45-RA	52	50	6	--	33	4.7	32	--	4.7
SFF60N-45-G1/4F	62.5	60	6	G1/4F	45	11	--	22	6
SFF60N-45-G1/4M	62.5	60	6	G1/4M	31	12	--	22	6
SFF60N-45-G3/8F	62.5	60	6	G3/8F	31	15	--	22	6
SFF60N-45-M10M	62.5	60	4	M10M	31	12	--	22	6
SFF60N-45-M14M	62.5	60	6	M14M	31	12	--	22	6
SFF60N-45-RA	62.5	60	6	--	36	4.7	32	--	6
SFF80N-45-G1/4F	82	80	6	G1/4F	48	11	--	22	7.5
SFF80N-45-G1/4M	82	80	6	G1/4M	34	12	--	22	7.5
SFF80N-45-G3/8F	82	80	6	G3/8F	34	15	--	22	7.5
SFF80N-45-M10M	82	80	4	M10M	34	12	--	22	7.5
SFF80N-45-M14M	82	80	6	M14M	34	12	--	22	7.5
SFF80N-45-RA	82	80	6	--	39	4.7	32	--	7.5
SFF100N-45-G1/4F	103	100	6	G1/4F	50	11	--	22	9.2
SFF100N-45-G1/4M	103	100	6	G1/4M	36	12	--	22	9.2
SFF100N-45-G3/8F	103	100	6	G3/8F	36	15	--	22	9.2
SFF100N-45-M10M	103	100	4	M10M	36	12	--	22	9.2
SFF100N-45-M14M	103	100	6	M14M	36	12	--	22	9.2
SFF100N-45-RA	103	100	6	--	41	4.7	32	--	9.2

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Large inner support structure, protects the metal sheets from deformation and damage during handling process
◇Slot structure efficiently increases the friction force between vacuum pad and workpiece in order to prevent the oily metal sheets from slipping during the process of handling
◇Flat, oval vacuum pad is suitable for long and narrow workpieces
◇1.5 bellows structure has good sealing and buffer to workpiece with uneven surface
◇Vacuum pads are available with various connection types

Applications

◇Car stamped steel
◇Steel plates with oily surface
◇Long and narrow metal sheet parts
◇Handling normal sheet metal (in order to avoid deformation)

Model

Model	Diameter(mm)	Material and Hardness	Connection thread
SOB	30×60 40×80 55×110 70×140	N–60(Orange)(N–NBR)	G1/4M (M–Male thread) G1/4F (F–Female thread) G3/8F M10M M14X1.5M RA Rectangular adapter

△SOB30X60N–60–G3/8F

How to order

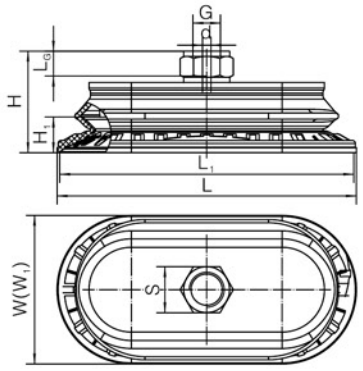
Model \ Connection	G1/4M (Male thread)	G1/4F (Female thread)	G3/8F (Female thread)	M10M (Male thread)	M14X1.5M (Male thread)	RA Rectangular adapter
SOB30X60N–60	203.0660.0102	203.0660.1102	203.0660.1106	203.0660.0210	203.0660.0214	203.0660.0932
SOB40X80N–60	203.0860.0102	203.0860.1102	203.0860.1106	203.0860.0210	203.0860.0214	203.0860.0932
SOB55X110N–60	203.1160.0102	203.1160.1102	203.1160.1106	203.1160.0210	203.1160.0214	203.1160.0932
SOB70X140N–60	203.1460.0102	203.1460.1102	203.1460.1106	203.1460.0210	203.1460.0214	203.1460.0932

Technical parameters

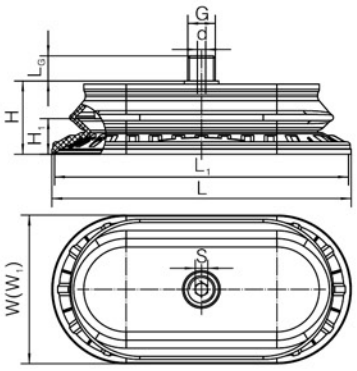
Model	Vertical pull–out force (N) –60kPa	Lateral pull–out force (N) –60kPa	Lateral pull–out force on oily surface (N) –60kPa	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Recommended tube Diameter (mm)	Weight (g)
SOB30X60	53	60	50	8.7	25	4	26
SOB40X80	110	118	101	22	32	6	33
SOB55X110	197	200	183	57	48	6	75
SOB70X140	275	295	267	108	64	6	117

△Workpiece is with smooth, dry surface, the above pull–out force datas don't include a safety factor. Values may change according to different workpiece surfaces.

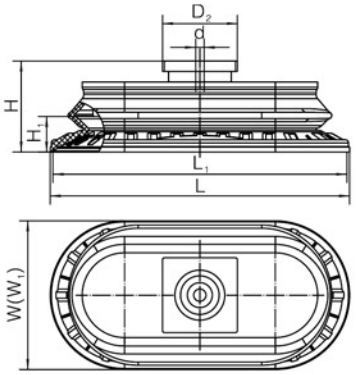
Dimensions



SOB30X60—70X140
(Female thread)



SOB30X60—70X140
(Male thread)



SOB30X60—70X140 RA
(Rectangular adapter)

Model \ Size (mm)	L	L_1	W	W_1	d	G	H	L_G	D_2	S	H_1
SOB30X60N-60-G1/4F	62	60	32	30	6	G1/4F	34	11	--	20	6
SOB30X60N-60-G1/4M	62	60	32	30	6	G1/4M	21.5	12	--	6	6
SOB30X60N-60-G3/8F	62	60	32	30	6	G3/8F	34	11	--	22	6
SOB30X60N-60-M10M	62	60	32	30	4	M10M	21.5	12	--	4	6
SOB30X60N-60-M14M	62	60	32	30	6	M14X1.5M	21.5	12	--	6	6
SOB30X60N-60-RA	62	60	32	30	6	--	29	--	32	--	6
SOB40X80N-60-G1/4F	82	80	42	40	6	G1/4F	37	11	--	20	8.8
SOB40X80N-60-G1/4M	82	80	42	40	6	G1/4M	24.5	12	--	6	8.8
SOB40X80N-60-G3/8F	82	80	42	40	6	G3/8F	37	11	--	22	8.8
SOB40X80N-60-M10M	82	80	42	40	4	M10M	24.5	12	--	4	8.8
SOB40X80N-60-M14M	82	80	42	40	6	M14X1.5M	24.5	12	--	6	8.8
SOB40X80N-60-RA	82	80	42	40	6	--	42	--	32	--	8.8
SOB55X110N-60-G1/4F	112	110	57	55	6	G1/4F	43	11	--	20	12.5
SOB55X110N-60-G1/4M	112	110	57	55	6	G1/4M	30.5	12	--	6	12.5
SOB55X110N-60-G3/8F	112	110	57	55	6	G3/8F	43	11	--	22	12.5
SOB55X110N-60-M10M	112	110	57	55	4	M10M	30.5	12	--	4	12.5
SOB55X110N-60-M14M	112	110	57	55	6	M14X1.5M	30.5	12	--	6	12.5
SOB55X110N-60-RA	112	110	57	55	6	--	38	--	32	--	12.5
SOB70X140N-60-G1/4F	143	140	72	69	6	G1/4F	47.5	11	--	20	17
SOB70X140N-60-G1/4M	143	140	72	69	6	G1/4M	35	12	--	6	17
SOB70X140N-60-G3/8F	143	140	72	69	6	G3/8F	47.5	11	--	22	17
SOB70X140N-60-M10M	143	140	72	69	4	M10M	35	12	--	4	17
SOB70X140N-60-M14M	143	140	72	69	6	M14X1.5M	35	12	--	6	17
SOB70X140N-60-RA	143	140	72	69	6	--	42.5	--	32	--	17

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Large inner support structure, protects the metal sheets from deformation and damage during handling process
◇Slot structure efficiently increases the friction force between vacuum pad and workpiece in order to prevent the oily metal sheets from slipping during the process of handling
◇Flat, oval vacuum pad is suitable for long and narrow workpieces
◇Two material shore hardness are available(45 shore and 60 shore), suitable for metal sheets with different thickness and shapes
◇Vacuum pads are available with various connection types

Applications

◇Car stamped steel
◇Steel plates with oily surface
◇Long and narrow metal sheet parts
◇Handling normal sheet metal (in order to avoid deformation)

Model

Model	Diameter(mm)	Material and Hardness	Connection thread
SOF	20×80 30×90 40×110	N-45(Green)(N-NBR) N-60(Orange)(N-NBR)	G1/4M (M-Male thread) G1/4F (F-Female thread) G3/8F M10M M14X1.5M RA Rectangular adapter

△SOF20X80N-60-G3/8F

How to order

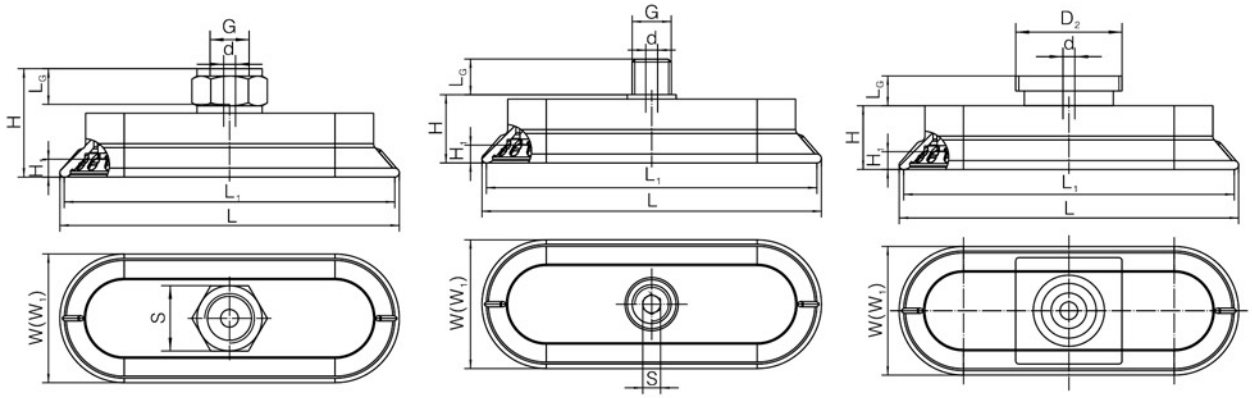
Connection / Model	G1/4M (Male thread)	G1/4F (Female thread)	G3/8F (Female thread)	M10M (Male thread)	M14X1.5M (Male thread)	RA Rectangular adapter
SOF20X80N-45	204.0640.0102	204.0640.1102	204.0640.1106	204.0640.0210	204.0640.0214	204.0640.0932
SOF20X80N-60	204.0660.0102	204.0660.1102	204.0660.1106	204.0660.0210	204.0660.0214	204.0660.0932
SOF30X90N-45	204.0940.0102	204.0940.1102	204.0940.1106	204.0940.0210	204.0940.0214	204.0940.0932
SOF30X90N-60	204.0960.0102	204.0960.1102	204.0960.1106	204.0960.0210	204.0960.0214	204.0960.0932
SOF40X110N-45	204.1140.0102	204.1140.1102	204.1140.1106	204.1140.0210	204.1140.0214	204.1140.0932
SOF40X110N-60	204.1160.0102	204.1160.1102	204.1160.1106	204.1160.0210	204.1160.0214	204.1160.0932

Technical parameters

Model	Vertical pull-out force (N) -60kPa	Lateral pull-out force (N) -60kPa	Lateral pull-out force on oily surface (N) -60kPa	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Recommended tube Diameter (mm)	Weight (g)
SOF20X80	75	38	35	15	20	4	23
SOF30X90	120	77	60	18	25	6	24
SOF40X110	200	188	118	35	42	6	47

△Workpiece is with smooth, dry surface, the above pull-out force datas don't include a safety factor. Values may change according to different workpiece surfaces.

Dimensions



SOF20X80—40X110
(Female thread)

SOF20X80—40X110
(Male thread)

SOF20X80—40X110 RA
(Rectangular adapter)

Model \ Size (mm)	L	L_1	W	W_1	d	G	H	L_G	D_2	S	H_1
SOF20X80N-45-G1/4F	84	82	24	22	6	G1/4F	29.5	11	--	20	5
SOF20X80N-45-G1/4M	84	82	24	22	6	G1/4M	17	12	--	6	5
SOF20X80N-45-G3/8F	84	82	24	22	6	G3/8F	29.5	11	--	22	5
SOF20X80N-45-M10M	84	82	24	22	4	M10M	17	12	--	4	5
SOF20X80N-45-M14M	84	82	24	22	6	M14X1.5M	17	12	--	6	5
SOF20X80N-45-RA	84	82	24	22	6	--	24.5	--	32	--	5
SOF30X90N-45-G1/4F	93	90	33	30	6	G1/4F	30	11	--	20	5
SOF30X90N-45-G1/4M	93	90	33	30	6	G1/4M	17.5	12	--	6	5
SOF30X90N-45-G3/8F	93	90	33	30	6	G3/8F	30	11	--	22	5
SOF30X90N-45-M10M	93	90	33	30	4	M10M	17.5	12	--	4	5
SOF30X90N-45-M14M	93	90	33	30	6	M14X1.5M	17.5	12	--	6	5
SOF30X90N-45-RA	93	90	33	30	6	--	25	--	32	--	5
SOF40X110N-45-G1/4F	113	110	43	40	6	G1/4F	35.5	11	--	20	6
SOF40X110N-45-G1/4M	113	110	43	40	6	G1/4M	23	12	--	6	6
SOF40X110N-45-G3/8F	113	110	43	40	6	G3/8F	35.5	11	--	22	6
SOF40X110N-45-M10M	113	110	43	40	4	M10M	23	12	--	4	6
SOF40X110N-45-M14M	113	110	43	40	6	M14X1.5M	23	12	--	6	6
SOF40X110N-45-RA	113	110	43	40	6	--	30.5	--	32	--	6

Features

◇Softy and concave oval structure give no damage to the workpiece surface
◇Slot structure increases the friction force between vacuum pad and workpiece
◇Concave oval vacuum pad is suitable for thin, long cylindrical surface and curved workpiece

Applications

◇Handling long, thin tube and curved workpiece
◇For narrow, long workpiece with small curved radius

Model

Model	Diameter(mm)	Material and Hardness	Connection thread
SOG	35 × 100	N–45(Green)(N–NBR)	G1/4M (M–Male thread) G1/4F (F–Female thread) G3/8F M10M M14X1.5M RA Rectangular adapter

△SOG 35X110N–45–G3/8F

How to order

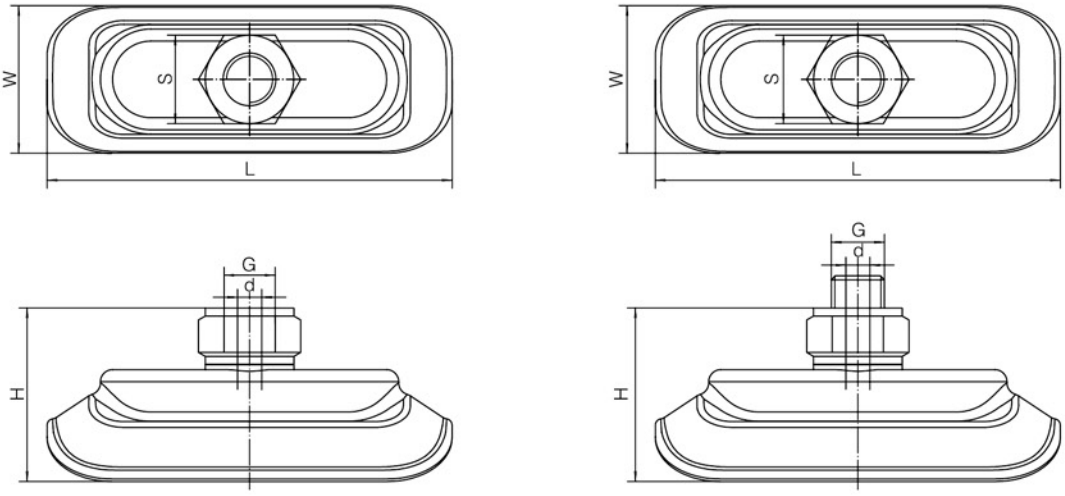
Model \ Connection	G1/4M (Male thread)	G1/4F (Female thread)	G3/8F (Female thread)	M10M (Male thread)	M14X1.5M (Male thread)	RA Rectangular adapter
SOG35X100N–45	209.1040.0102	209.1040.1102	209.1040.1103	209.1040.0210	209.1040.0214	209.1040.0932

Technical parameters

Model	Vertical pull–out force (N) –60kPa	Lateral pull–out force (N) –60kPa	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Recommended tube Diameter (mm)	Weight (g)
SOG35X100	122	87	11	25	6	37

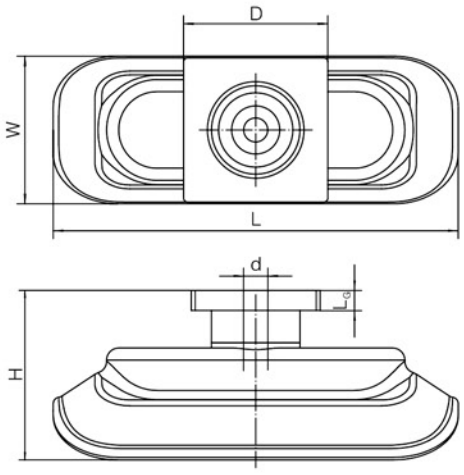
△Workpiece is with smooth, dry surface, the above pull–out force datas don't include a safety factor.
Values may change according to different workpiece surfaces.

Dimensions



SOG35X100(Female thread)

SOG35X100(Male thread)

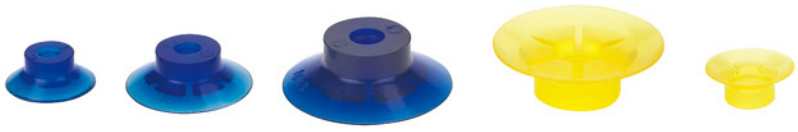


SOG35X100 RA(Rectangular adapter)

Model \ Size (mm)	L	W	d	G	H	L_G	S
SOG22N-45-G1/4F	100	35	6	G1/4F	52	11	22
SOG22N-45-G1/4M	100	35	6	G1/4M	37.5	8	--
SOG22N-45-G3/8F	100	35	6	G3/8F	52	11	22
SOG22N-45-M10M	100	35	4	M10M	50	8	22
SOG22N-45-M14M	100	35	6	M14X1.5M	50	8	22
SOG22N-45-RA	100	35	6	--	42.5	4.7	32

Features

☆PU material, suitable for carton boxes and flat surface workpiece. The big advantage is that pu material lasts more or less 3–4 times longer than rubber.
☆Good flexibility.
☆Good wear resistance and oil resistance.
☆High tensile strength.



Model

Model	Diameter (mm)	Connection thread	Shore hardness (color)
SFP	20	18F(G1/8Female thread) 18M(G1/8Male thread)	Material: PU Shore hardness 40 (Yellow) Material: PU Shore hardness 60 (Blue)
	30		
	40		

How to Order

SFP20–20–18F (①: Model; ②: Shore hardness; ③: Connection thread;)
① ② ③

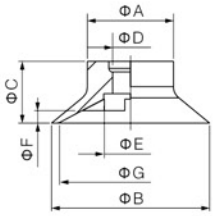
Model	Hardness	Without fitting	18F	18M
SFP20	40	220.2001.0000	220.2021.0000	220.2031.0000
SFP20	60	220.2002.0000	220.2022.0000	220.2032.0000
SFP30	40	220.3001.0000	220.3021.0000	220.3031.0000
SFP30	60	220.3002.0000	220.3022.0000	220.3032.0000
SFP40	40	220.4001.0000	220.4021.0000	220.4031.0000
SFP40	60	220.4002.0000	220.4022.0000	220.4032.0000

Connection thread	Ordering code
18F(G1/8Female thread)	10.018.0013
18M(G1/8Male thread)	10.018.0012

*Refer to the fittings for vacuum pads on page 208–211.

Pad without fitting dimensions (mm)

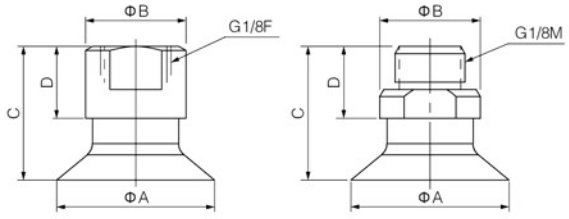
SFP20、SFP30、SFP40



Model	A	B	C	D	E	F	G
SFP20	12	22	8.6	5	7.5	1.6	20
SFP30	15.8	31	10.5	5	7.5	2	30
SFP40	21	41	14	6.5	10	2.5	40

Pad with fitting dimensions (mm)

SFP20、SFP30、SFP40



Model	A	B	C	D
SFP20	22	14	18.6	10
SFP30	31	14	20.5	10
SFP40	41	14	24	10

Features

☆1.5 bellows vacuum pad.
☆PU material, long lifetime, it lasts more or less 3–4 times longer than other material, less down time.
☆Good flexibility.
☆Good wear resistance and oil resistance.
☆High tensile strength.

Model

Model	Diameter(mm)	Connection thread	Shore hardness (color)
SBP	10	M5–5(M5 Male thread)	Material: PU Shore hardness 30/60 (L Blue/D Blue) Material: PU Shore hardness 60 (D Blue) Material: PU Shore hardness 40 (Yellow)
	15		
	20	18M(G1/8 Male thread) 18F(G1/8 Female thread)	
	30		
	40		
	50	38M(G3/8 Male thread) 38F(G3/8 Female thread)	
	70	38M(G3/8 Male thread) 38F(G3/8 Female thread) 38F(NPSF3/8 Female thread)	

How to Order

SBP20–40–18F (①: Model; ②: Shore hardness; ③: Connection thread;)
① ② ③

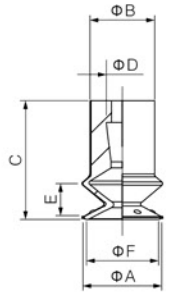
Model	Hardness	Without fitting	M5–M	18F	18M	38F	38M	38F(SBP70)	38M(SBP70)	NPSF38F
SBP10	30/60	221.1001.0000	221.1011.0000	--	--	--	--	--	--	--
SBP10	60	221.1002.0000	221.1012.0000	--	--	--	--	--	--	--
SBP10	40	221.1003.0000	221.1013.0000	--	--	--	--	--	--	--
SBP15	30/60	221.1501.0000	221.1511.0000	--	--	--	--	--	--	--
SBP15	60	221.1502.0000	221.1512.0000	--	--	--	--	--	--	--
SBP15	40	221.1503.0000	221.1513.0000	--	--	--	--	--	--	--
SBP20	30/60	221.2001.0000	--	221.2021.0000	221.2031.0000	--	--	--	--	--
SBP20	60	221.2002.0000	--	221.2022.0000	221.2032.0000	--	--	--	--	--
SBP20	40	221.2003.0000	--	221.2023.0000	221.2033.0000	--	--	--	--	--
SBP30	30/60	221.3001.0000	--	221.3021.0000	221.3031.0000	--	--	--	--	--
SBP30	60	221.3002.0000	--	221.3022.0000	221.3032.0000	--	--	--	--	--
SBP30	40	221.3003.0000	--	221.3023.0000	221.3033.0000	--	--	--	--	--
SBP40	30/60	221.4001.0000	--	221.4021.0000	221.4031.0000	--	--	--	--	--
SBP40	60	221.4002.0000	--	221.4022.0000	221.4032.0000	--	--	--	--	--
SBP40	40	221.4003.0000	--	221.4023.0000	221.4033.0000	--	--	--	--	--
SBP50	30/60	221.5001.0000	--	--	--	221.5061.0000	221.5071.0000	--	--	--
SBP50	60	221.5002.0000	--	--	--	221.5062.0000	221.5072.0000	--	--	--
SBP50	40	221.5003.0000	--	--	--	221.5063.0000	221.5073.0000	--	--	--
SBP70	30/60	221.7001.0000	--	--	--	--	--	221.7081.0000	--	--
SBP70	30/60	--	--	--	--	--	--	--	--	221.7101.0000
SBP70	30/60	--	--	--	--	--	--	--	221.7091.0000	--
SBP70	60	221.7002.0000	--	--	--	--	--	221.7082.0000	--	--
SBP70	60	--	--	--	--	--	--	--	--	221.7102.0000
SBP70	60	--	--	--	--	--	--	--	221.7092.0000	--
SBP70	40	221.7003.0000	--	--	--	--	--	221.7083.0000	--	--
SBP70	40	--	--	--	--	--	--	--	--	221.7103.0000
SBP70	40	--	--	--	--	--	--	--	221.7093.0000	--

Connection thread	Ordering code
M5–5(M5 Male thread)	10.005.0009
18F(G1/8 Female thread)	10.018.0013
18M(G1/8 Male thread)	10.018.0012
38F(G3/8 Female thread)	10.038.0004
38M(G3/8 Male thread)	10.038.0003
38F(SBP70)(G3/8 Female thread)	10.038.0005
38M(SBP70)(G3/8 Male thread)	10.038.0006
NPSF38F(NPSF3/8 Female thread)	10.038.0007

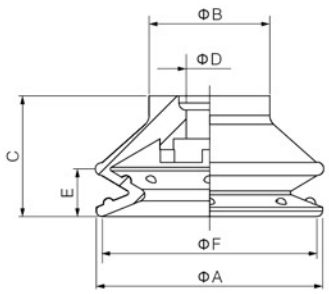
*Refer to the fittings for vacuum pads on page 208–211.

Pad without fitting dimensions (mm)

SBP10、SBP15



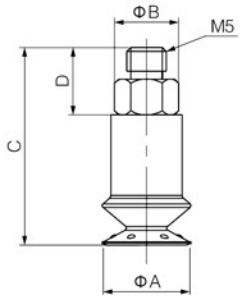
SBP20、SBP30、SBP40、SBP50、SBP70



Model	A	B	C	D	E	F
SBP10	10.9	9	16.5	5	5	10
SBP15	16	9	19	5.5	5.8	15
SBP20	21	12	18	5	7.5	20
SBP30	31.5	16.8	16.8	6.5	6.6	30
SBP40	42	22.4	22.4	6.5	8.8	40
SBP50	52.5	28	29.3	10.5	12.3	50
SBP70	73	42	35.5	20	16.5	70

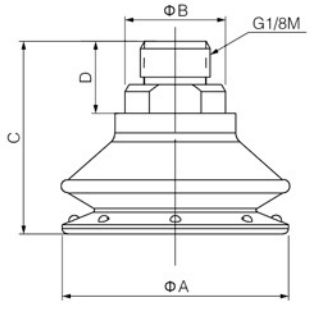
Pad with fitting dimensions (mm)

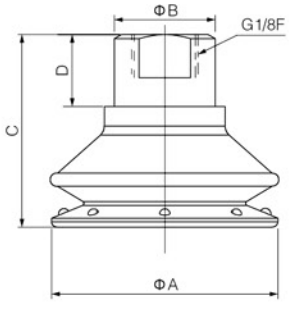
SBP10、SBP15



Model	A	B	C	D
SBP10	10.9	7	25.5	9
SBP15	16	7	28	9

SBP20、SBP30、SBP40

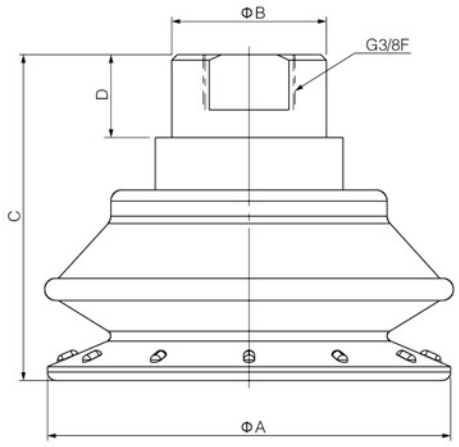




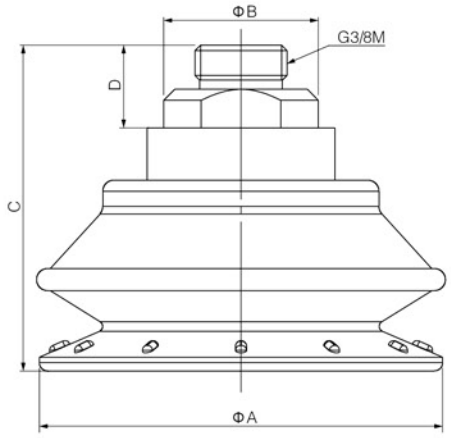
Model	A	B	C	D
SBP20	21	14	28	10
SBP30	31.5	14	26.8	10
SBP40	42	14	32.4	10

Pad with fitting dimensions (mm)

SBP50

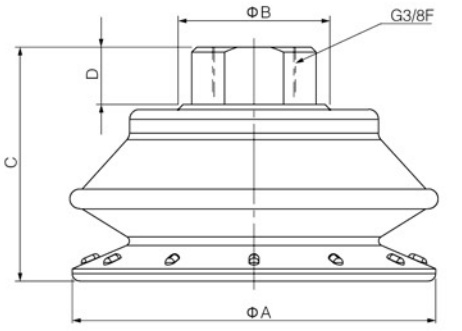


Model	A	B	C	D
SBP50	52.5	28	43.3	15

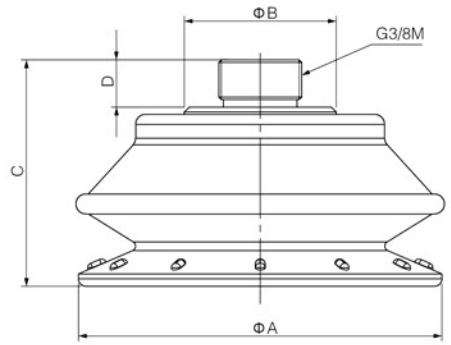


Model	A	B	C	D
SBP50	52.5	28	44.3	16

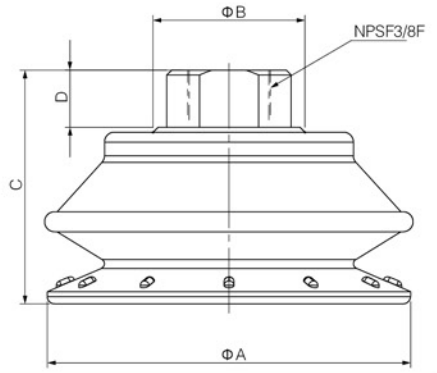
SBP70



Model	A	B	C	D
SBP70	73	30.5	47	11.5



Model	A	B	C	D
SBP70	73	30.5	45.5	10



Model	A	B	C	D
SBP70	73	30.5	47	11.5

Features

☆2.5 bellows vacuum pad.
☆PU material, long lifetime, it lasts more or less 3–4 times longer than other material, less down time.
☆Good flexibility.
☆Good wear resistance and oil resistance.
☆High tensile strength.

Model

Model	Diameter(mm)	Connection thread	Shore hardness (color)
SXP	20	18M(G1/8 Male thread) 18F(G1/8 Female thread)	Material: PU Shore hardness 30/60 (L Blue/D Blue) Material: PU Shore hardness 60 (D Blue) Material: PU Shore hardness 55 (Green)
	25		
	30		
	35	14M(G1/4 Male thread) 14F(G1/4 Female thread)	
	40		
	50	38M(G3/8 Male thread) 38F(G3/8 Female thread)	
	70	38M(G3/8 Male thread) 38F(G3/8 Female thread) 38F(NPSF3/8 Female thread)	

How to Order

SXP20–60–18F (①: Model; ②: Shore hardness; ③: Connection thread;)
① ② ③

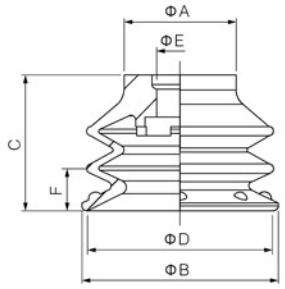
Model	Hardness	Without fitting	18F	18M	14F	14M	38F	38M	38F (SXP70)	38M (SXP70)	NPSF38F
SXP20	30/60	222.2001.0000	222.2021.0000	222.2031.0000	--	--	--	--	--	--	--
SXP20	60	222.2002.0000	222.2022.0000	222.2032.0000	--	--	--	--	--	--	--
SXP20	55	222.2003.0000	222.2023.0000	222.2033.0000	--	--	--	--	--	--	--
SXP25	30/60	222.2501.0000	222.2521.0000	222.2531.0000	--	--	--	--	--	--	--
SXP25	60	222.2502.0000	222.2522.0000	222.2532.0000	--	--	--	--	--	--	--
SXP25	55	222.2503.0000	222.2523.0000	222.2533.0000	--	--	--	--	--	--	--
SXP30	30/60	222.3001.0000	222.3021.0000	222.3031.0000	--	--	--	--	--	--	--
SXP30	60	222.3002.0000	222.3022.0000	222.3032.0000	--	--	--	--	--	--	--
SXP30	55	222.3003.0000	222.3023.0000	222.3033.0000	--	--	--	--	--	--	--
SXP35	30/60	222.3501.0000	--	--	222.3541.0000	222.3551.0000	--	--	--	--	--
SXP35	60	222.3502.0000	--	--	222.3542.0000	222.3552.0000	--	--	--	--	--
SXP35	55	222.3503.0000	--	--	222.3543.0000	222.3553.0000	--	--	--	--	--
SXP40	30/60	222.4001.0000	--	--	222.4041.0000	222.4051.0000	--	--	--	--	--
SXP40	60	222.4002.0000	--	--	222.4042.0000	222.4052.0000	--	--	--	--	--
SXP40	55	222.4003.0000	--	--	222.4043.0000	222.4053.0000	--	--	--	--	--
SXP50	30/60	222.5001.0000	--	--	--	--	222.5061.0000	222.5071.0000	--	--	--
SXP50	60	222.5002.0000	--	--	--	--	222.5062.0000	222.5072.0000	--	--	--
SXP50	55	222.5003.0000	--	--	--	--	222.5063.0000	222.5073.0000	--	--	--
SXP70	30/60	222.7001.0000	--	--	--	--	--	--	222.7081.0000	--	--
SXP70	30/60	--	--	--	--	--	--	--	--	--	222.7101.0000
SXP70	30/60	--	--	--	--	--	--	--	--	222.7091.0000	--
SXP70	60	222.7002.0000	--	--	--	--	--	--	222.7082.0000	--	--
SXP70	60	--	--	--	--	--	--	--	--	--	222.7102.0000
SXP70	60	--	--	--	--	--	--	--	--	222.7092.0000	--
SXP70	55	222.7003.0000	--	--	--	--	--	--	222.7083.0000	--	--
SXP70	55	--	--	--	--	--	--	--	--	--	222.7103.0000
SXP70	55	--	--	--	--	--	--	--	--	222.7093.0000	--

Connection thread	Ordering code
18F (G1/8 Female thread)	10.018.0013
18M (G1/8 Male thread)	10.018.0012
14F (G1/4 Female thread)	10.014.0005
14M (G1/4 Male thread)	10.014.0004
38F (G3/8 Female thread)	10.038.0004
38M (G3/8 Male thread)	10.038.0003
38F(SXP70) (G3/8 Female thread)	10.038.0005
38M(SXP70) (G3/8 Male thread)	10.038.0006
NPSF38F (NPSF3/8 Female thread)	10.038.0007

*Refer to the fittings for vacuum pads on page 208–211.

Pad without fitting dimensions (mm)

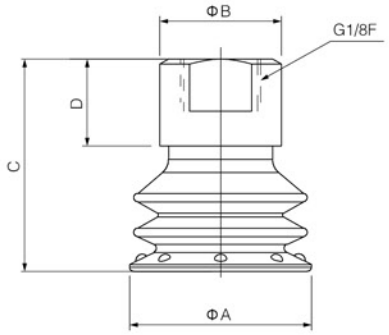
SXP20、SXP25、SXP30、SXP35、SXP40、SXP50、SXP70

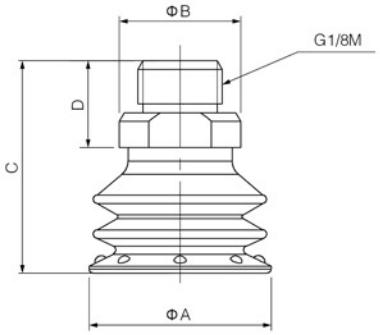


Model	A	B	C	D	E	F
SXP20	12	21	29	20	5	4.5
SXP25	15.4	26	18.9	24.4	5	7.3
SXP30	16.5	30	21.3	28	5	8
SXP35	21	35	25.3	33	6.5	9.8
SXP40	22	40	28.4	37.5	6.5	10.6
SXP50	27.5	50	35.5	47	10.5	13.4
SXP70	38.5	70	47.5	66	13	18.6

Pad with fitting dimensions (mm)

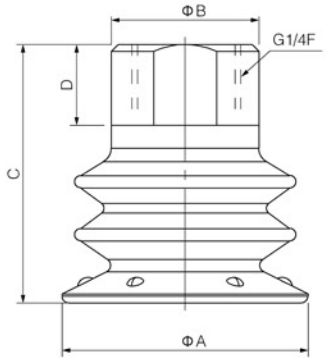
SXP20、SXP25、SXP30

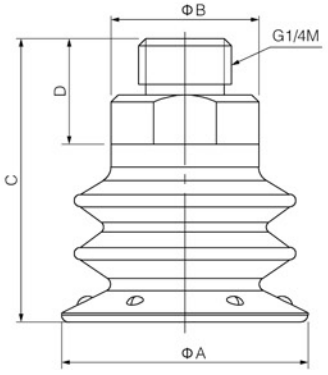




Model	A	B	C	D
SXP20	21	14	39	10
SXP25	26	14	28.9	10
SXP30	30	14	31.3	10

SXP35、SXP40



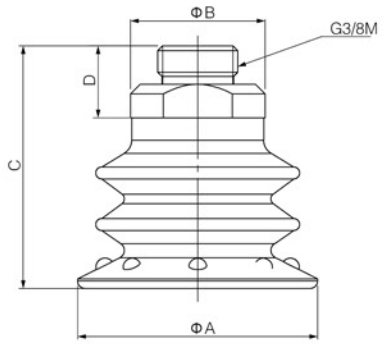


Model	A	B	C	D
SXP35	35	21	36.8	11.5
SXP40	40	21	40	11.5

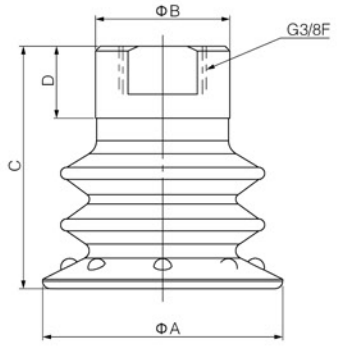
Model	A	B	C	D
SXP35	35	21	40.3	15
SXP40	40	21	43.5	15

Pad with fitting dimensions (mm)

SXP50

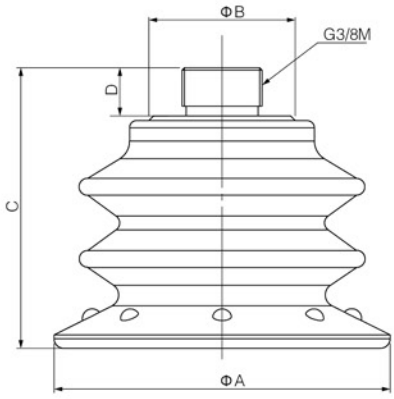


Model	A	B	C	D
SXP50	50	18	51.5	16

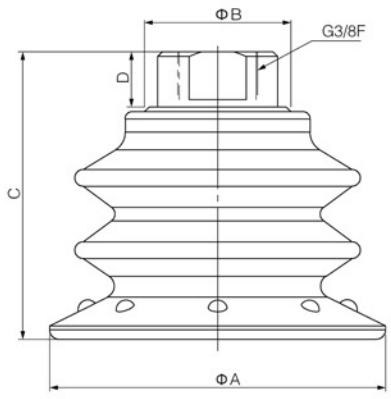


Model	A	B	C	D
SXP50	50	18	50.5	15

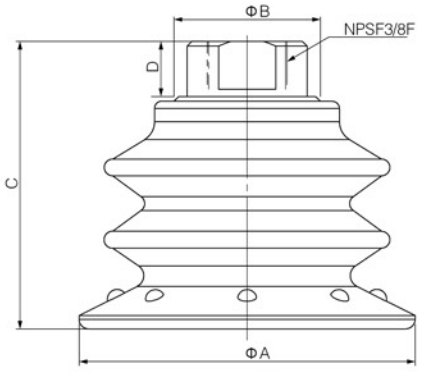
SXP70



Model	A	B	C	D
SXP70	70	30.5	58.5	10



Model	A	B	C	D
SXP70	70	30.5	60	11.5



Model	A	B	C	D
SXP70	70	30.5	60	11.5

Features

☆PU material, long lifetime, it lasts more or less 3–4 times longer than other material, less down time. Suitable for uneven textured surfaces,also good in plastic industry.
☆Good flexibility.
☆Good wear resistance and oil resistance.
☆High tensile strength.

Model

Model	Diameter(mm)	Connection thread	Shore hardness (color)
SGP	25	18M(G1/8 Male thread) 18F(G1/8 Female thread)	Material: PU Shore hardness 30/55 (Blue/Yellow) Material: PU Shore hardness 55 (Green)
	35		
	45		
	55	38M(G3/8 Male thread) 38F(G3/8 Female thread)	

How to Order

SGP20–20–18F (①: Model; ②: Shore hardness; ③: Connection thread;)
① ② ③

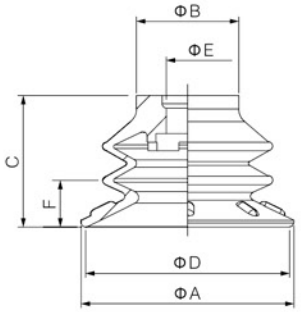
Model	Hardness	Without fitting	18F	18M	38F	38M
SGP25	30/55	223.2501.0000	223.2521.0000	223.2531.0000	--	--
SGP25	55	223.2502.0000	223.2522.0000	223.2532.0000	--	--
SGP35	30/55	223.3501.0000	223.3521.0000	223.3531.0000	--	--
SGP35	55	223.3502.0000	223.3522.0000	223.3532.0000	--	--
SGP45	30/55	223.4501.0000	223.4521.0000	223.4531.0000	--	--
SGP45	55	223.4502.0000	223.4522.0000	223.4532.0000	--	--
SGP55	30/55	223.5501.0000	--	--	223.5561.0000	223.5571.0000
SGP55	55	223.5502.0000	--	--	223.5562.0000	223.5572.0000

Connection thread	Ordering code
18F(G1/8 Female thread)	10.018.0013
18M(G1/8 Male thread)	10.018.0012
38F(G3/8 Female thread)	10.038.0004
38M(G3/8 Male thread)	10.038.0003

*Refer to the fittings for vacuum pads on page 208–211.

Pad without fitting dimensions (mm)

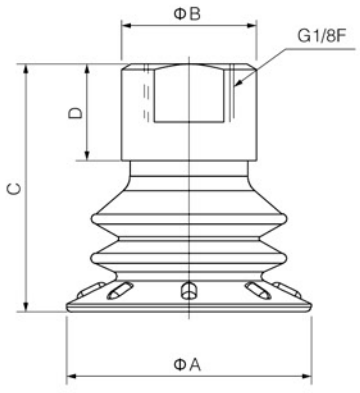
SGP25、SGP35、SGP45、SGP55

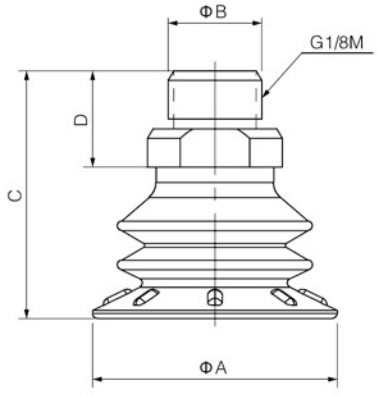


Model	A	B	C	D	E	F
SGP25	25	12	15.5	24	5	5.5
SGP35	35	16.5	22.3	33.4	5	8.4
SGP45	45	16.8	29.3	42.8	6.6	11.5
SGP55	55	27.5	36.3	52.4	10.5	12.9

Pad with fitting dimensions (mm)

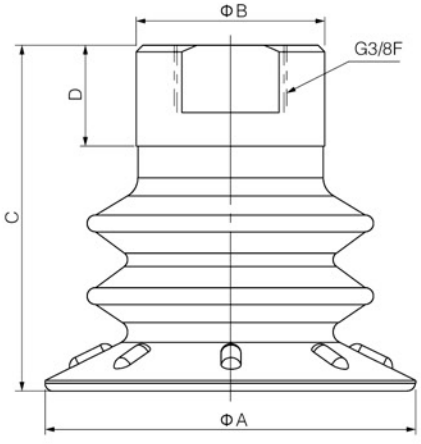
SGP25、SGP35、SGP45



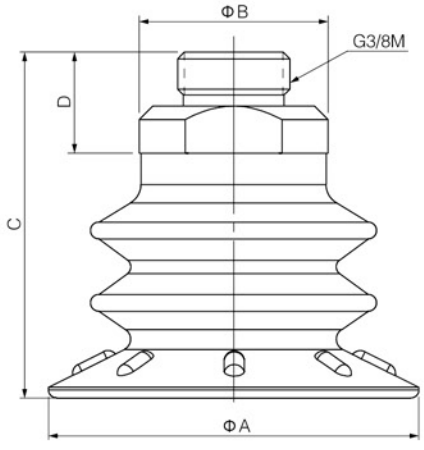


Model	A	B	C	D
SGP25	25	14	25.5	10
SGP35	35	14	32.3	10
SGP45	45	14	39.3	10

SGP55



Model	A	B	C	D
SGP55	55	28	51.3	15



Model	A	B	C	D
SGP55	55	28	52.3	16

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are avaible, suitable for workpiece with different materials and different working conditions
◇Deep structure to avoid bulging of the workpiece, suitable for cake–shaped and ball–shaped workpiece

Applications

◇Food industry, cake–shaped objects e.g. chocolate, candies and so on
◇Ball–shaped objects

Model

Model	Diameter (mm)	Material
SD	10	N–NBR (Black)
	16	S–Silicone(White)
	25	U–Urethane rubber
	40	F–Fluorine rubber

△SD10–N

How to order

Model \ Material	N	S	U	F
SD10	211.1001.0000	211.1002.0000	211.1003.0000	211.1004.0000
SD16	211.1601.0000	211.1602.0000	211.1603.0000	211.1604.0000
SD25	211.2501.0000	211.2052.0000	211.2503.0000	211.2504.0000
SD40	211.4001.0000	211.4002.0000	211.4003.0000	211.4004.0000

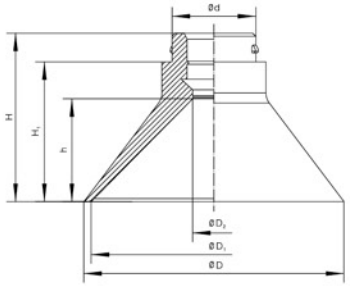
Technical parameters

Model	Pull–out force N (–60kPa)	Inner volume (cm^3)	Min. curve radius of workpiece (cm)	Recommended tube diameter (mm)
SD10	6.4	0.25	5.6	4
SD16	16.5	0.6	10	4
SD25	40	1.2	18	4
SD40	98	8.5	28	4

△Workpiece is with smooth, dry surface, the above pull–out force datas don't include a safety factor. Values may change according to different workpiece surfaces.

Dimensions

SD30—SD100 (Female thread)



Model \ Dimension(mm)	D	D_1	D_2	d	H	H_1	h
SD10–N	12	10	4	13	15	10.7	6
SD16–N	18	16	4	13	16	11.7	7
SD25–N	28	25	4	15	20	15.5	10
SD40–N	43.5	41	7	18	28	23.5	17

△ Refer to the matched spring plungers on page 156–158

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are avaible, suitable for workpiece with different materials and different working conditions
◇Heavy load design, suitable for heavy load handling in various industry

Model

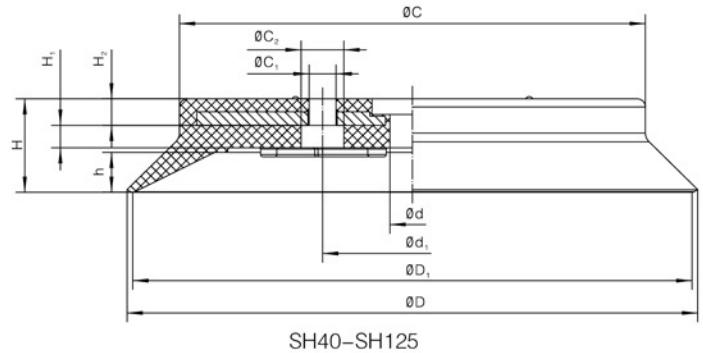
Model	Diameter (mm)	Material and Color
SH	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)

△SH40N Pad material of urethane rubber and fluorine rubber need to be ordered seperately

How to order

Model \ Material	N	S
SH40	212.0401.0000	212.0402.0000
SH50	212.0501.0000	212.0502.0000
SH63	212.0601.0000	212.0602.0000
SH80	212.0801.0000	212.0802.0000
SH100	212.1001.0000	212.1002.0000
SH125	212.1201.0000	212.1202.0000

Dimensions



SH40–SH125

Dimension(mm) / Model	D	D_1	d	d_1	H	H_1	H_2	h	C	C_1	C_2
SH40	42	40	6	18	11.5	3.5	3.5	3.5	32	4	6.5
SH50	52	50	6	18	11.5	3.5	3.5	3.5	42	4	6.5
SH63	65	63	8	34	14.5	4.5	4.5	3.5	64	5	8
SH80	82	80	8	34	16.5	4.5	4.5	4.5	68	5	8
SH100	103	100	10	40	21	5	6	7.5	80	6	9.5
SH125	127	125	10	40	21	5	6	7.5	104	6	9.5

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are available, suitable for workpiece with different materials and different working conditions
◇Heavy load design, suitable for heavy load handling in various industry
◇With spring plungers of different stroke, touch with the workpiece flexibly, it can adjust and compensate height differences of the workpiece timely

Model

Model	Diameter (mm)	Material and Color	Vacuum entry direction	Buffer stroke (mm)	Connection thread
SH	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)	Z–Vertical X–Lateral	25 50 75 100	M18–M18 × 1.5M M22–M22 × 1.5M

△SH40NZ–25–M18 M–Male thread F–Female thread Pad material of urethane rubber and fluorine rubber need to be ordered seperately

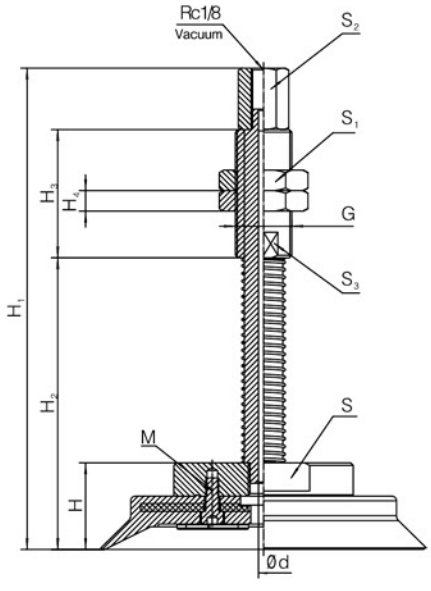
How to order

Model \ Buffer stroke	25mm	50mm	75mm	100mm
SH40NZ–M18	212.0411.1018	212.0411.2018	212.0411.3018	––
SH40SZ–M18	212.0421.1018	212.0421.2018	212.0421.3018	––
SH40NX–M18	212.0412.1018	212.0412.2018	212.0412.3018	––
SH40SX–M18	212.0422.1018	212.0422.2018	212.0422.3018	––
SH50NZ–M18	212.0511.1018	212.0511.2018	212.0511.3018	––
SH50SZ–M18	212.0521.1018	212.0521.2018	212.0521.3018	––
SH50NX–M18	212.0512.1018	212.0512.2018	212.0512.3018	––
SH50SX–M18	212.0522.1018	212.0522.2018	212.0522.3018	––
SH63NZ–M18	212.0611.1018	212.0611.2018	212.0611.3018	––
SH63SZ–M18	212.0621.1018	212.0621.2018	212.0621.3018	––
SH63NX–M18	212.0612.1018	212.0612.2018	212.0612.3018	––
SH63SX–M18	212.0622.1018	212.0622.2018	212.0622.3018	––
SH80NZ–M18	212.0811.1018	212.0811.2018	212.0811.3018	––

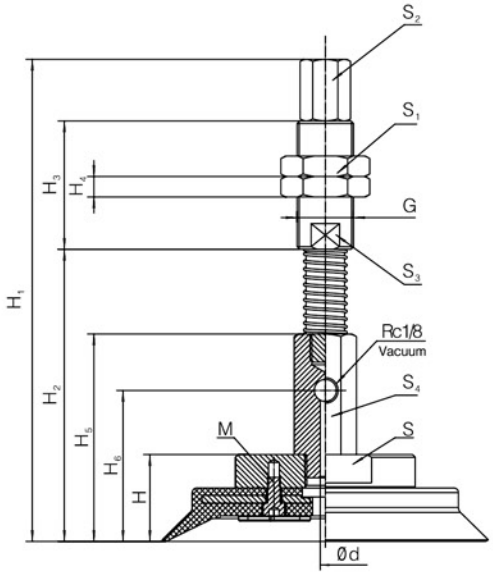
How to order

Model \ Buffer stroke	25mm	50mm	75mm	100mm
SH80SZ-M18	212.0821.1018	212.0821.2018	212.0821.3018	--
SH80NX-M18	212.0812.1018	212.0812.2018	212.0812.3018	--
SH80SX-M18	212.0822.1018	212.0822.2018	212.0822.3018	--
SH100NZ-M22	212.1011.1022	212.1011.2022	212.1011.3022	212.1011.4022
SH100SZ-M22	212.1021.1022	212.1021.2022	212.1021.3022	212.1021.4022
SH100NX-M22	212.1012.1022	212.1012.2022	212.1012.3022	212.1012.4022
SH100SX-M22	212.1022.1022	212.1022.2022	212.1022.3022	212.1022.4022
SH125NZ-M22	212.1211.1022	212.1211.2022	212.1211.3022	212.1211.4022
SH125SZ-M22	212.1221.1022	212.1221.2022	212.1221.3022	212.1221.4022
SH125NX-M22	212.1212.1022	212.1212.2022	212.1212.3022	212.1212.4022
SH125SX-M22	212.1222.1022	212.1222.2022	212.1222.3022	212.1222.4022

Dimensions



SH40[ ]Z~SH125[ ]Z Vertical direction connection (with buffer)



SH40[ ]X~SH125[ ]X Lateral direction connection (with buffer)

Dimension(mm) / Model	H	H_1	H_2	H_3	H_4	H_5	H_6	d	G	M	S	S_1	S_2	S_3	S_4
SH40Z-25-M18	23	118.5	63	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH40Z-50-M18	23	153.5	98	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH40Z-75-M18	23	189.5	134	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH40X-25-M18	23	151	100	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH40X-50-M18	23	186	135	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH40X-75-M18	23	222	171	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH50Z-25-M18	23	118.5	63	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH50Z-50-M18	23	153.5	98	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH50Z-75-M18	23	189.5	134	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SH50X-25-M18	23	151	100	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH50X-50-M18	23	186	135	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH50X-75-M18	23	222	171	35	6	60	38	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SH63Z-25-M18	26	121.5	66	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH63Z-50-M18	26	156.5	101	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH63Z-75-M18	26	192.5	137	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH63X-25-M18	26	154	103	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH63X-50-M18	26	189	136	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH63X-75-M18	26	225	172	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH80Z-25-M18	28	123.5	68	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH80Z-50-M18	28	158.5	103	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH80Z-75-M18	28	194.5	139	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SH80X-25-M18	28	156	105	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH80X-50-M18	28	191	138	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH80X-75-M18	28	227	174	35	6	63	41	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SH100Z-25-M22	34	152	78	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH100Z-50-M22	34	188	114	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH100Z-75-M22	34	228	154	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH100Z-100-M22	34	263	189	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH100X-25-M22	34	186	115	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH100X-50-M22	34	222	151	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH100X-75-M22	34	262	191	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH100X-100-M22	34	297	226	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH125Z-25-M22	34	152	78	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH125Z-50-M22	34	188	114	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH125Z-75-M22	34	228	154	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH125Z-100-M22	34	263	189	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SH125X-25-M22	34	186	115	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH125X-50-M22	34	222	151	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH125X-75-M22	34	262	191	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SH125X-100-M22	34	297	226	50	8	71	49	4	M22×1.5	4-M5×0.8	60	30	17	19	21

△Refer to the pad dimensions on page 140

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are available, suitable for workpiece with different materials and different working conditions
◇Heavy load design, suitable for heavy load handling in various industry

Model

Model	Diameter (mm)	Material and Color	Vacuum entry direction	Connection thread
SH	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)	Z–Vertical X–Lateral	F8–M8X1.25F F10–M10X1.5F F12–M12X1.75F M14–M14X1M M16–M16X1.5M F–M16X1.5F

△SH40NZ–M14 M–Male thread F–Female thread Pad material of urethane rubber and fluorine rubber need to be ordered seperately

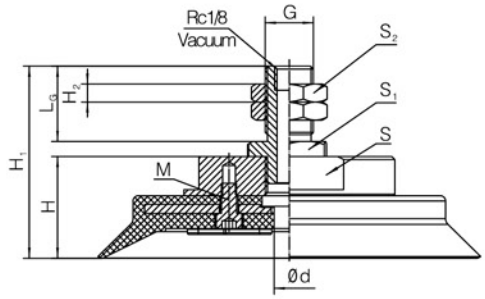
How to order

Model \ Connection	M14 (Male thread)	M16 (Male thread)	F8 (Female thread)	F10 (Female thread)	F12 (Female thread)	F16 (Female thread)
SH40NZ	212.0411.0014	––	212.0411.0108	212.0411.0110	––	––
SH40SZ	212.0421.0014	––	212.0421.0108	212.0421.0110	––	––
SH40NX	––	––	212.0412.0108	212.0412.0110	––	––
SH40SX	––	––	212.0422.0108	212.0422.0110	––	––
SH50NZ	212.0511.0014	––	212.0511.0108	212.0511.0110	––	––
SH50SZ	212.0521.0014	––	212.0521.0108	212.0521.0110	––	––
SH50NX	––	––	212.0512.0108	212.0512.0110	––	––
SH50SX	––	––	212.0522.0108	212.0522.0110	––	––
SH63NZ	––	212.0611.0016	212.0611.0108	212.0611.0110	212.0611.0112	212.0611.0116
SH63SZ	––	212.0621.0016	212.0621.0108	212.0621.0110	212.0621.0112	212.0621.0116
SH63NX	––	––	––	212.0612.0110	212.0612.0112	––
SH63SX	––	––	––	212.0622.0110	212.0622.0112	––
SH80NZ	––	212.0811.0016	212.0811.0108	212.0811.0110	212.0811.0112	212.0811.0116

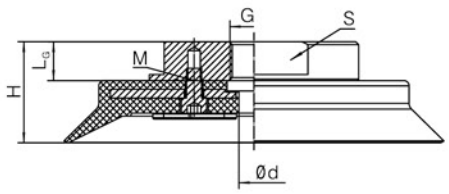
How to order

Model \ Connection	M14 (Male thread)	M16 (Male thread)	F8 (Female thread)	F10 (Female thread)	F12 (Female thread)	F16 (Female thread)
SH80SZ	--	212.0821.0016	212.0821.0108	212.0821.0110	212.0821.0112	212.0821.0116
SH80NX	--	--	--	212.0812.0110	212.0812.0112	--
SH80SX	--	--	--	212.0822.0110	212.0822.0112	--
SH100NZ	--	212.1011.0016	--	--	212.1011.0112	212.1011.0116
SH100SZ	--	212.1021.0016	--	--	212.1021.0112	212.1021.0116
SH100NX	--	--	--	212.1012.0110	212.1012.0112	--
SH100SX	--	--	--	212.1022.0110	212.1022.0112	--
SH125NZ	--	212.1211.0016	--	--	212.1211.0112	212.1211.0116
SH125SZ	--	212.1221.0016	--	--	212.1221.0112	212.1221.0116
SH125NX	--	--	--	212.1212.0110	212.1212.0112	--
SH125SX	--	--	--	212.1222.0110	212.1222.0112	--

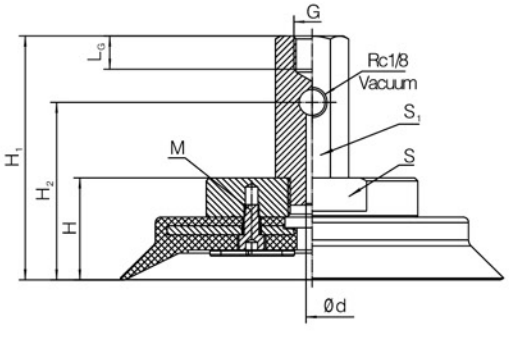
Dimensions



SH40[ ]Z~SH125[ ]Z Vertical direction connection (Male thread)



SH40[ ]Z~SH125[ ]Z Vertical direction connection (Female thread)



SH40[ ]X~SH125[ ]X Lateral direction connection (Female thread)

Model \ Dimension(mm)	d	H	H_1	H_2	h	G	M	L_G	S	S_1	S_2
SH40Z–M14	3	23	53	5	3	M14 × 1M	3–M3 × 0.5	25	24	19	19
SH40Z–F8	6	23	––	––	3	M8 × 1.25F	3–M3 × 0.5	11.5	24	––	––
SH40Z–F10	6	23	––	––	3	M10 × 1.5F	3–M3 × 0.5	11.5	24	––	––
SH40X–F8	3	23	60	38	3	M8 × 1.25F	3–M3 × 0.5	11	24	21	––
SH40X–F10	3	23	60	38	3	M10 × 1.5F	3–M3 × 0.5	11	24	21	––
SH50Z–M14	3	23	53	5	3	M14 × 1M	3–M3 × 0.5	25	24	19	19
SH50Z–F8	6	23	––	––	3	M8 × 1.25F	3–M3 × 0.5	11.5	24	––	––
SH50Z–F10	6	23	––	––	3	M10 × 1.5F	3–M3 × 0.5	11.5	24	––	––
SH50X–F8	3	23	60	38	3	M8 × 1.25F	3–M3 × 0.5	11	24	21	––
SH50X–F10	3	23	60	38	3	M10 × 1.5F	3–M3 × 0.5	11	24	21	––
SH63Z–M16	8	26	56	6	3.5	M16 × 1.5M	4–M4 × 0.7	25	37	24	22
SH63Z–F8	8	26	––	––	3.5	M8 × 1.25F	4–M4 × 0.7	11.5	37	––	––
SH63Z–F10	8	26	––	––	3.5	M10 × 1.5F	4–M4 × 0.7	11.5	37	––	––
SH63Z–F12	8	26	––	––	3.5	M12 × 1.75F	4–M4 × 0.7	11.5	37	––	––
SH63Z–F16	8	26	––	––	3.5	M16 × 1.5F	4–M4 × 0.7	11.5	37	––	––
SH63X–F10	4	26	63	41	3.5	M10 × 1.5F	4–M4 × 0.7	11	37	21	––
SH63X–F12	4	26	63	41	3.5	M10 × 1.5F	4–M4 × 0.7	11	37	21	––
SH80Z–M16	8	28	58	6	4.5	M16 × 1.5M	4–M4 × 0.7	25	37	24	22
SH80Z–F8	8	28	––	––	4.5	M8 × 1.25F	4–M4 × 0.7	11.5	37	––	––
SH80Z–F10	8	28	––	––	4.5	M10 × 1.5F	4–M4 × 0.7	11.5	37	––	––
SH80Z–F12	8	28	––	––	4.5	M12 × 1.75F	4–M4 × 0.7	11.5	37	––	––
SH80Z–F16	8	28	––	––	4.5	M16 × 1.5F	4–M4 × 0.7	11.5	37	––	––
SH80X–F10	4	28	65	43	4.5	M10 × 1.5F	4–M4 × 0.7	11	37	21	––
SH80X–F12	4	28	65	43	4.5	M10 × 1.5F	4–M4 × 0.7	11	37	21	––
SH100Z–M16	8	34	64	6	7.5	M16 × 1.5M	5–M5 × 0.8	25	60	24	22
SH100Z–F12	10	34	––	––	7.5	M12 × 1.75F	5–M5 × 0.8	13	60	––	––
SH100Z–F16	10	34	––	––	7.5	M16 × 1.5F	5–M5 × 0.8	13	60	––	––
SH100X–F10	10	34	71	49	7.5	M10 × 1.5F	5–M5 × 0.8	11	60	21	––
SH100X–F12	10	34	71	49	7.5	M12 × 1.75F	5–M5 × 0.8	11	60	21	––
SH125Z–M16	8	34	64	6	7.5	M12 × 1.75F	5–M5 × 0.8	25	60	24	––
SH125Z–F12	10	34	––	––	7.5	M16 × 1.5F	5–M5 × 0.8	13	60	––	––
SH125Z–F16	10	34	––	––	7.5	M10 × 1.5F	5–M5 × 0.8	13	60	––	––
SH125X–F10	10	34	71	49	7.5	M12 × 1.75F	5–M5 × 0.8	11	60	21	––
SH125X–F12	10	34	71	49	7.5	M12 × 1.75F	5–M5 × 0.8	11	60	21	––

△Refer to the pad dimensions on page 140

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are available, suitable for workpiece with different materials and different working conditions
◇1.5 bellows compensate height differences of the workpiece efficiently and have buffer effect in the process of handling

Model

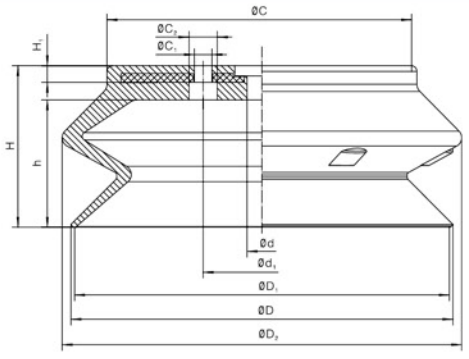
Model	Diameter (mm)	Material and Color
SHB	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)

△SHB40N M–Male thread F–Female thread Pad material of urethane rubber and fluorine rubber need to be ordered seperately

How to order

Model \ Material	N	S
SHB40	213.0401.0000	213.0402.0000
SHB50	213.0501.0000	213.0502.0000
SHB63	213.0601.0000	213.0602.0000
SHB80	213.0801.0000	213.0802.0000
SHB100	213.1001.0000	213.1002.0000
SHB125	213.1201.0000	213.1202.0000

Dimensions



SHB40–SHB125

Dimension(mm) / Model	D	D_1	D_2	d	d_1	H	H_1	h	C	C_1	C_2
SHB40	41.5	40	43.2	6	18	20.5	3.5	13	30	3–Φ4	3–Φ6.5
SHB50	52	50	54	6	18	24	3.5	16.5	40.5	3–Φ4	3–Φ6.5
SHB63	65	63	67.5	8	34	31.5	4.5	21.5	50	3–Φ5	3–Φ8
SHB80	83	80	85	8	34	37	5	27.5	64	3–Φ5	3–Φ8
SHB100	103	100	106.5	10	40	47.5	6	35.5	80	3–Φ6	3–Φ9.5
SHB125	128.5	125	135	10	40	56	6	44	105	3–Φ6	3–Φ9.5

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are available, suitable for workpiece with different materials and different working conditions
◇1.5 bellows
◇With spring plungers of different stroke, touch with the workpiece flexibly, it can adjust and compensate height differences of the workpiece timely

Model

Model	Diameter (mm)	Material and Color	Vacuum entry direction	Buffer stroke (mm)	Connection thread
SHB	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)	Z–Vertical X–Lateral	25 50 75 100	M18–M18×1.5M M22–M22×1.5M

△SHB40NZ–25–M18 M–Male thread F–Female thread
Pad material of urethane rubber and fluorine rubber need to be ordered seperately

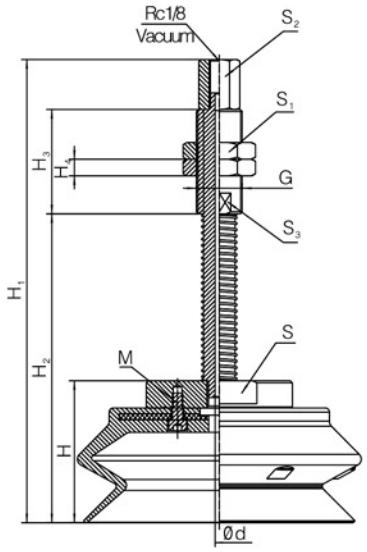
How to order

Model \ Buffer stroke	25mm	50mm	75mm	100mm
SHB40NZ–M18	213.0411.1018	213.0411.2018	213.0411.3018	––
SHB40SZ–M18	213.0421.1018	213.0421.2018	213.0421.3018	––
SHB40NX–M18	213.0412.1018	213.0412.2018	213.0412.3018	––
SHB40SX–M18	213.0422.1018	213.0422.2018	213.0422.3018	––
SHB50NZ–M18	213.0511.1018	213.0511.2018	213.0511.3018	––
SHB50SZ–M18	213.0521.1018	213.0521.2018	213.0521.3018	––
SHB50NX–M18	213.0512.1018	213.0512.2018	213.0512.3018	––
SHB50SX–M18	213.0522.1018	213.0522.2018	213.0522.3018	––
SHB63NZ–M18	213.0611.1018	213.0611.2018	213.0611.3018	––
SHB63SZ–M18	213.0621.1018	213.0621.2018	213.0621.3018	––
SHB63NX–M18	213.0612.1018	213.0612.2018	213.0612.3018	––
SHB63SX–M18	213.0622.1018	213.0622.2018	213.0622.3018	––
SHB80NZ–M18	213.0811.1018	213.0811.2018	213.0811.3018	––

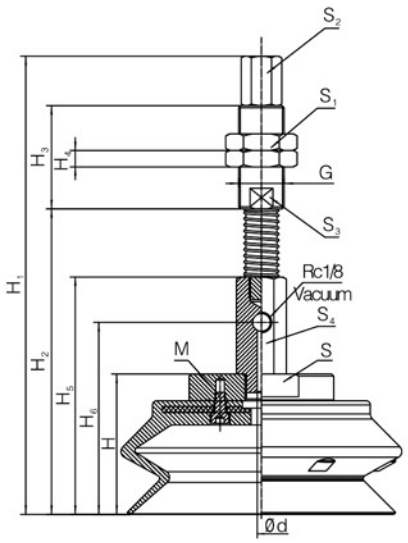
How to order

Model \ Buffer stroke	25mm	50mm	75mm	100mm
SHB80SZ-M18	213.0821.1018	213.0821.2018	213.0821.3018	--
SHB80NX-M18	213.0812.1018	213.0812.2018	213.0812.3018	--
SHB80SX-M18	213.0822.1018	213.0822.2018	213.0822.3018	--
SHB100NZ-M22	213.1011.1022	213.1011.2022	213.1011.3022	213.1011.4022
SHB100SZ-M22	213.1021.1022	213.1021.2022	213.1021.3022	213.1021.4022
SHB100NX-M22	213.1012.1022	213.1012.2022	213.1012.3022	213.1012.4022
SHB100SX-M22	213.1022.1022	213.1022.2022	213.1022.3022	213.1022.4022
SHB125NZ-M22	213.1211.1022	213.1211.2022	213.1211.3022	213.1211.4022
SHB125SZ-M22	213.1221.1022	213.1221.2022	213.1221.3022	213.1221.4022
SHB125NX-M22	213.1212.1022	213.1212.2022	213.1212.3022	213.1212.4022
SHB125SX-M22	213.1222.1022	213.1222.2022	213.1222.3022	213.1222.4022

Dimensions



SHB40[ ]Z~SH125[ ]Z Vertical direction connection (with buffer)



SHB40[ ]X~SH125[ ]X Lateral direction connection (with buffer)

Dimension(mm) / Model	H	H_1	H_2	H_3	H_4	H_5	H_6	d	G	M	S	S_1	S_2	S_3	S_4
SHB40Z-25-M18	32	127.5	72	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB40Z-50-M18	32	162.5	107	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB40Z-75-M18	32	198.5	143	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB40X-25-M18	32	160	109	35	6	69	47	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB40X-50-M18	32	195	144	35	6	69	47	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB40X-75-M18	32	231	180	35	6	69	47	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB50Z-25-M18	35.5	131	75.5	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB50Z-50-M18	35.5	166	110.5	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB50Z-75-M18	35.5	202	146.5	35	6	–	–	3	M18×1.5	3-M3×0.5	24	27	14	16	–
SHB50X-25-M18	35.5	163.5	112.5	35	6	72.5	50.5	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB50X-50-M18	35.5	198.5	147.5	35	6	72.5	50.5	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB50X-75-M18	35.5	234.5	183.5	35	6	72.5	50.5	3	M18×1.5	3-M3×0.5	24	27	14	16	21
SHB63Z-25-M18	43	138.5	83	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB63Z-50-M18	43	173.5	118	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB63Z-75-M18	43	209.5	154	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB63X-25-M18	43	171	120	35	6	80	58	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB63X-50-M18	43	206	155	35	6	80	58	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB63X-75-M18	43	242	191	35	6	80	58	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB80Z-25-M18	48.5	144	88.5	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB80Z-50-M18	48.5	179	123.5	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB80Z-75-M18	48.5	215	159.5	35	6	–	–	3	M18×1.5	4-M4×0.7	37	27	14	16	–
SHB80X-25-M18	48.5	176.5	125.5	35	6	85.5	63.5	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB80X-50-M18	48.5	211.5	160.5	35	6	85.5	63.5	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB80X-75-M18	48.5	247.5	196.5	35	6	85.5	63.5	3	M18×1.5	4-M4×0.7	37	27	14	16	21
SHB100Z-25-M22	60.5	178.5	104.5	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB100Z-50-M22	60.5	214.5	140.5	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB100Z-75-M22	60.5	254.5	180.5	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB100Z-100-M22	60.5	289.5	215.5	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB100X-25-M22	60.5	212.5	141.5	50	8	97.5	75.5	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB100X-50-M22	60.5	248.5	177.5	50	8	97.5	75.5	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB100X-75-M22	60.5	288.5	217.5	50	8	97.5	75.5	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB100X-100-M22	60.5	323.5	252.5	50	8	97.5	75.5	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB125Z-25-M22	69	187	113	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB125Z-50-M22	69	223	149	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB125Z-75-M22	69	263	189	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB125Z-100-M22	69	298	224	50	8	–	–	4	M22×1.5	4-M5×0.8	60	30	17	19	–
SHB125X-25-M22	69	221	150	50	8	106	84	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB125X-50-M22	69	257	186	50	8	106	84	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB125X-75-M22	69	297	226	50	8	106	84	4	M22×1.5	4-M5×0.8	60	30	17	19	21
SHB125X-100-M22	69	332	261	50	8	106	84	4	M22×1.5	4-M5×0.8	60	30	17	19	21

△Refer to the pad dimensions on page 147

Features

◇Various sizes, suitable for workpiece with different shapes and sizes
◇Various materials are available, suitable for workpiece with different materials and different working conditions
◇Heavy load design, suitable for heavy load handling in various industry

Model

Model	Diameter (mm)	Material and Color	Vacuum entry direction	Connection thread
SHB	40 50 63 80 100 125	N–NBR (Black) S–Silicone(White)	Z–Vertical X–Lateral	F8–M8X1.25F F10–M10X1.5F F12–M12X1.75F M14–M14X1M M16–M16X1.5M F–M16X1.5F

△SHB40NZ–M14 M–Male thread F–Female thread Pad material of urethane rubber and fluorine rubber need to be ordered seperately

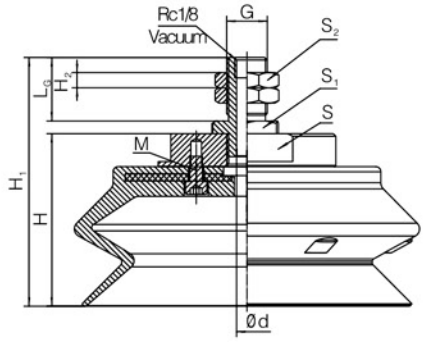
How to order

Model \ Connection	M14 (Male thread)	M16 (Male thread)	F8 (Female thread)	F10 (Female thread)	F12 (Female thread)	F16 (Female thread)
SHB40NZ	213.0411.0014	––	213.0411.0108	213.0411.0110	––	––
SHB40SZ	213.0421.0014	––	213.0421.0108	213.0421.0110	––	––
SHB40NX	––	––	213.0412.0108	213.0412.0110	––	––
SHB40SX	––	––	213.0422.0108	213.0422.0110	––	––
SHB50NZ	213.0511.0014	––	213.0511.0108	213.0511.0110	––	––
SHB50SZ	213.0521.0014	––	213.0521.0108	213.0521.0110	––	––
SHB50NX	––	––	213.0512.0108	213.0512.0110	––	––
SHB50SX	––	––	213.0522.0108	213.0522.0110	––	––
SHB63NZ	––	213.0611.0016	213.0611.0108	213.0611.0110	213.0611.0112	213.0611.0116
SHB63SZ	––	213.0621.0016	213.0621.0108	213.0621.0110	213.0621.0112	213.0621.0116
SHB63NX	––	––	––	213.0612.0110	213.0612.0112	––
SHB63SX	––	––	––	213.0622.0110	213.0622.0112	––
SHB80NZ	––	213.0811.0016	213.0811.0108	213.0811.0110	213.0811.0112	213.0811.0116

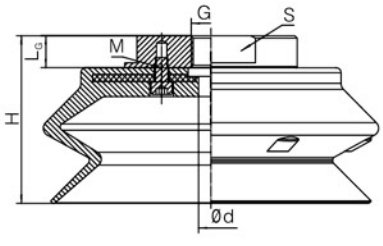
How to order

Model \ Connection	M14 (Male thread)	M16 (Male thread)	F8 (Female thread)	F10 (Female thread)	F12 (Female thread)	F16 (Female thread)
SHB80SZ	--	213.0821.0016	213.0821.0108	213.0821.0110	213.0821.0112	213.0821.0116
SHB80NX	--	--	--	213.0812.0110	213.0812.0112	--
SHB80SX	--	--	--	213.0822.0110	213.0822.0112	--
SHB100NZ	--	213.1011.0016	--	--	213.1011.0112	213.1011.0116
SHB100SZ	--	213.1021.0016	--	--	213.1021.0112	213.1021.0116
SHB100NX	--	--	--	213.1012.0110	213.1012.0112	--
SHB100SX	--	--	--	213.1022.0110	213.1022.0112	--
SHB125NZ	--	213.1211.0016	--	--	213.1211.0112	213.1211.0116
SHB125SZ	--	213.1221.0016	--	--	213.1221.0112	213.1221.0116
SHB125NX	--	--	--	213.1212.0110	213.1212.0112	--
SHB125SX	--	--	--	213.1222.0110	213.1222.0112	--

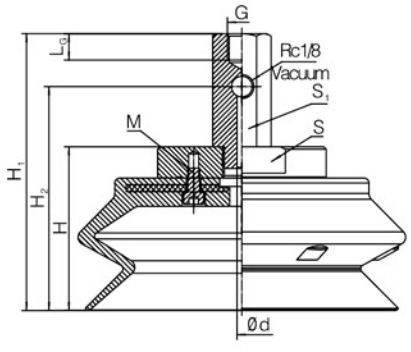
Dimensions



SHB40[ ]Z~SH125[ ]Z Vertical direction connection (Male thread)



SHB40[ ]Z~SH125[ ]Z Vertical direction connection (Female thread)



SHB40[ ]X~SH125[ ]X Lateral direction connection (Female thread)

Model \ Dimension(mm)	d	H	H_1	H_2	G	M	L_G	S	S_1	S_2
SHB40Z–M14	3	32	62	5	M14×1M	3–M3×0.5	25	24	19	19
SHB40Z–F8	6	32	––	––	M8×1.25F	3–M3×0.5	11.5	24	––	––
SHB40Z–F10	6	32	––	––	M10×1.5F	3–M3×0.5	11.5	24	––	––
SHB40X–F8	3	32	69	47	M8×1.25F	3–M3×0.5	11	24	21	––
SHB40X–F10	3	32	69	47	M10×1.5F	3–M3×0.5	11	24	21	––
SHB50Z–M14	3	35.5	65.5	5	M14×1M	3–M3×0.5	25	24	19	19
SHB50Z–F8	6	35.5	––	––	M8×1.25F	3–M3×0.5	11.5	24	––	––
SHB50Z–F10	6	35.5	––	––	M10×1.5F	3–M3×0.5	11.5	24	––	––
SHB50X–F8	3	35.5	72.5	50.5	M8×1.25F	3–M3×0.5	11	24	21	––
SHB50X–F10	3	35.5	72.5	50.5	M10×1.5F	3–M3×0.5	11	24	21	––
SHB63Z–M16	8	43	73	6	M16×1.5M	4–M4×0.7	25	37	24	22
SHB63Z–F8	8	43	––	––	M8×1.25F	4–M4×0.7	11.5	37	––	––
SHB63Z–F10	8	43	––	––	M10×1.5F	4–M4×0.7	11.5	37	––	––
SHB63Z–F12	8	43	––	––	M12×1.75F	4–M4×0.7	11.5	37	––	––
SHB63Z–F16	8	43	––	––	M16×1.5F	4–M4×0.7	11.5	37	––	––
SHB63X–F10	4	43	80	58	M10×1.5F	4–M4×0.7	11	37	21	––
SHB63X–F12	4	43	80	58	M10×1.5F	4–M4×0.7	11	37	21	––
SHB80Z–M16	8	48.5	78.5	6	M16×1.5M	4–M4×0.7	25	37	24	22
SHB80Z–F8	8	48.5	––	––	M8×1.25F	4–M4×0.7	11.5	37	––	––
SHB80Z–F10	8	48.5	––	––	M10×1.5F	4–M4×0.7	11.5	37	––	––
SHB80Z–F12	8	48.5	––	––	M12×1.75F	4–M4×0.7	11.5	37	––	––
SHB80Z–F16	8	48.5	––	––	M16×1.5F	4–M4×0.7	11.5	37	––	––
SHB80X–F10	4	48.5	85.5	63.5	M10×1.5F	4–M4×0.7	11	37	21	––
SHB80X–F12	4	48.5	85.5	63.5	M10×1.5F	4–M4×0.7	11	37	21	––
SHB100Z–M16	8	60.5	90.5	6	M16×1.5M	5–M5×0.8	25	60	24	22
SHB100Z–F12	10	60.5	––	––	M12×1.75F	5–M5×0.8	13	60	––	––
SHB100Z–F16	10	60.5	––	––	M16×1.5F	5–M5×0.8	13	60	––	––
SHB100X–F10	4	60.5	97.5	75.5	M10×1.5F	5–M5×0.8	11	60	21	––
SHB100X–F12	4	60.5	97.5	75.5	M12×1.75F	5–M5×0.8	11	60	21	––
SHB125Z–M16	8	69	99	6	M12×1.75F	5–M5×0.8	25	60	24	22
SHB125Z–F12	10	69	––	––	M16×1.5F	5–M5×0.8	13	60	––	––
SHB125Z–F16	10	69	––	––	M10×1.5F	5–M5×0.8	13	60	––	––
SHB125X–F10	4	69	106	84	M12×1.75F	5–M5×0.8	11	60	21	––
SHB125X–F12	4	69	106	84	M12×1.75F	5–M5×0.8	11	60	21	––

△Refer to the pad dimensions on page 147

Pad style/Pad diameter


Flat style(U)

Flat with ribs(C)


Bellow style(B)

Pad diameter	Φ2	Φ4	Φ6	Φ8	Φ10	Φ13	Φ16	Φ20	Φ25	Φ32	Φ40	Φ50
Flat(U)	•	•	•	•	•	•	•	•	•	•	•	•
Flat with ribs(C)					•	•	•	•	•	•	•	•
Bellow(B)			•	•	•	•	•	•	•	•	•	•

(• Selective)

Pad material	NBR(Black)	Silicone rubber(White)	Urethane rubber(Brown)	Fluorine rubber(Black with green mark)
	(N)	(S)	(U)	(F)

How to Order

AZP 10 U N
① ② ③

① Pad diameter

02	Φ2mm	16	Φ16mm
04	Φ4mm	20	Φ20mm
06	Φ6mm	25	Φ25mm
08	Φ8mm	32	Φ32mm
10	Φ10mm	40	Φ40mm
13	Φ13mm	50	Φ50mm

② Pad style

U	Flat style
C	Flat with ribs
B	Bellow style

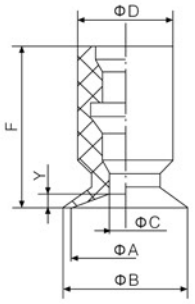
③ Pad material*

N	NBR
S	Silicone rubber
U	Urethane rubber
F	Fluorine rubber

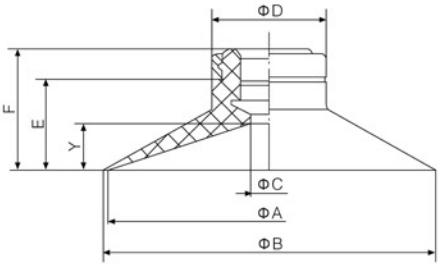
*Besides,we also have electric conductivity NBR and electric conductivity silicone rubber material

Dimensions (mm)

Flat style



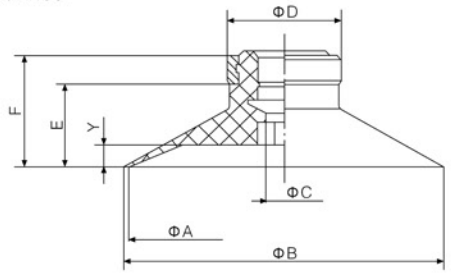
AZP02U~08U



AZP10U~50C

Model	ΦA	ΦB	ΦC	ΦD	E	F	Y
AZP02U	2	2.6	1.2	7	–	12	0.8
AZP04U	4	4.8	1.6	7	–	12	0.8
AZP06U	6	7	2.5	7	–	12	0.8
AZP08U	8	9	2.5	7	–	12	1
AZP10U	10	12	4	13	7.7	12	3
AZP13U	13	15	4	13	7.7	12	3
AZP16U	16	18	4	13	8.2	12.5	3.5
AZP20U	20	23	4	15	9.5	14	4
AZP25U	25	28	4	15	9.5	14	4
AZP32U	32	35	4	15	10	14.5	4.5
AZP40U	40	43	7	18	13.7	18.5	6.5
AZP50U	50	53	7	18	14.7	19.5	7.5

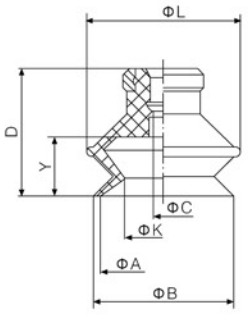
Flat with ribs



AZP10C~50C

Model	ΦA	ΦB	ΦC	ΦD	E	F	Y
AZP10C	10	12	4	13	7.7	12	1.7
AZP13C	13	15	4	13	7.7	12	1.8
AZP16C	16	18	4	13	8.2	12.5	1.2
AZP20C	20	23	4	15	9.5	14	1.7
AZP25C	25	28	4	15	9.5	14	1.8
AZP32C	32	35	4	15	10	14.5	2.3
AZP40C	40	43	7	18	13.7	18.5	3.3
AZP50C	50	53	7	18	14.7	19.5	3.8

Bellow style



AZP10B~50B

Model	ΦA	ΦB	ΦC	D	ΦK	ΦL	Y
AZP06B	6	7	2.5	13	3.3	9.1	4
AZP08B	8	9	2.5	13	4.7	10.1	4
AZP10B	10	12	2.5	16	5.5	13.8	5.5
AZP13B	13	15	2.5	18.5	8.7	19	7.5
AZP16B	16	18	2.5	20	9.9	21	8.5
AZP20B	20	22	3.5	23.5	12.4	25	10.5
AZP25B	25	27	3.5	24	15.6	28	10.5
AZP32B	32	34	3.5	29	18.9	37	14
AZP40B	40	43	4.5	34	24.4	48	16
AZP50B	50	53	4.5	38	32.4	57	19

Connection	Male thread
Vacuum entry direction	Vertical
Mounting	Use connection for vacuum entry

Connection	Female thread
Vacuum entry direction	Vertical
Mounting	Use connection for vacuum entry

How to Order

AZPT 02 U N – A5

① Refer to the pad model on page 154
② ③ ④ Vacuum entry (Refer to table ①)

Table ①

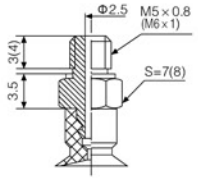
Connection thread	Symbol	Thread dia	Φ2~Φ8	Φ10~Φ16	Φ20~Φ32	Φ40~Φ50
Male thread	A5	M5×0.8	•	•	–	–
	A6	M6×1	•	•	•	•
	A8	M8×1	–	–	•	•
Female thread	B4	M4×0.7	•	–	–	–
	B5	M5×0.8	•	•	•	–
	B6	M6×1	–	•	•	•
	B8	M8×1.25	–	–	•	•
	B01	Rc1/8	–	•	•	•

(•–Selective)

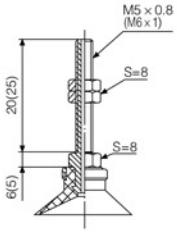
Dimensions (mm)

• Male thread connection

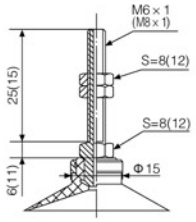
Pad diameters Φ2·Φ4·Φ6·Φ8



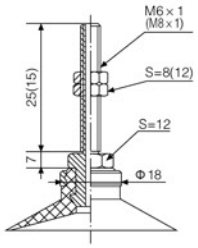
Pad diameters Φ10·Φ13·Φ16



Pad diameters Φ20·Φ25·Φ32



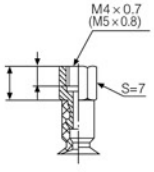
Pad diameters Φ40·Φ50



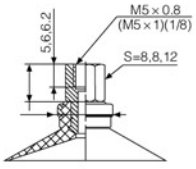
Refer to the pad dimensions on page 155

• Female thread connection

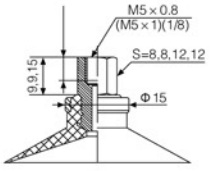
Pad diameters Φ2·Φ4·Φ6·Φ8



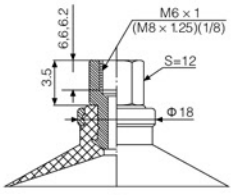
Pad diameters Φ10·Φ13·Φ16



Pad diameters Φ20·Φ25·Φ32



Pad diameters Φ40·Φ50



Refer to the pad dimensions on page 155

S:Width across flats

Connection	Female thread、Barb fitting、One–touch fitting
Vacuum entry direction	Vertical
Mounting	Use male thread

Table ①

Connection		Symbol	Thread dia	Φ2~Φ8	Φ10~Φ32	Φ40~Φ50
Barb fitting	Female thread	B3	M3×0.5	•		
		B5	M5×0.8	•	•	•
		B01	Rc1/8			•
	Vacuum entry	N4	Φ4 Nylon tube	•		
		N6	Φ6 Nylon tube		•	•
		U4	Φ4 PU tube	•		
		U6	Φ6 PU tube		•	•
	One–touch fitting	4	Φ4 tube	•	•	
		6	Φ6 tube	•	•	•
		8	Φ8 tube			•
Mounting	Male thread	A8	M8×1	•		
		A10	M10×1		•	
		A14	M14×1			•

(•–Selective)

How to Order

AZPT ① ② ③ ④ ⑤ – ⑥ – ⑦

① ② ③ Refer to the pad model on page 154

④ Buffer style

J	Rotating
K	Non–Rotating

⑥ Vacuum entry (Refer to table ①)

⑦ Mounting thread (Refer to table ①)

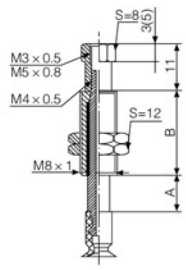
⑤ Buffer stroke(mm)

Buffer stroke	Pad diameter(mm)
6	Φ2~Φ8
10	Φ2~Φ50
15	Φ2~Φ8
20	Φ10~Φ50
25	Φ2~Φ8
30	Φ10~Φ50
40	Φ10~Φ32
50	Φ10~Φ50

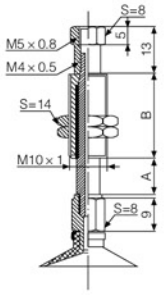
Dimensions (mm)

• Female thread connection

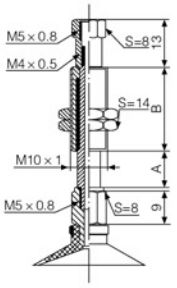
Pad diameters Φ2·Φ4·Φ6·Φ8



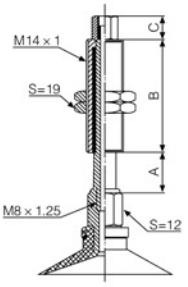
Pad diameters Φ10·Φ13·Φ16



Pad diameters Φ20·Φ25·Φ32



Pad diameters Φ40·Φ50



Refer to the pad dimensions on page 155

S:Width across flats

(mm)

Buffer stroke	A	B
6	6	15
10	11	43
15	16	
25	26	

(mm)

Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

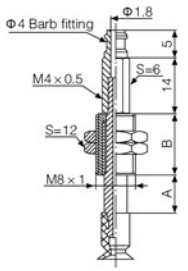
Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

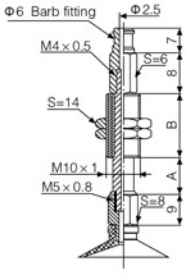
Buffer stroke	A	B	C	
			M5	1/8
10	12.5	50	15	16.5
20	22.5		9	12
30	32.5			
50	52.5	75		

• Barb fitting connection

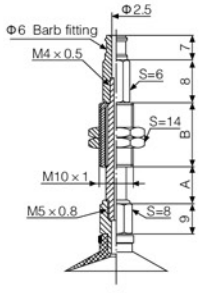
Pad diameters Φ2 · Φ4 · Φ6 · Φ8



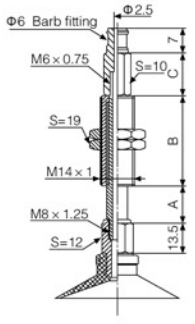
Pad diameters Φ10 · Φ13 · Φ16



Pad diameters Φ20 · Φ25 · Φ32



Pad diameters Φ40 · Φ50



Refer to the pad dimensions on page 155

S:Width across flats

(mm)

Buffer stroke	A	B
6	6	15
10	11	43
15	16	
25	26	

(mm)

Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

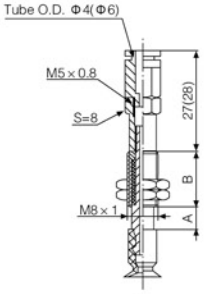
Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

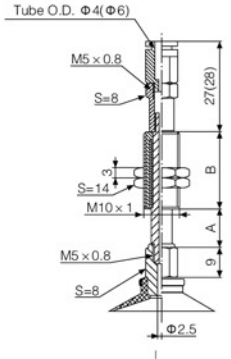
Buffer stroke	A	B	C
10	12.5	50	12
20	22.5		5
30	32.5		
50	52.5	75	

• One–touch fitting connection

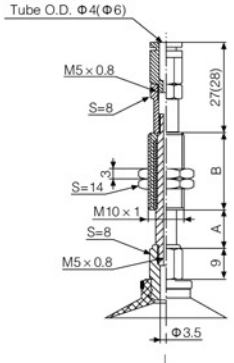
Pad diameters Φ2 · Φ4 · Φ6 · Φ8



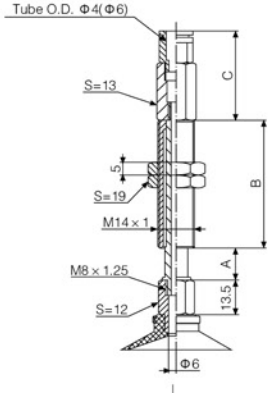
Pad diameters Φ10 · Φ13 · Φ16



Pad diameters Φ20 · Φ25 · Φ32



Pad diameters Φ40 · Φ50



Refer to the pad dimensions on page 155

S:Width across flats

(mm)

Buffer stroke	A	B
6	6	15
10	11	43
15	16	
25	26	

(mm)

Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

Buffer stroke	A	B
10	11.5	23
20	21.5	51
30	31.5	51
40	41.5	77
50	51.5	77

(mm)

Buffer stroke	A	B	C	
			Φ6	Φ8
10	12.5	50	35	39.5
20	22.5		19.9	24.9
30	32.5			
50	52.5	75		

Connection	One–touch fitting
Vacuum entry direction	Lateral
Mounting	Male thread

Connection	One–touch fitting
Vacuum entry direction	Lateral
Mounting	Female thread

How to Order

AZPR 02 U N – 04 – A5
① ② ③ ④ ⑤

①②③ Refer to the pad model on page 154
④ Vacuum entry(Refer to table ①)
⑤ Mounting thread(Refer to table ①)

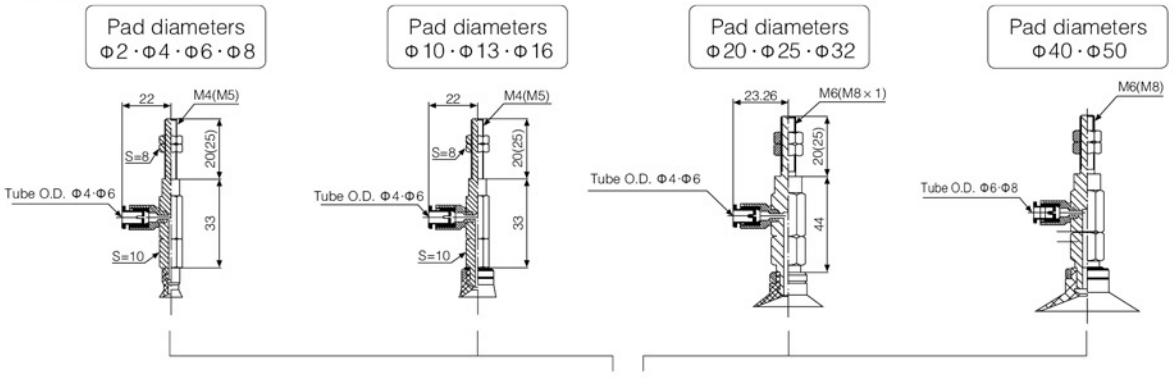
Table ①

Connection		Symbol	Tube/Male thread	Φ2~Φ8	Φ10~Φ16	Φ20~Φ32	Φ40~Φ50
Vacuum entry	One–touch fitting	04	Φ4 tube	•	•	•	–
		06	Φ6 tube	•	•	•	•
		08	Φ8 tube	–	–	•	•
Mounting	Male thread	A5	M5×0.8	•	•	–	–
		A6	M6×1	•	•	•	•
		A8	M8×1	–	–	•	•
	Female thread	B4	M4×0.7	•	–	–	–
		B5	M5×0.8	•	•	•	
		B6	M6×1	–	•	•	•
		B8	M8×1.25	–	–	•	•

(•–Selective)

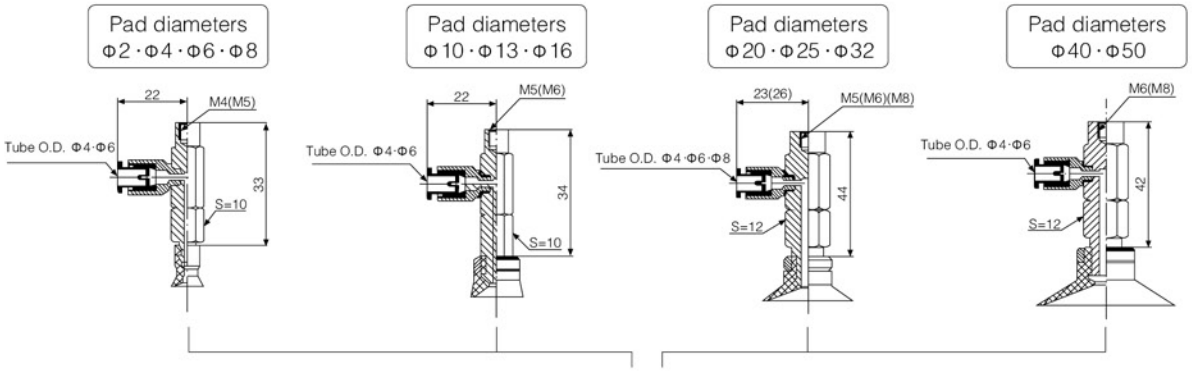
Dimensions (mm)

• Male thread connection



Refer to the pad dimensions on page 155

• Female thread connection



Refer to the pad dimensions on page 155

S:Width across flats

Connection	One-touch fitting
Vacuum entry direction	Lateral
Mounting	Use Male thread

How to Order

AZPR [02] [U] [N] [J] – [ ] [04] – [A8]
① ② ③ ④ ⑤ ⑥ ⑦

① ② ③ Refer to the pad model on page 154

④ Buffer style

J	Rotating
K	Non-Rotating

⑤ Buffer stroke(mm)

Buffer stroke	Pad diameters
6	Φ2~Φ8
10	Φ2~Φ50
15	Φ2~Φ8
20	Φ10~Φ50
25	Φ2~Φ8
30	Φ10~Φ50
40	Φ10~Φ32
50	Φ10~Φ50

⑥ Vacuum entry (Refer to table ①)

⑦ Mounting thread (Refer to table ①)

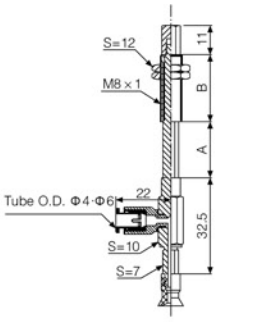
Table ①

Connection		Symbol	Tube/Male thread	Φ2~Φ8	Φ10~Φ16	Φ20~Φ32	Φ40~Φ50
Vacuum entry	One-touch fitting	04	Φ4 tube	•	•	•	–
		06	Φ6 tube	•	•	•	•
		08	Φ8 tube	–	–	•	•
Mounting	Male thread	A8	M8×1	•	-	–	–
		A10	M10×1	–	•	•	–
		A14	M14×1	–	–	–	–

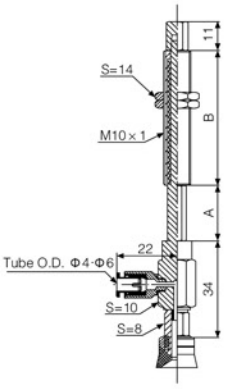
Dimensions (mm)

• Male thread connection

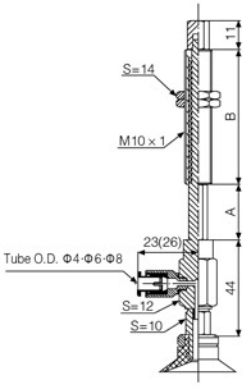
Pad diameters Φ2·Φ4·Φ6·Φ8



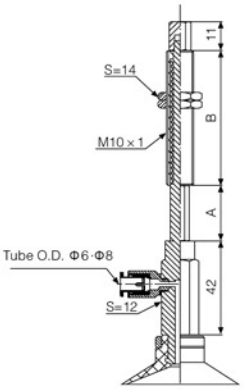
Pad diameters Φ10·Φ13·Φ16



Pad diameters Φ20·Φ25·Φ32



Pad diameters Φ40·Φ50



Refer to the pad dimensions on page 155

S:Width across flats

(mm)

Buffer stroke	A	B
6	8	15
10	11	43
15	16	43
25	26	43

(mm)

Buffer stroke	A	B
10	11	23
20	21	51
30	31	51
40	41	77
50	51	77

(mm)

Buffer stroke	A	B
10	11	23
20	21	51
30	31	51
40	41	77
50	51	77

(mm)

Buffer stroke	A	B
10	12	50
20	22	50
30	32	50
40	52	75

How to Order

SPAG – 10 – N
① ②

① Pad Diameter(mm)
10
15
20
25
30

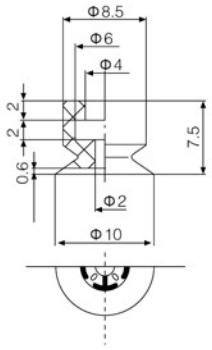
② Pad Material	
N	Nitrile Rubber
S	Silicone

How to Order

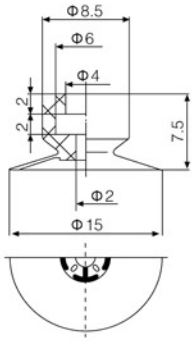
☆The lip edge is very thin.
☆The pad face is smooth, not easy to wrinkle.It is fit to suck the thin things like paper, plastic bag and so on.
☆There are four series of this vacuum pad: SPATK, SPAYK, SPATS, SPAYS.

Dimensions (mm)

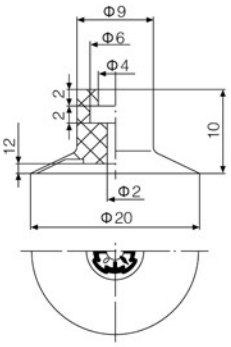
Pad diameters Φ10



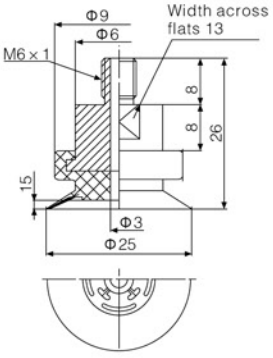
Pad diameters Φ15



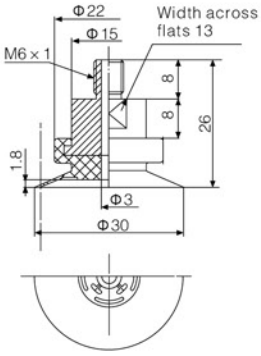
Pad diameters Φ20



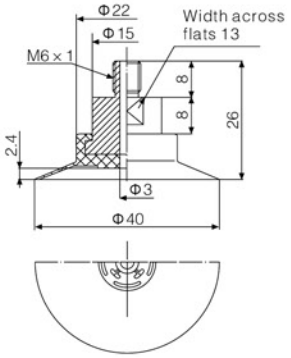
Pad diameters Φ25



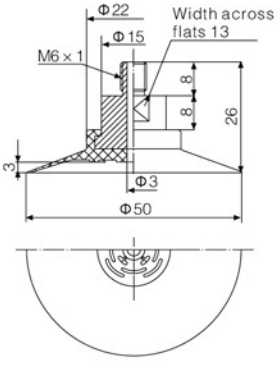
Pad diameters Φ30



Pad diameters Φ40



Pad diameters Φ50



S: Width across flats

How to Order

SPA T K– 10 – N
① ② ③

① Vacuum entry direction

T	Vertical
Y	Lateral

② Pad Diameter(mm)

10
15
20
25
30

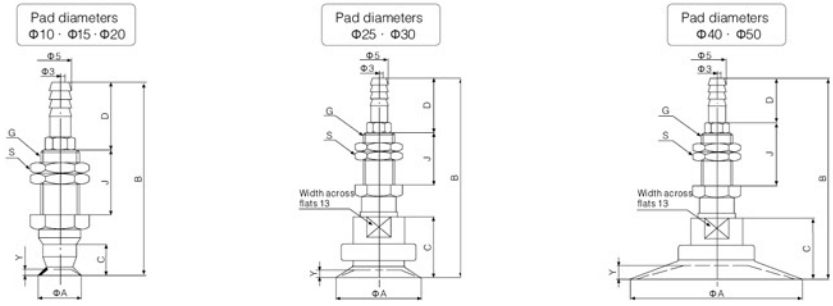
③ Pad Material

N	Nitrile Rubber
S	Silicone

Dimensions (mm)

Vertical direction connection

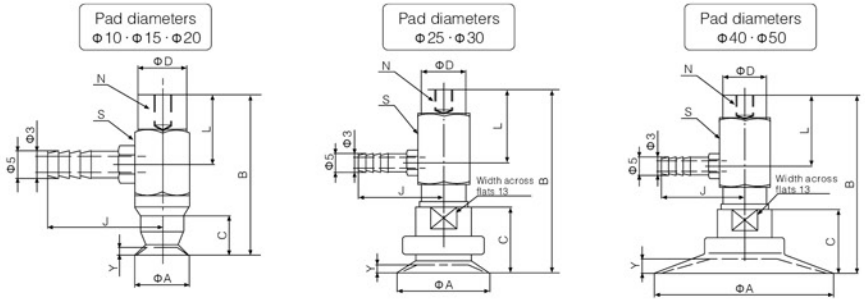
• SPATK



SPATK	A	B	C	D	Y	S	G	J
SPATK–10	10	46	7.5	16	0.6	12H	M9 × 1	15.5
SPATK–15	15	46	7.5	16	0.9	12H	M9 × 1	15.5
SPATK–20	20	48.5	10	16	1.2	12H	M9 × 1	15.5
SPATK–25	25	67.2	18	16	1.5	14H	M10	20
SPATK–30	30	67.2	18	16	1.8	14H	M10	20
SPATK–40	40	67.2	18	16	0.6	14H	M10	20
SPATK–50	50	67.2	18	16	0.6	14H	M10	20

Lateral direction connection

• SPATK



SPAYK	A	B	C	D	Y	S	N	J
SPAYK–10	10	30	7.5	10	0.6	12	M4depth6	16
SPAYK–15	15	30	7.5	10	0.9	12	M4depth6	16
SPAYK–20	20	32.5	10	10	1.2	12	M4depth6	16
SPAYK–25	25	51.5	18	12	1.5	14	M6depth8	18
SPAYK–30	30	51.5	18	12	1.8	14	M6depth8	18
SPAYK–40	40	51.5	18	12	0.6	14	M6depth8	18
SPAYK–50	50	51.5	18	12	0.6	14	M6depth8	18

How to Order

SPATS– 10 – 4 – N
① ② ③

① Pad Diameter(mm)
10
15
20
25
30

② Stroke(mm)
4
6
10
15
20
30
50

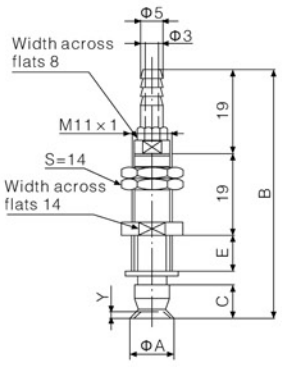
③ Pad Material	
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

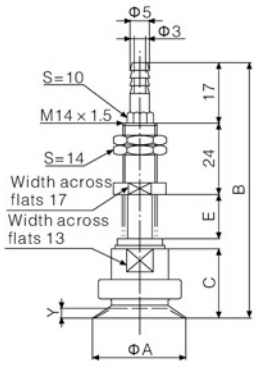
Vertical direction connection

• SPATS

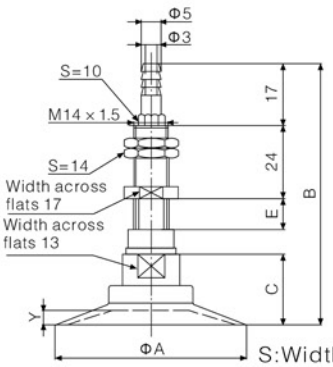
Pad diameters Φ10 · Φ20



Pad diameters Φ25 · Φ30



Pad diameters Φ40 · Φ50



S:Width across flats

SPATS	A	B	C	E	Y
SPATS–10–4	10	56.5	7.5	8	0.6
SPATS–10–10	10	68.5	7.5	20	0.6
SPATS–10–20	10	88.5	7.5	40	0.6
SPATS–10–30	10	108.5	7.5	60	0.6
SPATS–15–4	15	56.5	7.5	8	0.9
SPATS–15–10	15	68.5	7.5	20	0.9
SPATS–15–20	15	88.5	7.5	40	0.9
SPATS–15–30	15	108.5	7.5	60	0.9
SPATS–20–4	20	59	10	8	1.2
SPATS–20–10	20	71	10	20	1.2
SPATS–20–20	20	91	10	40	1.2
SPATS–20–30	20	111	10	60	1.2
SPATS–25–6	25	73	18	13	1.5
SPATS–25–15	25	93	18	30	1.5
SPATS–25–30	25	123	18	60	1.5
SPATS–25–50	25	163	18	100	1.5
SPATS–30–6	30	76	18	13	1.8
SPATS–30–15	30	93	18	30	1.8
SPATS–30–30	30	126	18	60	1.8
SPATS–30–50	30	163	18	100	1.8
SPATS–40–6	40	76	18	13	2.4
SPATS–40–15	40	93	18	30	2.4
SPATS–40–30	40	123	18	60	2.4
SPATS–40–50	40	163	18	100	2.4
SPATS–50–6	50	76	18	13	3
SPATS–50–15	50	93	18	30	3
SPATS–50–30	50	123	18	60	3
SPATS–50–50	50	163	18	100	3

How to Order

SPAYS– 10 – 4 – N
① ② ③

① Pad Diameter(mm)
10
15
20
25
30

② Stroke(mm)
4
6
10
15
20
30
50

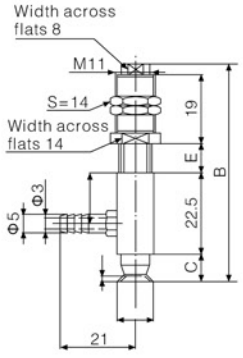
③ Pad Material	
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

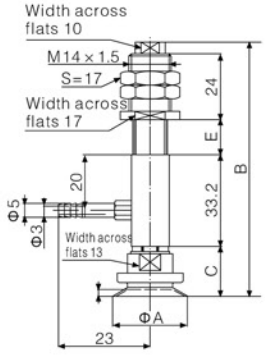
Vertical direction connection

• SPAYS

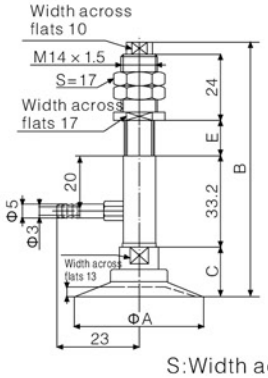
Pad diameters Φ10 · Φ20



Pad diameters Φ25 · Φ30



Pad diameters Φ40 · Φ50



S:Width across flats

SPAYS	A	B	C	E	Y
SPAYS–10–4	10	60	7.5	8	0.6
SPAYS–10–10	10	72	7.5	20	0.6
SPAYS–10–20	10	92	7.5	40	0.6
SPAYS–10–30	10	112	7.5	60	0.6
SPAYS–15–4	15	60	7.5	8	0.9
SPAYS–15–10	15	72	7.5	20	0.9
SPAYS–15–20	15	92	7.5	40	0.9
SPAYS–15–30	15	112	7.5	60	0.9
SPAYS–20–4	20	62.5	10	8	1.2
SPAYS–20–10	20	74.5	10	20	1.2
SPAYS–20–20	20	94.5	10	40	1.2
SPAYS–20–30	20	114.5	10	60	1.2
SPAYS–25–6	25	92.5	18	13	1.5
SPAYS–25–15	25	109	18	30	1.5
SPAYS–25–30	25	139	18	60	1.5
SPAYS–25–50	25	179	18	100	1.5
SPAYS–30–6	30	92	18	13	1.8
SPAYS–30–15	30	109	18	30	1.8
SPAYS–30–30	30	139	18	60	1.8
SPAYS–30–50	30	179	18	100	1.8
SPAYS–40–6	40	92	18	13	2.4
SPAYS–40–15	40	109	18	30	2.4
SPAYS–40–30	40	139	18	60	2.4
SPAYS–40–50	40	179	18	100	2.4
SPAYS–50–6	50	92	18	13	3
SPAYS–50–15	50	109	18	30	3
SPAYS–50–30	50	139	18	60	3
SPAYS–50–50	50	179	18	100	3

How to Order

SPA T KM – 10 – N
① ② ③

① Vacuum entry direction

T	Vertiacal
Y	Lateral

② Pad Diameter(mm)

10
15
20
25
30

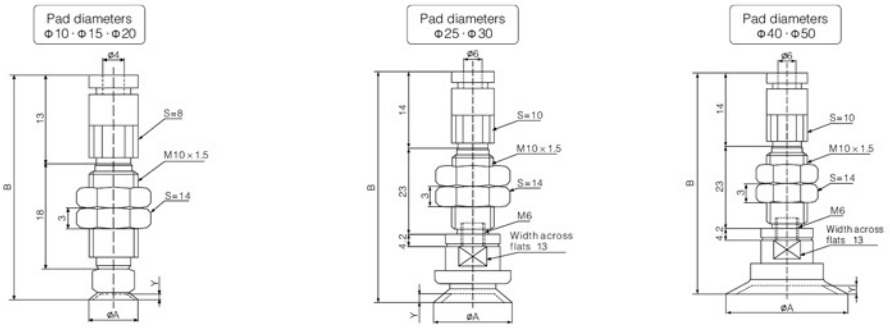
③ Pad Material

N	Nitrile Rubber
S	Silicone

Dimensions (mm)

Vertical direction connection

• SPATKM

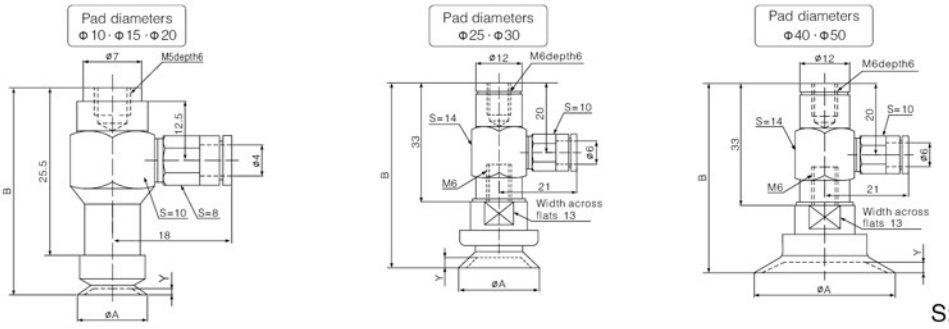


S: Width across flats

SPATKM	A	B	Y
SPATKM–10	10	38.5	0.6
SPATKM–15	15	38.5	0.9
SPATKM–20	20	41	1.2
SPATKM–25	25	59.2	1.5
SPATKM–30	30	59.2	1.8
SPATKM–40	40	59.2	2.4
SPATKM–50	50	59.2	3

Lateral direction connection

• SPAYKM



S: Width across flats

SPAYKM	A	B	Y
SPAYKM–10	10	33	0.6
SPAYKM–15	15	33	0.9
SPAYKM–20	20	35.5	1.2
SPAYKM–25	25	51.2	1.5
SPAYKM–30	30	51.2	1.8
SPAYKM–40	40	51.2	2.4
SPAYKM–50	50	51.2	3

How to Order

SPCG – 10 – N
① ②

① Pad Diameter(mm)

10	20
15	30
18	

② Pad Material

N	Nitrile Rubber
S	Silicone

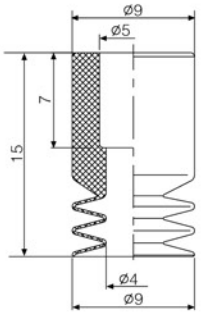
Features

☆Three stage design,strong adsorbing power.
☆There are several layers of ruffle,having some buffering capacity, It is fit to suck the unsmooth face things like unsmooth paper, plastic film and so on.

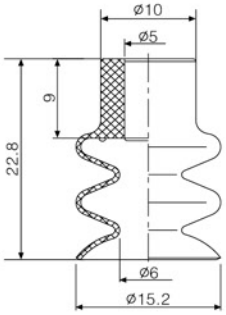
Dimensions (mm)

• SPCG

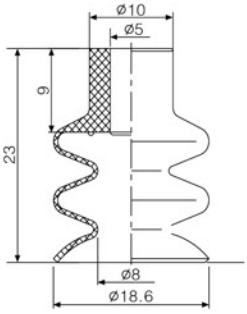
Pad diameters Φ10



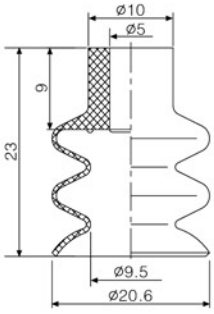
Pad diameters Φ15



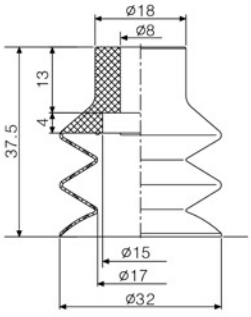
Pad diameters Φ18



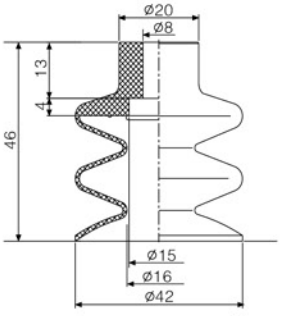
Pad diameters Φ20



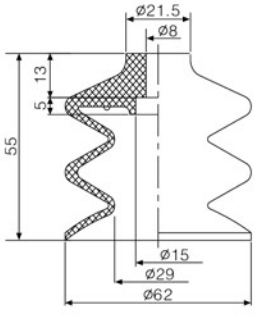
Pad diameters Φ30



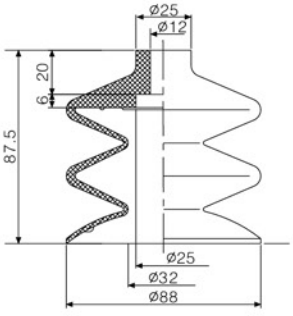
Pad diameters Φ40



Pad diameters Φ60



Pad diameters Φ90



How to Order

SPC T K – 10 – N
① ② ③

① Vacuum entry direction

T	Vertiacal
Y	Lateral

② Pad Diameter(mm)

10	20
15	30
18	

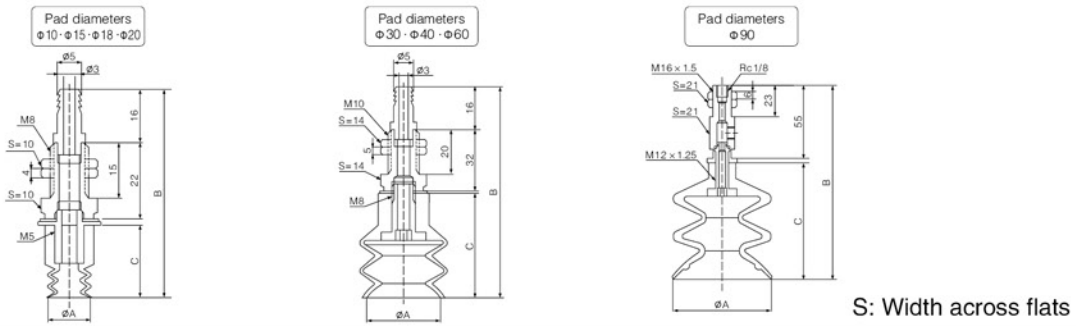
③ Pad Material

N	Nitrile Rubber
S	Silicone

Dimensions (mm)

Vertical direction connection

• SPCTK

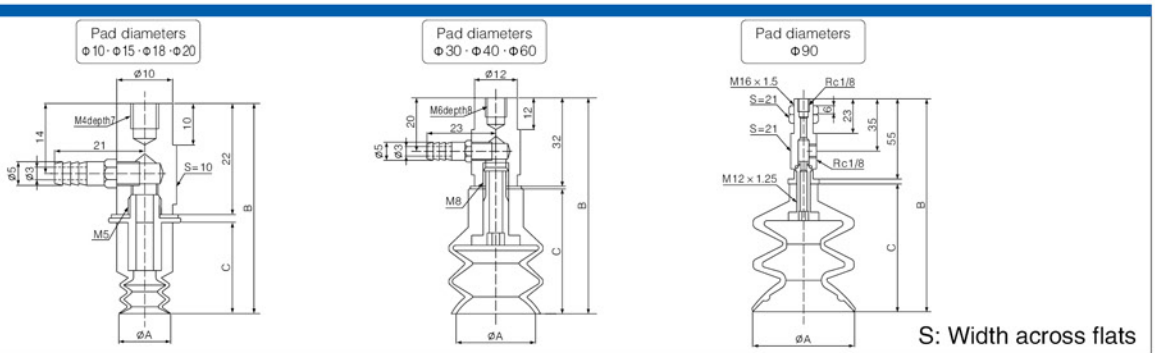


S: Width across flats

SPCTK	A	B	C
SPCTK–10	9	56.2	15
SPCTK–15	14	64.2	23
SPCTK–18	18.6	64.2	23
SPCTK–20	20.6	64.2	23
SPCTK–30	32	86.8	37.5
SPCTK–40	42	95.3	46
SPCTK–60	62	104.3	56
SPCTK–90	88	144.8	87.5

Lateral direction connection

• SPCTK



S: Width across flats

SPCYK	A	B	C
SPCYK–10	9	40.2	15
SPCYK–15	14	48.2	23
SPCYK–18	18.6	48.2	23
SPCYK–20	20.6	48.2	23
SPCYK–30	32	70.8	37.5
SPCYK–40	42	79.3	46
SPCYK–60	62	88.3	56
SPCYK–90	88	144.8	87.5

How to Order

SPFG– 2 – N
① ②

① Pad Diameter(mm)

2	25	120
3.5	30	150
5	35	200
6	40	
8	50	
10	60	
15	80	
20	95	

② Pad Material

N	Nitrile Rubber
S	Silicone

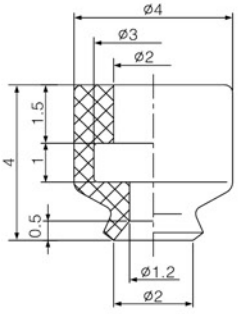
Features

☆It is standard flat style.
☆It is fit to suck the smooth face things like steel plate, sheet material and so on.
☆Strong and stable adsorbing power.

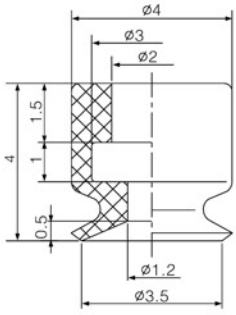
Dimensions (mm)

• SPFG

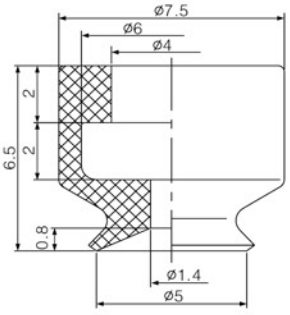
Pad diameters Φ2



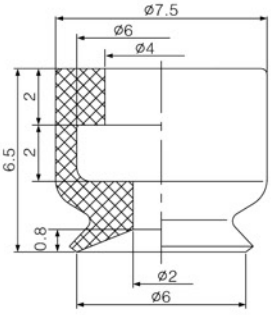
Pad diameters Φ3.5



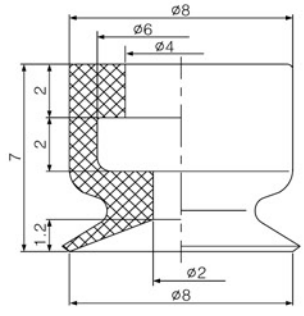
Pad diameters Φ5



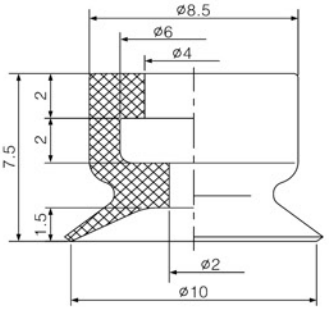
Pad diameters Φ6



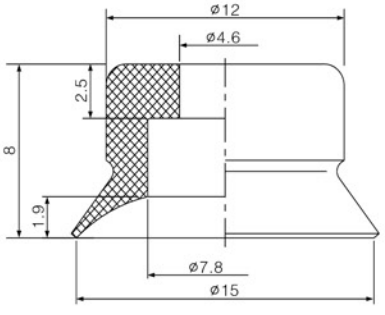
Pad diameters Φ8



Pad diameters Φ10

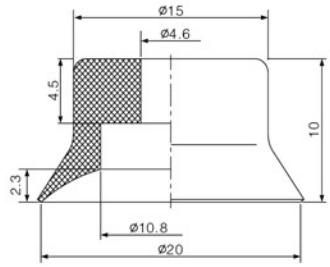


Pad diameters Φ15

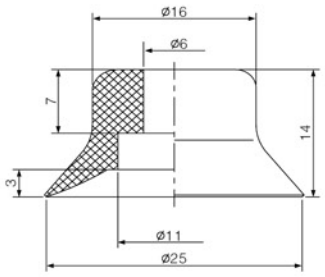


• SPFG

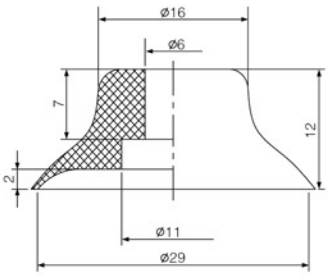
Pad diameters Φ20



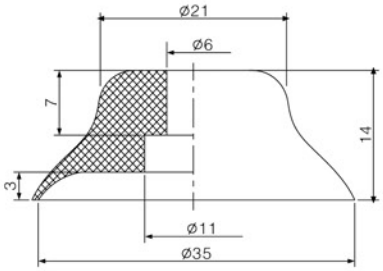
Pad diameters Φ25



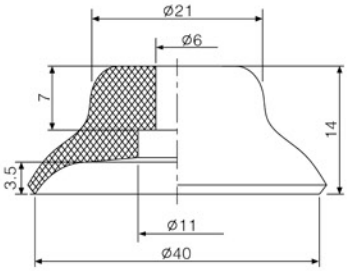
Pad diameters Φ30



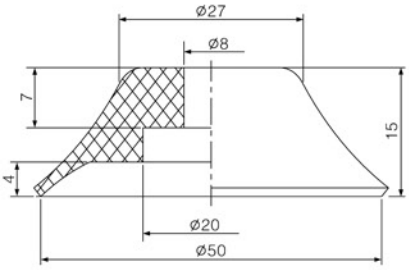
Pad diameters Φ35



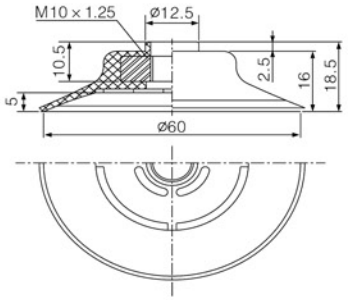
Pad diameters Φ40



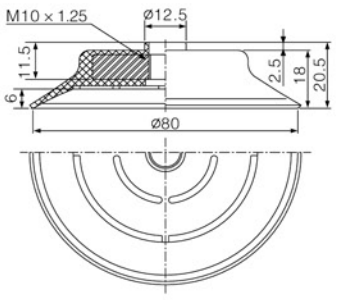
Pad diameters Φ50



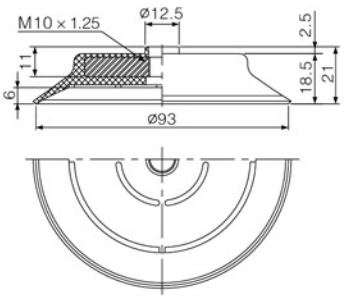
Pad diameters Φ60



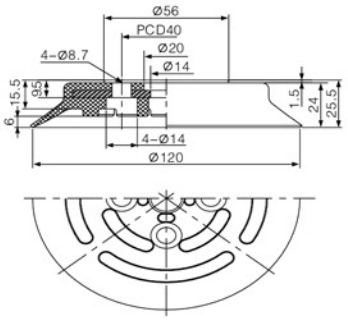
Pad diameters Φ80



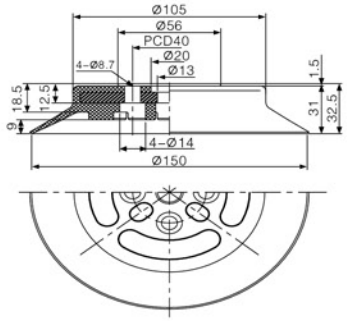
Pad diameters Φ95



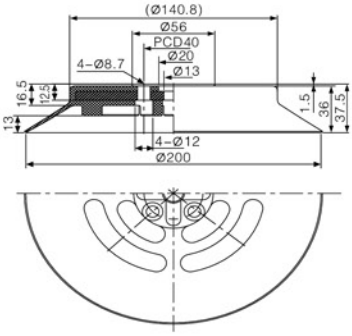
Pad diameters Φ120



Pad diameters Φ150



Pad diameters Φ200



How to Order

SPF T KM – 2 – N
① ② ③

① Vacuum entry direction

T	Vertiacal
Y	Lateral

② Pad Diameter(mm)

2	20
3.5	25
5	30
6	35
8	40
10	50
15	

③ Pad Material

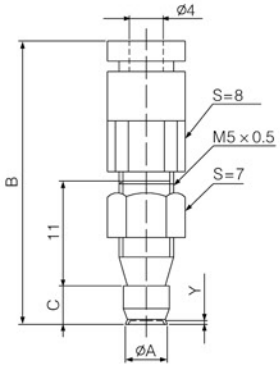
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

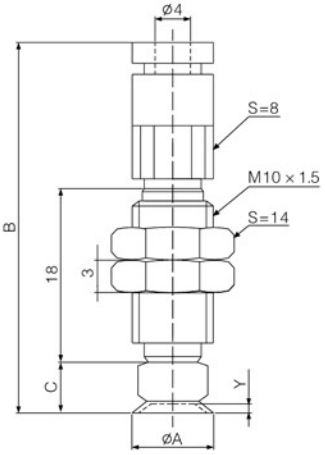
Vertical direction connection

• SPFTKM

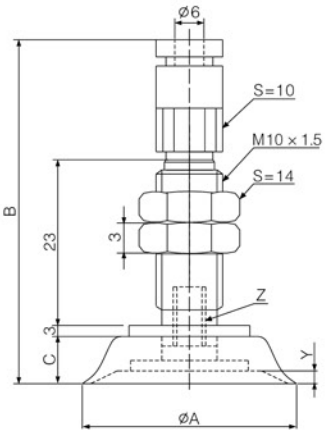
Pad diameters
Φ2 · Φ3.5



Pad diameters
Φ5 · Φ6 · Φ8 · Φ10



Pad diameters
Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50



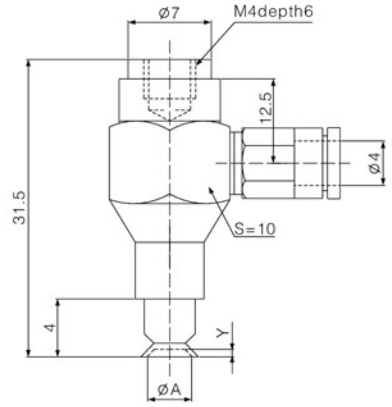
S:Width across flats

SPFTKM	A	B	C	Y	Z
SPFTKM–2	2	27.5	4	0.5	–
SPFTKM–3.5	3.5	27.5	4	0.5	–
SPFTKM–5	5	37.5	6.5	0.8	–
SPFTKM–6	6	37.5	6.5	0.8	–
SPFTKM–8	8	38	7	1.2	–
SPFTKM–10	10	38.5	7.5	1.5	–
SPFTKM–15	15	48	8	1.9	M5
SPFTKM–20	20	50	10	2.3	M5
SPFTKM–25	25	54	14	3	M6
SPFTKM–30	30	52	12	2	M6
SPFTKM–35	35	54	14	3	M6
SPFTKM–40	40	54	14	3.5	M6
SPFTKM–50	50	55	15	4	M6

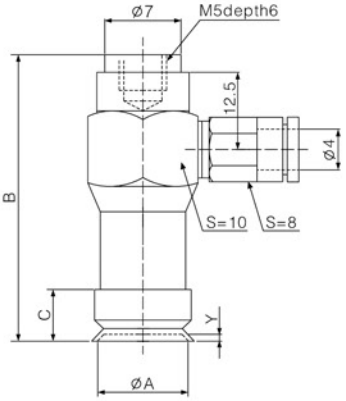
Lateral direction connection

• SPFYKM

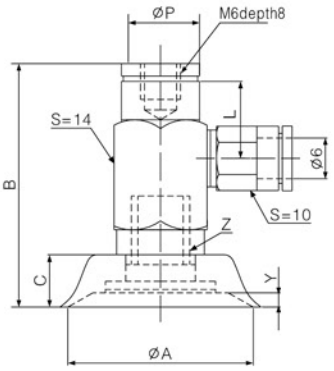
Pad diameters
Φ2 · Φ3.5



Pad diameters
Φ5 · Φ6 · Φ8 · Φ10



Pad diameters
Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50



S:Width across flats

SPFYKM	A	B	C	L	P	Y	Z
SPFYKM–2	2	–	–	–	–	0.5	–
SPFYKM–3.5	3.5	–	–	–	–	0.5	–
SPFYKM–5	5	37.5	6.5	–	–	0.8	–
SPFYKM–6	6	37.5	6.5	–	–	0.8	–
SPFYKM–8	8	38	7	–	–	1.2	–
SPFYKM–10	10	38.5	7.5	–	–	1.5	–
SPFYKM–15	15	48	8	14	9	1.9	M5
SPFYKM–20	20	50	10	14	9	2.3	M5
SPFYKM–25	25	54	14	20	12	3	M5
SPFYKM–30	30	52	12	20	12	2	M6
SPFYKM–35	35	54	14	20	12	3	M6
SPFYKM–40	40	54	14	20	12	3.5	M6
SPFYKM–50	50	55	15	20	12	4	M6

How to Order

SPF T K – 2 – N
① ② ③

① Vacuum entry direction

T	Vertiacal
Y	Lateral

② Pad Diameter(mm)

2	35
3.5	40
5	50
6	60
8	80
10	95
15	100
20	120
25	150
30	200

③ Pad Material

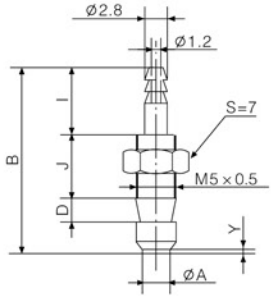
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

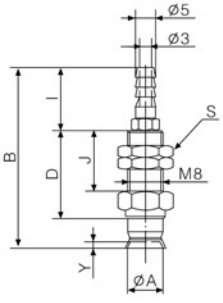
Vertical direction connection

• SPFTK

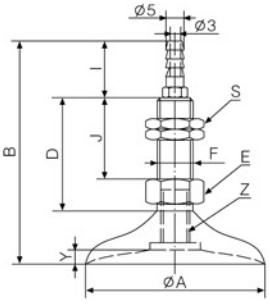
Pad diameters Φ2 · Φ3.5



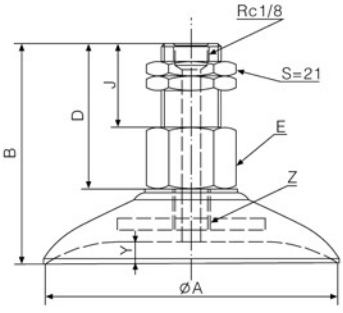
Pad diameters Φ5 · Φ6 · Φ8 · Φ10



Pad diameters Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50



Pad diameters Φ60 · Φ80 · Φ95



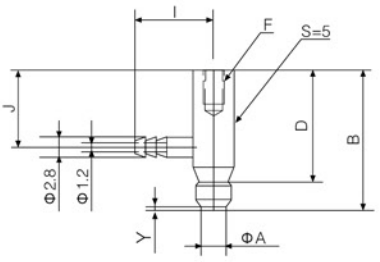
S:Width across flats

SPFTK	A	B	D	E	F	I	J	S	Y	Z
SPFTK–2	2	23.5	3	–	–	8.5	8	–	0.5	–
SPFTK–3.5	3.5	23.5	3	–	–	8.5	8	–	0.5	–
SPFTK–5	5	30.5	14	–	–	10	12	12H	0.8	–
SPFTK–6	6	30.5	14	–	–	10	12	12H	0.8	–
SPFTK–8	8	31	14	–	–	10	12	12H	1.2	–
SPFTK–10	10	46	22.5	10H	M8 × 1.25	16	15.5	12H	1.5	–
SPFTK–15	15	46	22	10H	M8 × 1.25	16	15	10H	1.9	M5
SPFTK–20	20	48	22	10H	M10 × 1.5	16	15	10H	2.3	M5
SPFTK–25	25	62	32	14H	M10 × 1.5	16	20	14H	3.0	M6
SPFTK–30	30	60	32	14H	M10 × 1.5	16	20	14H	2.0	M6
SPFTK–35	35	62	32	14H	M10 × 1.5	16	20	14H	3.0	M6
SPFTK–40	40	62	32	14H	M10 × 1.5	16	20	14H	3.5	M6
SPFTK–50	50	63	32	14H	M10 × 1.5	16	20	14H	4.0	M8
SPFTK–60	60	58.5	40	21H	–	–	23	–	5.0	M10 × 1.25
SPFTK–80	80	60.5	40	21H	–	–	23	–	6.0	M10 × 1.25
SPFTK–95	95	61	40	21H	–	–	23	–	6.0	M10 × 1.25

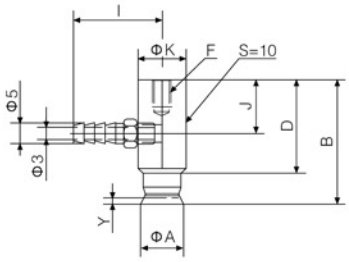
Lateral direction connection

• SPFYK

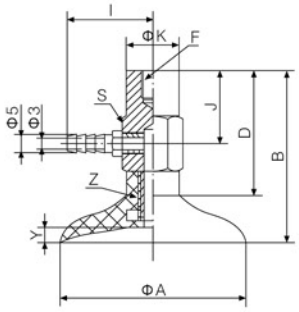
Pad diameters
Φ2 · Φ3.5



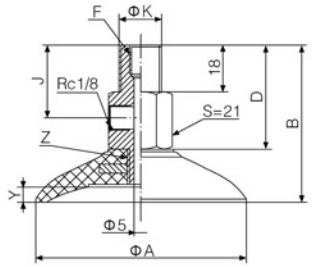
Pad diameters
Φ5 · Φ6 · Φ8 · Φ10



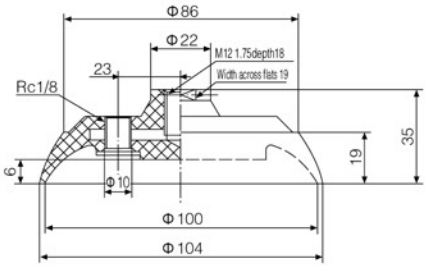
Pad diameters
Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50



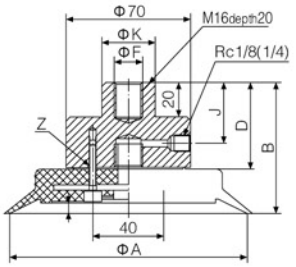
Pad diameters
Φ60 · Φ80 · Φ95



Pad diameters
Φ100



Pad diameters
Φ120 · Φ150 · Φ200



S:Width across flats

SPFYK	A	B	D	S	F	I	J	K	Y	Z
SPFYK–2	2	20	16	–	M3depth5	11	11	–	0.5	–
SPFYK–3.5	3.5	20	16	–	M3depth5	11	11	–	0.5	–
SPFYK–5	5	29	22.5	–	M4depth6	21	13	10	0.8	–
SPFYK–6	6	29	22.5	–	M4depth6	21	13	10	0.8	–
SPFYK–8	8	29.5	22.5	–	M4depth6	21	13	10	1.2	–
SPFYK–10	10	30	22.5	–	M4depth6	21	13	10	1.5	–
SPFYK–15	15	30	22	–	M4depth6	21	14	10	1.9	M5
SPFYK–20	20	32	22	–	M4depth6	21	14	10	2.3	M5
SPFYK–25	25	46	32	14H	M6depth8	23	20	12	3.0	M6
SPFYK–30	30	44	32	14H	M6depth8	23	20	12	2.0	M6
SPFYK–35	35	46	32	14H	M6depth8	23	20	12	3.0	M6
SPFYK–40	40	46	32	14H	M6depth8	23	20	12	3.5	M6
SPFYK–50	50	47	32	14H	M6depth8	23	20	12	4.0	M8
SPFYK–60	60	58.5	40	–	M8depth11	–	28	17	5.0	M10 × 1.25
SPFYK–80	80	60.5	40	–	M8depth11	–	28	17	6.0	M10 × 1.25
SPFYK–95	95	61	40	–	M8depth11	–	28	17	6.0	M10 × 1.25
SPFYK–100	–	–	–	–	–	–	–	–	–	–
SPFYK–120	120	75.5	50	–	M16depth20	–	38	30	6.0	4–M8
SPFYK–150	150	82.5	50	–	M16depth20	–	38	30	9.0	4–M8
SPFYK–200	200	87.5	50	–	M16depth20	–	38	30	13	4–M8

How to Order

SPFTS– 10 – 4 – N
① ② ③

① Pad Diameter(mm)

2	25
3.5	30
5	35
6	40
8	50
10	60
15	80
20	95

② Stroke(mm)

2.5	15
3	20
4	25
5	30
6	50
10	70

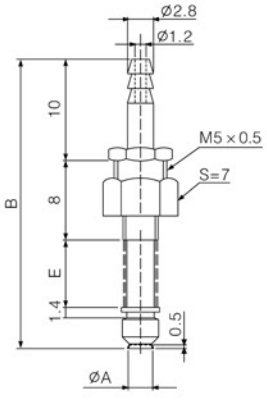
③ Pad Material

N	Nitrile Rubber
S	Silicone
NE	Nitrile ESD
SE	Silicone ESD

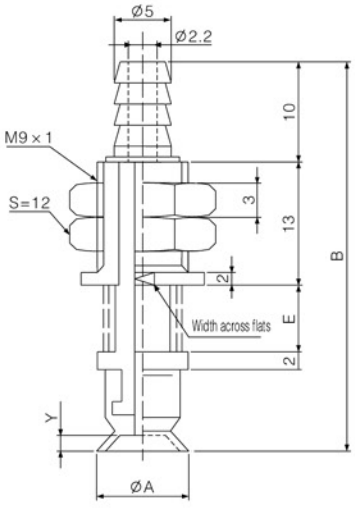
Dimensions (mm)

• SPFTS

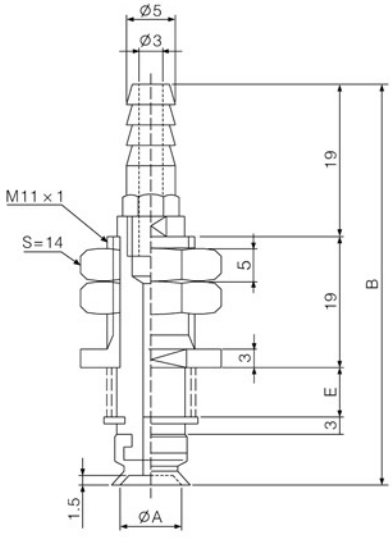
Pad diameters Φ2·Φ3.5



Pad diameters Φ5·Φ6·Φ8



Pad diameters Φ10



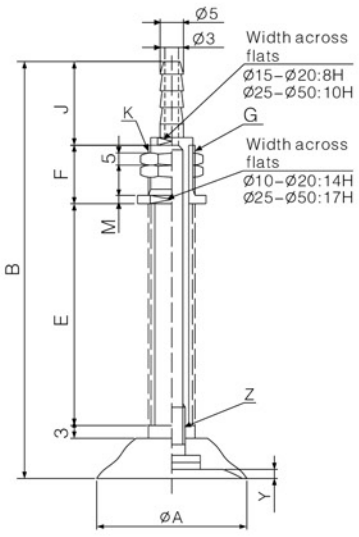
S:Width across flats

SPFTS	A	B	D	Y
SPFTS–2–2.5	2	28.5	5.1	–
SPFTS–2–5	2	33.5	10.1	–
SPFTS–3.5–2.5	3.5	28.5	5.1	–
SPFTS–3.5–5	3.5	33.5	10.1	–
SPFTS–5–3	5	37.5	6	0.8
SPFTS–5–10	5	51.5	20	0.8
SPFTS–5–15	5	61.5	30	0.8
SPFTS–5–25	5	61.5	50	0.8
SPFTS–6–3	6	37.5	6	0.8
SPFTS–6–10	6	51.5	20	0.8
SPFTS–6–15	6	61.5	30	0.8
SPFTS–6–25	6	81.5	50	0.8
SPFTS–8–3	6	38	6	1.2

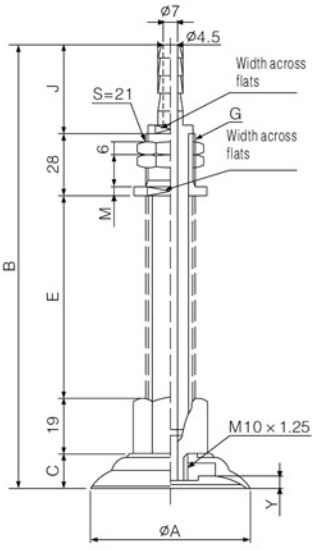
SPFTS	A	B	D	Y
SPFTS-8-10	8	52	20	1.2
SPFTS-8-15	8	62	30	1.2
SPFTS-8-25	8	82	50	1.2
SPFTS-10-4	10	56.5	8	1.5
SPFTS-10-10	10	68.5	20	1.5
SPFTS-10-20	10	88.5	40	1.5
SPFTS-10-30	10	108.5	60	1.5

· SPFTS

Pad diameters
Φ15·Φ20·Φ25·Φ30·Φ35·Φ40·Φ50



Pad diameters
Φ60·Φ80·Φ95



S:Width across flats

SPFTS	A	B	E	F	J	s	Y	Z
SPFTS-15-4	15	54	8	19	16	14H	1.9	M5
SPFTS-15-10	15	66	20	19	16	14H	1.9	M5
SPFTS-15-20	15	86	40	19	16	14H	1.9	M5
SPFTS-15-30	15	106	60	19	16	14H	1.9	M5
SPFTS-20-4	20	56	8	19	16	14H	2.3	M5
SPFTS-20-10	20	68	20	19	16	14H	2.3	M5
SPFTS-20-20	20	88	40	19	16	14H	2.3	M5
SPFTS-20-30	20	108	60	19	16	14H	2.3	M5
SPFTS-25-6	25	71	13	24	17	17H	3.0	M6
SPFTS-25-15	25	88	30	24	17	17H	3.0	M6
SPFTS-25-30	25	118	60	24	17	17H	3.0	M6
SPFTS-25-50	25	158	100	24	17	17H	3.0	M6
SPFTS-30-6	30	69	13	24	17	17H	2.0	M6
SPFTS-30-15	30	86	30	24	17	17H	2.0	M6
SPFTS-30-30	30	116	60	24	17	17H	2.0	M6
SPFTS-30-50	30	156	100	24	17	17H	2.0	M6
SPFTS-35-6	35	71	13	24	17	17H	3.0	M6
SPFTS-35-15	35	88	30	24	17	17H	3.0	M6
SPFTS-35-30	35	118	60	24	17	17H	3.0	M6
SPFTS-35-50	35	158	100	24	17	17H	3.0	M6

SPFTS	A	B	E	F	J	s	Y	Z
SPFTS-40-6	40	71	13	24	17	17H	3.5	M6
SPFTS-40-15	40	88	30	24	17	17H	3.5	M6
SPFTS-40-30	40	118	60	24	17	17H	3.5	M6
SPFTS-40-50	40	158	100	24	17	17H	3.5	M6
SPFTS-50-6	50	72	13	24	17	17H	4.0	M6
SPFTS-50-15	50	89	30	24	17	17H	4.0	M6
SPFTS-50-30	50	119	60	24	17	17H	4.0	M6
SPFTS-50-50	50	159	100	24	17	17H	4.0	M6
SPFTS-60-10	60	110.5	20	–	–	–	5.0	–
SPFTS-60-30	60	150.5	60	–	–	–	5.0	–
SPFTS-60-50	60	190.5	100	–	–	–	5.0	–
SPFTS-60-70	60	230.5	140	–	–	–	5.0	–
SPFTS-80-10	80	112.5	20	–	–	–	6.0	–
SPFTS-80-30	80	152.5	60	–	–	–	6.0	–
SPFTS-80-50	80	192.5	100	–	–	–	6.0	–
SPFTS-80-70	80	232.5	140	–	–	–	6.0	–
SPFTS-95-10	93	113	20	–	–	–	6.0	–
SPFTS-95-30	93	153	60	–	–	–	6.0	–
SPFTS-95-50	93	193	100	–	–	–	6.0	–
SPFTS-95-70	93	233	140	–	–	–	6.0	–

How to Order

SPFYS– 10 – 4 – N
① ② ③

① Pad Diameter(mm)

2	35
3.5	40
5	50
6	60
8	80
10	95
15	100
20	120
25	150
30	200

② Stroke(mm)

2.5	15
3	20
4	25
5	30
6	50
10	70

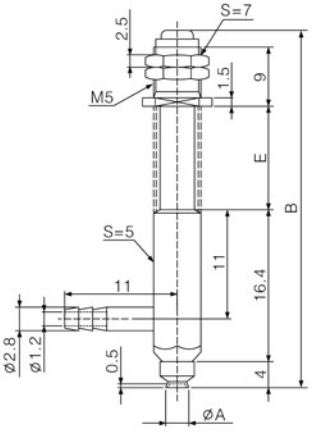
③ Pad Material

N	Nitrile Rubber
S	Silicone
NE	Nitrile ESD
SE	Silicone ESD

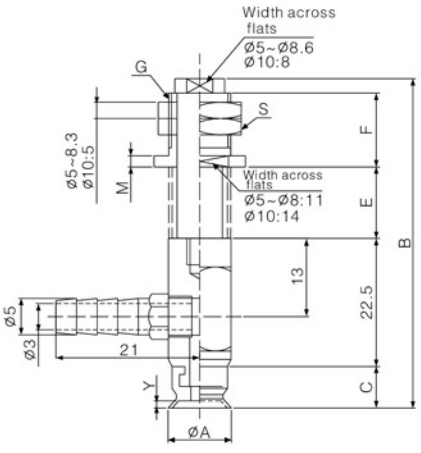
Dimensions (mm)

• SPFYS

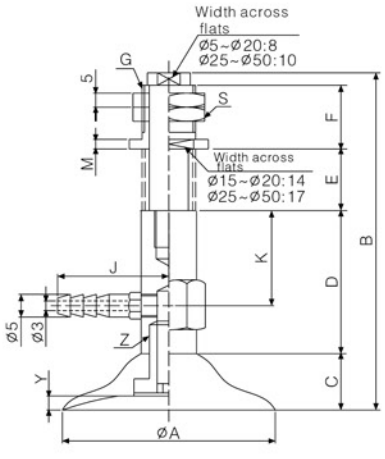
Pad diameters
Φ2 · Φ3.5



Pad diameters
Φ5 · Φ6 · Φ8 · Φ10



Pad diameters
Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50

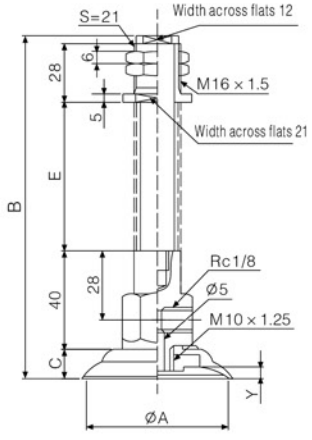


S:Width across flats

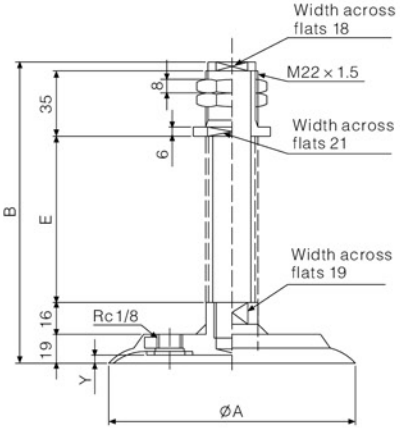
SPFYS	A	B	C	D	E	F	G	J	K	S	M	Y	Z
SPFYS-2-2.5	2	35.7	–	–	4.5	–	–	–	–	–	–	–	–
SPFYS-2-5	2	40.7	–	–	9.5	–	–	–	–	–	–	–	–
SPFYS-3.5-2.5	3.5	35.7	–	–	4.5	–	–	–	–	–	–	–	–
SPFYS-3.5-5	3.5	40.7	–	–	9.5	–	–	–	–	–	–	–	–
SPFYS-5-3	5	51	6.5	–	6	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-5-10	5	65	6.5	–	20	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-5-15	5	75	6.5	–	30	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-5-25	5	95	6.5	–	50	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-6-3	6	51	6.5	–	6	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-6-10	6	65	6.5	–	20	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-6-15	6	75	6.5	–	30	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-6-25	6	95	6.5	–	50	13	M9×P1	–	–	12H	2	0.8	–
SPFYS-8-3	8	51.5	7	–	6	13	M9×P1	–	–	12H	2	1.2	–
SPFYS-8-10	8	65.5	7	–	20	13	M9×P1	–	–	12H	2	1.2	–
SPFYS-8-15	8	75.5	7	–	30	13	M9×P1	–	–	12H	2	1.2	–
SPFYS-8-25	8	95.5	7	–	50	13	M9×P1	–	–	12H	2	1.2	–
SPFYS-10-4	10	60	7.5	–	8	19	M11×P1	–	–	14H	3	1.5	–
SPFYS-10-10	10	72	7.5	–	20	19	M11×P1	–	–	14H	3	1.5	–
SPFYS-10-20	10	92	7.5	–	40	19	M11×P1	–	–	14H	3	1.5	–
SPFYS-10-30	10	112	7.5	–	60	19	M11×P1	–	–	14H	3	1.5	–

• SPFYS

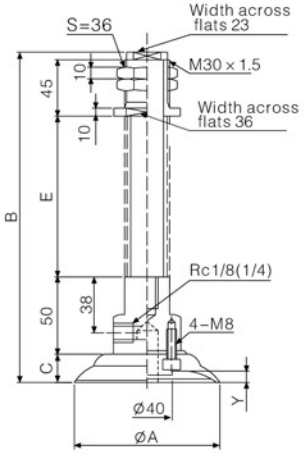
Pad diameters
Φ60 · Φ80 · Φ95



Pad diameters
Φ100



Pad diameters
Φ120 · Φ150 · Φ200



S:Width across flats

SPFYS	A	B	C	D	E	F	G	J	K	S	M	Y	Z
SPFYS–15–4	15	60	8	22	8	19	M11×P1	21	14	14H	3	1.9	M5
SPFYS–15–10	15	72	8	22	20	19	M11×P1	21	14	14H	3	1.9	M5
SPFYS–15–20	15	92	8	22	40	19	M11×P1	21	14	14H	3	1.9	M5
SPFYS–15–30	15	112	8	22	60	19	M11×P1	21	14	14H	3	1.9	M5
SPFYS–20–4	20	62	10	22	8	19	M11×P1	21	14	14H	3	2.3	M5
SPFYS–20–10	20	74	10	22	20	19	M11×P1	21	14	14H	3	2.3	M5
SPFYS–20–20	20	94	10	22	40	19	M11×P1	21	14	14H	3	2.3	M5
SPFYS–20–30	20	114	10	22	60	19	M11×P1	21	14	14H	3	2.3	M5
SPFYS–25–6	25	87	14	32	13	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–25–15	25	104	14	32	30	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–25–30	25	134	14	32	60	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–25–50	25	174	14	32	100	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–30–6	30	85	12	32	13	24	M14×P1.5	23	20	17H	4	2.0	M6
SPFYS–30–15	30	102	12	32	30	24	M14×P1.5	23	20	17H	4	2.0	M6
SPFYS–30–30	30	132	12	32	60	24	M14×P1.5	23	20	17H	4	2.0	M6
SPFYS–30–50	30	172	12	32	100	24	M14×P1.5	23	20	17H	4	2.0	M6
SPFYS–35–6	35	87	14	32	13	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–35–15	35	104	14	32	30	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–35–30	35	134	14	32	60	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–35–50	35	174	14	32	100	24	M14×P1.5	23	20	17H	4	3.0	M6
SPFYS–40–6	40	87	14	32	13	24	M14×P1.5	23	20	17H	4	3.5	M6
SPFYS–40–15	40	104	14	32	30	24	M14×P1.5	23	20	17H	4	3.5	M6
SPFYS–40–30	40	134	14	32	60	24	M14×P1.5	23	20	17H	4	3.5	M6
SPFYS–40–50	40	174	14	32	100	24	M14×P1.5	23	20	17H	4	3.5	M6
SPFYS–50–6	50	88	14	32	13	24	M14×P1.5	23	20	17H	4	4.0	M8
SPFYS–50–15	50	105	14	32	30	24	M14×P1.5	23	20	17H	4	4.0	M8
SPFYS–50–30	50	135	14	32	60	24	M14×P1.5	23	20	17H	4	4.0	M8
SPFYS–50–50	50	175	15	32	100	24	M14×P1.5	23	20	17H	4	4.0	M8
SPFYS–60–10	60	110.5	18.5	40	20	28	M16×P1.5	–	28	21H	5	5.0	M10×P1.5
SPFYS–60–30	60	150.5	18.5	40	60	28	M16×P1.5	–	28	21H	5	5.0	M10×P1.5
SPFYS–60–50	60	190.5	18.5	40	100	28	M16×P1.5	–	28	21H	5	5.0	M10×P1.5
SPFYS–60–70	60	230.5	18.5	40	140	28	M16×P1.5	–	28	21H	5	5.0	M10×P1.5
SPFYS–80–10	80	112.5	20.5	40	20	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–80–30	80	152.5	20.5	40	60	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–80–50	80	192.5	20.5	40	100	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–80–70	80	232.5	20.5	40	140	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–95–10	93	113	21	40	20	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–95–30	93	153	21	40	60	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–95–50	93	193	21	40	100	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–95–70	93	233	21	40	140	28	M16×P1.5	–	28	21H	5	6.0	M10×P1.5
SPFYS–100–15	100	106	19	16	30	35	M22×P1.5	–	–	27H	6	6.0	–
SPFYS–100–30	100	136	19	16	60	35	M22×P1.5	–	–	27H	6	6.0	–
SPFYS–100–50	100	176	19	16	100	35	M22×P1.5	–	–	27H	6	6.0	–
SPFYS–100–70	100	216	19	16	140	35	M22×P1.5	–	–	27H	6	6.0	–
SPFYS–120–20	120	203.5	25.5	50	75	45	M30×P1.5	–	38	36H	10	6.0	4–M8
SPFYS–120–100	120	293.5	25.5	50	165	45	M30×P1.5	–	38	36H	10	6.0	4–M8
SPFYS–150–20	150	210.5	32.5	50	75	45	M30×P1.5	–	38	36H	10	9.0	4–M8
SPFYS–150–100	150	300.5	32.5	50	165	45	M30×P1.5	–	38	36H	10	9.0	4–M8
SPFYS–200–20	200	215.5	37.5	50	75	45	M30×P1.5	–	38	36H	10	13.0	4–M8
SPFYS–200–100	200	305.5	37.5	50	165	45	M30×P1.5	–	38	36H	10	13.0	4–M8

How to Order

SPJG– 6 – N
① ②

① Pad Diameter(mm)

6	30
8	35
10	40
15	50
20	60
25	

② Pad Material

N	Nitrile Rubber
S	Silicone

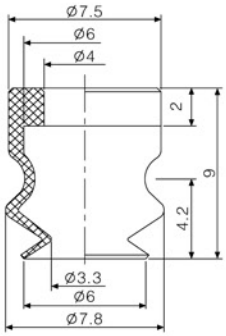
Features

☆ The lip edge is thin and the leak tightness is very good.
☆ It is fit to suck tilted things and small-sized papers, plastic film and so on.
☆ Strong and stable adsorbing power.

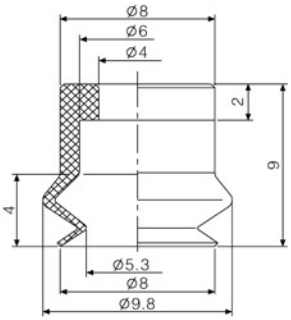
Dimensions (mm)

• SPJG

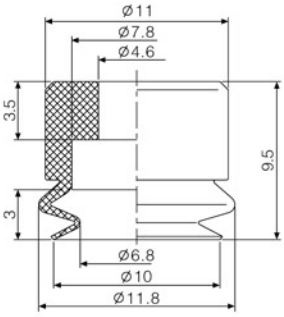
Pad diameters Φ6



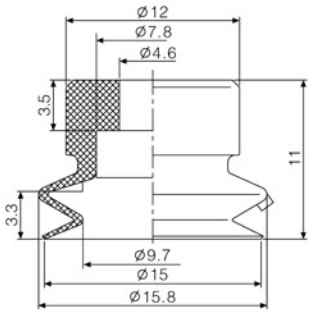
Pad diameters Φ8



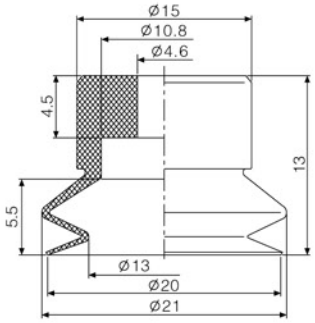
Pad diameters Φ10



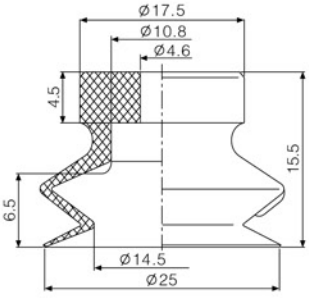
Pad diameters Φ15



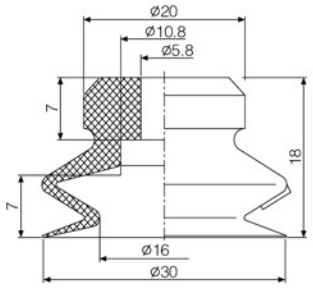
Pad diameters Φ20



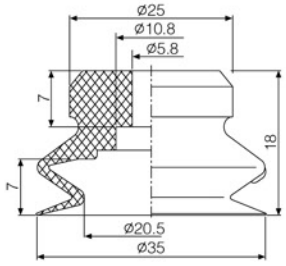
Pad diameters Φ25



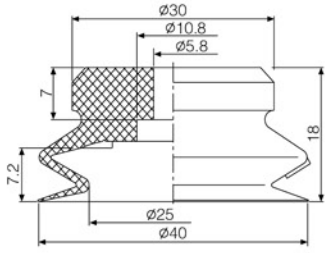
Pad diameters
Φ30



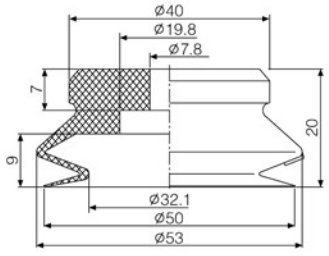
Pad diameters
Φ35



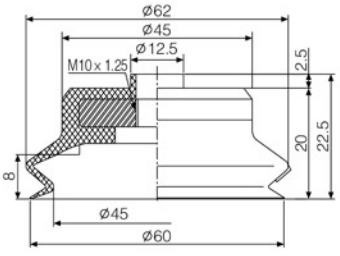
Pad diameters
Φ40



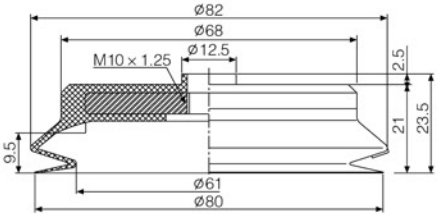
Pad diameters
Φ50



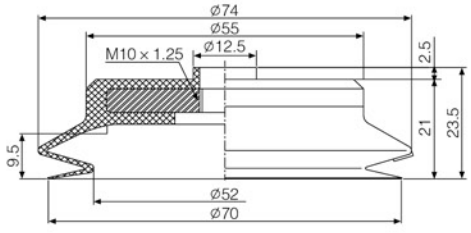
Pad diameters
Φ60



Pad diameters
Φ70



Pad diameters
Φ80



S:Width across flats

How to Order

SPJ T K – 2 – N
① ② ③

① Vacuum entry direction

T	Vertical
Y	Lateral

② Pad Diameter(mm)

6	25
8	30
10	35
15	40
20	50

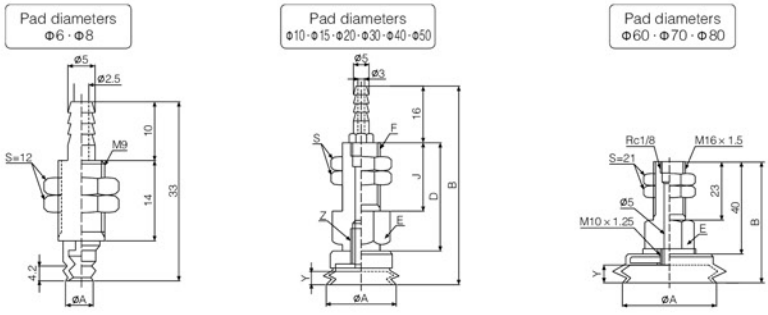
③ Pad Material

N	Nitrile Rubber
S	Silicone

Dimensions (mm)

Vertical direction connection

• SPJTK

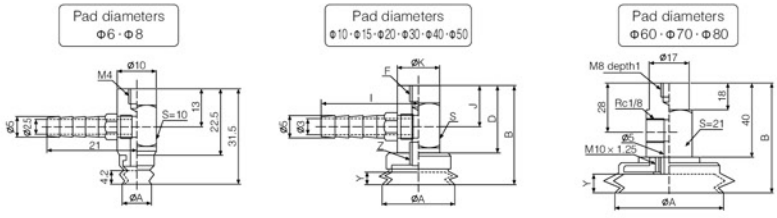


S: Width across flats

SPJTK	A	B	D	E	F	J	S	Y	Z
SPJTK–6	6	–	–	–	–	–	–	4.2	–
SPJTK–8	8	–	–	–	–	–	–	4.2	–
SPJTK–10	10	47.5	22	10H	M8	15	10H	3	M5
SPJTK–15	15	49	22	10H	M8	15	10H	4.5	M5
SPJTK–20	20	51	22	10H	M8	15	10H	5.5	M5
SPJTK–30	30	66	32	14H	M10	20	14H	8	M6
SPJTK–40	40	66	32	14H	M10	20	14H	8	M6
SPJTK–50	50	68	32	14H	M10	20	14H	9	M8
SPJTK–60	60	62.5	–	21H	–	–	–	10	–
SPJTK–70	70	63.5	–	22H	–	–	–	11	–
SPJTK–80	80	63.5	–	23H	–	–	–	11	–

Lateral direction connection

• SPJYK



S: Width across flats

SPJYK	A	B	D	S	F	J	K	Y	Z
SPJYK–6	6	–	–	–	–	–	–	–	–
SPJYK–8	8	–	–	–	–	–	–	–	–
SPJYK–10	10	31.5	22	10H	M4depth6	14	10	3	M5
SPJYK–15	15	33	22	10H	M4depth6	14	10	4.5	M5
SPJYK–20	20	35	22	10H	M4depth6	14	10	5.5	M5
SPJYK–30	30	50	32	14H	M6depth8	20	12	8	M6
SPJYK–40	40	50	32	14H	M6depth8	20	12	8	M6
SPJYK–50	50	52	32	14H	M6depth8	20	12	9	M8
SPJYK–60	60	62.5	–	–	–	–	–	10	–
SPJYK–70	70	63.5	–	–	–	–	–	11	–
SPJYK–80	80	63.5	–	–	–	–	–	11	–

How to Order

SPJTS – 6 ① – 3 ② – N ③

① Pad Diameter(mm)	
6	25
8	30
10	35
15	40
20	50

② Stroke(mm)	
3	20
4	25
6	30
10	50
15	

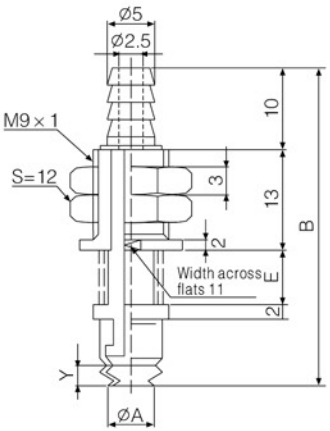
③ Pad Material	
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

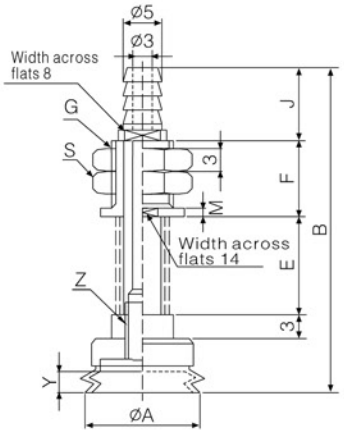
Vertical direction connection

• SPJTS

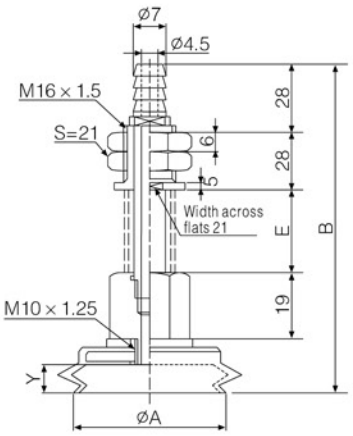
Pad diameters
Φ6 · Φ8



Pad diameters
Φ10 · Φ15 · Φ20 · Φ30 · Φ40 · Φ50



Pad diameters
Φ60 · Φ70 · Φ80



S:Width across flats

SPJTS	A	B	E	F	G	J	S	M	Y	Z
SPJTS-6-3	6	40	6	–	–	–	–	–	4.2	–
SPJTS-6-10	6	54	20	–	–	–	–	–	4.2	–
SPJTS-6-15	6	64	30	–	–	–	–	–	4.2	–
SPJTS-6-25	6	84	50	–	–	–	–	–	4.2	–
SPJTS-8-3	8	40	6	–	–	–	–	–	4.2	–
SPJTS-8-10	8	54	20	–	–	–	–	–	4.2	–
SPJTS-8-15	8	64	30	–	–	–	–	–	4.2	–
SPJTS-8-25	8	84	50	–	–	–	–	–	4.2	–
SPJTS-10-4	10	55.5	8	19	M11×P1	16	14H	3	3	M5
SPJTS-10-10	10	67.5	20	19	M11×P1	16	14H	3	3	M5
SPJTS-10-20	10	87.5	40	19	M11×P1	16	14H	3	3	M5
SPJTS-10-30	10	107.5	60	19	M11×P1	16	14H	3	3	M5
SPJTS-15-4	15	57	8	19	M11×P1	16	14H	3	4.5	M5
SPJTS-15-10	15	69	20	19	M11×P1	16	14H	3	4.5	M5
SPJTS-15-20	15	89	40	19	M11×P1	16	14H	3	4.5	M5
SPJTS-15-30	15	109	60	19	M11×P1	16	14H	3	4.5	M5
SPJTS-20-4	20	59	8	19	M11×P1	16	14H	3	5.5	M5
SPJTS-20-10	20	71	20	19	M11×P1	16	14H	3	5.5	M5
SPJTS-20-20	20	91	40	19	M11×P1	16	14H	3	5.5	M5
SPJTS-20-30	20	111	60	19	M11×P1	16	14H	3	5.5	M5
SPJTS-30-6	30	75	13	24	M14×P1.5	17	17H	4	8	M6
SPJTS-30-15	30	92	30	24	M14×P1.5	17	17H	4	8	M6
SPJTS-30-30	30	122	60	24	M14×P1.5	17	17H	4	8	M6
SPJTS-30-50	30	162	100	24	M14×P1.5	17	17H	4	8	M6
SPJTS-40-6	40	75	13	24	M14×P1.5	17	17H	4	8	M6
SPJTS-40-15	40	92	30	24	M14×P1.5	17	17H	4	8	M6
SPJTS-40-30	40	122	60	24	M14×P1.5	17	17H	4	8	M6
SPJTS-40-50	40	162	100	24	M14×P1.5	17	17H	4	8	M6
SPJTS-50-6	50	77	13	24	M14×P1.5	17	17H	4	9	M6
SPJTS-50-15	50	94	30	24	M14×P1.5	17	17H	4	9	M6
SPJTS-50-30	50	124	60	24	M14×P1.5	17	17H	4	9	M6
SPJTS-50-50	50	164	100	24	M14×P1.5	17	17H	4	9	M6
SPJTS-60-10	60	114.5	20	–	–	–	–	–	10	–
SPJTS-60-30	60	154.5	60	–	–	–	–	–	10	–
SPJTS-60-50	60	194.5	100	–	–	–	–	–	10	–
SPJTS-60-70	60	234.5	140	–	–	–	–	–	10	–
SPJTS-70-10	70	115.5	20	–	–	–	–	–	11	–
SPJTS-70-30	70	155.5	60	–	–	–	–	–	11	–
SPJTS-70-50	70	195.5	100	–	–	–	–	–	11	–
SPJTS-70-70	70	235.5	140	–	–	–	–	–	11	–
SPJTS-80-10	80	115.5	20	–	–	–	–	–	11	–
SPJTS-80-30	80	155.5	60	–	–	–	–	–	11	–
SPJTS-80-50	80	195.5	100	–	–	–	–	–	11	–
SPJTS-80-70	80	235.5	140	–	–	–	–	–	11	–

How to Order

SPJYS – 6 – 3 – N
① ② ③

① Pad Diameter(mm)

6	25
8	30
10	35
15	40
20	50

② Stroke(mm)

3	20
4	25
6	30
10	50
15	

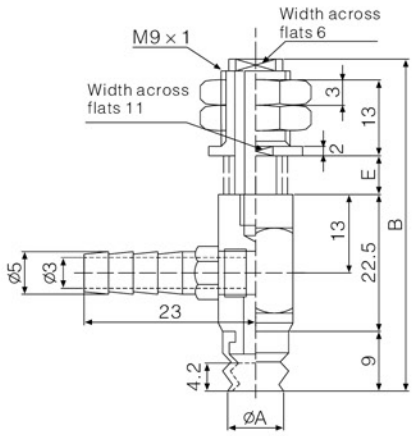
③ Pad Material

N	Nitrile Rubber
S	Silicone

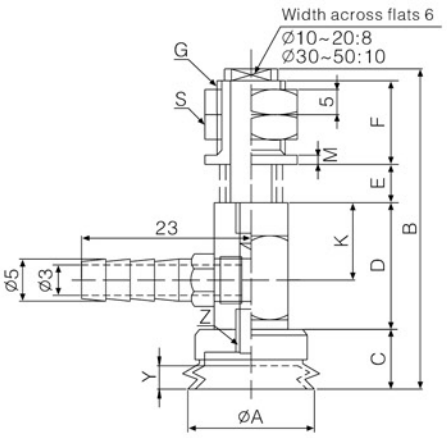
Dimensions (mm)

• SPJYS

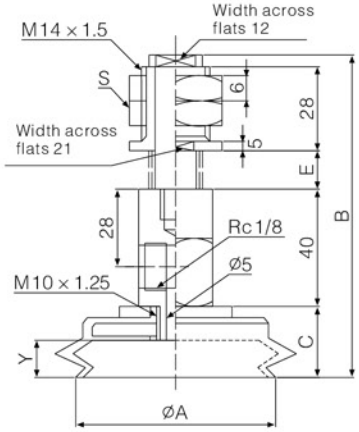
Pad diameters
Φ6 · Φ8



Pad diameters
Φ10 ·Φ15 ·Φ20 ·Φ30· Φ40· Φ50



Pad diameters
Φ60 · Φ70 · Φ80



S:Width across flats

SPJYS	A	B	C	D	E	F	G	K	S	M	Y	Z
SPJYS-6-3	6	53.5	–	–	6	–	–	–	–	–	–	–
SPJYS-6-10	6	67.5	–	–	20	–	–	–	–	–	–	–
SPJYS-6-15	6	77.5	–	–	30	–	–	–	–	–	–	–
SPJYS-6-25	6	97.5	–	–	50	–	–	–	–	–	–	–
SPJYS-8-3	8	53.5	–	–	6	–	–	–	–	–	–	–
SPJYS-8-10	8	67.5	–	–	20	–	–	–	–	–	–	–
SPJYS-8-15	8	77.5	–	–	30	–	–	–	–	–	–	–
SPJYS-8-25	8	97.5	–	–	50	–	–	–	–	–	–	–
SPJYS-10-4	10	61.5	9.5	22	8	19	M11×P1	14	14H	3	3	M5
SPJYS-10-10	10	73.5	9.5	22	20	19	M11×P1	14	14H	3	3	M5
SPJYS-10-20	10	93.5	9.5	22	40	19	M11×P1	14	14H	3	3	M5
SPJYS-10-30	10	113.5	9.5	22	60	19	M11×P1	14	14H	3	3	M5
SPJYS-15-4	15	63	11	22	8	19	M11×P1	14	14H	3	4.5	M5
SPJYS-15-10	15	75	11	22	20	19	M11×P1	14	14H	3	4.5	M5
SPJYS-15-20	15	95	11	22	40	19	M11×P1	14	14H	3	4.5	M5
SPJYS-15-30	15	115	11	22	60	19	M11×P1	14	14H	3	4.5	M5
SPJYS-20-4	20	65	13	22	8	19	M11×P1	14	14H	3	5.5	M5
SPJYS-20-10	20	77	13	22	20	19	M11×P1	14	14H	3	5.5	M5
SPJYS-20-20	20	97	13	22	40	19	M11×P1	14	14H	3	5.5	M5
SPJYS-20-30	20	117	13	22	60	19	M11×P1	14	14H	3	5.5	M5
SPJYS-30-6	30	91	18	32	13	24	M14×P1.5	20	17H	4	8	M6
SPJYS-30-15	30	108	18	32	30	24	M14×P1.5	20	17H	4	8	M6
SPJYS-30-30	30	138	18	32	60	24	M14×P1.5	20	17H	4	8	M6
SPJYS-30-50	30	178	18	32	100	24	M14×P1.5	20	17H	4	8	M6
SPJYS-40-6	40	91	18	32	13	24	M14×P1.5	20	17H	4	8	M6
SPJYS-40-15	40	108	18	32	30	24	M14×P1.5	20	17H	4	8	M6
SPJYS-40-30	40	138	18	32	60	24	M14×P1.5	20	17H	4	8	M6
SPJYS-40-50	40	178	18	32	100	24	M14×P1.5	20	17H	4	8	M6
SPJYS-50-6	50	93	20	32	13	24	M14×P1.5	20	17H	4	9	M6
SPJYS-50-15	50	110	20	32	30	24	M14×P1.5	20	17H	4	9	M6
SPJYS-50-30	50	140	20	32	60	24	M14×P1.5	20	17H	4	9	M6
SPJYS-50-50	50	180	20	32	100	24	M14×P1.5	20	17H	4	9	M6
SPJYS-60-10	60	114.5	22.5	–	20	–	–	–	21H	–	10	M10×P1.25
SPJYS-60-30	60	154.5	22.5	–	60	–	–	–	21H	–	10	M10×P1.25
SPJYS-60-50	60	194.5	22.5	–	100	–	–	–	21H	–	10	M10×P1.25
SPJYS-60-70	60	234.5	22.5	–	140	–	–	–	21H	–	10	M10×P1.25
SPJYS-70-10	70	115.5	23.5	–	20	–	–	–	21H	–	11	M10×P1.25
SPJYS-70-30	70	155.5	23.5	–	60	–	–	–	21H	–	11	M10×P1.25
SPJYS-70-50	70	195.5	23.5	–	100	–	–	–	21H	–	11	M10×P1.25
SPJYS-70-70	70	235.5	23.5	–	140	–	–	–	21H	–	11	M10×P1.25
SPJYS-80-10	80	115.5	23.5	–	20	–	–	–	21H	–	11	M10×P1.25
SPJYS-80-30	80	155.5	23.5	–	60	–	–	–	21H	–	11	M10×P1.25
SPJYS-80-50	80	195.5	23.5	–	100	–	–	–	21H	–	11	M10×P1.25
SPJYS-80-70	80	235.5	23.5	–	140	–	–	–	21H	–	11	M10×P1.25

How to Order

SPJG – 8 ① – N ② – PEEK

① Applicable pad

8	PJG–8
10	PJG–10
15	PJG–15
20	PJG–20
25	PJG–25
30	PJG–30
35	PJG–35
40	PJG–40
50	PJG–50

② Pad Material

N	Nitrile Rubber
S	Silicone

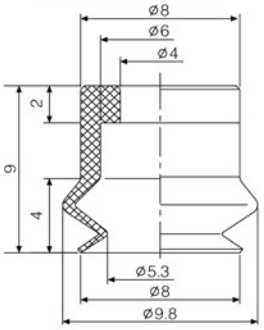
Features

☆ On the basis of the ruffle pad SPJG,we install the PEEK accessories to the pad core of the SPJG vacuum pad to prevent static, stick up with the adsorbing objects and adsorbing mark.

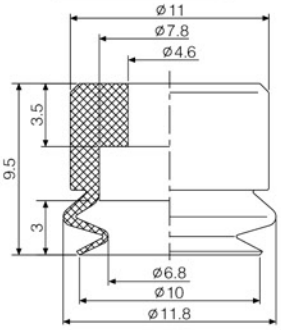
Dimensions (mm)

• SPJG

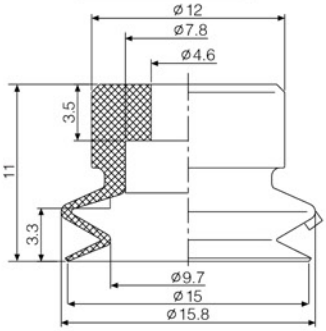
Pad diameters Φ8



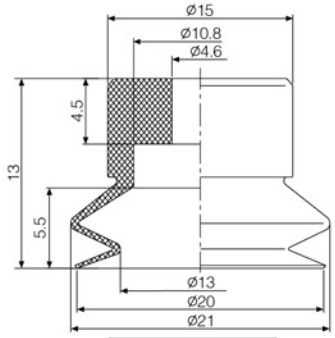
Pad diameters Φ10



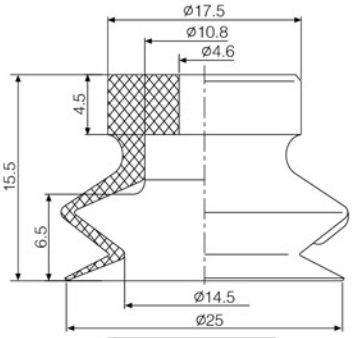
Pad diameters Φ15



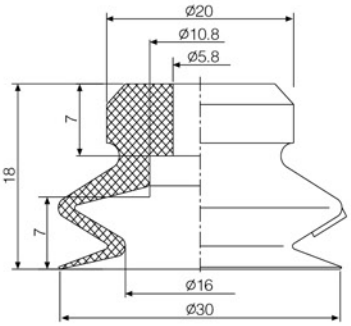
Pad diameters Φ20



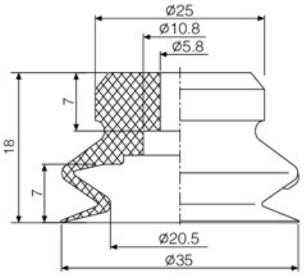
Pad diameters Φ25



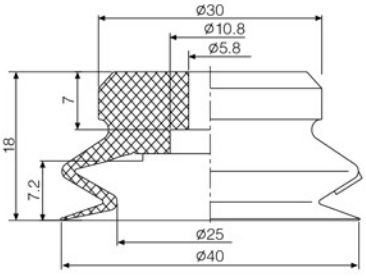
Pad diameters Φ30



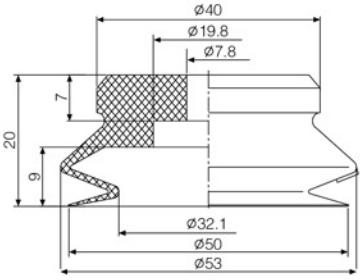
Pad diameters Φ35



Pad diameters Φ40



Pad diameters Φ50



How to Order

SPS – 6 ① – M ② – N ③

① Pad Diameter(mm)

SPFG		SPJG
6	25	6–J
8	30	8–J
10	35	10–J
15	40	15–J
20	50	20–J
		30–J
		40–J
		50–J

② Connection thread

M	Male thread
F	Female thread

③ Pad Material

N	Nitrile Rubber
S	Silicone

Features

☆ Add inner teeth and outer teeth fixed screw to SPF and SPJ vacuum pad. It is easy to install.

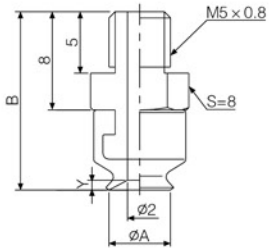
☆ It is fit to suck small–sized steel plate, glass and so on.

Dimensions (mm)

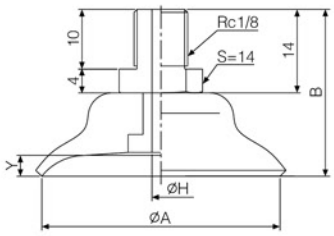
Male thread connection

• SPS–M

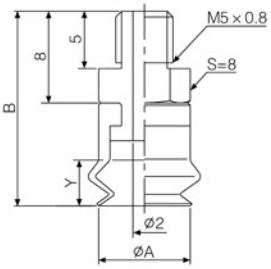
Pad diameters Φ6 · Φ8 · Φ10



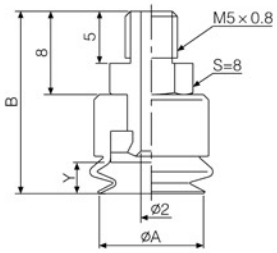
Pad diameters Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50



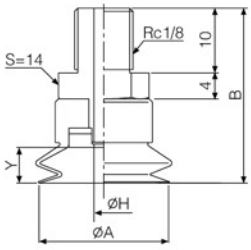
Pad diameters Φ6 · Φ8



Pad diameters Φ10



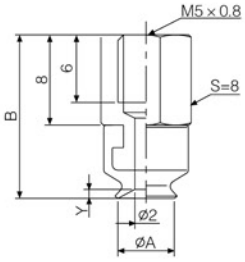
Pad diameters Φ15 · Φ20 · Φ30 · Φ40 · Φ50



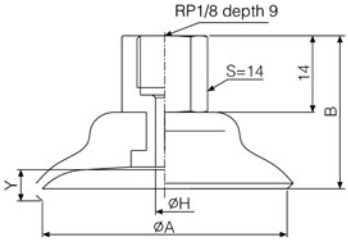
S:Width across flats

• SPS–F

Pad diameters Φ6 · Φ8 · Φ10



Pad diameters Φ15 · Φ20 · Φ25 · Φ30 · Φ35 · Φ40 · Φ50

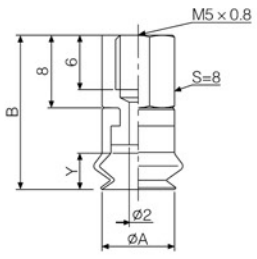


SPS	A	B	H	Y
SPS-6-M	6	14.5	–	0.8
SPS-8-M	8	15	–	1.2
SPS-10-M	10	15.5	–	1.5
SPS-15-M	15	22	2	1.9
SPS-20-M	20	24	3	2.3
SPS-25-M	25	28	3	3
SPS-30-M	30	26	3	2
SPS-35-M	35	28	3	3
SPS-40-M	40	28	3	3.5
SPS-50-M	50	29	4	4
SPS-6-J-M	6	17	–	4.2
SPS-8-J-M	8	17	–	4
SPS-10-J-M	10	17.5	–	3
SPS-15-J-M	15	25	2	3.3
SPS-20-J-M	20	27	2	5.5
SPS-30-J-M	30	32	3	7
SPS-40-J-M	40	32	3	7.2
SPS-50-J-M	50	34	4	9
SPS-6-F	6	14.5	–	0.8
SPS-8-F	8	15	–	1.2
SPS-10-F	10	15.5	–	1.5
SPS-15-F	15	22	2	1.9
SPS-20-F	20	24	3	2.3
SPS-25-F	25	28	3	3
SPS-30-F	30	26	3	2
SPS-35-F	35	28	3	3
SPS-40-F	40	28	3	3.5
SPS-50-F	50	29	4	4

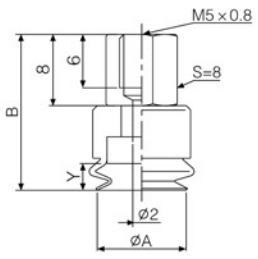
Female thread connection

• **SPS-J-F**

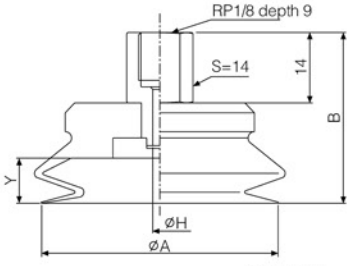
Pad diameters
Φ6・Φ8



Pad diameters
Φ10



Pad diameters
Φ15・Φ20・Φ30・Φ40・Φ50



S:Width across flats

SPS	A	B	H	Y
SPS-6-J-F	6	17	–	4.2
SPS-8-J-F	8	17	–	4
SPS-10-J-F	10	17.5	–	3
SPS-15-J-F	15	25	2	3.3
SPS-20-J-F	20	27	3	5.5
SPS-30-J-F	30	32	3	7
SPS-40-J-F	40	32	3	7.2
SPS-50-J-F	50	34	4	9

How to Order

SPUG – 80 – N
① ②

① Pad Diameter(mm)

35	60
40	80
50	100

② Pad Material

N	Nitrile Rubber
S	Silicone

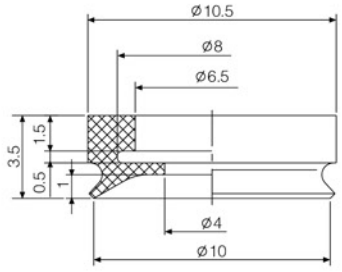
Features

☆ Parallel direction pad.
☆ Swivel type,can swing between 30 angle. It is flexibleto install and can save space.
☆ Design for special pad face, it is stable for sucking.

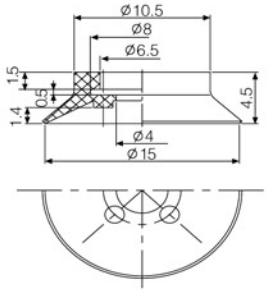
Dimensions (mm)

• SPUG

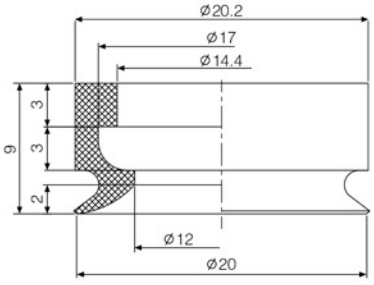
Pad diameters Φ10



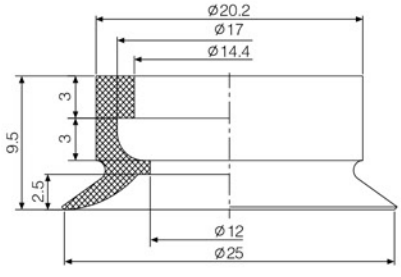
Pad diameters Φ15



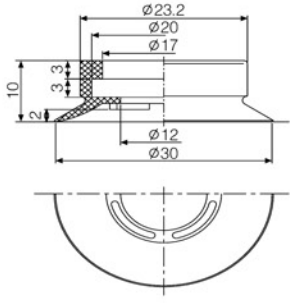
Pad diameters Φ20



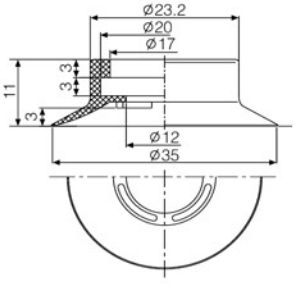
Pad diameters Φ25



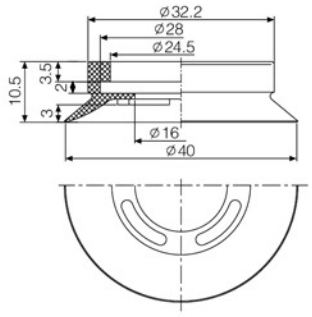
Pad diameters Φ30



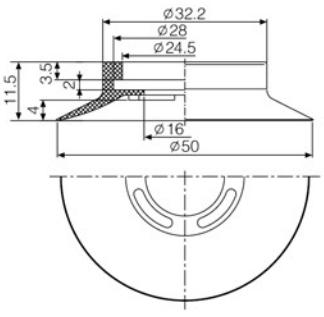
Pad diameters Φ35



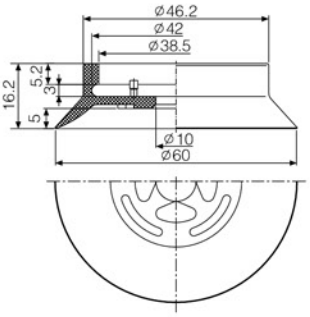
Pad diameters
Φ40



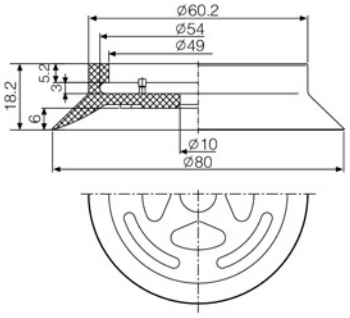
Pad diameters
Φ50



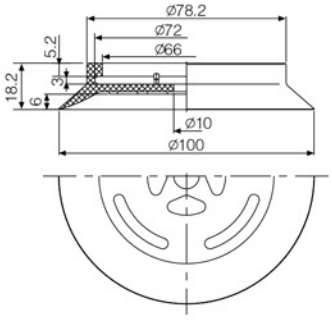
Pad diameters
Φ60



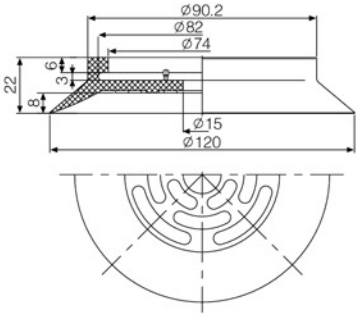
Pad diameters
Φ80



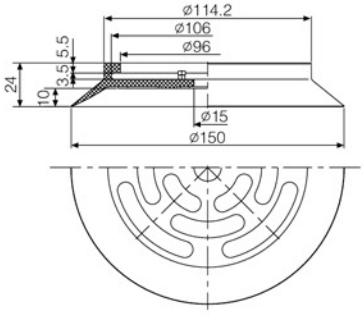
Pad diameters
Φ100



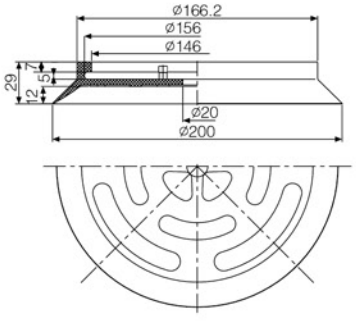
Pad diameters
Φ120



Pad diameters
Φ150



Pad diameters
Φ200



S:Width across flats

How to Order

SPU – T ① KB – 80 ② – N ③

① Vacuum entry direction

T	Vertical
Y	Lateral

② Pad Diameter(mm)

35	60
40	80
50	100

③ Pad Material

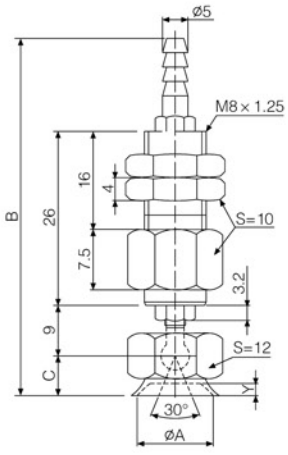
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

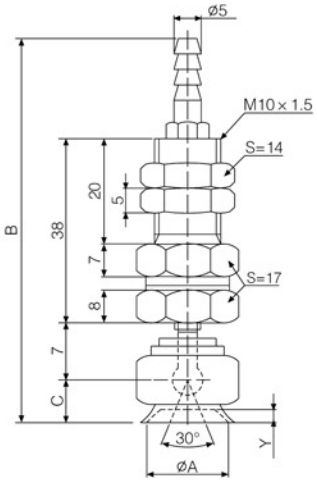
Vertical direction connection

• SPUTKB

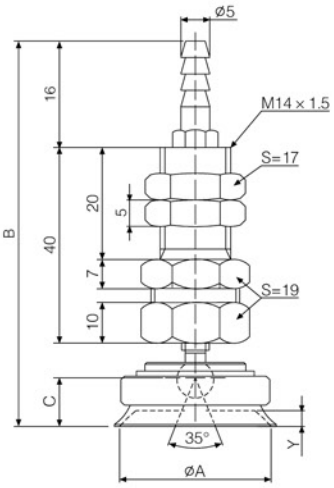
Pad diameters Φ10 · Φ15



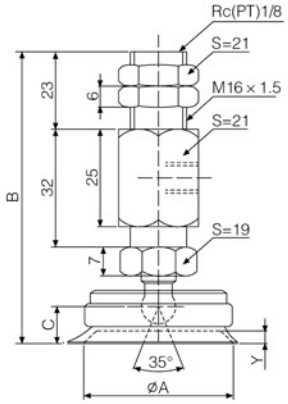
Pad diameters Φ20 · Φ25 · Φ30 · Φ35



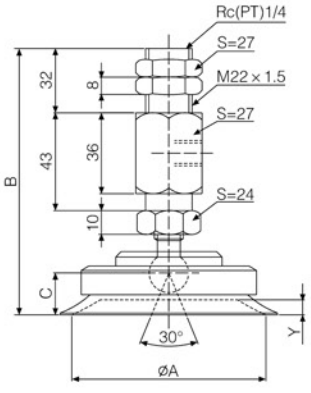
Pad diameters Φ40 · Φ50



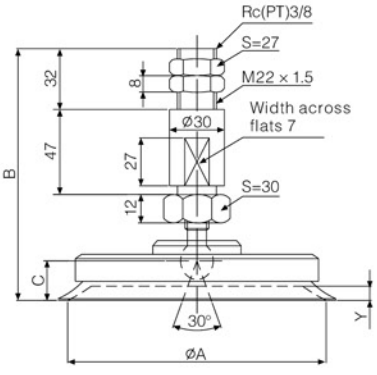
Pad diameters Φ60 · Φ80 · Φ100



Pad diameters Φ120 · Φ150



Pad diameters Φ200



S:Width across flats

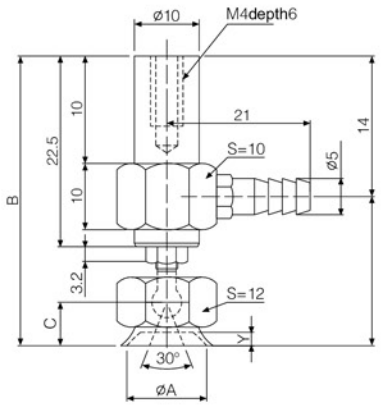
SPUTKB	A	B	C	Y
SPUTKB–10	10	56	5	1
SPUTKB–15	15	57	6	1.4
SPUTKB–20	20	70	9	2
SPUTKB–25	25	70.5	9.5	2.5
SPUTKB–30	30	71	10	2
SPUTKB–35	35	72	11	3
SPUTKB–40	40	77	11	3
SPUTKB–50	50	78	12	4
SPUTKB–60	60	93	16	5
SPUTKB–80	80	95	18	6
SPUTKB–100	100	95	18	6
SPUTKB–120	120	128	23	8
SPUTKB–150	150	130	25	10
SPUTKB–200	200	140	29	12

Dimensions (mm)

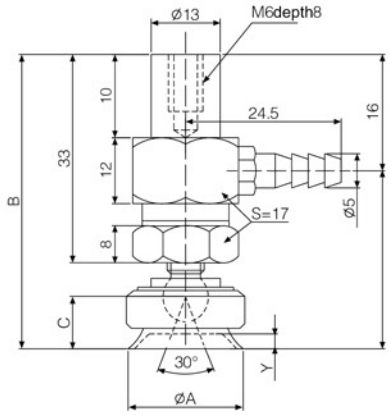
Lateral direction connection

• SPUYKB

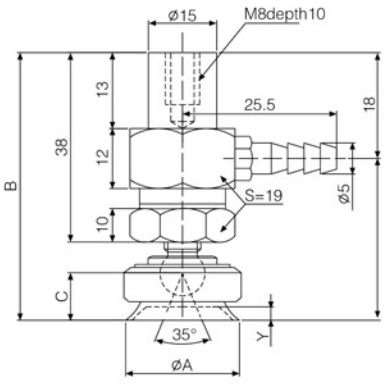
Pad diameters
Φ10 · Φ15



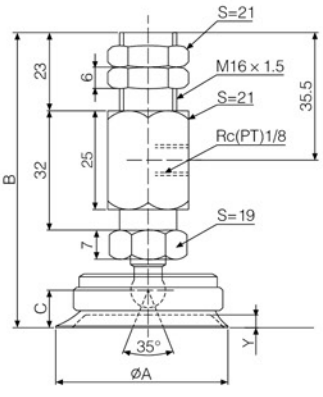
Pad diameters
Φ20 · Φ25 · Φ30 · Φ35



Pad diameters
Φ40 · Φ50



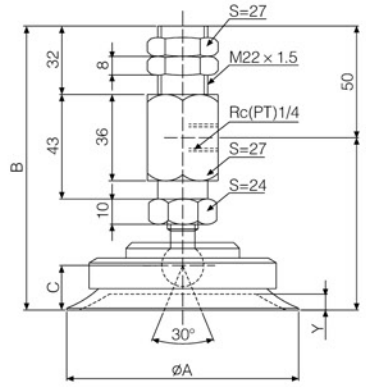
Pad diameters
Φ60 · Φ80 · Φ100



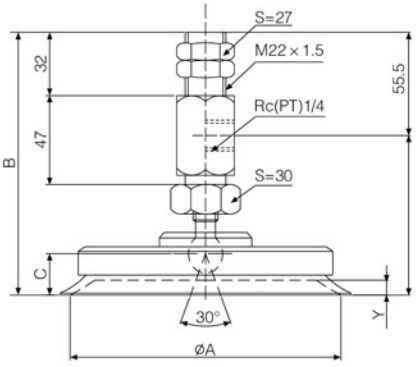
Swivel Type Vacuum Pad with Locking Fittings

SPUTKB / SPUYKB Series

Pad diameters
Φ120 · Φ150



Pad diameters
Φ200



S:Width across flats

SPUYKB	A	B	C	Y
SPUYKB–10	10	36.5	5	1
SPUYKB–15	15	37.5	6	1.4
SPUYKB–20	20	49	9	2
SPUYKB–25	25	49.5	9.5	2.5
SPUYKB–30	30	50	10	2
SPUYKB–35	35	51	11	3
SPUYKB–40	40	59	11	3
SPUYKB–50	50	60	12	4
SPUYKB–60	60	93	16	5
SPUYKB–80	80	95	18	6
SPUYKB–100	100	95	18	6
SPUYKB–120	120	128	23	8
SPUYKB–150	150	130	25	10
SPUYKB–200	200	140	29	12

How to Order

SPU – T ① SB – 80 ② – Stroke ③ – N ④

① Vacuum entry direction

T	Vertical
Y	Lateral

② Pad Diameter(mm)

35	60
40	80
50	100

③ Pad Material

4
6
10
15
20
30
50

④ Pad Material

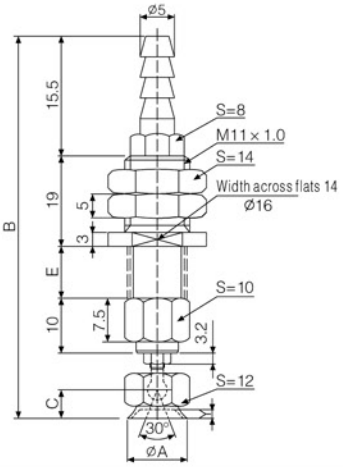
N	Nitrile Rubber
S	Silicone

Dimensions (mm)

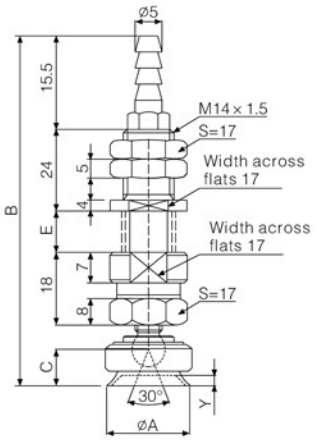
Vertical direction connection

• SPUTSB

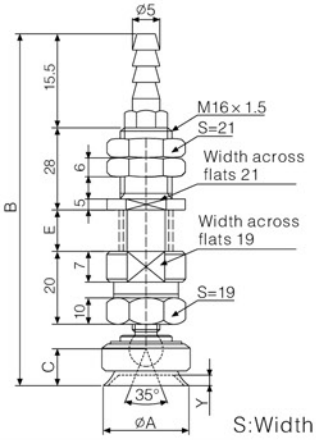
Pad diameters Φ10 · Φ15



Pad diameters Φ20 · Φ25 · Φ30 · Φ35



Pad diameters Φ40 · Φ50

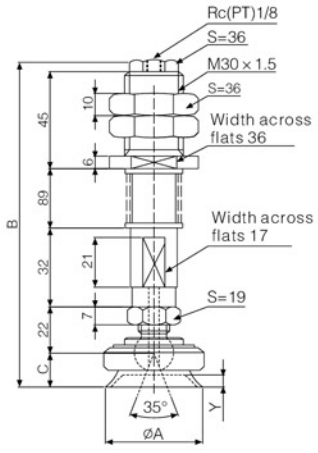


S:Width across flats

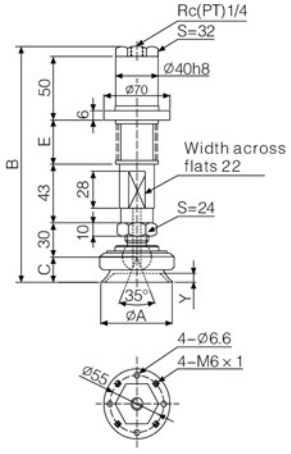
SPUTSB	A	B	C	E	Y
SPUTSB–10–4	10	66.5	5	8	1
SPUTSB–10–10	10	78.5	5	20	1
SPUTSB–10–20	10	98.5	5	40	1
SPUTSB–10–30	10	118.5	5	60	1
SPUTSB–15–4	15	67.5	6	8	1.4
SPUTSB–15–10	15	79.5	6	20	1.4
SPUTSB–15–20	15	99.5	6	40	1.4
SPUTSB–15–30	15	119.5	6	60	1.4
SPUTSB–20–6	20	86.5	9	13	2
SPUTSB–20–15	20	103.5	9	30	2
SPUTSB–20–30	20	133.5	9	60	2
SPUTSB–20–50	20	173.5	9	100	2
SPUTSB–25–6	25	87	9.5	13	2.5
SPUTSB–25–15	25	104	9.5	30	2.5
SPUTSB–25–30	25	134	9.5	60	2.5
SPUTSB–25–50	25	174	9.5	100	2.5
SPUTSB–30–6	30	87.5	10	13	2
SPUTSB–30–15	30	104.5	10	30	2
SPUTSB–30–30	30	134.5	10	60	2
SPUTSB–30–50	30	174.5	10	100	2
SPUTSB–35–6	35	88.5	11	13	3
SPUTSB–35–15	35	105.5	11	30	3
SPUTSB–35–30	35	135.5	11	60	3
SPUTSB–35–50	35	175.5	11	100	3

SPUTSB	A	B	C	E	Y
SPUTSB-40-6	40	97.5	11	13	3
SPUTSB-40-15	40	114.5	11	30	3
SPUTSB-40-30	40	144.5	11	60	3
SPUTSB-40-50	40	184.5	11	100	3
SPUTSB-50-6	50	98.5	12	13	4
SPUTSB-50-15	50	115.5	12	30	4
SPUTSB-50-30	50	145.5	12	60	4
SPUTSB-50-50	50	185.5	12	100	4

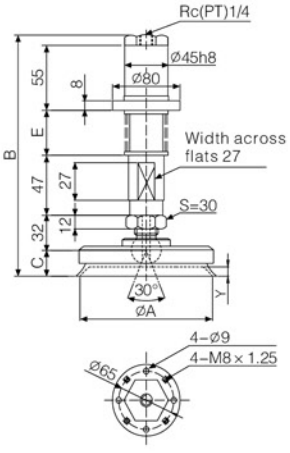
Pad diameters
Φ60 · Φ80 · Φ100



Pad diameters
Φ120 · Φ150



Pad diameters
Φ200



S:Width across flats

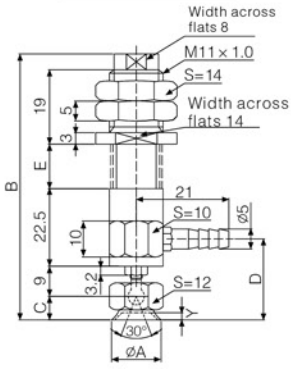
SPUTSB	A	B	C	E	Y
SPUTSB-60-10	60	144	16	23	5
SPUTSB-60-30	60	180	16	59	5
SPUTSB-60-50	60	210	16	89	5
SPUTSB-60-70	60	240	16	119	5
SPUTSB-80-10	80	146	18	23	6
SPUTSB-80-30	80	182	18	59	6
SPUTSB-80-50	80	212	18	89	6
SPUTSB-80-70	80	242	18	119	6
SPUTSB-100-10	100	146	18	23	6
SPUTSB-100-30	100	182	18	59	6
SPUTSB-100-50	100	212	18	89	6
SPUTSB-100-70	100	242	18	119	6
SPUTSB-120-20	120	206	23	53.5	8
SPUTSB-120-100	120	324	23	171.5	8
SPUTSB-150-20	150	208	25	53.5	10
SPUTSB-150-100	150	326	25	171.5	10
SPUTSB-200-20	200	255	29	54	12
SPUTSB-200-100	200	345	29	174	12

Dimensions (mm)

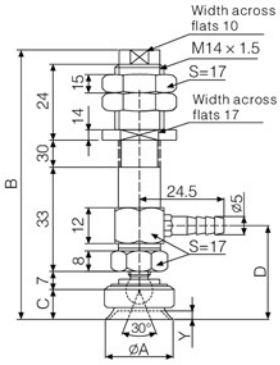
Lateral direction connection

• SPUYSB

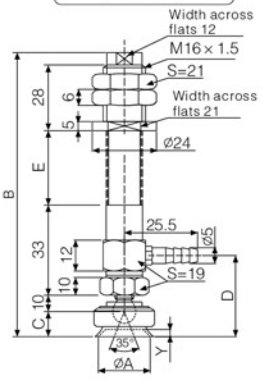
Pad diameters
Φ10 · Φ15



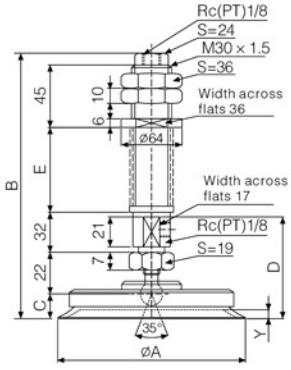
Pad diameters
Φ20 · Φ25 · Φ30 · Φ35



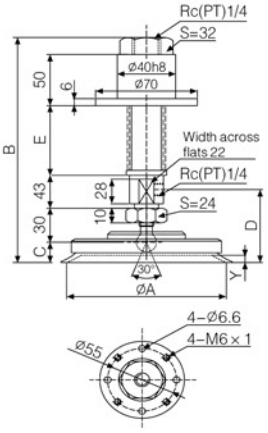
Pad diameters
Φ40 · Φ50



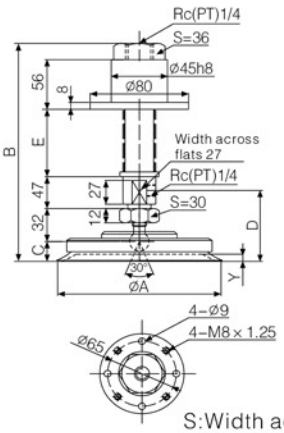
Pad diameters
Φ60 · Φ80 · Φ100



Pad diameters
Φ120 · Φ150



Pad diameters
Φ200



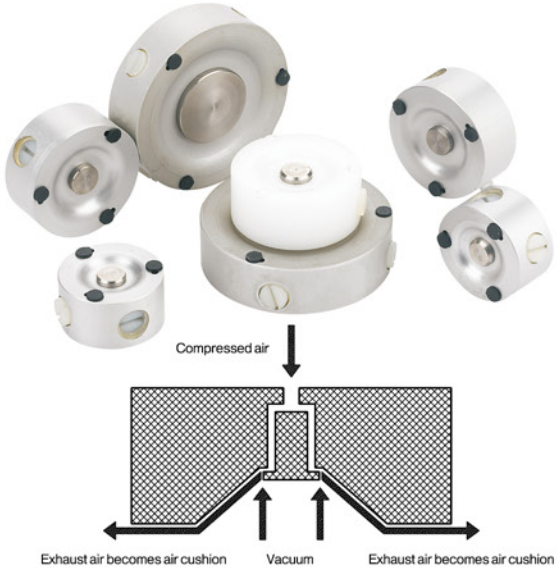
S:Width across flats

SPUYSB	A	B	C	D	E	Y
SPUYSB–10–4	10	66.5	5	22.5	8	1
SPUYSB–10–10	10	78.5	5	22.5	20	1
SPUYSB–10–20	10	98.5	5	22.5	40	1
SPUYSB–10–30	10	118.5	5	22.5	60	1
SPUYSB–15–4	15	67.5	6	23.5	8	1.4
SPUYSB–15–10	15	79.5	6	23.5	20	1.4
SPUYSB–15–20	15	99.5	6	23.5	40	1.4
SPUYSB–15–30	15	119.5	6	23.5	60	1.4
SPUYSB–20–6	20	90	9	33	13	2
SPUYSB–20–15	20	107	9	33	30	2
SPUYSB–20–30	20	137	9	33	60	2
SPUYSB–20–50	20	177	9	33	100	2
SPUYSB–25–6	25	90.5	9.5	33.5	13	2.5
SPUYSB–25–15	25	107.6	9.5	33.5	30	2.5
SPUYSB–25–30	25	137.5	9.5	33.5	60	2.5
SPUYSB–25–50	25	177.5	9.5	33.5	100	2.5
SPUYSB–30–6	30	91	10	34	13	2
SPUYSB–30–15	30	108	10	34	30	2

SPUYSB	A	B	C	D	E	Y
SPUYSB-30-30	30	138	10	34	60	2
SPUYSB-30-50	30	178	10	34	100	2
SPUYSB-35-6	35	92	11	35	13	3
SPUYSB-35-15	35	109	11	35	30	3
SPUYSB-35-30	35	139	11	35	60	3
SPUYSB-35-50	35	179	11	35	100	3
SPUYSB-40-6	40	104	11	41	13	3
SPUYSB-40-15	40	121	11	41	30	3
SPUYSB-40-30	40	151	11	41	60	3
SPUYSB-40-50	40	191	11	41	100	3
SPUYSB-50-6	50	105	12	42	13	4
SPUYSB-50-15	50	122	12	42	30	4
SPUYSB-50-30	50	152	12	42	60	4
SPUYSB-50-50	50	192	12	42	100	4
SPUYSB-60-10	60	144	16	58	23	5
SPUYSB-60-30	60	180	16	58	59	5
SPUYSB-60-50	60	210	16	58	89	5
SPUYSB-60-70	60	240	16	58	119	5
SPUYSB-80-10	80	146	18	60	23	5
SPUYSB-80-30	80	182	18	60	59	6
SPUYSB-80-50	80	212	18	60	89	6
SPUYSB-80-70	80	242	18	60	119	6
SPUYSB-100-10	100	146	18	60	23	6
SPUYSB-100-30	100	182	18	60	59	6
SPUYSB-100-50	100	212	18	60	89	6
SPUYSB-100-70	100	242	18	60	119	6
SPUYSB-120-20	120	206	23	82	53.5	8
SPUYSB-120-100	120	324	23	82	171.5	8
SPUYSB-150-20	150	208	25	84	53.5	10
SPUYSB-150-100	150	326	25	84	171.5	10
SPUYSB-200-20	200	255	29	94	54	12
SPUYSB-200-100	200	345	29	94	174	12

Features

◇Built-in special vacuum generation, no need vacuum pump
◇Vacuum pad floats when working, non-contact handling, particularly suitable for fragile workpieces
◇Low vacuum level, high vacuum flow, very good compensation for air leakage, little deformation of the workpieces
◇Easy to seperate thin and porous workpieces



Operating Principle

Applications

◇Handling of fragile workpieces such as circuit boards, wafer and so on
◇Handling and separation of thin and porous workpieces such as film and other fabrication without deformation
◇Handling of very porous workpieces

Model

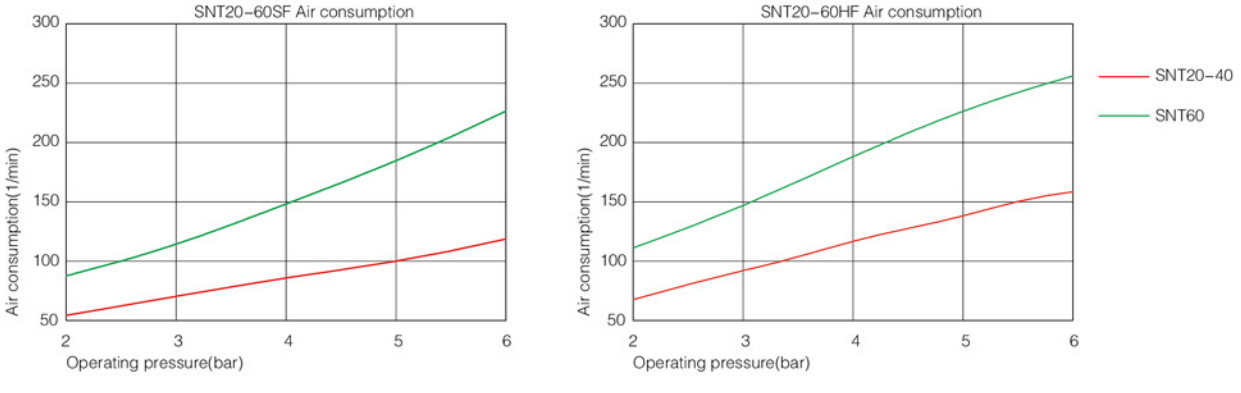
Model	Specification	Material	Streaming element
SNT	20、30、40、60	A-Aluminum D-Derlin	SF-Standard flow HF-High flow

△SNT30-A-HF

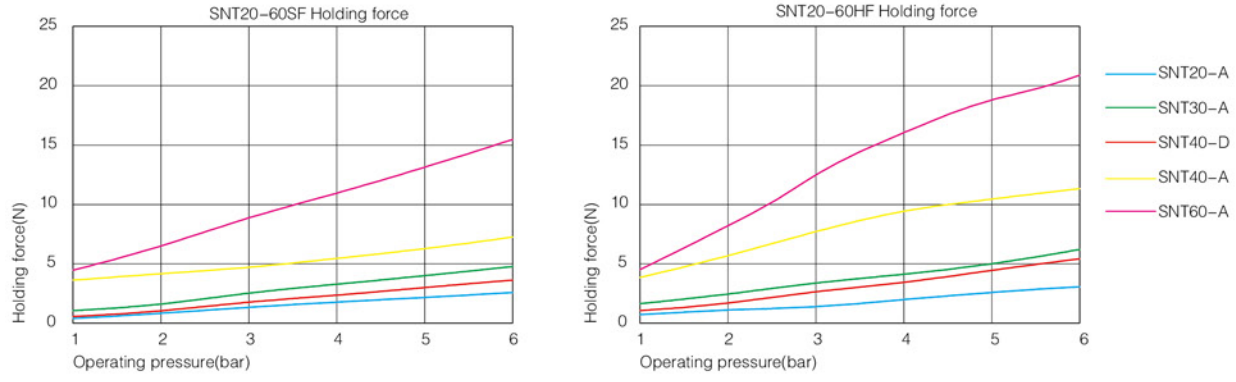
How to order

Model \ Streaming element	SF-Standard flow	HF-High flow
SNT20-A	215.0201.0000	215.0201.1000
SNT30-A	215.0301.0000	215.0301.1000
SNT40-A	215.0401.0000	215.0401.1000
SNT40-D	215.0402.0000	215.0402.1000
SNT60-A	215.0601.0000	215.0601.1000

Technical parameters



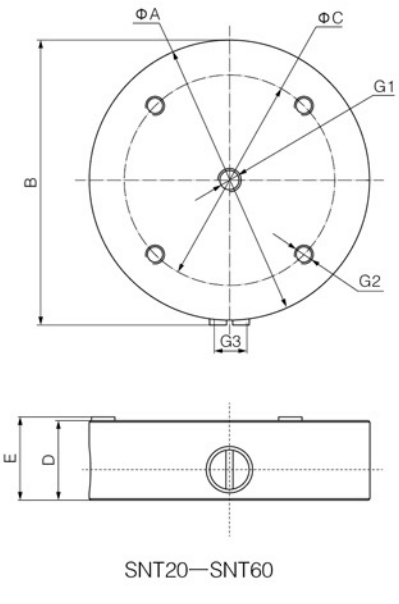
Technical parameters



Model	Holding force (N)	Air consumption (l/min)	Air supply pressure (bar)	Operating temperature (℃)	Weight (g)
SNT20-A-SF	2	100	1~6	-20~80	12
SNT20-A-HF	3	140			12
SNT30-A-SF	4	100			31
SNT30-A-HF	5	140			31
SNT40-A-SF	6.5	100			51
SNT40-A-HF	10.5	190			51
SNT40-D-SF	3	100			29
SNT40-D-HF	4.5	190			29
SNT60-A-SF	13	150			118
SNT60-A-HF	18.5	225			118

△The specified values are valid for an operating pressure of 5 bar

Dimensions(mm)



SNT20—SNT60

Model \ Dimension	A	B	C	D	E	G1	G2	G3
SNT20-A-SF(HF)	20	22.2	15	17	17.8	M5-F	4-M4 depth8	M5-F
SNT30-A-SF(HF)	32	33	22	17	17.8	M5-F	4-M4 depth8	M5-F
SNT40-A/D-SF(HF)	40	41	32	17	17.8	G1/8-F	4-M4 depth8	M5-F
SNT60-A-SF(HF)	60	61	45	17	17.8	G1/8-F	4-M4 depth10	M5-F

How to Order

K [E] 5 [10] – [Y] – [A12]
① ② ③ ④

① Buffer style

E	External spring
I	Built–in spring

② External spring buffer stroke

10
20

Built–in spring buffer stroke

R、B E、S	06、10、25
V type	07、15、20

③ Vacuum entry–External spring connection

Nil	Standard
Y	Pipe connector

Built–in spring connection

Nil	Standard	
V	Female thread	
R	B	Refer to the outline dimension
E	S	

④ Mounting connection–male thread

Symbol	Male thread	Indent HEX
A8	M8 × 1	12
A10	M10 × 1	14
A12	M12 × 1	14

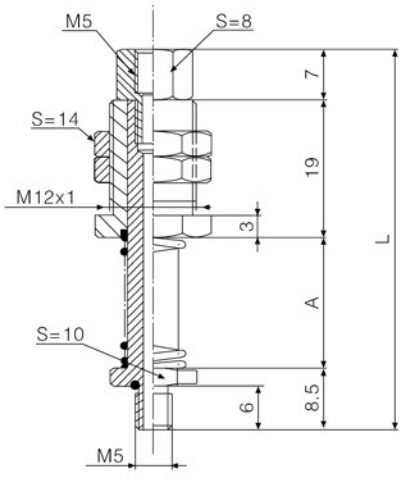
Remark：Vacuum pad port connection type

Model	Suitable vacuum pad model
R type	SB6X、SU1.5X、SU2X、SU4X
B type	SU10(15)、SF15、SB10(12、15)
E type	SU4(6、8)、SB5(8)
S type	SU2(3)

Features

☆ With buffer spring,it can adjust height differences automatically when transfer the objects with height differences.
☆ Various connection thread and different stroke,it is suitable for standard vacuum pad.Wide applications.
☆ Touch with the fragile workpiece flexibly,buffer the impact to the object.

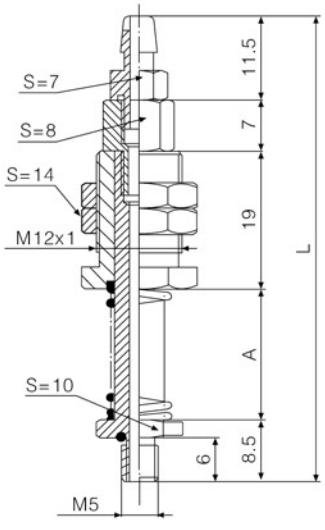
Dimensions (mm)



KE5 [10] –A12

(mm)

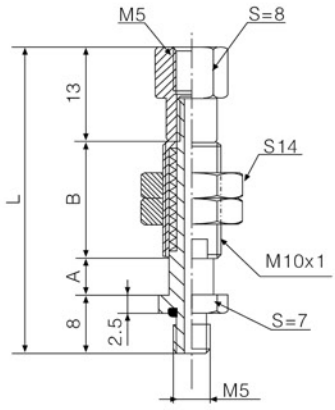
Buffer stroke	A	L
10	18	53
20	28	63



KE5 [10] –Y–A12

(mm)

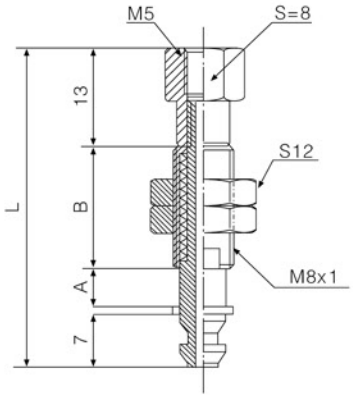
Buffer stroke	A	L
10	18	64
20	28	74



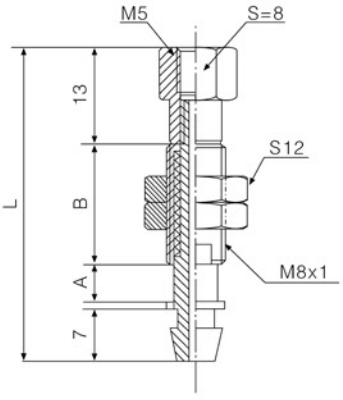
KI5 06 –A10

(mm)

Buffer stroke	A	B	L
6	6	15	42
10	10	44	75
25	25	44	90



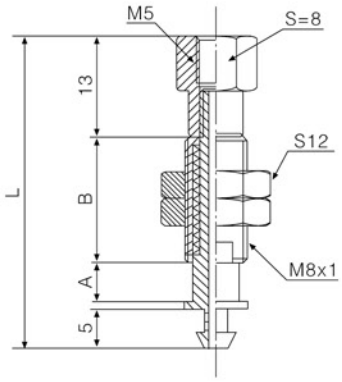
KI5 06 –R–A8



KI5 06 –B–A8

(mm)

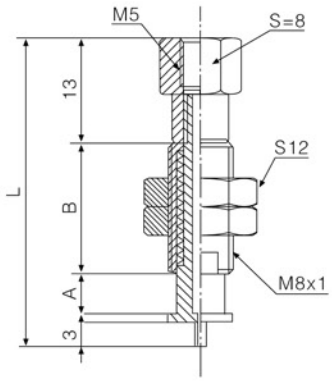
Buffer stroke	A	B	L
6	6	15	42
10	10	44	75
25	25	44	90



KI5 06 –E–A8

(mm)

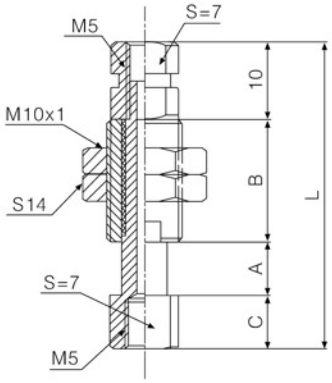
Buffer stroke	A	B	L
6	6	15	40
10	10	44	73
25	25	44	88



KI5 06 –S–A8

(mm)

Buffer stroke	A	B	L
6	6	15	38
10	10	44	71
25	25	44	86



KI5 15 –V–A10

(mm)

Buffer stroke	A	B	C	L
7	7	19	7	43
15	15	23	27	75
20	20	36	7	73

S:Width across flats

How to Order

K [E] 18 [10] – [L] – [A14]
① ② ③ ④

① Buffer style

E	External spring
I	Built–in spring

② Buffer stroke

10
20
30
50

③ Vacuum entry connection

Nil	Standard
L	Lateral exhaust
V	Female thread

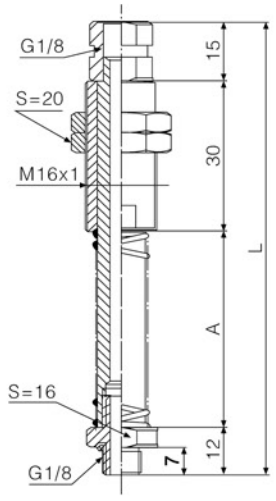
④ Mounting connection–Male thread

Symbol	Male thread	Indent HEX
A14	M14 × 1	19
A16	M16 × 1	20
A18	M18 × 1	22

Features

- ☆ With buffer spring,it can adjust height differences automatically when transfer the objects with height differences.
- ☆ Various connection thread and different stroke,it is suitable for standard vacuum pad.Wide applications.
- ☆ Touch with the fragile workpiece flexibly,buffer the impact to the object.

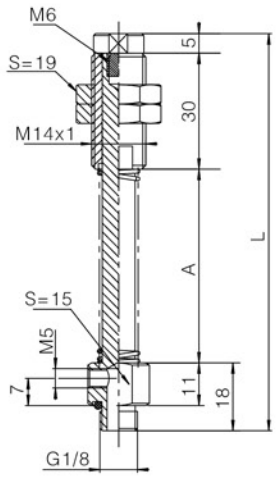
Dimensions (mm)



KE18 [50] –A16

(mm)

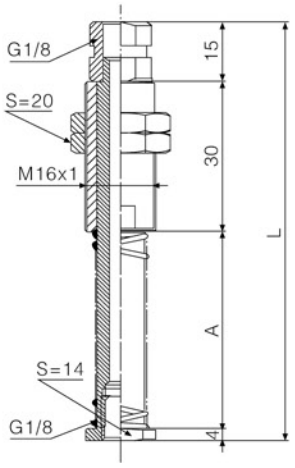
Buffer stroke	A	L
10	20	77
20	35	92
30	50	107
50	70	127



KE18 [30] –L–A14

(mm)

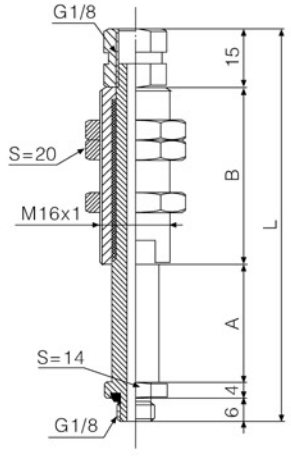
Buffer stroke	A	L
10	20	73
20	35	88
30	50	103
50	70	123



KE18 [20] –V–A16

(mm)

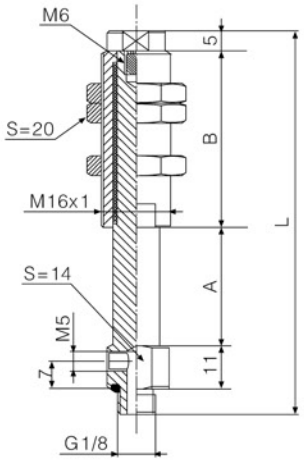
Buffer stroke	A	L
10	20	69
20	35	84
30	50	99
50	70	119



KI18 20 –A16

(mm)

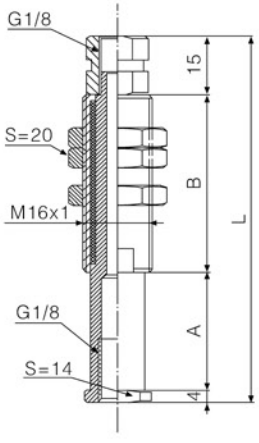
Buffer stroke	A	B	L
10	10	25	60
20	20	35	80
30	30	45	100
50	50	65	140



KI18 20 –L–A16

(mm)

Buffer stroke	A	B	L
10	10	25	58
20	20	35	78
30	30	45	98
50	50	65	138



KI18 20 –V–A16

(mm)

Buffer stroke	A	B	L
10	10	25	54
20	20	35	74
30	30	45	94
50	50	65	134

How to Order

K ① 14 ② – ③ – ④

① Buffer style

E	External spring
I	Built-in spring

② Buffer stroke

10、20、30、50

③ Vacuum entry connection

Nil	Standard
V	Female thread

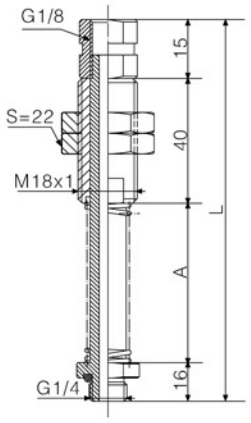
④ Mounting connection-Male thread

Symbol	Male thread	Indent HEX
A18	M18 × 1	22
A20	M20 × 1.5	24

Features

- ☆ With buffer spring,it can adjust height differences automatically when transfer the objects with height differences.
- ☆ Various connection thread and different stroke,it is suitable for standard vacuum pad.Wide applications.
- ☆ Touch with the fragile workpiece flexibly,buffer the impact to the object.

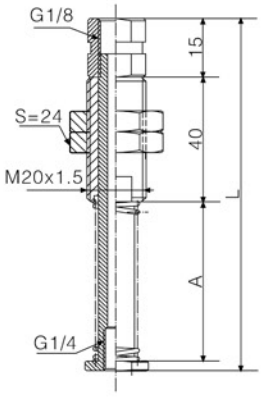
Dimensions (mm)



KE14 20 –A18

(mm)

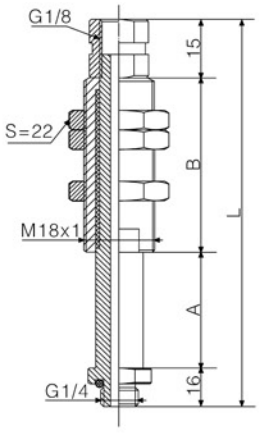
Buffer stroke	A	L
10	20	91
20	35	106
30	50	121
50	70	141



KE14 20 – V –A20

(mm)

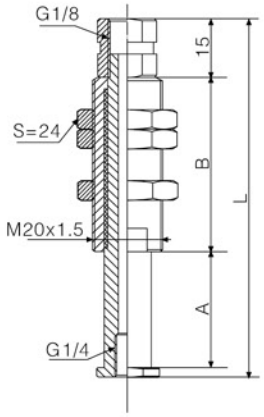
Buffer stroke	A	L
10	20	80
20	35	95
30	50	110
50	70	130



KI14 20 –A18

(mm)

Buffer stroke	A	B	L
10	10	25	66
20	20	35	86
30	30	45	106
50	50	65	146



KI14 20 – V –A20

(mm)

Buffer stroke	A	B	L
10	10	25	55
20	20	35	75
30	30	45	95
50	50	65	135

How to Order

K ① I ② K 38 ③ 10 – ④ A18

① Buffer style

E	External spring
I	Built–in spring

② Rotary type

Nil	Rotating
K	Non–Rotating

Remark: When it is external spring(E) , there is no non–rotating type

③ Buffer stroke

10
20
30
50

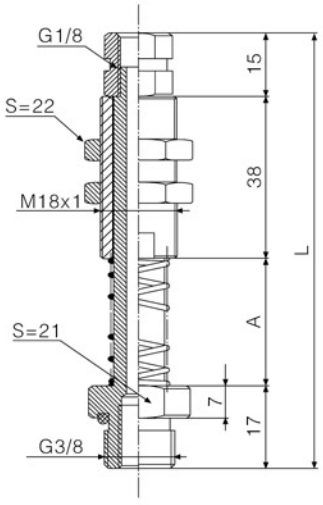
④ Mounting connection–Male thread

Symbol	Male thread	Indent HEX
A18	M18 × 1	22
A20	M20 × 1.5	24

Features

- ☆ With buffer spring,it can adjust height differences automatically when transfer the objects with height differences.
- ☆ Various connection thread and different stroke,it is suitable for standard vacuum pad.Wide applications.
- ☆ Touch with the fragile workpiece flexibly,buffer the impact to the object.
- ☆ Preventing rotate function is alternative.

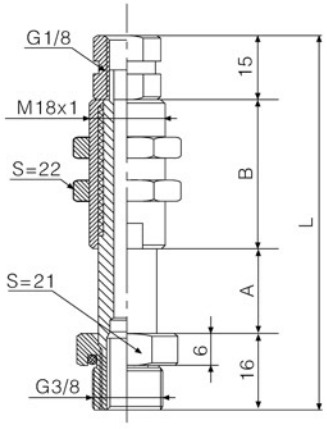
Dimensions (mm)



KE38 20 –A18

(mm)

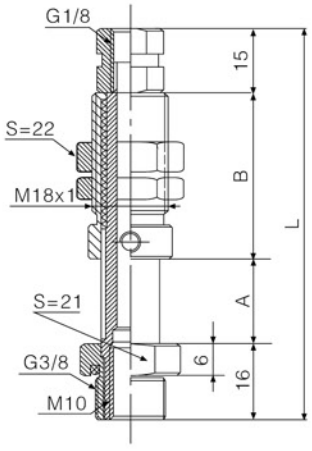
Buffer stroke	A	L
10	20	90
20	35	105
30	50	120
50	70	140



KI38 20 –A18

(mm)

Buffer stroke	A	B	L
10	10	24	65
20	20	35	86
30	30	46	107
50	50	66	147



KIK38 20 –A18

(mm)

Buffer stroke	A	B	L
10	10	28	69
20	20	39	90
30	30	50	111
50	50	70	151

How to Order

K E 12 10 – L – A18

① ② ③ ④

① Buffer style

E	External spring
I	Built–in spring

② Buffer stroke

10
20
30
50

③ Vacuum entry connection

Nil	Standard
L	Lateral exhaust

④ Mounting connection–Male thread

Symbol	Male thread	Indent HEX
A18	M18 × 1	22
A20	M20 × 1.5	24
A22	M22 × 1.5	26

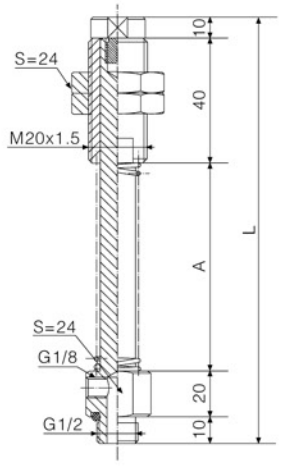
Features

☆ With buffer spring,it can adjust height differences automatically when transfer the objects with height differences.

☆ Various connection thread and different stroke,it is suitable for standard vacuum pad.Wide applications.

☆ Touch with the fragile workpiece flexibly,buffer the impact to the object.

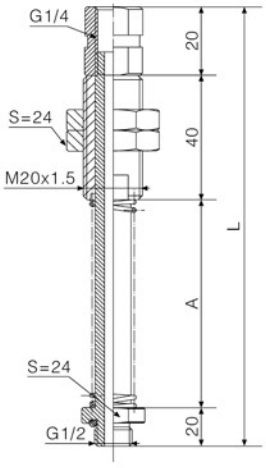
Dimensions (mm)



KE12 30 –L–A20

(mm)

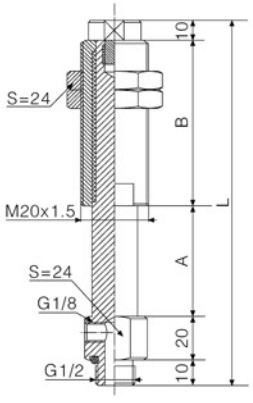
Buffer stroke	A	L
10	20	100
20	35	115
30	50	130
50	90	170



KE12 30 –A20

(mm)

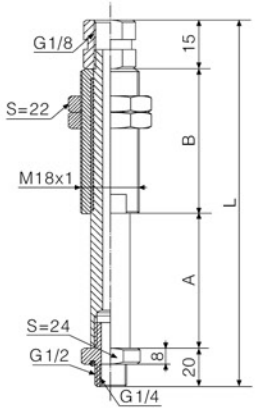
Buffer stroke	A	L
10	20	100
20	35	115
30	50	130
50	90	170



KI12 30 –L–A20

(mm)

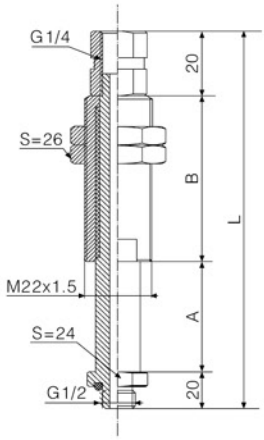
Buffer stroke	A	B	L
10	10	30	80
20	20	35	95
30	30	50	120
50	50	70	160



KI12 30 –A18

(mm)

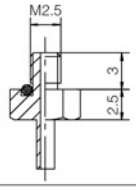
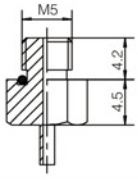
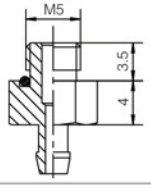
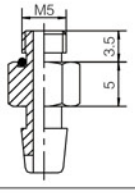
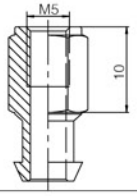
Buffer stroke	A	B	L
10	10	30	75
20	20	35	90
30	30	50	115
50	50	70	155

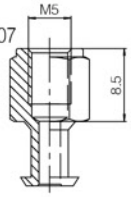
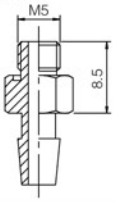
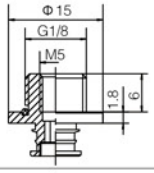
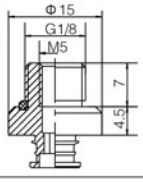
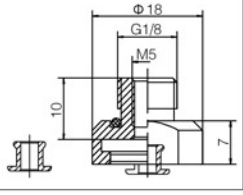


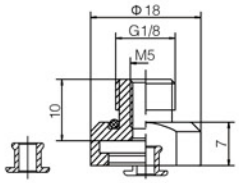
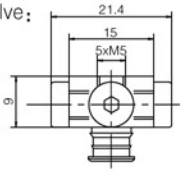
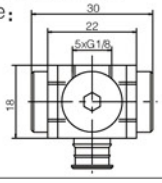
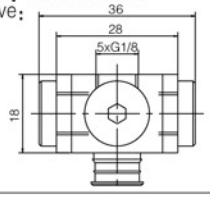
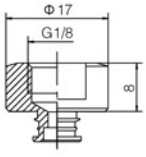
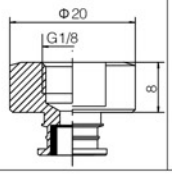
KI12 30 –A22

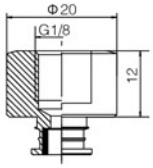
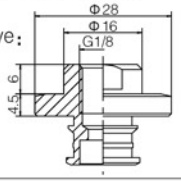
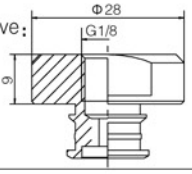
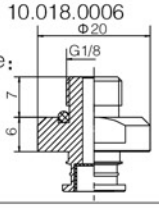
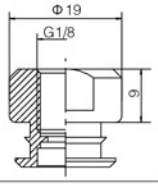
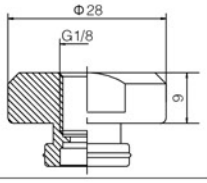
(mm)

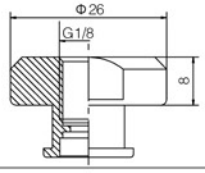
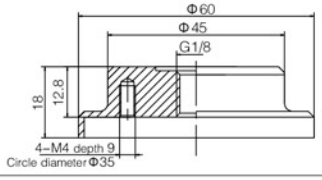
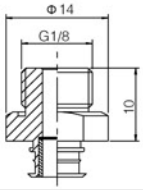
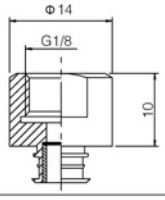
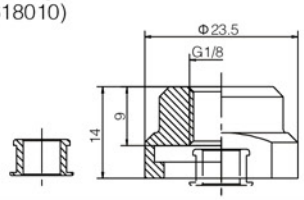
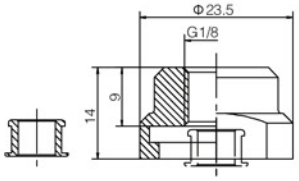
Buffer stroke	A	B	L
10	10	30	80
20	20	35	95
30	30	50	120
50	50	70	160

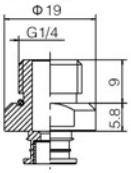
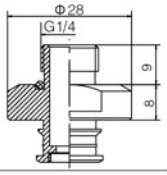
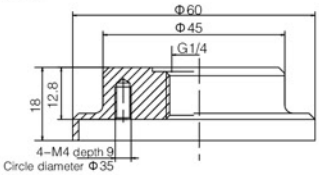
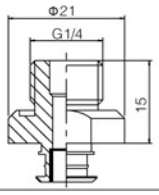
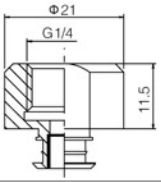
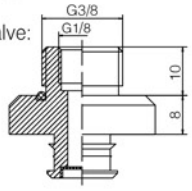
Fittings	Vacuum pad model
M2.5–M Ordering code:10.025.0001 (7625001) 	SU2、SU3
M5–M Ordering code:10.005.0001 (7605001) 	SU2、SU3
M5–M Ordering code:10.005.0003 (7605003) 	SU4、SU6、SU8 SB5、SB8
M5–M Ordering code:10.005.0004 (7605004) 	SU10、SU15 SF15 SB10、SB12、SB15 SBL15
M5–F Ordering code:10.005.0006 (7605006) 	AZP20 AZP25 AZP32

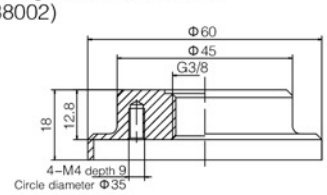
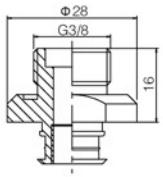
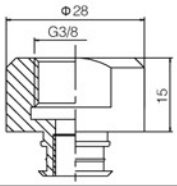
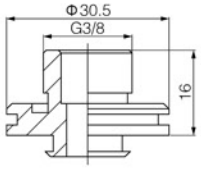
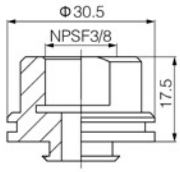
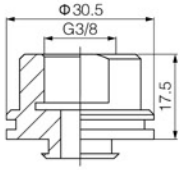
Fittings	Vacuum pad model
M5–F Ordering code:10.005.0007 (7605007) 	AZP10 AZP13 AZP16
M5–M Ordering code:10.005.0009 	SBP10PU SBP15PU
M5/18–MF Standard：10.518.0101 Built in mesh–filter：10.518.0001 (7651801) Built in efficiency valve： 10.518.0201 	SU20、SU25、SU30 SF20、SF25、SF30 SB17、SB20 SBL20
M5/18–MFA Standard：10.518.0102 Built in mesh–filter：10.518.0002 (7651802) Built in efficiency valve： 10.518.0202 	SU20、SU25、SU30 SF20、SF25、SF30 SB17、SB20 SBL20
M5/18–MFI Ordering code:10.518.0003 (7651803) 	SU20、SU25、SU30 SF20、SF25、SF30 (For silicone mat'l)

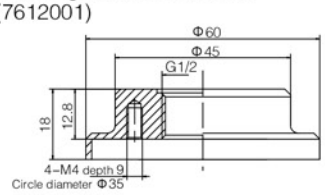
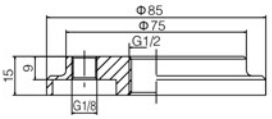
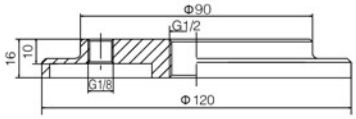
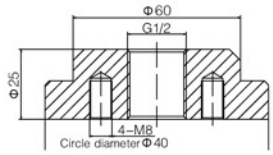
Fittings	Vacuum pad model
M5/18–MFL Ordering code:10.518.0004 	SB17、SB20、SBL20 (For silicone mat'l)
5xM5–F Standard：10.005.0008 Built in mesh–filter：10.005.0108 Built in efficiency valve： 10.005.0208 	SU20、SU25、SU30 SF20、SF25、SF30 SB17、SB20 SBL20
5–18–F Standard：10.518.0005 Built in mesh–filter：10.018.0112 Built in efficiency valve： 10.018.0212 	SU40 SF40 SB30、SB40 SBL30、SBL40
5–18–F Standard：10.518.0006 Built in mesh–filter：10.018.0113 Built in efficiency valve： 10.018.0213 	SU50 SF50 SB50 SBL50
18–F Standard：10.018.0101 Built in mesh–filter：10.018.0001 (7618001) Built in efficiency valve： 10.018.0201 	SU20、SU25、SU30 SF20、SF25、SF30 SB17、SB20 SBL20
18–F Standard：10.018.0102 Built in mesh–filter：10.018.0002 (7618002) Built in efficiency valve： 10.018.0202 	SU40 SF40 SB30、SB40 SBL30、SBL40

Fittings	Vacuum pad model
18–F Standard：10.018.0103 Built in mesh–filter：10.018.0003 (7618003) 	SU40 SF40 SB30、SB40 SBL30、SBL40
18–F Standard：10.018.0104 Built in mesh–filter：10.018.0004 (7618004) Built in efficiency valve： 10.018.0204 	SU50 SF50 SB50 SBL50
18–F Standard：10.018.0105 Built in mesh–filter：10.018.0005 (7618005) Built in efficiency valve： 10.018.0205 	SU50 SF50 SB50 SBL50
18–M Standard：10.018.0106 Built in mesh–filter：10.018.0006 (7618006) Built in efficiency valve： 10.018.0206 	SU40 SF40 SB30、SB40 SBL30、SBL40
18–F Standard：10.018.0107 Built in mesh–filter：10.018.0007 (7618007) 	SPS 1
18–F Ordering code:10.018.0008 (7618008) 	SPS 5 SPS 5–15

Fittings	Vacuum pad model
18–F Standard：10.018.0109 Built in mesh–filter：10.018.0009 (7618009) 	SPS 9
18–F Ordering code:10.018.0011 (7618011) 	SB75 SF75、SF90 SFC90、SFC100
18–M Ordering code:10.018.0012 	SBP20PU SBP30PU SBP40PU SXP20PU SXP25PU SXP30PU SFP20PU SFP30PU SFP40PU SGP25PU SGP35PU SGP45PU
18–F Ordering code:10.018.0013 	SBP20PU SBP30PU SBP40PU SXP20PU SXP25PU SXP30PU SFP20PU SFP30PU SFP40PU SGP25PU SGP35PU SGP45PU
18–FA Ordering code:10.018.0010 (7618010) 	SU40 SF40 (For silicone mat'l)
18–FL Ordering code:10.018.0014 	SB30、SB40 SBL30、SBL40 (For silicone mat'l)

Fittings	Vacuum pad model
14–M Standard：10.014.0101 Built in mesh–filter：10.014.0001 (7614001) Built in efficiency valve: 10.014.0201 	SU40 SF40 SB30、SB40 SBL30、SBL40
14–M Standard：10.014.0102 Built in mesh–filter：10.014.0002 (7614002) Built in efficiency valve: 10.014.0202 	SU50 SF50 SB50 SBL50
14–F Ordering code:10.014.0003 (7614003) 	SB75 SF75、SF90 SFC90、SFC100
14–M Ordering code:10.014.0004 	SXP35PU SXP40PU
14–F Ordering code:10.014.0005 	SXP35PU SXP40PU
38–M Standard：10.038.0101 Built in mesh–filter：10.038.0001 (7638001) Built in efficiency valve: 10.038.0201 	SU50 SF50 SB50 SBL50

Fittings	Vacuum pad model
38–F Ordering code:10.038.0002 (7638002) 	SB75 SF75、SF90 SFC90、SFC100
38–M Ordering code:10.038.0003 	SBP50PU SXP50PU SGP55PU
38–F Ordering code:10.038.0004 	SBP50PU SXP50PU SGP55PU
38–M Ordering code: 10.038.0005 	SBP70 SXP70
38–F(NPSF) Ordering code: 10.038.0006 	SBP70 SXP70
38–F Ordering code: 10.038.0007 	SBP70 SXP70

Fittings	Vacuum pad model
12–F Ordering code:10.012.0001 (7612001) 	SB75 SF75、SF90 SFC90、SFC100
12–F Ordering code:10.012.0002 (7612002) 	SB110 SF110
12–F Ordering code:10.012.0003 	SB150 SF150
12–F Ordering code:10.012.0004 	SF200

Universal Holder BH series

Features

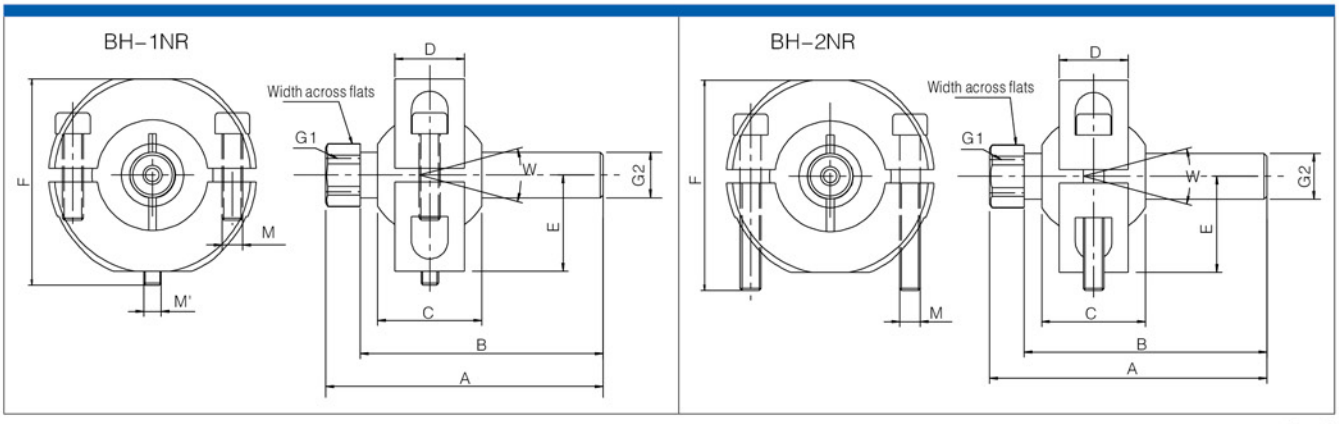
- ☆ Adjustment and fixing with ball clamp. Flexible use, rapid changing short set-up times.
- ☆ Adjustable height and inclination. Flexible adaptation to work pieces with, for example curved metal sheets(car bodywork parts)
- ☆ Suitable for mounting on square and round tubes. For universal use.
- ☆ Vacuum pads can be screwed directly into the G1/4" thread. Quick and cheap construction of a load cross-beam.

How to Order

Model	Ordering Code
BH-1NR	13.012.0001
BH-2NR	13.022.0001
BH-STB	13.030.0001
BH-STC	13.032.0001
BUCHSE-PA	13.025.0001

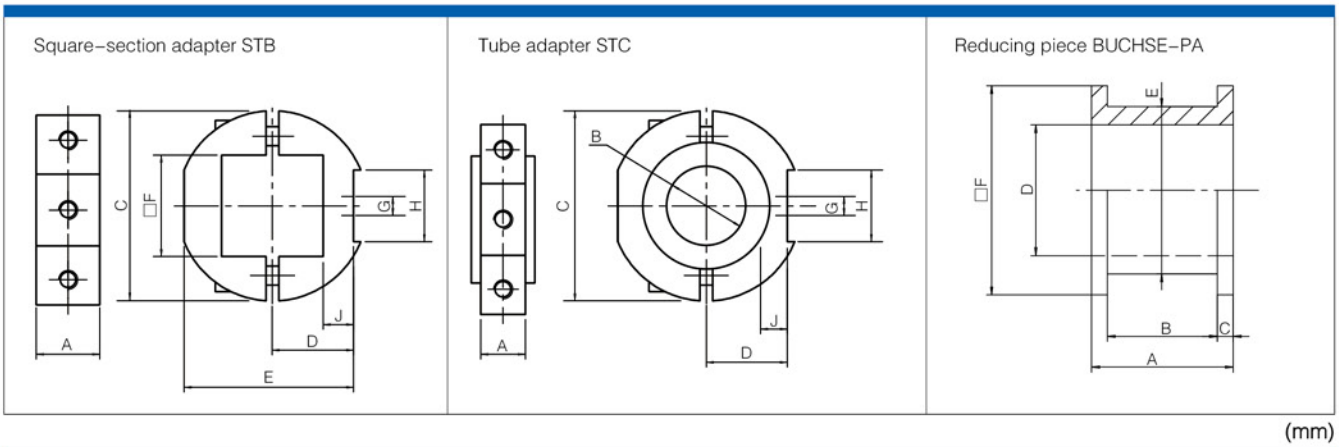
BH-1NR=universal holder,consisting of holder tube,supporting rod,steering ball and inner hexagon screws.
BH-2NR=universal holder,consisting of holder tube,supporting rod,steering ball and 2 inner hexagon screws.

Dimensions (mm)



(mm)

Model	A	B	C	D	E	F	G1	G2	M	M'	W	S
BH-1NR	80	70	55.6	20	27.5	59.5	G1/8	G1/4	M6	M5	30°	17
BH-2NR	80	70	55.6	20	27.5	61	G1/8	G1/4	M6	–	30°	17



(mm)

Model	A	B	C	D	E	□F	G	H	J
BH-STB	20	–	58.9	25	52.5	30.5	M6	20.1	10
BH-STC	20	Φ32	58.9	25	–	–	M6	20.1	12
BUCHSE-PA	27	21	3	25	32	40	–	–	–

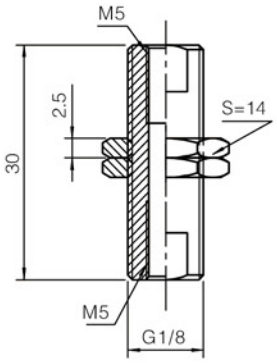
Features

☆ All Vacuum pads and fittings can be screwed in.
☆ Various locking nuts included, flats for spanner on external thread.
☆ Permits precise adjustment of the vacuum pad position.
☆ No further mounting elements needed, high stability.

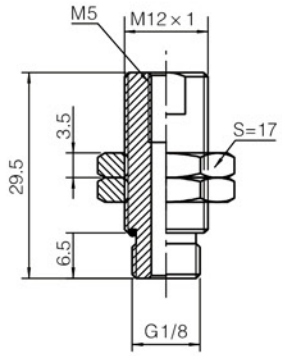
Dimensions (mm)

18 series Ordering Code

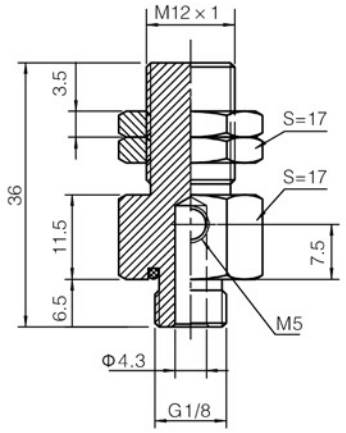
10.018.1800



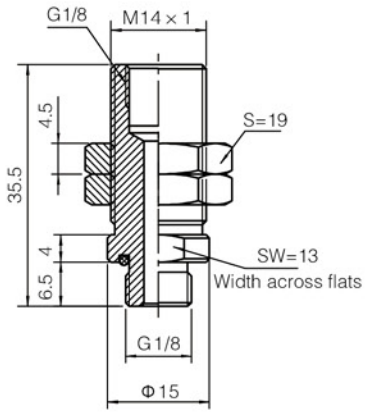
10.018.1812



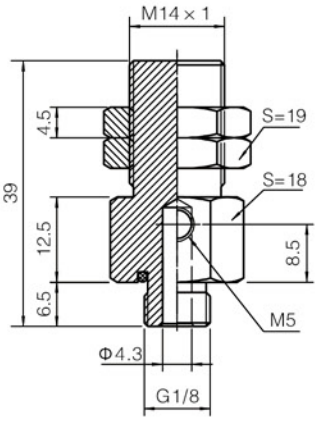
10.018.1205



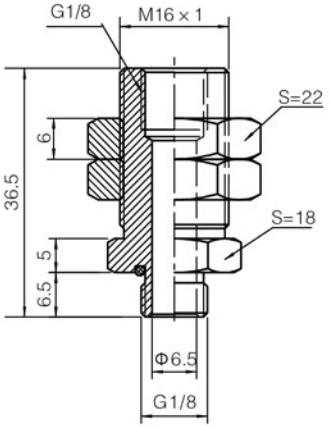
10.018.1814



10.018.1405



10.018.1816



S:Width across flats

Features

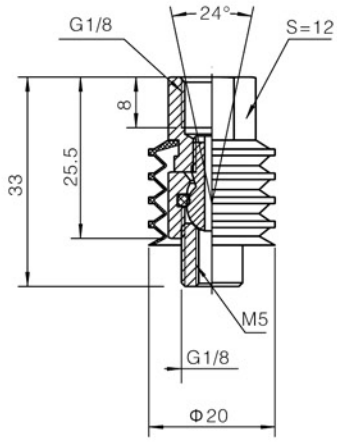
☆ Fully flexible mounting of vacuum pads and vacuum plates.
☆ Very good adaptation to sloping workpiece surface.
☆ Vacuum-tight design with integrated protection against damage.
☆ Reduced wear on vacuum pads when they are placed on sloping surface.

Technical Parameters

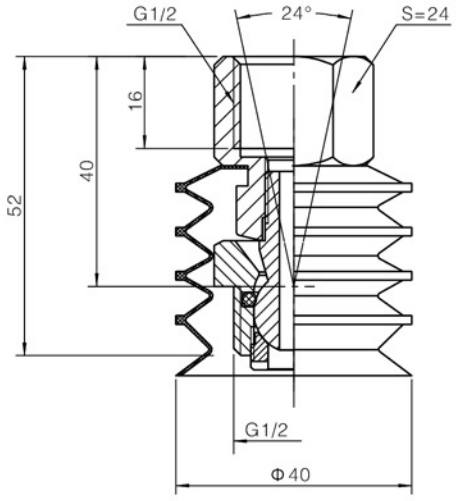
Model	Thread Size	Angle	Max.Load (kg)	Weight (g)
BH-G1/8	G1/8	± 12°	25	20
BH-G1/2	G1/2	± 12°	50	113

Dimensions (mm)

BH-G1/8



BH-G1/2



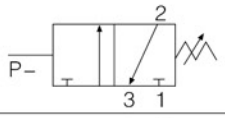
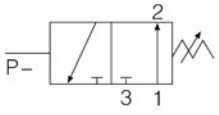
AIRBEST

Vacuum Accessories D

How to Order

AVS – 212
① ②

① Model	② Function
AVS	212–Normally closed
	213–Normally open

Function	Adjustable
NC (normally closed)	
NO (normally open)	

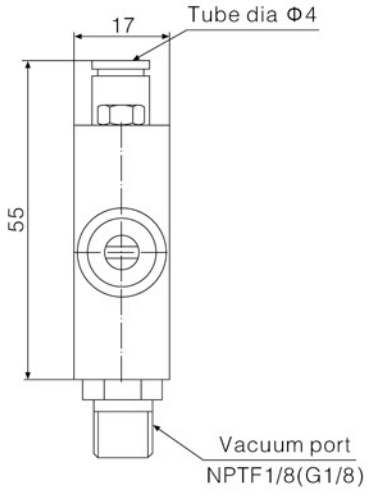
Features

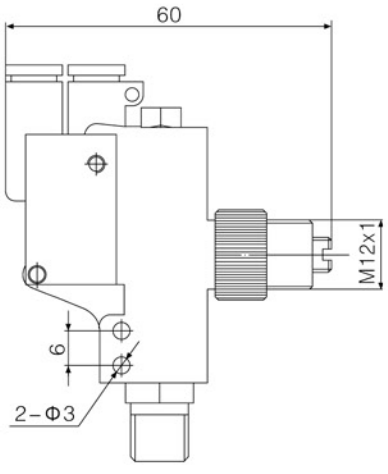
☆ The vacuum switch converts vacuum signal into pneumatic signal.
☆ The different vacuum range can be setted by the adjusting screw on the valve.
☆ There are two different functional valves:normally open valve and normally closed valve.

Specifications

Model	AVS–212	AVS–213
Output function	NC(Normally closed)	NO(Normally open)
Pressure(bar)	1.5~8	
Signal range(–kPa)	15~95	10~95
Hysteresis(kPa)	12	3
Temperature(℃)	–10~+60℃	
Weight(g)	44	
Vacuum connection	NPTF1/8 G1/8	

Dimensions (mm)

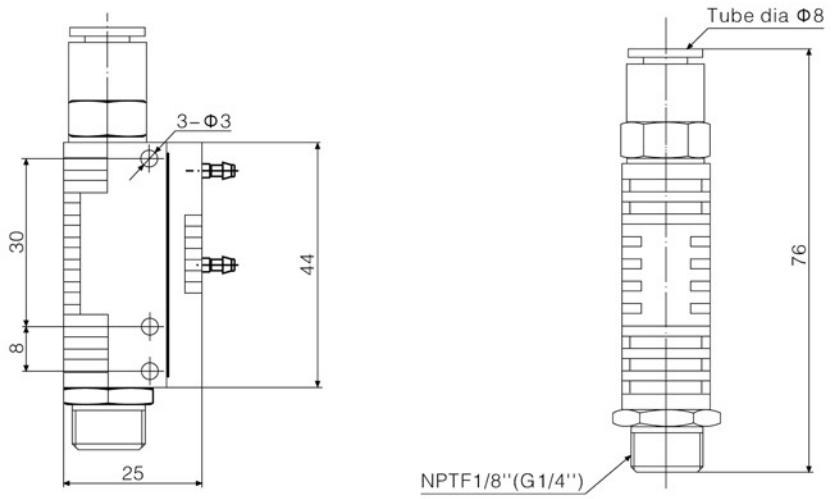




Specifications

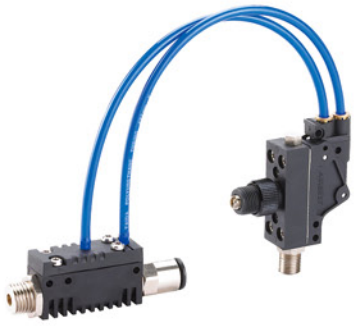
Air supply pressure	bar	1–8
Working temperature	℃	0–60
Control mode		Pneumatic control
Action mode		Normally open
Weight	g	55

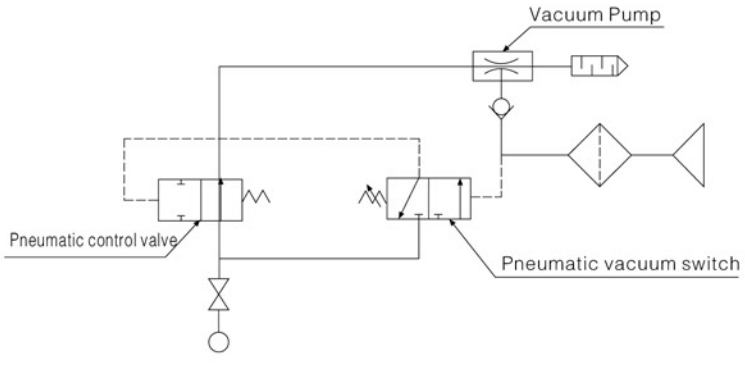
Dimensions (mm)



Energy saving system(ES)

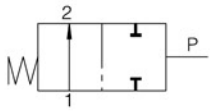
The control valve (APS–8) works together with vacuum switch(AVS).The vacuum switch provides air control signal to open and close the control valve.It will save energy.





Features

☆2 position 2 way directional valve (normally open)with 1/8 and 1/4 air inlet realizes the opening and closure of air supply and energy saving through vacuum switch returns air signal. The small valve can control high flow compressed air.



How to Order

APL06 – D
① ②

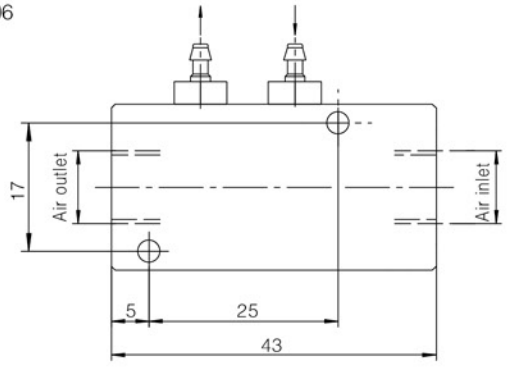
①Model	APL06	APL08	
②Function	B=NPT1/8 NPT1/4	D=NPSF1/8 NPSF1/4	G=G1/8 G1/4

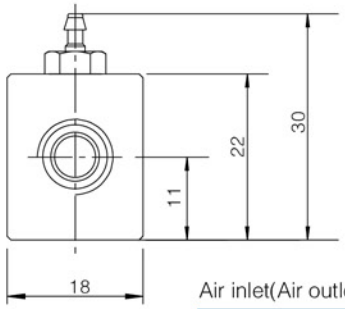
Specifications

Air supply pressure	3.5~7bar
Ambient temperature	0~60℃
Valve body material	Aluminum

Dimensions (mm)

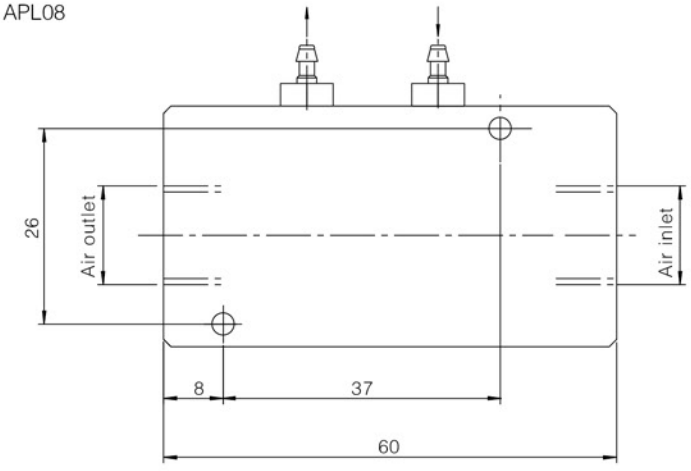
APL06

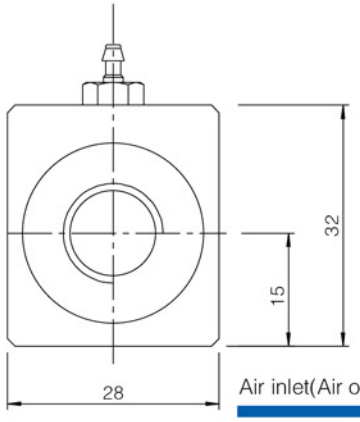




Air inlet(Air outlet)
B=NPT1/8
D=NPSF1/8
G=G1/8

APL08





Air inlet(Air outlet)
B=NPT1/4
D=NPSF1/4
G=G1/4

How to Order

APE06 – G– 1 – 2
① ② ③ ④

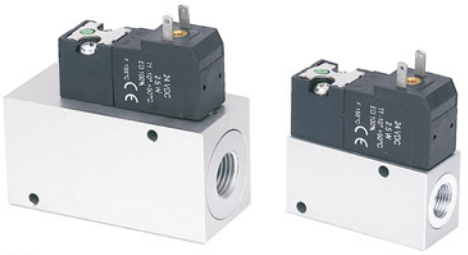
①Model	APE06	APE08	
②Function	B=NPT1/8 NPT1/4	D=NPSF1/8 NPSF1/4	G=G1/8 G1/4

③ Rated voltage

1	DC24V
2	AC110V
3	AC220V

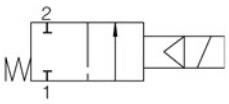
④ Lead wire type

1	DIN type without lead wire
2	DIN type with lamp without lead wire



Features

☆ The small solenoid valve normally closed can remote control compressed air with large flow, and supply compressed air when the current is switched on.

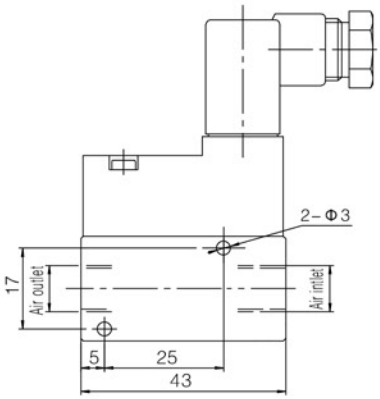


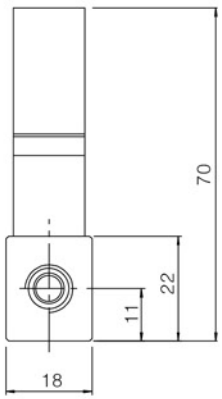
Specifications

Air supply pressure	3.5~7bar
Ambient temperature	0~60℃
Valve body material	Aluminum
Working Voltage	DC：24V AC：110V, 220V –50/60Hz
Current consumption	0.85W, 1.3W

Dimensions (mm)

APE06

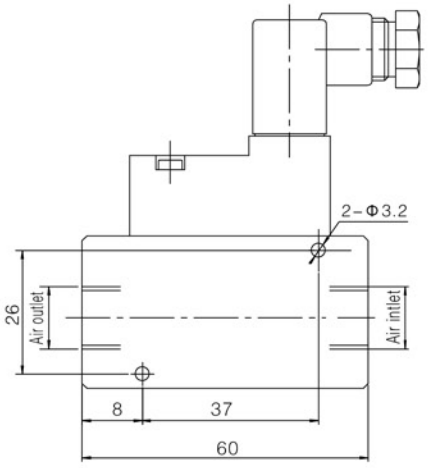


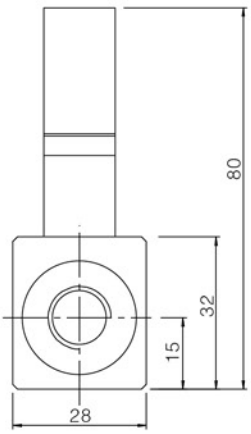


Air inlet(Air outlet)

B=NPT1/8
D=NPSF1/8
G=G1/8

APE08





Air inlet(Air outlet)

B=NPT1/4
D=NPSF1/4
G=G1/4

Features

☆ 7 User Programmable Units Available
☆ 2 NPN/PNP Open Collector + Analog Output (1~5V or 4~20mA)
☆ 3-Color Digital LCD Display
☆ Repeatability ±0.2% F.S. ± 1 digit
☆ Max. 20% energy saving
☆ Quick Installation (NEW)
☆ Copy Setting (NEW)

Specifications

TYPE		KP43P (Positive)	KP43V (Vacuum)	KP43C (Compound)
Rated pressure range		0.0~1.000MPa	−101.3~0.0kPa	−100.0~100.0kPa
Set pressure range		−0.100~1.000MPa	−101.3~10.0kPa	−101.0~101.0kPa
Withstand pressure		1.5MPa	300kPa	
Fluid		Air, Non-corrosive / Non-flammable gas		
Set pressure resolution	kPa	–	0.1	
	MPa	0.001	–	
	kgf/cm²	0.01	0.001	
	bar	0.01	0.001	
	psi	0.1	0.01	
	inHg	–	0.1	
	mmHg	–	1	
Power supply voltage		12 to 24V DC ±10%, Ripple (P-P) 10% or less		
Current consumption		≤40mA(With no load)		
Switch output		NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: ≤1.5V	PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: ≤1.5V	
Repeatability(Switch output)		±0.2% F.S. ±1 digit		
Hysteresis	One point set mode	Adjustable(*1)		
	One point set mode			
	Window comparator mode			
Response time		2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms,1000ms and 1500ms selections)		
Output short circuit protection		Yes		
7 segment LCD display		Two color(Red/Green) main & unit display, Orange sub-display (Sampling rate: 5 times/1sec.)		
Indicator accuracy		±2% F.S. ±1 digit (ambient temperature: 25 ±3℃)		
Switch ON Indicator		Orange(1&2 Indicator) OUT1 OUT2		
Analog output (Voltage Output) (*2)		Output Voltage: 1 to 5V ±2.5% F.S. (within rated pressure range) Linearity: ±1%F.S. Output impedance:about 1kΩ		
Analog output (Current Output) (*3)		Output Current: 4 to 20mA ±2.5% F.S.(within rated pressure range) Linearity: ±1% F.S. Max.Load Impedance:300Ω at power supply of 12V 600Ω at power supply of 24V Min.Load impedance:50Ω		
Environment	Environment	IP40		
	Ambient temp. range	Operation: 0 ~ 50℃, Storage:-10 ~ 60℃(No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)		
	Withstand voltage	1000V AC in 1-min (between case and lead wire)		
	Insulation resistance	50MΩ min. (at 500V DC, between case and lead wire)		
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z		
	Shock	100m/s2(10G), 3 times each in direction of X, Y and Z		
Temperature characteristic		±2.5% F.S. of detected pressure (25℃) at temp. Range of 0~50℃		
Port size		F1 : R1/8", M5 ; F2 :NPT1/8", #10-32UNF ; F3 : G1/8", M5		
Lead wire		Oil-resistance cable(0.15mm²)		
Weight		Approx. 80g (with 2 meter lead wire)		

(NOTE) *1 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.
*2 : If analog voltage output is selected, the analog current output cannot be selected at the same time.
*3 : If analog current output is selected, the analog voltage output cannot be selected at the same time.

How to Order

RL3 C – 010 F1
① ② ③

① Pressure Range

C	Compound (–101.0~101.0 kPa)
V	Vacuum (10.0~–101.3 kPa)
P	Positive (–0.100~1.000 MPa)

② Output Specifications

010	2 NPN+Analog (Voltage) output (1~5V)
011	2 NPN+Analog (Current) output (4~20mA)
030	2 PNP+Analog (Voltage) output (1~5V)
031	2 PNP+Analog (Current) output (4~20mA)

③ Pressure port

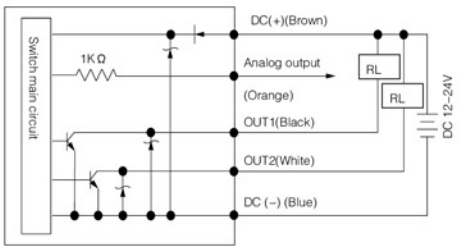
F1	R1/8", M5
F2	NPT1/8", #10–32UNF
F3	G1/8", M5

Pressure port

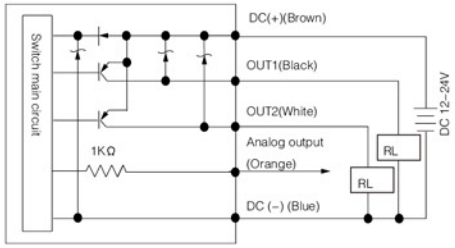
BT–5	Mounting bracket
BT–6	Mounting bracket
PA–C	Panel adapter
PA–D	Panel adapter + Front protective lid

Output circuit wiring diagrams (mm)

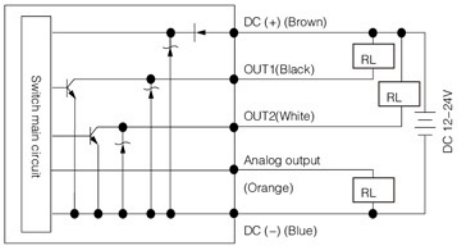
RL3□–010–□
2 NPN+Analog Voltage output (1~5V)



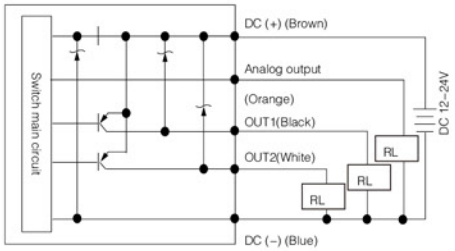
RL3□–030–□
2 PNP+Analog Voltage output (1~5V)

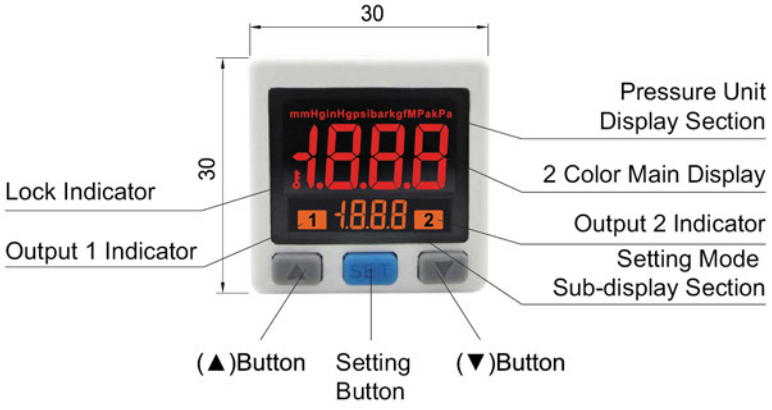


RL3□–011–□
2 NPN+Analog Current output (4~20mA)



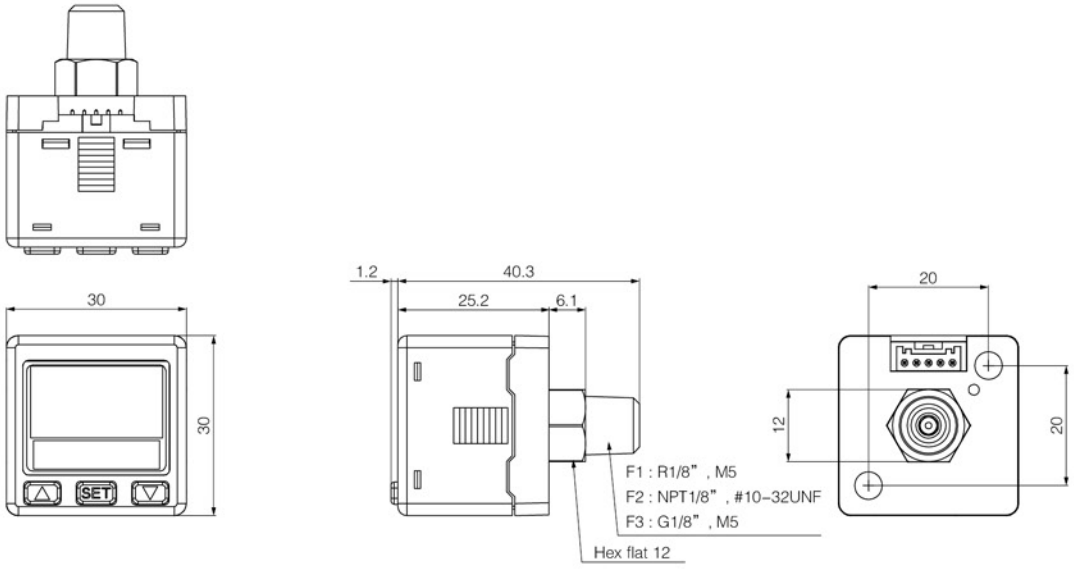
RL3□–031–□
2 PNP+Analog Current output (4~20mA)



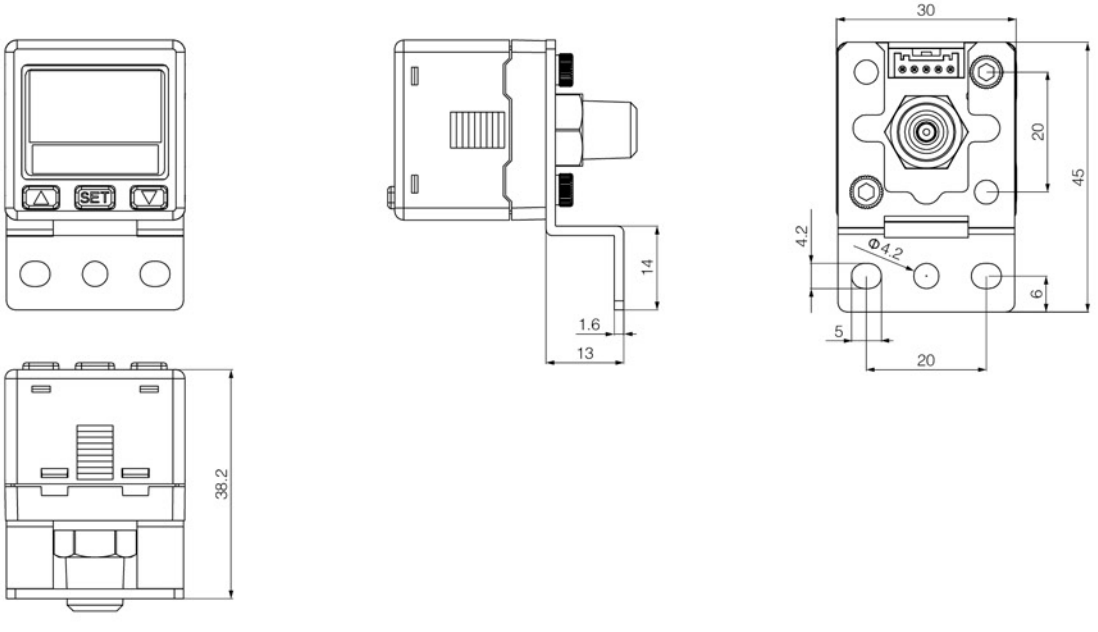


Optional parts dimensions (mm)

Dimensions

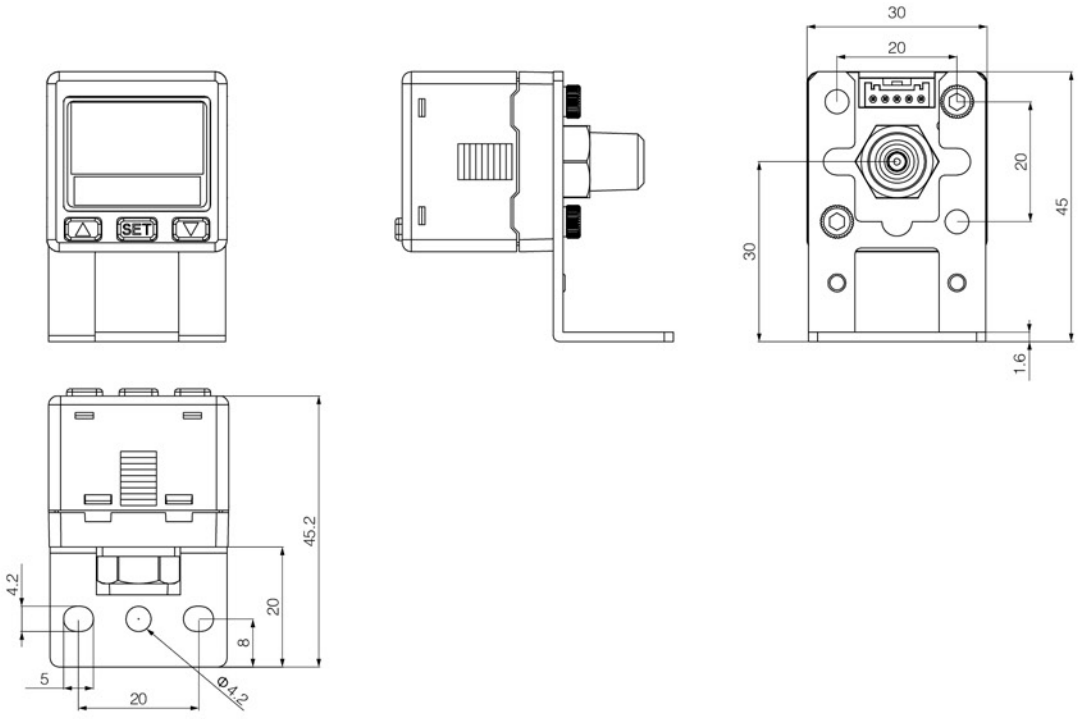


Mounting bracket : BT-5

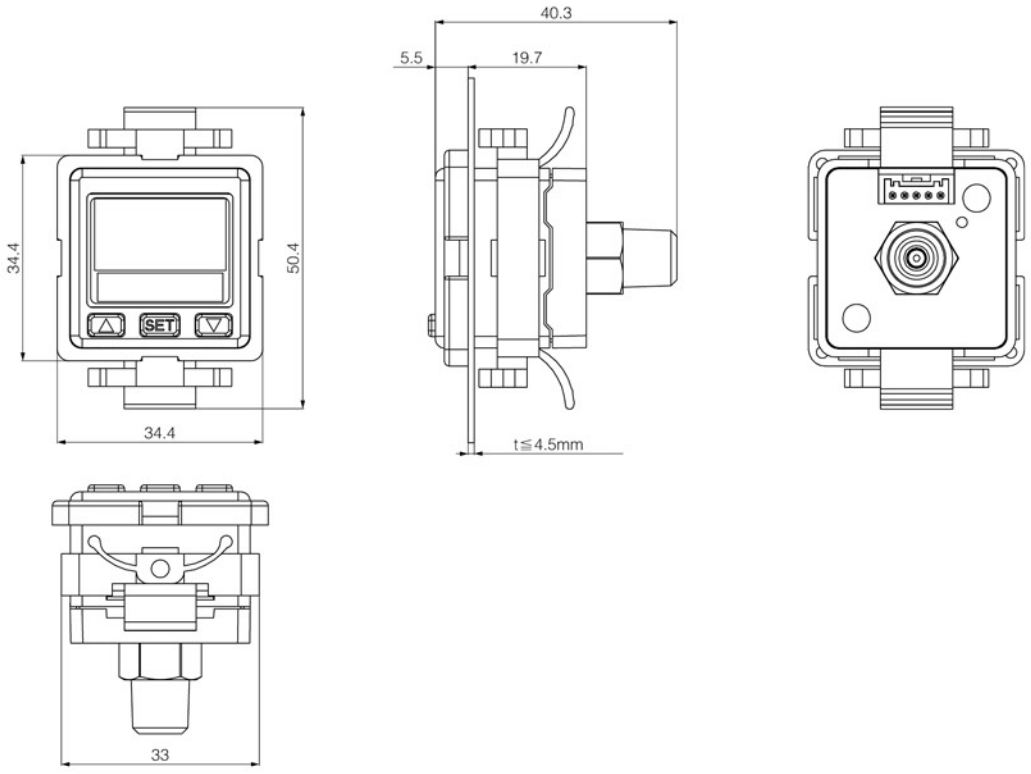


Optional parts dimensions (mm)

Mounting bracket : BT-6

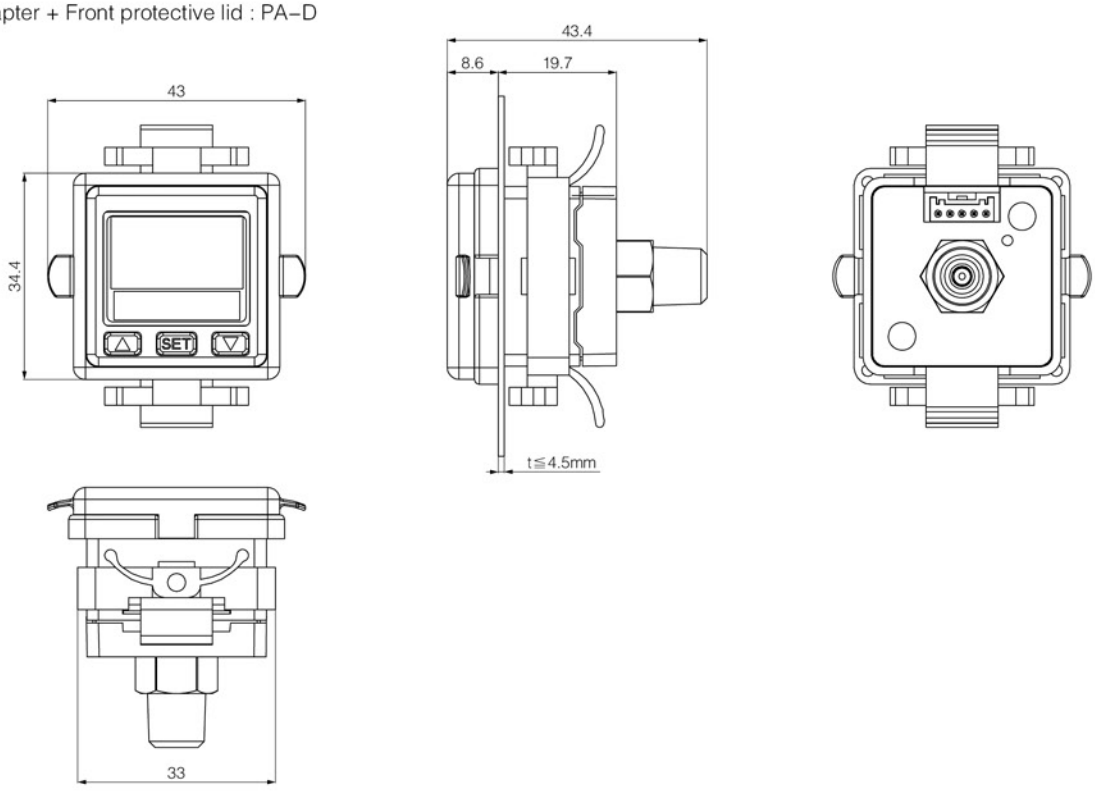


Panel adapter : PA-C

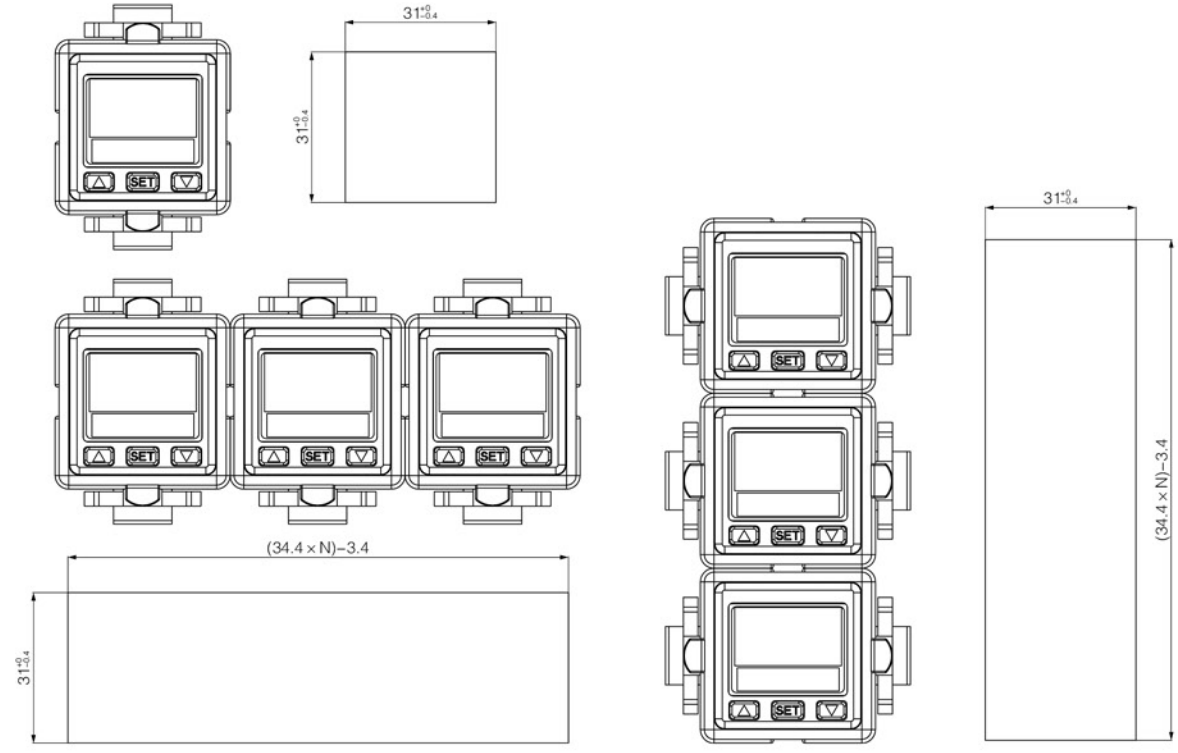


Optional parts dimensions (mm)

Panel adapter + Front protective lid : PA–D



Panel cutout dimensions



Features

☆Pressure range: Compound(−100.0~100.0kPa)
Vacuum(0.0~−101.3kPa)
Positive(−0.100~1.000MPa)
☆Two switch output & one analog output.
☆Hysteresis adjustable.
☆High accuracy and resolution.
☆Low cost.

Technical Parameters

Model		RL6C(Compound)	RL6V(Vacuum)	RL6P(Positive)
Rated pressure range		−100.0~100.0kPa	0.0~−101.3kPa	0.000~1.000 MPa
Setting pressure range		−100.0~100.0kPa	10.0~−101.3kPa	−0.100~1.000 MPa
Withstand pressure		300 kPa		1.5MPa
Fluid		Air,Non−corrosive gases,incombustible gases		
Set pressure resolution	kPa	0.1		−
	MPa	−		0.001
	kgf/cm^2	0.001		0.01
	bar	0.001		0.01
	psi	0.01		0.1
	InHg	0.1		−
	mmHg	1		−
	mmH_2O	0.1		−
Power supply voltage		12 to 24VDC ± 10%,Ripple(P−P)10% or less		
Current consumption		≤55mA		
Switch output		NPN:open collector 2 outputs Max.load current: 80mA Max.supply voltage: 30VDC Residual voltage: ≤1V (load current 80mA)		PNP:open collector 2 outputs Max.load current: 80mA Max.supply voltage: 24VDC Residual voltage: ≤1V (load current 80mA)
Repeatability(Switch output)		≤ ± 0.2%F.S. ± 1digit		
Hysteresis	Hysteresis mode	Adjustable		
	Window comparator mode	Fixed(3 digits)		
Response time		≤2.5ms(chattering−proof function: 24ms,192ms and 768ms selections)		
Output short circuit protection		Yes		
7 segment LED display		3 1/2digit LED display (Sampling rate:5 times/1sec)		
Indicator accuracy		≤ ± 2% F.S. ± 1 digit(ambient temperature: 25 ± 3℃)		
Indicator		Green LED(OUT1),Red LED(OUT2)		
Analog output (only type RL6□−01−□, RL6□−03−□)		Output voltage: 1 to 5V ≤ ± 5%F.S.(within rated pressure range) Linearity: ≤ ± 1%F.S.		Output voltage: to 5V ≤ ± 2.5%F.S.(within rated pressure range) Linearity: ≤ ± 1%F.S.
Environment	Enclosure	IP 40		
	Ambient temp.range	Operation: 0~50℃,storage: −20~60℃ (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35~85%RH (No condensation)		
	Withstand voltage	1000VAC in 1−min (between case and lead wire)		
	Insulation resistance	50 Mohm min.(at 500VDC) (between case and lead wire)		
	Vibration	Total amplitude 1.5mm, 10Hz~55Hz~10Hz scan for 1 minute,, two hours each direction of X,Y and Z		
	Shock	$980m/s^2$(100G) 3 times each in direction of X,Y and Z		
Temperature characteristic		≤ ± 2% F.S. of detected pressure(25℃) at temp. Range of 0~50℃		
Port size		F1:1/8"PT,M5;F2:1/8"NPT,M5; F3:G1/8",M5		
Lead wire		Oil−resistance cable($0.15mm^2$)		
Weight		Approx.*67g(with 2−meter lead wire), Approx.*35g(with male connector)		

How to Order

RL6C – 01 – F1 – □

① ② ③ ④

① Pressure Range

C	Compound(–100.0~100.0kPa)
V	Vacuum(0.0~–101.3kPa)
P	Positive(–0.100~1.000MPa)

② Output Specifications

01	2 NPN output &1Analog output
02	2 NPN output
03	2 PNP output &1Analog output
04	2 PNP output

③ Pressure port

F1	1/8"PT
F2	1/8"NPT
F3	G1/8"

④ Cable Length/Connector

Blank	With 2 meter cable
QD	M8,4 Pin male connector

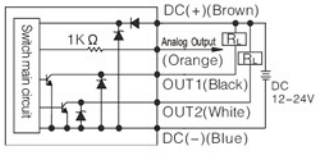
*(Only type RL6□–02–□, RL6□–04–□)

Option part

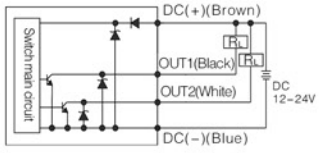
M84R–W0085–2M: M8,4 Pin female connector

Output circuit wiring graph

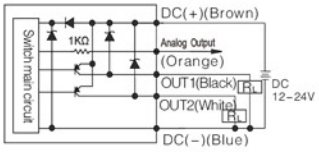
RL6□–01–□–□ NPN output &Analog output



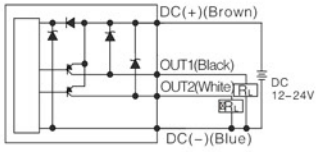
RL6□–02–□–□ NPN output



RL6□–03–□–□ PNP output &Analog output

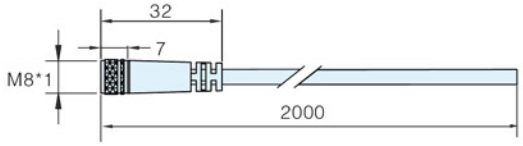


RL6□–04–□–□ PNP output



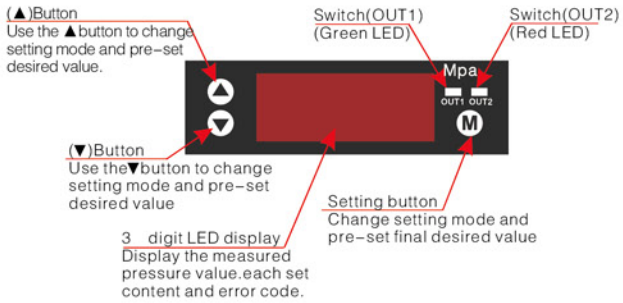
Type of spare parts/Dimension graph

1.M8 Female Connector



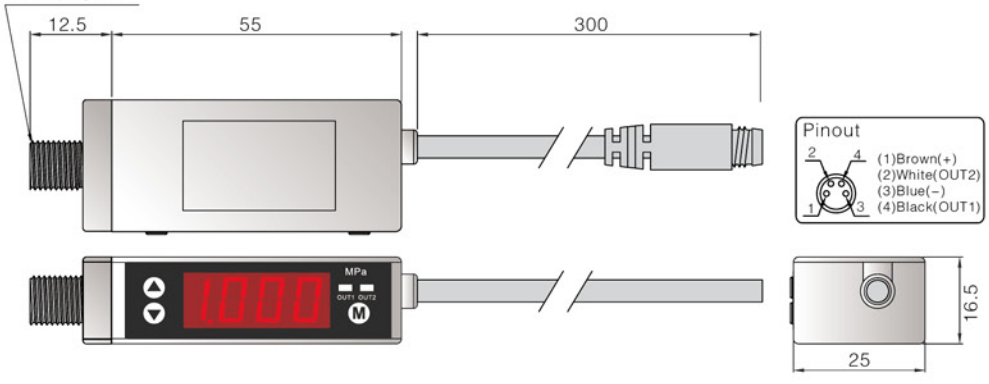
Unit:mm

Panel instructions



2.Dimensions (mm)

F1:1/8"PT,M5
F2:1/8"NPT,M5
F3:G1/8",M5



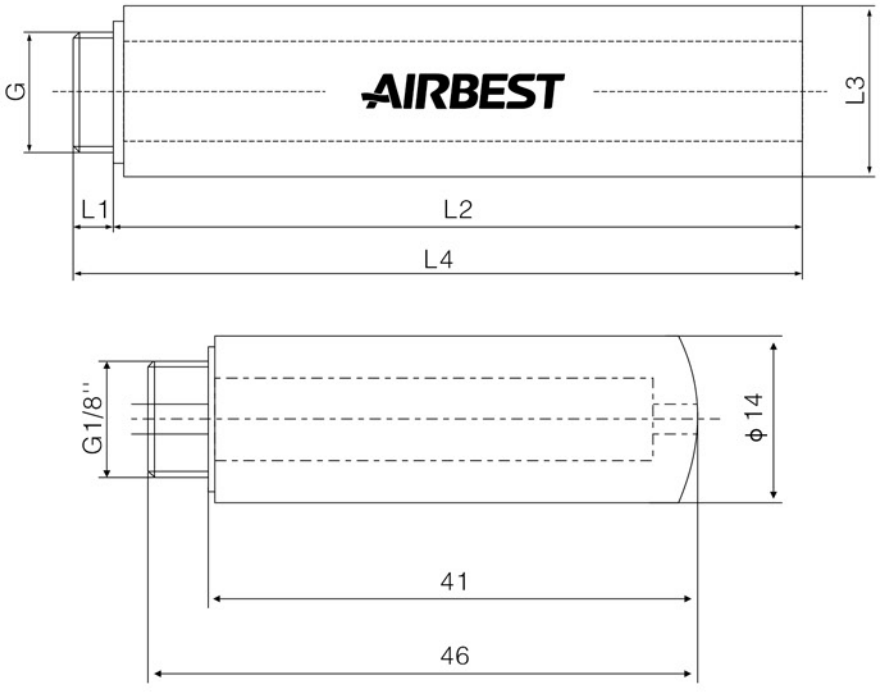
Features

☆These silencers which are fitted to many of the vacuum pumps as standard can be ordered separately as replacements. They significantly reduce noise levels on all exhaust applications.Six sizes are available ranging from 1/8" to 1".

How to Order

Model	L1	L2	L3	L4	G	Weight(g)
ABS01	5	41	Φ14	46	G1/8"	3
ABS02	8	65	Φ20	73	G1/4"	20
ABS03	8	64	Φ24	72	G3/8"	25
ABS04	7	121	Φ30	128	G1/2"	35
ABS06	7	119	Φ40	126	G3/4"	55
ABS10	7	119	Φ49	126	G1"	175

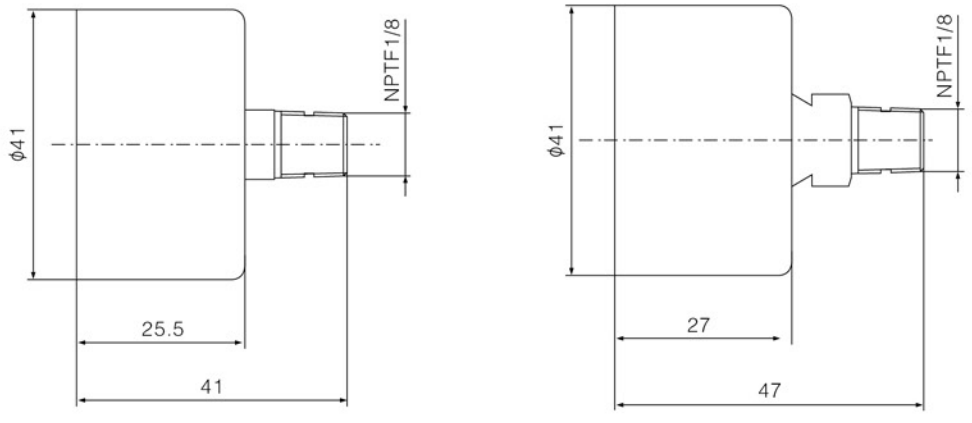
Dimensions (mm)



Specifications

Product name：Vacuun Gauge
Model：AB168-QDPE-001
Dial size：1.5"
Mounting type： Back entry
Pressure Range：-30-0inHg/-100kPa-0 kPa
Case material：ABSblack case
View window material:： Acrylic
Connector material：Brass
Connector seal material：Teflon
Connetor thread：NPTF1/8

Dimensions (mm)



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