

AIRBEST



Vacuum Solutions Supplier

Insist on customer orientation, become the optimal choice for the development of industry application.

Devote ourselves to becoming an outstanding enterprise with continuous improvement and the pursuit of excellence.



Company Introduction

AIRBEST was established in 2006, which was mainly engaged in international trade in early time. In 2009, it was transformed into a manufacturing and developing and research enterprise for vacuum gripping system components. It mainly manufactures related products for robot terminal vacuum gripping system matching intelligent manufacturing industry, such as vacuum pump, suction cup, vacuum gripper, vacuum accessories, mounting parts even whole set of vacuum gripping system solutions for customers. Products are mainly used in domestic high-end manufacture, automotive metal sheet stamping, packaging, 3C, new energy, wood, stone, robot, food and pharmaceuticals. It has become the leading company in domestic vacuum field, and established strategy cooperation with many domestic high-end brands, such as South Korea's HYUNDAI KIA, American GM and so on. In 2017, in order to close to the market and serve customers, production R&D base moved to HUZHOU CHANGXING, and new company AIRBEST (CHANGXING) TECHNOLOGY CO.,LTD is established. It is new start and new journey.

Mr. Hu Wenjing, the founder of the company, has been adhering to the concept of consistency, paying attention to the practical application of products, quality-orientation and innovation first. The corporation value is innovation, quality, fast, cost, and employees. Insist on customer orientation, become the optimal choice for the development of industry application. Devote ourselves to becoming an outstanding enterprise with continuous improvement and the pursuit of excellence. The company focuses on R&D and innovation. It currently has 2 standards (the industry standard for vacuum pump, the enterprise standard for suction cups), 42 product patents (including 8 product invention patents and 2 international patents), and has its own product performance laboratory.

Make smart, go together. In nowadays rapid development of automation industry, AIRBEST constantly serves customers and leads the future. AIRBEST contributes our wisdom and efforts in vacuum gripping field at home and abroad.



A

Vacuum
technology

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CATALOGUE

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B

Vacuum
Pump

 25	 32	 36	 38	 41	 48
ABM / ABX	ABM / ABX Combined type	ASM / ASX	ASM / ASX Combined type	AM / AL / AH	AM / AL / AH Combined type
 56	 62	 64	 66	 68	 73
AZL	ACP	ACPF	ACPS	ACV	AQV
 75	 80	 83			
AZH	AZU	ASBP			

C

Suction
Cup

 85	 89	 91	 93	 95	 97
SB	SBA	SBB	SBF	SBOF	SFT
 100	 101	 104	 106	 111	 115
STP	SBL	SBLP	SF	SU	SUF
 116	 117	 120	 123	 126	 127
SFG	STC	SFF	SFM	SDM	SOB
 130	 133	 135	 137	 140	 143
SOF	SOG	SFP	SBP	SXP	SGP
 146	 147	 155	 163	 163	 163
SDL	SH	SHB	SZD	SZC	SZU

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A Vacuum Technology

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Vacuum level

The difference between standard atmospheric pressure and absolute pressure

Pressure unit

Positive pressure conversion table

	Pa(N/m ²)	kPa	bar	kg/cm ²	torr	psi(lbf/in ²)	inHg
1 Pa	1	0.001	0.00001	10.1792×10^{-6}	7.50062×10^{-3}	0.145038×10^{-3}	0.3×10^{-3}
1 kPa	1,000	1	0.01	10.1792×10^{-3}	7.50062	0.145038	0.3
1 bar	100,000	100	1	1.01972	750.062	14.5038	30
1 kg/cm ²	98,066.5	98.0665	0.980665	1	735.559	14.2233	29.42
1 torr	133.322	0.133322	1.33322×10^{-3}	1.35951×10^{-3}	1	19.3368×10^{-3}	0.04
1 psi	6,894.76	6.89476	68.9476×10^{-3}	70.3096×10^{-3}	51.7149	1	2.07

Negative pressure conversion table

	mbar	kPa	-kPa	%vacuum	torr	-mmHg	-inHg
Atmospheric pressure	1,013	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

Air volume flows through specified cross section per unit time

Flow conversion table

	m ³ /s	m ³ /h	NL/min	NL/s	ft ³ /min(scfm)
1 m ³ /s	1	3,600	60,000	1,000	2,118.9
1 m ³ /h	0.28×10^{-3}	1	16.6667	0.2778	0.5885
1 NL/min	16.67×10^{-6}	0.06	1	0.0167	0.035
1 NL/s	1×10^{-3}	3.6	60	1	2.1189
1 ft ³ /min	0.472×10^{-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.

Instructions for suction cups' applications

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

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

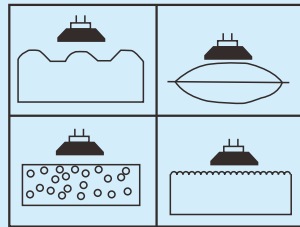
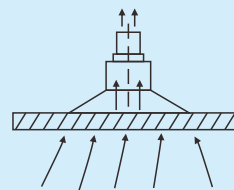


Figure 1.1 types of surface

Leakage through the substrate



Leakage through the edge

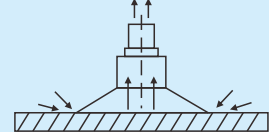


Figure 1.2 Unsealed system

Unsealed systems applications are that where there is leaking through the suction cup 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.

Examples: Handling of cardboard box / Handling of foam/ Handling of rough ceramic floor

Types of suction cups

Flat and flat with internal support suction cups

- 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

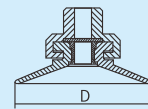


Figure 1.3 Flat suction cups

Bellows suction cups

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

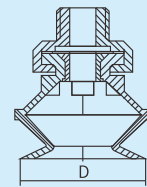


Figure 1.4 Bellows suction cups

Multiple bellows suction cups

- Good for handling flat and curved objects
- Huge working course, allowing great compensation level between products with very difference 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.

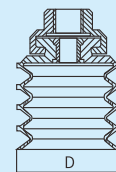


Figure 1.5 Multiple Bellows suction cups

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

Types of suction cups

Profile suction cups

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

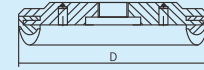


Figure 1.6 Profile suction cups

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

Due to the energy required to create vacuum beyond -80% raised 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)

We can divide the suction cups 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 friction, gravity and acceleration, it is required to implement the safety factor to prevent slipping or detachments during the movements. Below is a table with suggested values.

Table 1.1 Safety factor

k(safety factor)	Kind of manipulation
2	Horizontal movement
4	Vertical movement
4	Horizontal movement with robots
6	Vertical movement with robots

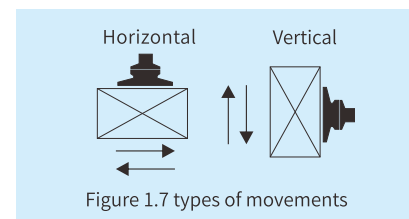


Figure 1.7 types of movements

Diameter of the suction cups

After selecting the type of the suction cup 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.

D=diameter of suction cup (mm)

k=safety factor (see table 1.1)

V=vacuum level (-kPa)

n=number of suction cups in the application

m=mass to be manipulated (kg)

Table 1.2 Formulas for diameter for type of suction cup

Types of suction cups	Formula	Types of suction cups	Formula
Bellows 	$D=152 \times \sqrt{\frac{m \times k}{V \times n}}$	Multiple Bellows 	$D=223.5 \times \sqrt{\frac{m \times k}{V \times n}}$ up to $D=558.5 \times \sqrt{\frac{m \times k}{V \times n}}$
Flat and flat with internal support 	$D=139.5 \times \sqrt{\frac{m \times k}{V \times n}}$	Profile 	$D=122 \times \sqrt{\frac{m \times k}{V \times n}}$
		Theoretical (without deformation)	$D=117 \times \sqrt{\frac{m \times k}{V \times n}}$

Example

Sealed systems

Determine the type and number of suction cups for handling a flat aluminum plate of dimensions 2000x2000mm and mass of 260kg. The manipulation will be done through a pulley in the horizontal direction at low speed.

manipulation of flat sheet m=260kg
 suction will be the appropriate flat(Flat) k=2
 safety factor is 2, taken from table 1.1 V=-60kPa
 let's select -60kPa and 8 pads for sake of stability and distribution of forces n=8
 from table 1.2 we have

$$D = 139.5 \times \sqrt{\frac{m \times k}{V \times n}} \Rightarrow D = 139.5 \times \sqrt{\frac{260 \times 2}{60 \times 8}} = 145.19 \text{m} \approx \boxed{150 \text{ mm}}$$

For this diameter, we should use AIRBEST flat suction cup SPF150

Material characteristic

Material	Short time contact temperature(°C)<30s	Long time contact temperature(°C)>30s	Wear resistance	Oil resistance	Weather and ozone
N - NBR	- 20 ~ +110	- 10 ~ +80	◎	◎	○
S - Silicone	- 40 ~ +200	- 30 ~ +180	×	×	◎
CN - Conductive NBR	- 10 ~ +100	- 10 ~ +70	◎	◎	○
CS - Conductive silicone	- 30 ~ +180	- 20 ~ +160	×	×	○
U - Polyurethane	+10 ~ +50	+10 ~ +40	◎	◎	◎
F - Fluorine Rubber	- 10 ~ +230	- 5 ~ +200	◎	○	○
E - EPDM	-30 ~ +150	-20 ~ +120	○	×	◎
HS - High temp silicone	- 70 ~ +280	- 50 ~ +230	△	×	◎
HD - High temp/mark free material	- 10 ~ +160	- 5 ~ +140	◎	◎	◎
NR - Natural rubber	-20 ~ +80	-10 ~ +60	◎	×	△
NF - Neoprene foam rubber	- 20 ~ +80	- 10 ~ +60	◎	△	◎
OF - Geranium foam rubber	- 20 ~ +80	- 10 ~ +60	◎	×	×

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

Color and hardness of suction cup

Examples		
S - Silicone		Color is red, calibration hardness is 50°
WS - white silicone		Color is white, calibration hardness is 50°
CS - Conductive silicone		Color is black, there is red dot on surface ,calibration hardness is 55°

Suction cup's color, hardness are shown as above icon for your reference. Besides, slight color difference caused by catalogue printing and difference between calibration hardness of material and actual hardness of suction cup are normal. (Generally within ±5°)

UI	Industry	Description	Recommendation		Applicable Suction cups
			Vacuum pump	Suction cup	
	PACKAGING (Carton)	Mainly for handling, logistics, stacking, storage of carton and so on. The features are that the workpiece is easy to deform, porous, medium weight, various sizes, and has high requirement for wear resistance of the vacuum pad.	Large area vacuum gripping system, multi stage vacuum pump, etc take advantage of flow to compensate leakage loss	NBR, PU, etc., excellent wear resistance, recommend bellows suction cups	TXC, TXM SB, SPC
	PACKAGING (Plastic Bag)	Mainly for gripping, destacking, handling of plastic bag, purchasing bag, cat food bag and dog food bag. The features are that the workpiece can be both soft and hard and has wrinkles, and has high requirement for deformation and adaptability of suction cup itself.	Select vacuum pump according to weight and characteristic of workpiece	Silicone, soft and flexible, recommend multiple bellows suction cups	SBL, SBLP STP, SPJ
	GLASS	Mainly for handling, gripping of universal glass, industry glass, float glass and so on. The features are that workpiece is heavy, flat, smooth, hard and it has requirement of powerful lateral gripping force	Select vacuum pump according to weight and characteristic of workpiece	NBR, excellent wear resistance, recommend flat suction cups	SFG, SF
	METAL SHEET (Sheet Metal)	Metal sheet industry, mainly for handling, fixing and processing of metal plate. The features are that the workpiece is easy to deform, with oily surface, curved metal plate, heavy weight and has high requirement for big internal support, anti slip, anti deformation of vacuum pad.	Select vacuum pump according to weight and characteristic of workpiece	NBR, PU, etc. excellent wear resistance, recommend flat or 1.5 bellows suction cups	SFF, SFM STC, SBF SOF, SOB SDM
	META SHEET (Thick Metal Plate)	Metal sheet industry, mainly for handling, fixing and processing of metal plate. The features are that the workpiece is, with oily surface, heavy weight and has high requirement for large internal support, slip resistance, anti deformation of suction cup.	Select vacuum pump according to weight and characteristic of workpiece	NBR, PU, etc. excellent wear resistance, recommend flat suction cups	SFF, SFM SDM, SOF
	AUTOMOTIVE	Automotive industry, mainly for glass, curved metal plate, tyre and so on. The features are that metal plate is with uneven and curved surface, glass is smooth and with heavy weight, and has high requirement for slip resistance.	Select vacuum pump according to weight and characteristic of workpiece	NBR, PU, etc. excellent wear resistance and good oil resistance	SBB, SFG SFF, SFM STC, SBF SOF, SOB
	WOOD	Wood industry, mainly for handling of wood plate, fiberboard, wooden handicraft and so on. The features are uneven surface, porous, oil, heavy and it has requirement of slip resistance and large internal support for suction cup.	Multistage vacuum pump AM/AL, etc, take advantage of flow to compensate the flow loss between suction cup and workpiece.	NBR, excellent wear resistance	SF, SB SOF, SOB
	FABRIC	Fabric industry, mainly for handling of cloth, gauze and so on. The features are workpiece is easy to deform, porous, light weight, overlap, and has requirement of large vacuum flow for suction cup	Select vacuum pump according to weight and characteristic of workpiece	POM material special gripper, which is with suction cup, recommend flow gripper	SLP, SLB
	COMPOSITE MATERIAL	Mainly for handling leather, fiber plate, the features are that the workpieces are porous, light, and overlapping and has requirement of large vacuum flow for suction cup	Select vacuum pump according to weight and characteristic of workpiece	Select suction cup according to actual condition	SLB
	STONE	Stone industry, mainly for handling marble, bricks, and so on. The features are that workpiece is with uneven surface and has requirement for large deformation of suction cup	Multistage vacuum pump AM/AL and so on, take advantage of flow to compensate the flow loss between suction cup and workpiece	NF-Neoprene foam rubber OF-Geranium foam rubber large deformation and good tightness, recommend foam rubber pad	SOP, SNP

UI	Industry	Description	Recommendation		Applicable Suction cups
			Vacuum pump	Suction cup	
	PLASTIC	Plastic industry, mainly for handling in latter procedure of plastic injection molding. The features are high temperature resistance, workpiece with curved surface, and has high requirement for high temperature resistance and large deformation of suction cup	Select vacuum pump according to weight and characteristics of workpiece	Silicone,HD high temp material,recommend high temp material vacuum pad	Silicone,HD high temp material, other special custom-made products
	ROBOT	Robot terminal components, supporting robot to grip and handle. The features are that it requires fast response, combined type saving pipes, system with high safety factor	Select vacuum pump according to weight and characteristics of workpiece	Select suction cup according to workpiece	--
	MACHINE	Machine terminal components, supporting intelligent manufacture equipment to grip and handle. The features are that they are small size, light weight, compact and most of them are metal products.	Select vacuum pump according to weight and characteristics of workpiece	Select suction cup according to workpiece	--
	ELECTRONICS (Screen)	Handling of the screen of mobilephone,tablet PC,etc. The features are mark free,without deformation,slip resistance,small and light,etc.	Select vacuum pump according to weight and characteristics of workpiece	Flat suction cup,mark free suction cup which is HD material, halogenation,and teflon tape	SNT,SZU SZC,SZB SPC,SLP,etc
	ELECTRONICS (PCB)	Electronics industry, mainly for handling electronic components. The features are that workpiece is with small surface, light weight, without mark, and has high requirement for conductivity of suction cup.	Select vacuum pump according to weight and characteristics of workpiece	Materials like NBR, Si or conductive NBR, Conductive Si,etc are soft , wear resistant and conductive. recommend flat,or 1.5bellows suction cups.	SZU,SZC SZB,SAN SAO,SLB TXC,etc
	PHARMACEUTICALS	Pharmaceuticals industry, mainly for handling of medical kits , medical devices,etc. The features are that there is alcohol, chemical reagent on the surface of workpice, and it has high requirement for chemical resistance of suction cup.	Select vacuum pump according to working enviroment and characteristic	Special plastic material, corrosion resistance,alcohol resistance, wear resistance, weather resistance	SBOF
	FOOD	Food industry, mainly for handling of bread, chocolate, milk,etc. The features are irregular shape of surface of workpiece, light weight, plastic bag package, and it has high requirement for material of suction cup.	select vacuum pump according to weight and characteristics of workpiece	FDA silicone, soft seal or FDA POM suction cup	SBL,SBLP SNT
	NEW ENERGY (Photovoltaic)	New energy industry, mainly for handling of solar cell, circuit board.The features are that the workpiece is porous, fragile and require soft contact and large vacuum flow and average air flow	Air flow is well distributed, smoothly gripping		
	NEW ENERGY (Li Battery)	New energy li battery industry, mainly for handling of battery pack,battery, The features are corrosion resistant , explosion-proof Soft package gripping, safe and reliable	Select vacuum pump according to weight and characteristics of workpiece	suction cup with corrosion resistant material, such as EPDM , fluorine rubber	SLB,SF SB,etc

UI	Characteristic	Description	Applicable suction cups
	Porous	Suitable for porous workpiece, main features are that vacuum pump with low vacuum level and large vacuum flow (usually use flow gripper) is through flow to compensate air permeability loss to create vacuum to grip workpiece.	SLB, SLP
	Curved surface	Suitable for workpiece with curved surface or certain slope surface. Usually adopt bellows suction cups to compensate the plane.	All bellows suction cups
	Slip resistance	For workpiece with smooth surface and prevent it from side slip when grip Generally adopt flat with ribs or flat with pattern suction cup	All flat with ribs suction cups and flat with pattern suction cups
	Rough surface	Mainly for workpiece with rough surface such as wood plate, stone. In order to prevent air leakage, usually adopt sponge vacuum pad to compensate the micro space to grip the workpiece	SNP, SOP
	Heavy load	For gripping workpiece with heavy load, generally adopt heavy load suction cups and mounting parts	Flat suction cup with big diameter PSPH heavy load level compensator.
	Non-rotating	Mainly for workpiece having precise positioning and direction requirement. It needs non- rotating function	Non-rotating level compensator etc
	FDA	For workpiece requiring safety certificate in food industry of medical industry, usually adopt food grade white silicone of POM suction cups with FDA	WS material suction cup, SNT-P series
	Tube shaped object	Adopt special concave suction cups for tube shaped or stick shaped workpieces	SOG
	Long and narrow object	Adopt oval suction cups special for long and narrow workpiece	SOB, SOF

UI	Characteristic	Description	Applicable suction cups
	Corrosion resistance	Adopt fluorine rubber or EPDM suction cups for requirements of corrosion resistance, (such as battery liquid, chemical environment)	F/E material suction cups
	Long life time	Adopt suction cups with special material for high weariness occasion which is longer than average life	V/U material suction cups
	Spherical objects	Adopt deep taper suction cup to grip spherical objects	SD
	Water resistance Oil resistance	Adopt special suction cups with oil resistant material and design	SFM, SBF, STC, SFF,etc
	Composite product	Composite product integrated with vacuum pump and suction cups, save space, easy to assemble and wide usage	SLB, SLP, SNT,etc
	Anti -deformation	Select different suction cups for different workpieces and conditions to grip workpiece without deformaton.	SNT, SLP, SFT,etc
	Temperature resistance up to 180°C	Adopt suction cups with high temperature resistant material for gripping workpiece with high temperature 180°C	HD suction cup, silicone suction cup
	Temperature resistance up to 400°C	Gripping workpiece with high temperature 400°C	SNT-S

M5 M

Thread

- M** Male thread.
- F** Female thread.

Types of thread

- M** Metric thread.
- G** British standard pipe thread.
- T** NPT thread.
- F** NPSF thread.
- R** British conical pipe thread.

Example

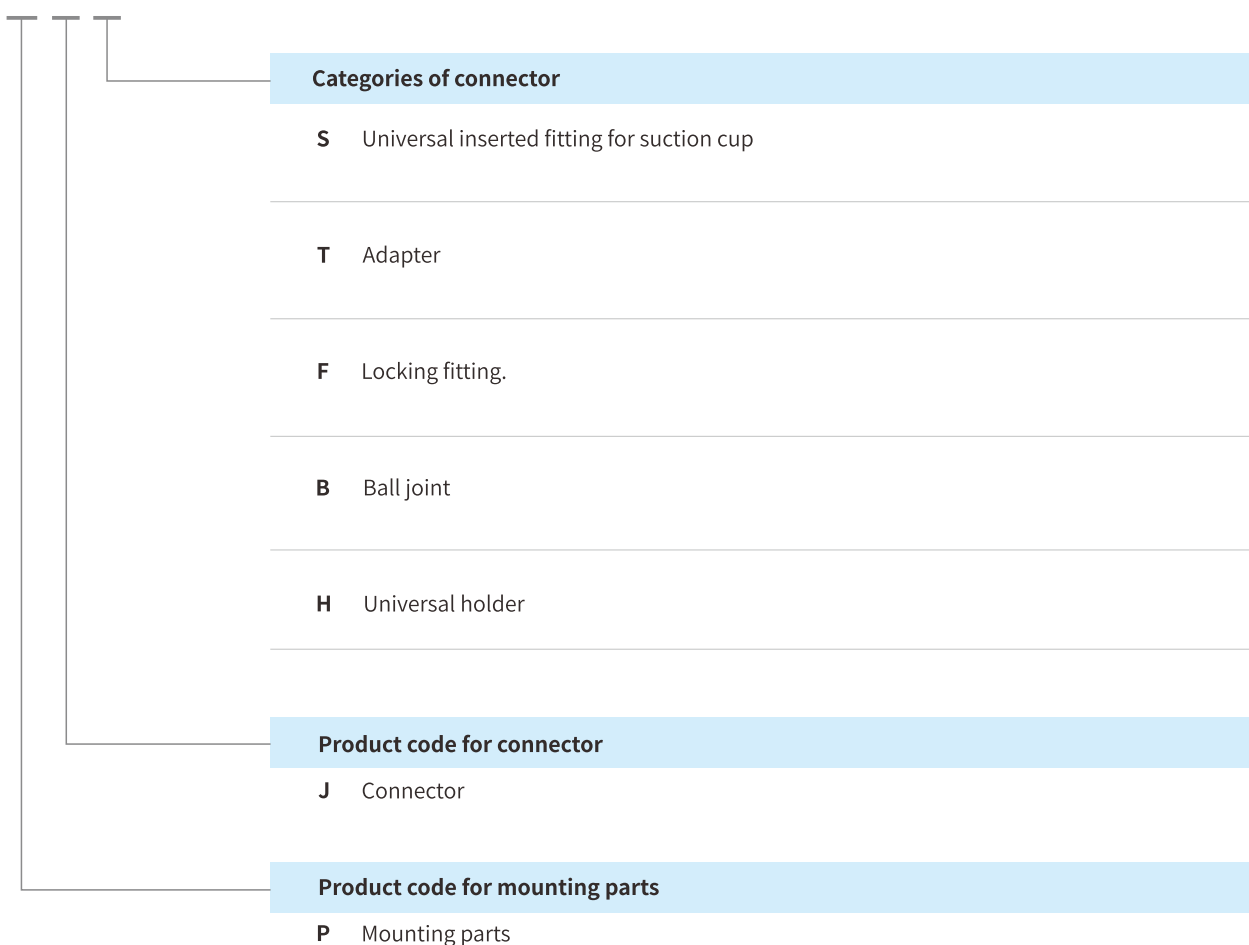
Types of thread	Size	
M	5	M5: M5
G	1	G1: G1/8
T	4	T4: NPT1/2
F	8	F8: NPSF1"
R	12	R12: R1"1/2
...	...	

Connection thread instruction

G1M	G1/8 Male thread	G6F	G3/4 Female thread
G2M	G1/4 Male thread	G8F	G1" Female thread
G3M	G3/8 Male thread	G12F	G1"1/2 Female thread
G4F	G1/2 Female thread		

Note: Thread pitch which is not indicated in the catalogue, is considered as national standard coarse thread specification.

P J S - ***



Series	Size range	Fitting								Suction cup connection																									
		M5		M8		G1		G2		G3		G4		SC						SF							ST								
		M	F	M	F	M	F	M	F	M	F	M	F	1	2	3	4	5	6	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	
SB	5	●													●																				
	6		●											●																					
	8	●													●																				
	10-15	●														●																			
	17-20					●	●													●															
	30-40					●	●														●														
	50							●	●		●											●													
SBA	33			●																													●		
SBL	15	●														●																			
	20					●	●													●															
	30-40					●	●														●														
	50							●	●													●													
SF	15	●														●																			
	20-30					●	●													●															
	40					●	●														●														
	50							●	●													●													
	75								●														●												
	110												●												●										
	150											●															●								
	200											●																	●						
SU	2-4	●												●																					
	6-8	●													●																				
	10-15	●														●																			
	20-30					●	●													●															
	40					●	●														●														
	50							●	●													●													
SFP	20-30					●	●													●															
	40					●	●														●														
SBP	20					●	●													●															
	30-40					●	●														●														
	50							●	●													●													
SXP	20-30					●	●													●															
	35-40					●	●														●														
	50							●	●													●													

Series	Size range	Fitting												Suction cup connection																											
		M5		M8		G1		G2		G3		G4		SC						SF								ST													
		M	F	M	F	M	F	M	F	M	F	M	F	1	2	3	4	5	6	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8							
SGP	25-35					●	●													●																					
	45					●	●														●																				
	55							●	●														●																		
SZD	10-16		●															●																							
	25		●																●																						
	40				●																	●																			
SZC	10-16		●															●																							
	20-32		●																●																						
	40-50				●																	●																			
SZU	2-8		●											●																											
	10-16		●															●																							
	20-32		●																●																						
	40-50				●																	●																			
SZB	6-8		●											●																											
	10-16		●															●																							
	20-32		●																●																						
	40-50				●																	●																			
SPA	10-20A	●																											●												
	15-20B	●																											●												
	15X	●																											●												
	30B	●																												●											
	25-50A				●																													●							
SPC	5-7	●																											●												
	30-60				●																												●								
	90																																	●							
SPF	2-3.5	●																										●													
	5-15	●																											●												
	20	●																												●											
	25-40	●																													●										
	50				●																												●								
SPJ	4	●																										●													
	6-15	●																											●												
	20-25	●																												●											
	30-40	●																													●										
	50				●																													●							

Example: SB5-M5M, fitting for suction cup: PJS-M5M-SC2

◇Note: For detailed size of fitting for suction cup, please refer to related content of PJS series on page 272-277

◇For sizes of SC, SF, ST type fitting, please refer to page 272-277

Series	Size range	Suction cup connection				
		M5F	M8F	G1F	G2F	G3F
SB	5-15	●				
	17-40			●		
	50				●	●
	75				●	
SBA	11-20	●				
	33		●			
SBF	All sizes				●	
SBOF	All sizes				●	
SFT	15-24	●		●		
	30-40				●	
SBL	15	●				
	20-40			●		
	50				●	●
SBLP	30				●	
	40					●
SF	15	●				
	20-40			●		
	50				●	●
SU	2-8	●				
	20-40			●		
	50				●	●
SUF	All sizes	●				
STC	All sizes				●	
SFF	All sizes				●	
SFM	50-120				●	
SOB	All sizes				●	
SOF	All sizes				●	
SOG	15×40	●				
	35×100				●	
SFP	All sizes			●		
SBP	10-15	●				
	20-40			●		
	50				●	●
	70					●
SXP	20-40			●		
	50				●	●
	70					●

Series	Size range	Suction cup connection				
		M5F	M8F	G1F	G2F	G3F
SGP	25-45			●		
	55				●	●
SAN	All sizes	●				
SAO	All sizes					
SPA	10-20	●				
	30B	●				
	25-50		●			
SPC	5-7	●				
	10-20	●				
	30-60					
	90					
SPF	2-3.5					
	5-8	●				
	10-15	●				
	20	●				
	25-40	●				
	50		●			
	60-95					
	120-300					
SPJ	4					
	6-8	●				
	10-15	●				
	20-25	●				
	30-40	●				
	50		●			
	60-80					

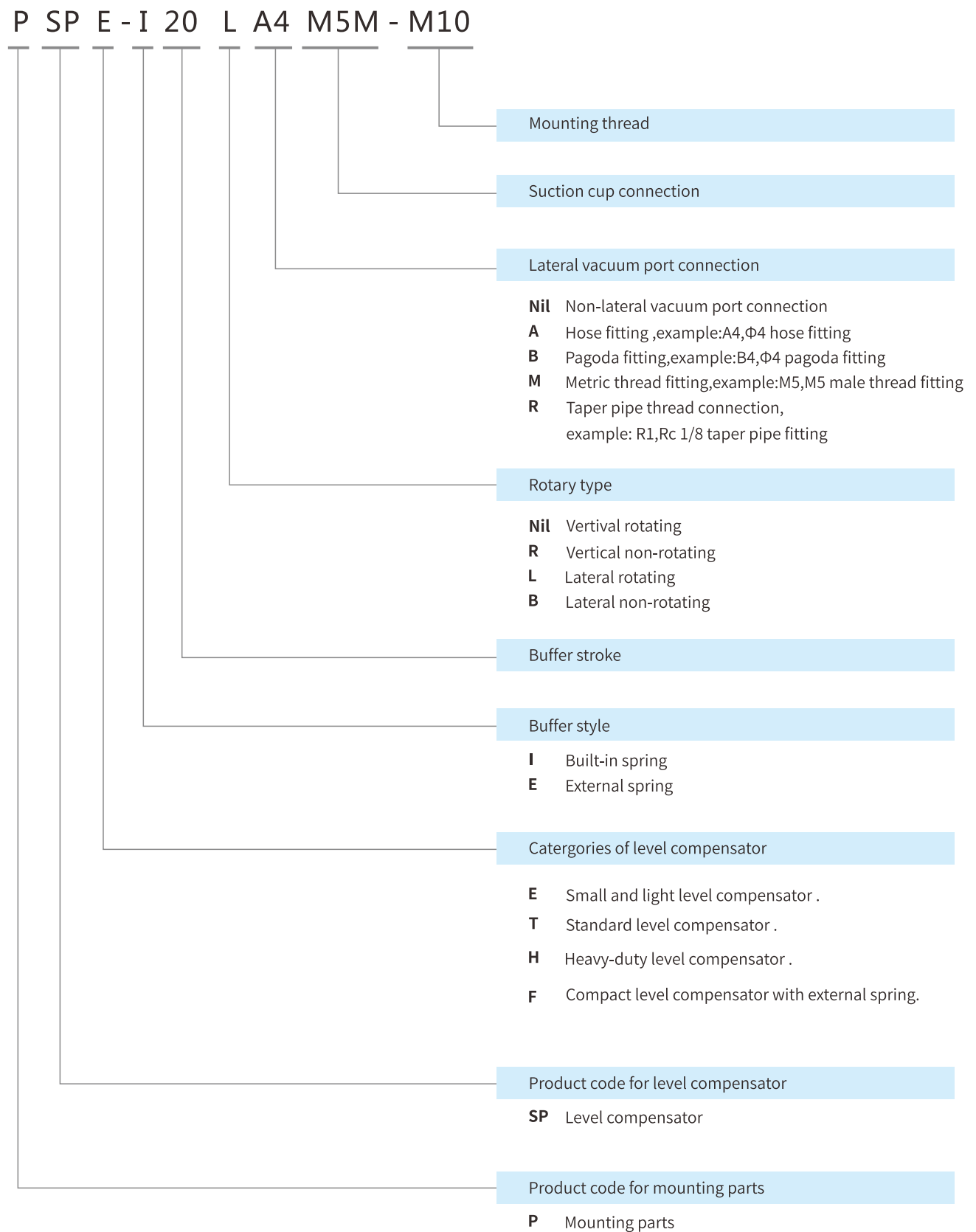
Thread(1)	Thread(2)											
	M5F	M5M	M8F	M8M	G1F	G1M	G2F	G2M	G3F	G3M	G4F	G4M
M5F	●											
M5M		●	●	●								
M8F		●	●									
M8M				●	●	●						
G1F				●	●							
G1M						●	●	●				
G2F						●	●					
G2M								●	●	●		
G3F								●	●			
G3M										●	●	●

Example: PJT-M5M-M8F

◇Note: For detailed sizes of adaptor, please refer to PJT series on page 278-279

Level compensator selection instruction

Series	Applicable industry	Description	Remark
PSPE	Electronics industry for light and small load..	Small and light level compensator, port specifications are M5 male thread and SC type.	SC type connection is mainly for SZB/C/U 02-08(SC1 type)
PSPT	All industries	Conventional level compensator Port specification is M8, G1/8,G1/4,G3/8 male thread and G1/8,G1/4 female thread	-
PSPH	Metal sheet, automotive, machine etc, for heavy load.	Heavy-duty level compensator, connection thread on suction cup side is G3/8,G1/2 male thread.	-
PSPF	All industries, mainly used with suction cup SPA series , SPJ series ,SPF series	Compact external level compensator, port specification is M5,M8 female thread,M10 male thread and ST type.	For suction cup with ST type connection, pls refer to fitting for suction cup PJS series (ST1,ST2 type connection)



Series	Vacuum port	Mounting connection	Buffer stroke (mm)										Vacuum port+rotary type				
			6	10	15	20	25	30	40	50	75	90	Nil Vertical rotating	R Vertical non-rotating	L Lateral rotating	B Lateral non-rotating	
PSPE	M5M	M8	●	●	●		●									●	●
		M10		●		●		●	●	●			●	●	●	●	
	M5F	M10		●		●		●	●	●			●				
PSPT	M8M	M14		●		●		●		●			●				
	G1/8M	M16		●		●		●		●			●		●		
	G1/8F	M16		●		●		●		●			●				
	G1/4M	M18		●		●		●		●			●	●			
										●	●	●					
	G1/4F	M18		●		●		●		●			●				
	G3/8M	M18		●		●		●		●			●	●			
										●	●	●					
PSPH	G3/8M	M30					●			●	●	●	●				
	G1/2M	M30					●			●	●	●	●				

Series	Vacuum port	Mounting connection	Buffer stroke (mm)					Vacuum port+ rotary type	
			4	6	10	15	30	Nil vertical rotating	L Lateral rotating
PSPF	M5F	M11	●		●			●	●
		M14		●		●		●	●
	M8F	M14		●		●		●	●
	M10M	M16			●		●		●

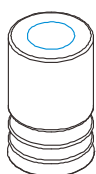
◇ Note: "●"—standard, in stock.

Suction cup(without fitting)+PJS series fitting for suction cup

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-ST2	SPC5、7
	PJS-M5M-SPC10	SPC10
	PJS-M5M-SPC20	SPC15、18、20

◇The above table is from page 194

Suction cup(without fitting)



SPC 10 N

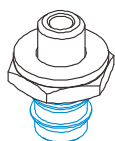
NBR

DiameterΦ10mm

SPC series bellows suction cup

Remark: For suction cup connection, please refer to mounting parts of SPC 10 on page 194

PJS series fitting for suction cup



PJS-M5M-SPC10

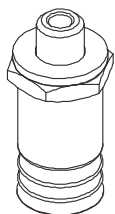
Ftting special for suction cup SPC10

Mounting thread M5 male thread

PJS Series fitting for suction cup

vacuum pad connection port specifications are matching

Suction cup + PJS series fitting for susction cup



SPC 10 N - M5M

Mounting thread M5 male thread

NBR

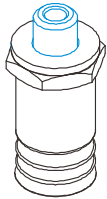
Diameter Φ10mm

SPC series bellows suction cup

Note:1.For description of shape of fitting for suction cup which is non-integrated vulcanized with fitting(it means that suction cup can be changed separately), please refer to PJS series fitting for suction cup on page 11-12 or parts selection of each series of suction cups. For actual dimensions of fitting, please refer to PJS series 272-277.

2.All of fitting for non-integrated vulcanized suction cup can be found in instruction of each series, which is easy for customers to select model.

Suction cup(with fitting)+PJT adapter



Suction cup(with fitting)

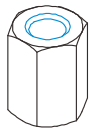
SPC 10 N - M5M

Fitting for suction cup M5 male thread

NBR

Diameter Φ10mm

SPC series bellows suction cup



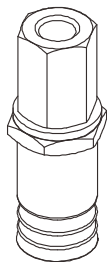
PJT Adapter

PJT - M5F

M5 female thread

PJT series adapter

fitting for vacuum pad specification is matching



Suction cup(with fitting)+PJT Adapter

SPC 10 N - M5F

Mounting thread M5 female thread

NBR

Diameter Φ10mm

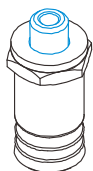
SPC series bellows suction cup

Note:1. The above example is fitting for suction cup changing from M5M to M5F

Please refer to convertible specifications of PJT adapter on page 15, and real dimensions on page 278-279.

Suction cup(with fitting)+PJF locking fitting

Suction cup(with fitting)



SPC 10 N - M5M

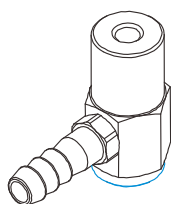
Mounting thread M5 male thread

NBR

DiameterΦ10mm

SPC series bellows suction cup

PJF Locking fitting



PJF - LB6 - M4F - M5F

Connection on suction cup side M5 female thread

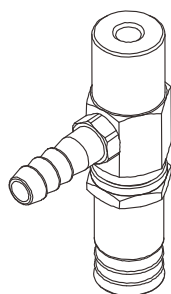
Mounting thread M4 female thread

Connect with pagoda fitting Φ6 in level direction

PJF series fixed fitting

The specifications of fitting for suction cup matches

Suction cup(with fitting)+PJF Locking fitting



SPC 10 N - LB6 - M4F

Mounting thread M4 female thread

Connect with pagoda fitting Φ6 in lateral direction

NBR

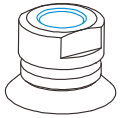
Diameter Φ10mm

SPC series bellows suction cup

Note: 1. The above example is suction cup SPC10N with locking fitting PJF-LB6-M4F-M5F

2. Please refer to detailed specifications of PJF adapter on page 280-283.

Suction cup(with fitting)+Level Compensator



Suction cup(with fitting)

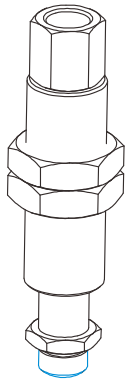
SF 20 N - G1F

G1/8 female thread

NBR

Diameter Φ20 mm

SF series flat suction cup



Level compensator(T type)

PSP T - I 10 G1M - M16

Mounting nut M16

G1/8 male thread (on suction cup side)

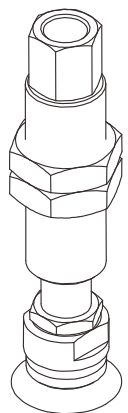
Buffer stroke 10mm

Buffer style: built-in

Level compensator T type

Fixed serial number of level compensator

Connection matches



Suction cup + Level compensator

SF 20 N - T I 10 - M16

Mounting nut M16

Buffer stroke 10mm

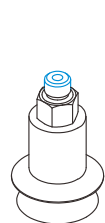
Buffer style: built-in

Level compensator T type

NBR

Diameter Φ20 mm

SF series flat suction cup

Suction cup(with fitting)+adapter+level compensator (standard)


Suction cup (with fitting)

SB 15 N - M5M

model /connection	M5M
SB5 - 15	●
SB17 - 20	-
SB30 - 40	-

◇The above table is from page 88.

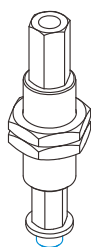
M5 male thread

NBR

DiameterΦ15 mm

SB series 1.5 bellows suction cup

Not match



Level compensator(E type)

PSP E - I 10 R M5M - M10

Mounting nut M10

M5 female thread connection

Non-rotating type

Buffer stroke10 mm

Buffer style: built-in spring

Level compensator

Fixed serial number of level compensator

Switch



Adapter (PJT series)

PJT - M5F

M5 female thread

T series universal mounting parts- adapter

Suction cup+Adapter+Level compensator

SB 15 N - E I 10 R - M10

Mounting nut M10

Non-rotating

Buffer stroke 10 mm

Buffer style: built-in

Level compensator E type

NBR

DiameterΦ15 mm

SB series bellows suction cup

Suction cup(with fitting)+ Level compensator



Suction cup (with fitting)

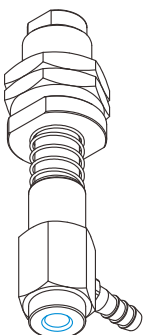
SPC 20 N - M5M

M5 male thread

NBR

Diameter Φ20mm

SPC series bellows suction cup



PSPF Level compensator

PSP F - E 6 L B6 M5F - M14

Mounting thread M14

M5F female thread
(on suction cup side)

Pagoda fitting Φ6 hose
(on vacuum port side)

Lateral rotating type

Buffer stroke 6mm

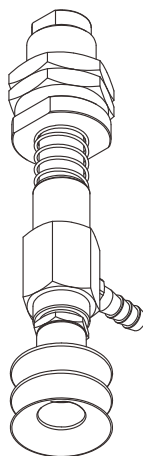
Buffer style: external spring

Level compensator F type

Fixed serial number of level compensator

Specifications of fitting for suction cup matches

Suction cup(with fitting) +PSPF Level compensator



SPC 20 N - F E 6 L B6 - M14

Mounting thread M14 male thread

Pagoda fitting Φ6 hose
(on vacuum port side)

Rotating type and lateral vacuum
port direction

Buffer stroke 6mm

Buffer style: external spring

PSPF series level compensator

NBR

Diameter Φ20mm

SPC series bellows suction cup

Note:1. The above example is suction cup SPC20N-M5M with level compensator PSPF-E6LB6M5F-M14

2. Please refer to PSPF level compensator on page 269-271.

Series	Size range	Recommend level compensator (AIRBEST standard)				Series	Size range	Recommend level compensator (AIRBEST standard)			
		PSPE	PSPT	PSPH	PSPF			PSPE	PSPT	PSPH	PSPF
SB	5-15	●				SBP	10-15	●			
	17-50		●				20-70		●		
	75		●			SXP	All sizes		●		
	110-150			●		SGP	All sizes		●		
SBA	11-20	●				SDL	All sizes		●		
	33	●				SD	10-25	●			
SBB	All sizes			●			40		●		
SBF	All sizes		●			SH	All sizes		●		
SBOF	All sizes		●			SHB	All sizes		●		
SFT	15-24	●	●			SZC	10-32	●			
	30-40		●				40-50		●		
STP	All sizes		●	●		SZU	2-32	●			
SBL	15	●					40-50		●		
	20-50		●			SZB	6-32	●			
SBLP	30		●				40-50		●		
	40-50 *					SAN	All sizes	●			
SF	15	●				SAO	All sizes	●			
	20-50		●			SPA	All sizes				●
	75		●			SPC	5-60				●
	110-200			●			90		●		
	300 *					SPF	2-95				●
SU	2-8	●					120-200 *				
	20-80		●			SPJ	4-50				●
SUF	All sizes	●					60-80		●		●
SFG	All sizes			●		SPU	10-50				●
STC	All sizes		●				60-100		●		
SFF	All sizes		●			SNP	50-75		●		
SFM	All sizes		●				68		●	●	
SDM	All sizes		●				140			●	
SOB	All sizes		●			SOP	40-64		●		
SOF	All sizes		●				92		●	●	
SOG	15×40	●					127-220			●	
	35×100		●								
SFP	All sizes		●								

Note:1. "●" means that selected suction cup directly matches the recommended level compensator.

2. "*" means that there is no level compensator directly for this item.



B Vacuum Pump

25	ABM / ABX Series
32	ABM / ABX Series Combined type
36	ASM / ASX Series
38	ASM / ASX Series Combined type
41	AM / AL / AH Series
48	AM / AL / AH Series Combined type
56	AZL Series
62	ACP Series
64	ACPF Series
66	ACPS Series
68	ACV Series
73	AQV Series
75	AZH Series
80	AZU Series
83	ASBP Series



Features

- ◇ Compact, light weight and easy to install. It can be directly connected to the suction cup.
- ◇ Multistage vacuum pump offers large vacuum flow.
- ◇ It can be used in most harmful gases.
- ◇ It can be operated with a single pneumatic control valve, and each vacuum circuit can be controlled by a single ABM/ABX without affecting the operation of other lines.
- ◇ Vacuum filter ZFL for it is available.

Applications

- ◇ Suitable for occasions where vacuum is required for each station in fast operation.
- ◇ Handling of electronic components and small parts.
- ◇ Various specifications to meet different operation requirements.

How to order

ABM 10 - B - F L
 ① ② ③ ④ ⑤

① Series	② Specification	③ Port connection	④ Sealing	⑤ Vacuum filter
ABM - Universal type	5	A B C	Nil - Standard, NBR	Nil - Standard, without filter
(-85kPa)	10	NA BA NC	F - Fluorine rubber	L - With ZFL10 vacuum filter
ABX - High vacuum level type	20	NB	E - EPDM	
(-92kPa)	30	NBA		
		(Refer to table ①)		

Port connection table ①

Port connection	Air supply port	Vacuum port	Exhaust port
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

Selection

Model/Port connection	A	NA	B	BA	NB	NBA	C	NC
ABM (X) 5	●	○	●	○	○	○	●	○
ABM (X) 10	●	○	●	○	○	○	●	○
ABM (X) 20	—	—	●	○	○	○	●	○
ABM (X) 30	—	—	●	○	○	○	●	○

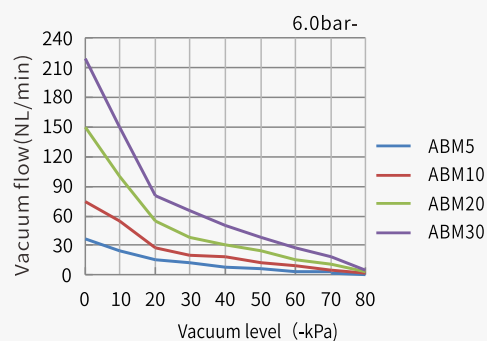
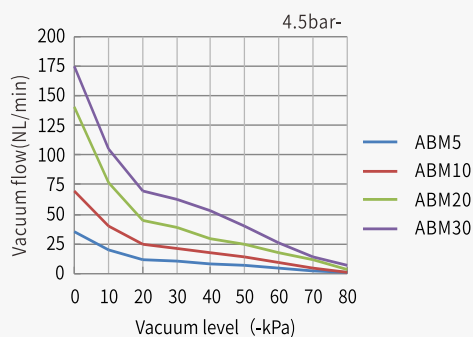
◇Note: "●"- standard, in stock. "○"-selective,no stock. "—"-unavailable.

Technical parameters

Model	Air supply pressure(bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Recommended hose dia. (mm)	
						Air supply (P)	Vacuum (V)
ABM5	4.5 - 6.0	85	35 - 37	12 - 20	50 - 65	6	8
ABM10	4.5 - 6.0	85	70 - 75	28 - 42	55 - 68	6	10
ABM20	4.5 - 6.0	85	141 - 150	55 - 85	60 - 68	8	12
ABM30	4.5 - 6.0	85	175 - 220	87 - 125	60 - 68	10	12
ABX5	4.5 - 6.0	92	30 - 32	18 - 22	50 - 65	6	8
ABX10	4.5 - 6.0	92	52 - 63	31 - 40	55 - 68	6	10
ABX20	4.5 - 6.0	92	100 - 125	79 - 89	60 - 69	8	12
ABX30	5.0 - 6.0	92	180 - 185	128 - 137	60 - 69	10	12

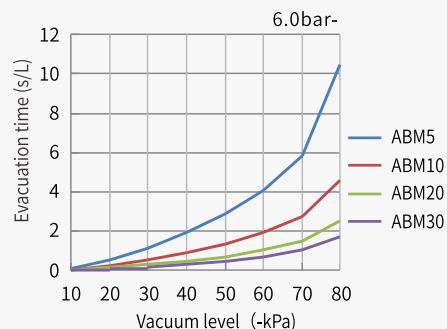
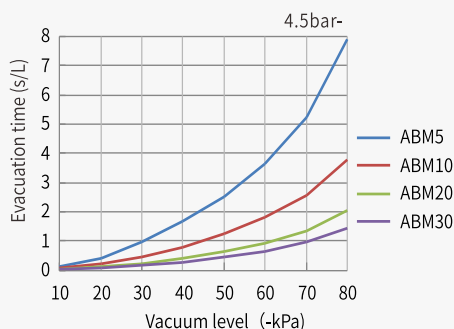
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure(bar)	Air consumption (NL/min)	Vacuum level (-kPa)									Max. vacuum level (-kPa)
			0	10	20	30	40	50	60	70	80	
ABM5	4.5	12	35	20.5	12	10.5	8.5	6.5	4.5	2.5	0.8	85
ABM10	4.5	28	70	40.5	25	21	18	14	9.5	5	1.3	
ABM20	4.5	55	141	77	45	39.5	29.5	25	17.5	12	3	
ABM30	5.0	87	175	105	70	63	53	40	26	14	6.5	
ABM5	6.0	20	37	25	15.5	12	8	6	4	2.7	0.6	85
ABM10	6.0	42	75	55	27	20	18	12	9	5	2	
ABM20	6.0	85	150	100	55	38	30	24	16	11	3.2	
ABM30	6.0	125	220	150	81	65	50	38	27	18	5	



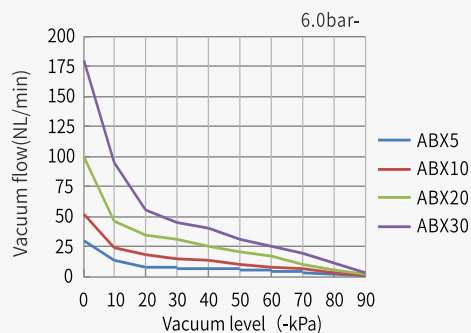
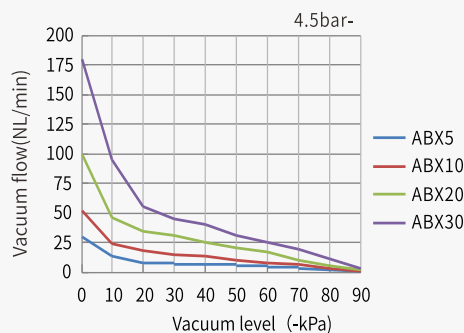
Evacuation time (s/L) to reach different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
ABM5	4.5	12	0.11	0.42	0.95	1.66	2.5	3.65	5.25	7.89	85
ABM10	4.5	28	0.08	0.2	0.44	0.8	1.24	1.8	2.55	3.8	
ABM20	4.5	55	0.04	0.12	0.23	0.41	0.65	0.93	1.33	2.03	
ABM30	4.5	87	0.03	0.09	0.16	0.27	0.43	0.66	0.95	1.43	
ABM5	6.0	20	0.13	0.51	1.15	1.93	2.87	4.09	5.84	10.46	85
ABM10	6.0	42	0.03	0.23	0.53	0.92	1.37	1.95	2.77	4.62	
ABM20	6.0	85	0.02	0.15	0.28	0.46	0.71	1.02	1.48	2.55	
ABM30	6.0	125	0.02	0.08	0.14	0.31	0.49	0.69	1.02	1.75	



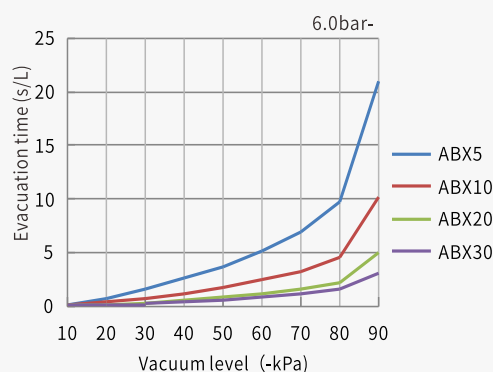
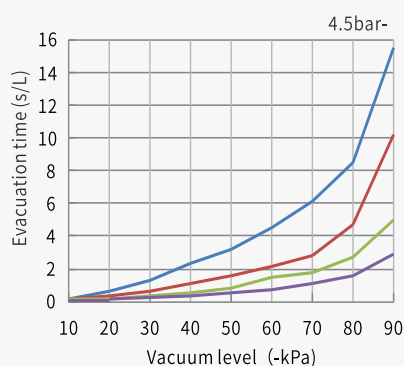
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ABX5	4.5	18	30	13	7.5	7	6	5	4	3.2	1.8	0.4	92
ABX10	4.5	31	52	24	18	15	13	10.5	8	6	2.5	0.8	
ABX20	4.5	79	100	46	34	30.5	25	21	17	10.5	5	1.6	
ABX30	5.0	128	180	95	55	45.5	40.5	30.5	25	19	11.5	3	
ABX5	6.0	22	32	20	8.5	7.5	6	5	4	3	1.5	0.15	92
ABX10	6.0	40	63	36	18	16	12.5	10.5	8.5	6	3.5	0.5	
ABX20	6.0	89	125	73	35	30	25	22	18	12	7	0.9	
ABX30	6.0	137	185	103	51	46	38	31	25	19	12	1.8	



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

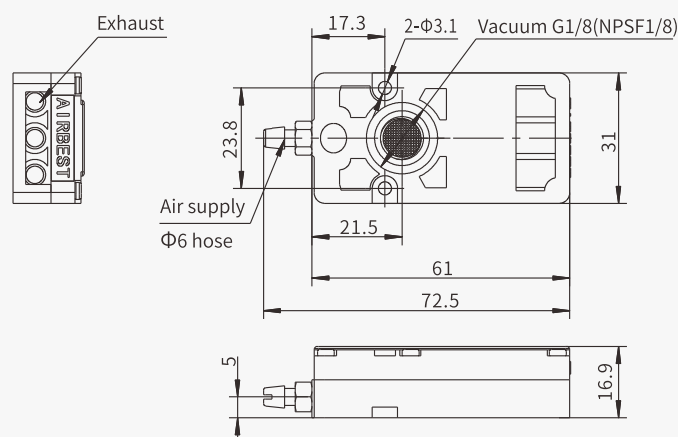
Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ABX5	4.5	18	0.13	0.6	1.26	2.3	3.2	4.5	6.15	8.5	15.5	92
ABX10	4.5	31	0.11	0.3	0.65	1.1	1.55	2.15	2.85	4.7	10.2	
ABX20	4.5	79	0.09	0.16	0.32	0.55	0.8	1.5	1.8	2.7	5	
ABX30	5.0	128	0.06	0.12	0.23	0.36	0.53	0.76	1.1	1.6	2.9	
ABX5	6.0	22	0.15	0.71	1.52	2.54	3.72	5.12	6.95	9.70	21	93
ABX10	6.0	40	0.09	0.32	0.71	1.18	1.74	2.4	3.26	4.55	10.2	
ABX20	6.0	89	0.05	0.15	0.31	0.52	0.77	1.08	1.54	2.15	4.92	
ABX30	6.0	137	0.03	0.13	0.23	0.38	0.58	0.82	1.11	1.54	3	


Dimensions (mm)

Internal silencer

ABM(5-10)-A(NA)

ABX(5-10)-A(NA)



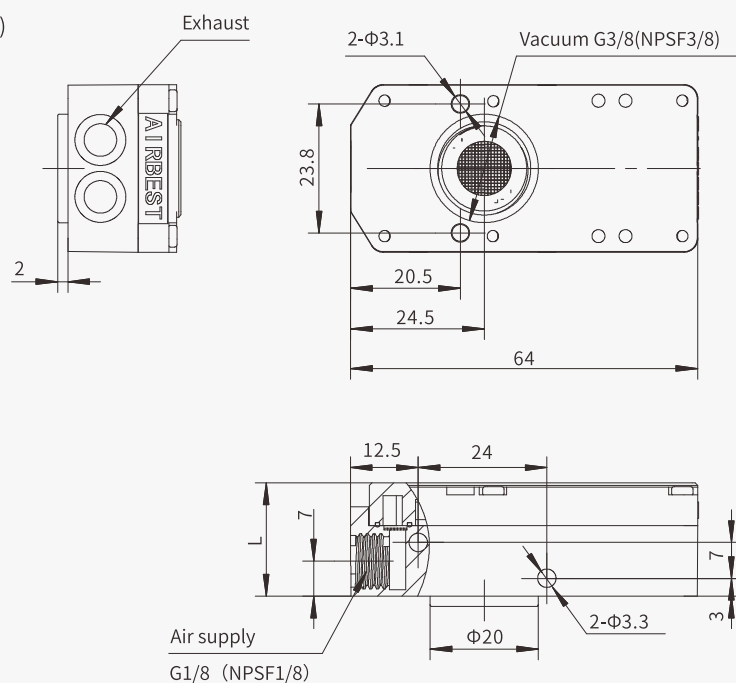
Model	Specification	Port connection	Weight (g)
ABM	5	A(NA)	32.5(35.2)
ABX	10		32(32)

Dimensions (mm)

Internal silencer

ABM(5-30)-B(BA/NB/NBA)

ABX(5-30)-B(NB/NB/NBA)



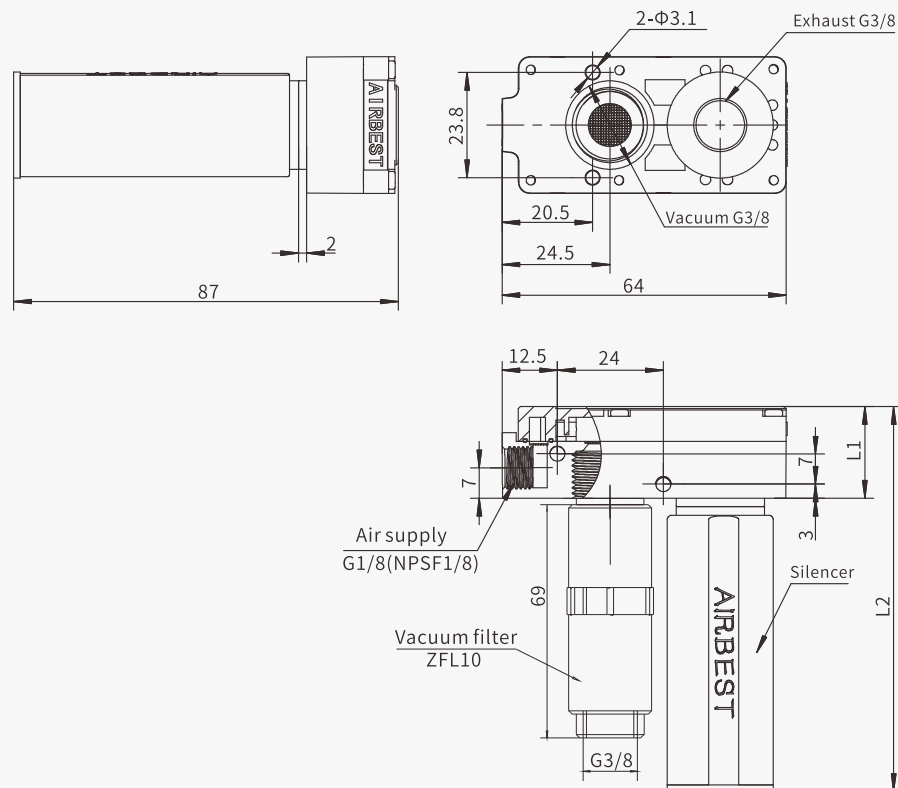
Model	Specification	Port connection	L	Weight (g)
ABM	5	B (BA, NB, NBA)	20.7	38(58, 38, 58)
ABX	10		20.7	37.5(57.5, 37.5, 57.5)
	20		28	50(70, 50, 70)
	30		35	62.5(82.5, 62.5, 82.5)

Dimensions (mm)

External silencer

ABM(5-30)-C(NC)

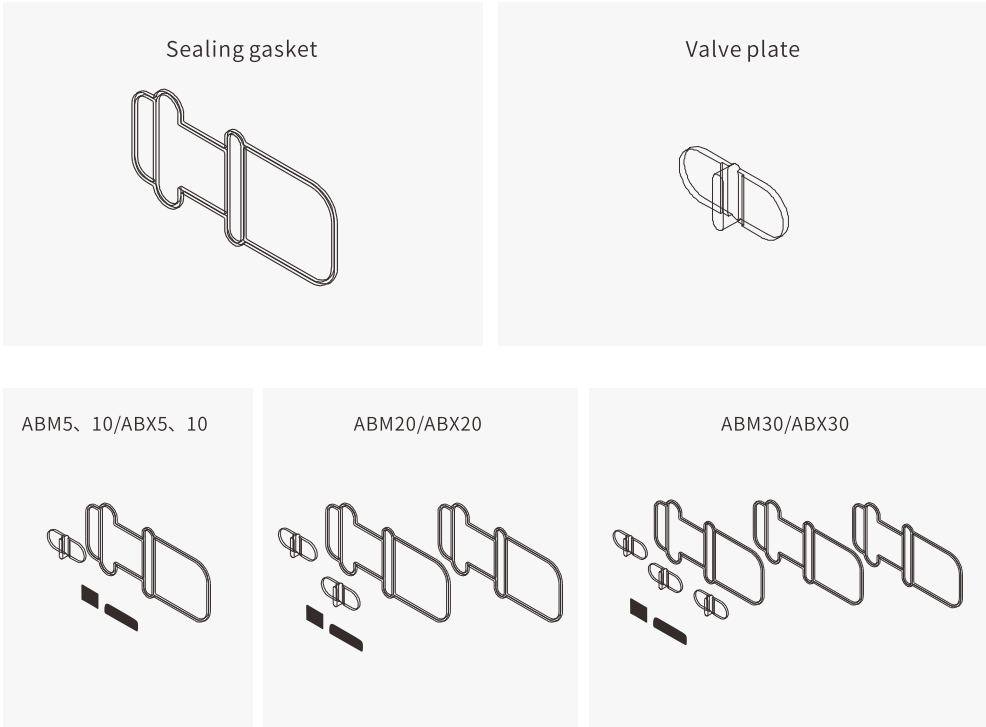
ABX(5-30)-C(NC)



Model	Specification	Port connection	L1	L2	Weight (g)
ABM	5	C(NC)	20.7	87	38
ABX	10		20.7	87	37.5
	20		28	94.2	50
	30		35	101.5	62.5

◇ Note: The above weight excludes vacuum filter ZFL10 (13g/pcs)

Repair kits



Model	Specification	Sealing			Repair kits code	Applicable vacuum pump
		Nil	F	E		
ABM	10	●	○	○	PK	ABM5, 10; ABX5, 10
	20	●	○	○		ABM20, ABX20
	30	●	○	○		ABM30, ABX30

Example:ABM20-F-PK
◇ Note: "●"- standard, in stock. "○"-selective, no stock.



How to order

ABM 5 ×5 - 4 - F L

① ② ③ ④ ⑤ ⑥

① Series	② Specification	③ Vacuum stack	④ Vacuum port, inner dia of hose	⑤ Sealing	⑥ Vacuum filter
ABM - Universal type (-85kPa)	5	2、3、4、5、6、7、8、9、	4 – φ4	Nil - Standard,NBR	Nil - Standard, without vacuum filter
ABX - High vacuum level type (-92kPa)	10	10、11、12、13、14、15、16 (Layer)		F - Fluorine rubber E - EPDM	L - With ZFL 06 vacuum filter

Selection

Model	Specification	Vacuum stack	Vacuum port, inner dia of hose	Sealing			Vacuum filter	
				Nil	F	E	Nil	L
ABM	5	2-16	4	●	○	○	●	○
ABX	10	2-12						

◇Note: "●"- standard, in stock. "○"-selective,no stock.

Technical parameters

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

Model	Specification	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ABM	5×1	6.0	20	25	15	12.5	11	10	7.5	5.5	2	0.6	-	85
	10×1	6.0	42	32	28	24	22	18	15	11	5	1.35	-	85
ABX	5×1	6.0	22	23	14	10	9	7.5	6	4	2.8	1.5	0.44	92
	10×1	6.0	40	32	21	18	16	14	11	9.5	5.5	2.5	1.1	92

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

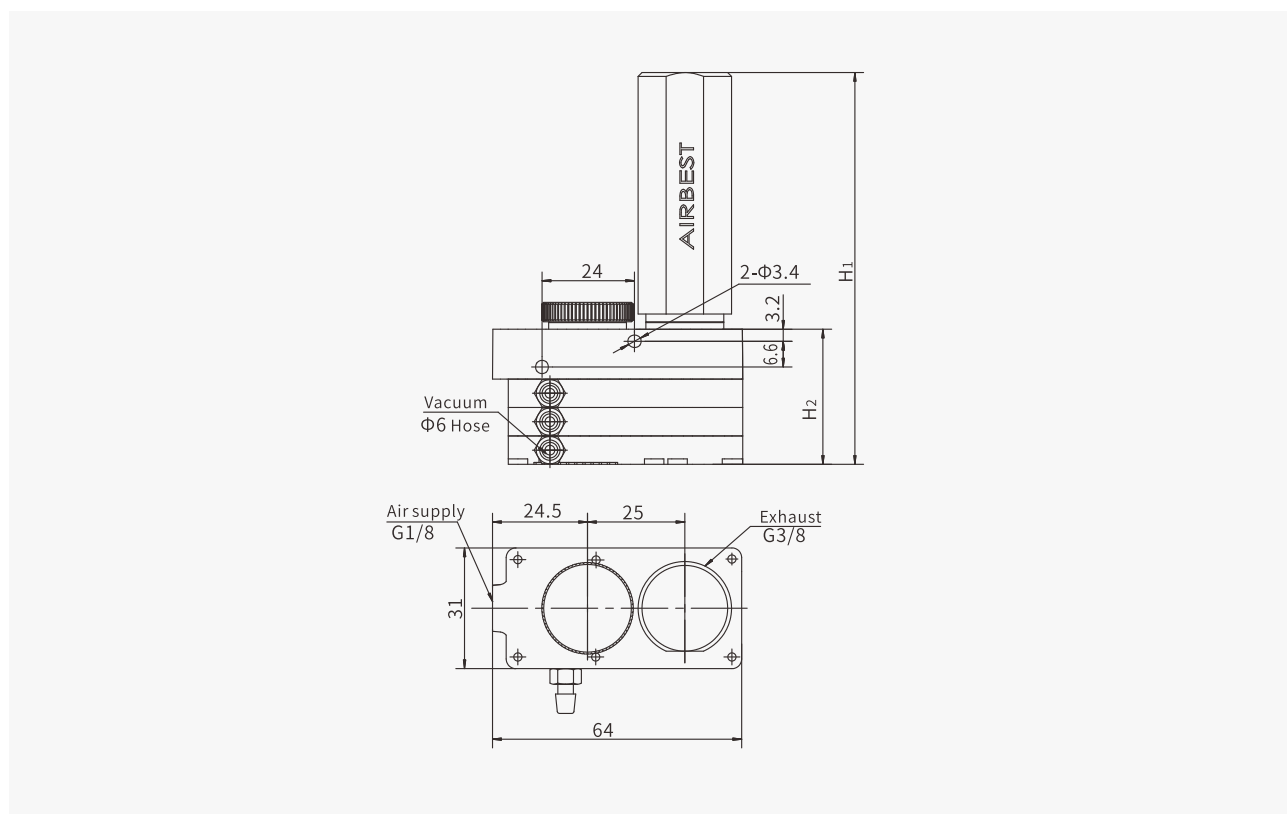
Model	Specification	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ABM	5×1	6.0	20	0.2	0.59	1.1	1.58	2.4	3.52	5.3	10.3	-	85
	10×1	6.0	42	0.12	0.28	0.6	0.81	1.18	1.82	2.65	5.21	-	85
ABX	5×1	6.0	22	0.21	0.81	1.52	2.35	3.48	4.85	6.57	10.5	19.3	92
	10×1	6.0	40	0.14	0.4	0.78	1.22	1.77	2.4	3.3	4.95	9.62	92

Technical Parameters

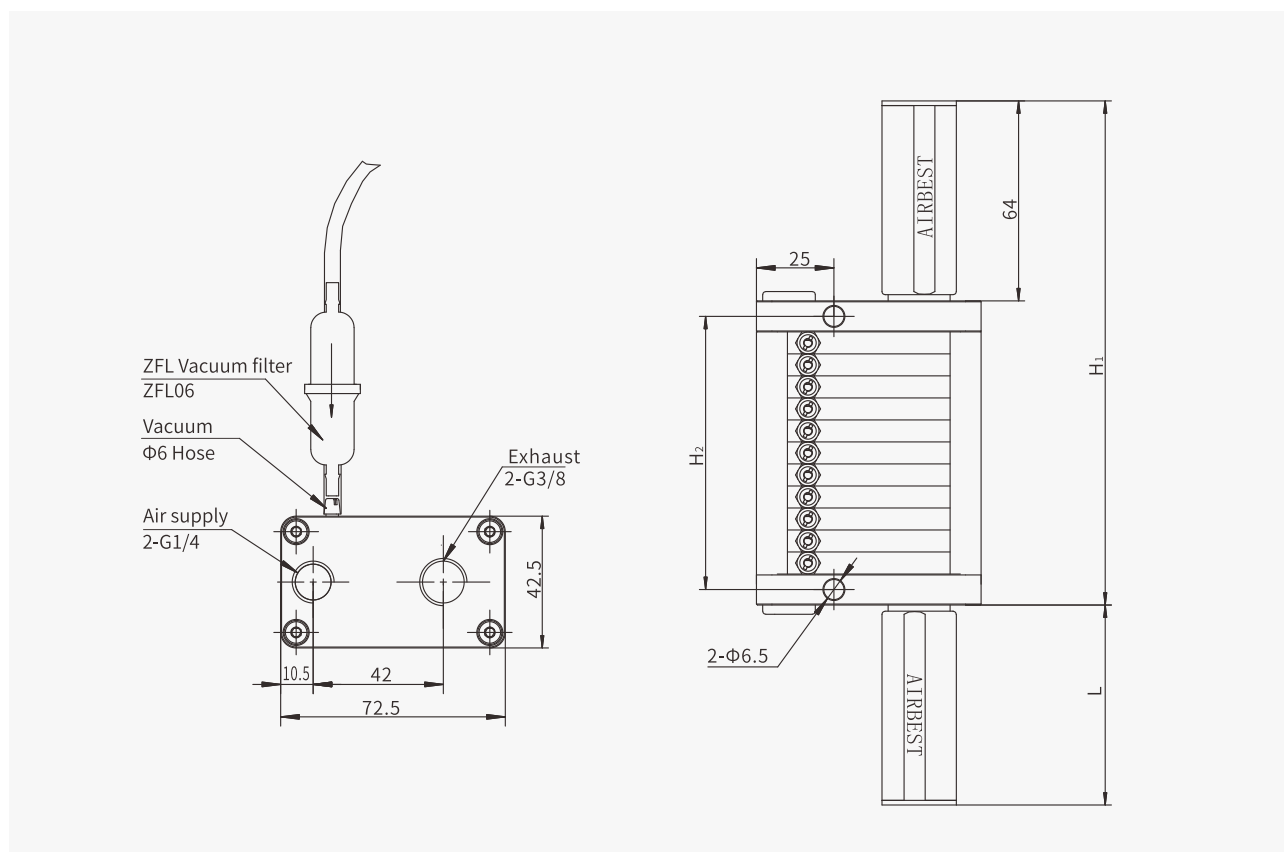
Model	Specification	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight (g)	Recommended hose dia. (mm)		
								Air supply (P)	Vacuum (V)	Exhaust (E)
ABM	5×2	4.5-6.0	85	25×2	29 - 41	55 - 60	67	6	6	G3/8×1
	5×3			25×3	44 - 64	55 - 60	80			G3/8×1
	5×4			25×4	61 - 85	55 - 60	247			G3/8×1
	5×5			25×5	71 - 104	60 - 65	255			G3/8×1
	5×6			25×6	89 - 125	60 - 65	281			G3/8×1
	5×7			25×7	104 - 145	60 - 65	299			G3/8×1
	5×8			25×8	120 - 168	60 - 65	317			G3/8×1
	5×9			25×9	132 - 190	60 - 65	335			G3/8×1
	5×10			25×10	148 - 211	60 - 65	353			G3/8×1
	5×11			25×11	165 - 232	60 - 65	371			G3/8×1
	5×12			25×12	180 - 252	60 - 65	389			G3/8×2
	5×13			25×13	195 - 275	60 - 65	417			G3/8×2
	5×14			25×14	208 - 293	60 - 65	435			G3/8×2
	5×15			25×15	225 - 316	60 - 65	453			G3/8×2
	5×16			25×16	241 - 335	60 - 65	471			G3/8×2
ABM	10×2	4.5-6.0	85	32×2	61 - 85	55 - 60	67	8	6	G3/8×1
	10×3			32×3	91 - 125	60 - 65	80			G3/8×1
	10×4			32×4	121 - 167	60 - 65	247			G3/8×1
	10×5			32×5	151 - 212	60 - 65	255			G3/8×1
	10×6			32×6	185 - 255	60 - 65	281			G3/8×2
	10×7			32×7	211 - 295	60 - 65	299			G3/8×2
	10×8			32×8	241 - 335	60 - 65	327			G3/8×2
	10×9			32×9	271 - 376	60 - 65	345			G3/8×2
	10×10			32×10	301 - 421	60 - 65	363			G3/8×2
	10×11			23×11	332 - 463	60 - 63	381			G3/8×2
	10×12			23×12	361 - 505	60 - 63	399			G3/8×2
ABX	5×2	4.5-6.0	92	23×2	43 - 49	55 - 60	67	6	6	G3/8×1
	5×3			23×3	65 - 73	55 - 60	80			G3/8×1
	5×4			23×4	85 - 96	60 - 63	247			G3/8×1
	5×5			23×5	106 - 121	60 - 63	255			G3/8×1
	5×6			23×6	130 - 144	60 - 63	281			G3/8×1
	5×7			23×7	151 - 167	60 - 63	299			G3/8×1
	5×8			23×8	173 - 193	60 - 63	317			G3/8×1
	5×9			23×9	195 - 217	60 - 63	335			G3/8×1
	5×10			23×10	215 - 241	60 - 63	353			G3/8×1
	5×11			23×11	238 - 265	60 - 63	371			G3/8×1
	5×12			23×12	260 - 289	60 - 63	389			G3/8×2
	5×13			32×13	281 - 313	60 - 63	417			G3/8×2
	5×14			32×14	346 - 335	63 - 65	435			G3/8×2
	5×15			32×15	389 - 361	63 - 65	453			G3/8×2
	5×16			32×16	346 - 385	63 - 65	471			G3/8×2

◇Note: Operating temperature -20-80°C and max. air supply pressure 7bar.

Model	Specification	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight (g)	Recommended hose dia. (mm)		
								Air supply (P)	Vacuum (V)	Exhaust (E)
ABX	10×2	4.5-6.0	92	32×2	87 - 96	60 - 63	67	6	6	G3/8×1
	10×3			32×3	130 - 145	63 - 65	80	6		G3/8×1
	10×4			32×4	173 - 193	63 - 65	247	8		G3/8×1
	10×5			32×5	215 - 241	63 - 65	255	8		G3/8×1
	10×6			32×6	260 - 288	63 - 65	281	10		G3/8×2
	10×7			32×7	303 - 337	63 - 65	299	10		G3/8×2
	10×8			32×8	346 - 385	63 - 65	327	10		G3/8×2
	10×9			32×9	389 - 433	63 - 65	345	12		G3/8×2
	10×10			32×10	433 - 481	63 - 65	363	12		G3/8×2
	10×11			32×11	476 - 529	63 - 65	381	12		G3/8×2
	10×12			32×12	519 - 578	63 - 65	399	12		G3/8×2



Dimensions (mm)



Model	Vacuum stack	5			10			Air supply port	Vacuum port	Exhaust port
		H ₁	H ₂	L	H ₁	H ₂	L			
ABM	4	113	39	—	113	39	—	G1/4	Φ6 Hose fitting	External silencer
ABX	5	121	47	—	121	47	—			
	6	128	54	—	128	54	64			
	7	135	61	—	135	61	64			
	8	142	68	—	142	68	64			
	9	150	76	—	150	76	64			
	10	157	83	—	157	83	64			
	11	164	90	—	164	90	64			
	12	172	98	64	172	98	64			
	13	179	105	64	—	—	—			
	14	186	112	64	—	—	—			
	15	194	120	64	—	—	—			
	16	201	127	64	—	—	—			



Features

- ◇ Integrated with vacuum control, breaking control, breaking adjustment, filter and silencer.
- ◇ Multistage nozzle makes more efficient use of compressed air.
- ◇ Light and thin design, easy to install.
- ◇ Various of combination of control valve and vacuum switch are available.
- ◇ Digital vacuum monitoring unit is available, LED display, easy adjustment.
- ◇ Optional ZCE series vacuum control unit, which can be used in conjunction with digital vacuum monitoring unit to maintain the required vacuum value, minimizing air consumption.

How to order

ASM 05 - NC - N E

① ② ③ ④ ⑤

① Series	② Specification	③ Control valve	④ Vacuum switch	⑤ Vacuum control unit
ASM - Universal type (-85kPa)	05 10	NC - Normally closed NO - Normally open	Nil - Without vacuum switch N - Vacuum switch (-100~0 kPa),2NPN	Nil - Without vacuum control unit
ASX - High vacuum level type (-92kPa)	15 20	Voltage: DC24V Power: 2.5W Operating temperature: -10~50°C Air supply pressure: 0-7bar	P - Vacuum switch (-100~0 kPa),2PNP (Refer to ZPDB Series on page G26.)	E - With vacuum control unit (Refer to ZCE Series on page G29.)

Technical parameters

Model	Specification	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight (g)
ASM	05	4 - 6	85	48	32 - 42	65 - 70	250
	10			85	40 - 75		
	15			115	70 - 90		
	20			132	96 - 122		
ASX	05	4 - 6	92	46	24 - 30	65 - 70	250
	10			72	45 - 78		
	15			103	70 - 92		
	20			110	98 - 125		

◇Note: Optimal air supply pressure: 4.5bar.

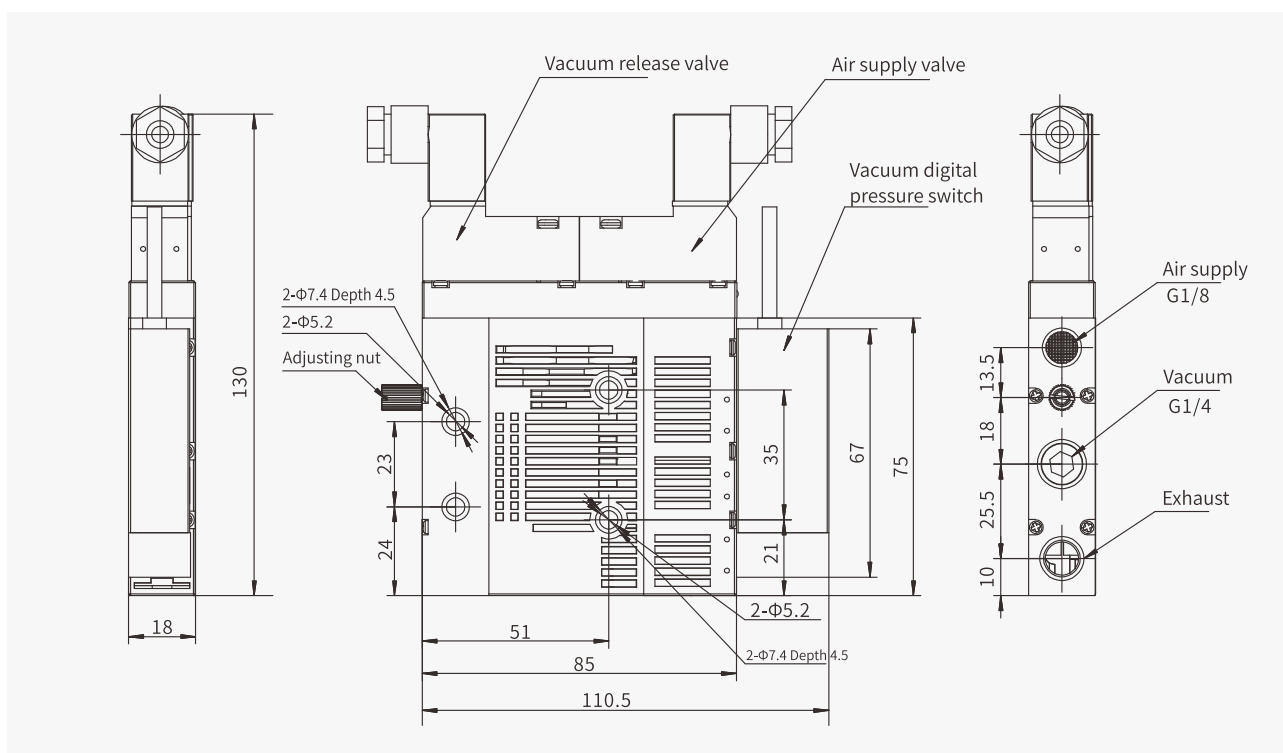
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Specification	Air supply pressure (bar)	0	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ASM	05	4.5	41	20	12	10	8.5	7	4.5	2.6	0.5	-	85
	10		75	48	25	19	15	12	7	2.5	0.8	-	
	15		102	65	41	28	22	18	12	5	1.5	-	
	20		120	74	45	35	27	22	16	9	2.5	-	
ASX	05	4.5	38	19	11	7.5	6	5	3.8	2.7	1.6	0.3	92
	10		58	25	18	15	12	10	7	5	2	0.5	
	15		75	48	27	20	16	13	10	7	3.7	1	
	20		95	54	32	28	22	18	15	9	4.6	1.8	

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

Model	Specification	Air supply pressure (bar)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
ASM	05	4.5	0.12	0.36	0.9	1.4	2.2	3.4	4.2	7	-	85
	10		0.1	0.31	0.56	0.9	1.5	2.3	3.2	4.7	-	
	15		0.07	0.25	0.43	0.76	1.2	1.9	2.6	4	-	
	20		0.05	0.14	0.32	0.68	0.98	1.6	2.1	2.8	-	
ASX	05	4.5	0.15	0.5	1.1	1.8	2.6	3.8	5.2	7	12	92
	10		0.12	0.38	0.75	1.4	1.8	2.5	3.2	4.8	9	
	15		0.1	0.28	0.47	0.76	1.2	2	2.7	3.5	7.5	
	20		0.09	0.18	0.36	0.6	0.9	1.3	2	2.6	5.2	

Dimensions (mm)





How to order

ASM 05 × 8 E - NC - N E

① ② ③ ④ ⑤ ⑥ ⑦

① Series	② Specification	③ Vacuum stack	④ Air supply & Exhaust
ASM - Universal type (-85kPa) ASX - High vacuum level type (-92kPa)	05	2、 3	Nil - Concentrated air supply + Individual exhaust E - Concentrated air supply + concentrated exhaust
	10	4、 5	
	15	6、 7	
	20	8 (Layer)	
⑤ Control valve		⑥ Vacuum switch	⑦ Vacuum control unit
NC - Normally closed		Nil - None	Nil - None
NO - Normally open		N - Vacuum switch (-100~0 kPa),	E - With vacuum control unit (Refer to ZCE Series on page G29.)
Voltage: DC24V		2NPN Output	
Power: 2.5W		P - Vacuum switch (-100~0 kPa),	
Working temperature: -10~50℃		2PNP Output	
Air supply pressure: 0-7bar		(Refer to ZPDB Series on page G26.)	

Selection

Model	Specification	Vacuum stack	Air supply & Exhaust	Control valve		Vacuum switch			Vacuum control unit	
				NC	NO	Nil	N	P	Nil	E
ASM	05	2-8	Nil - Concentrated air supply + Individual exhaust	●	●	●	●	●	●	●
ASX	10	2-4	E - Concentrated air supply + concentrated exhaust							
	15									
	20									

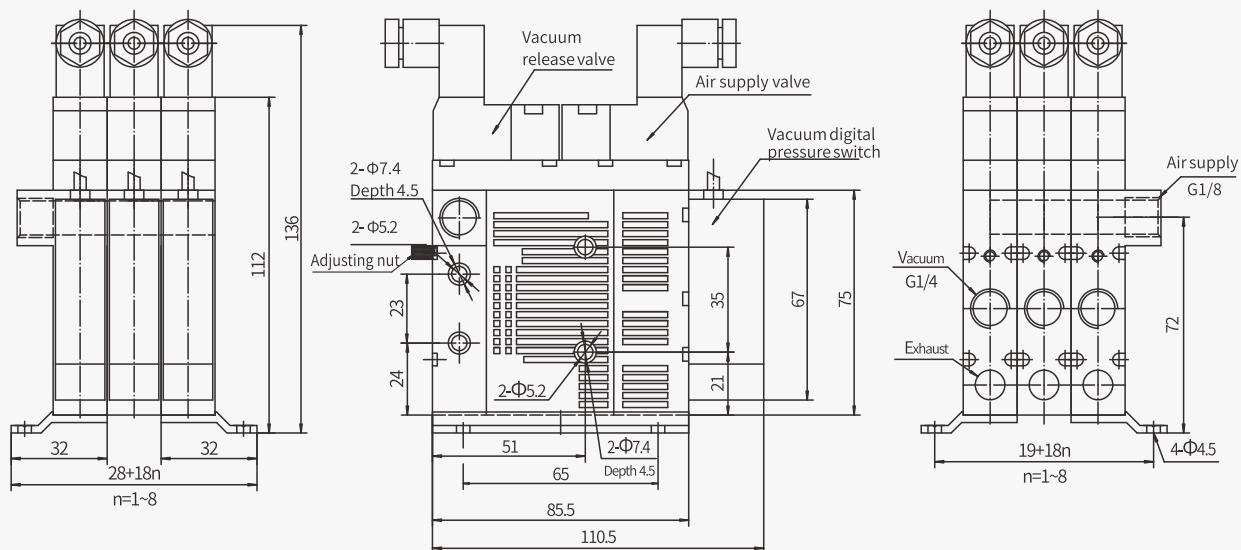
◇Note: "●"- standard, in stock.

Technical parameters

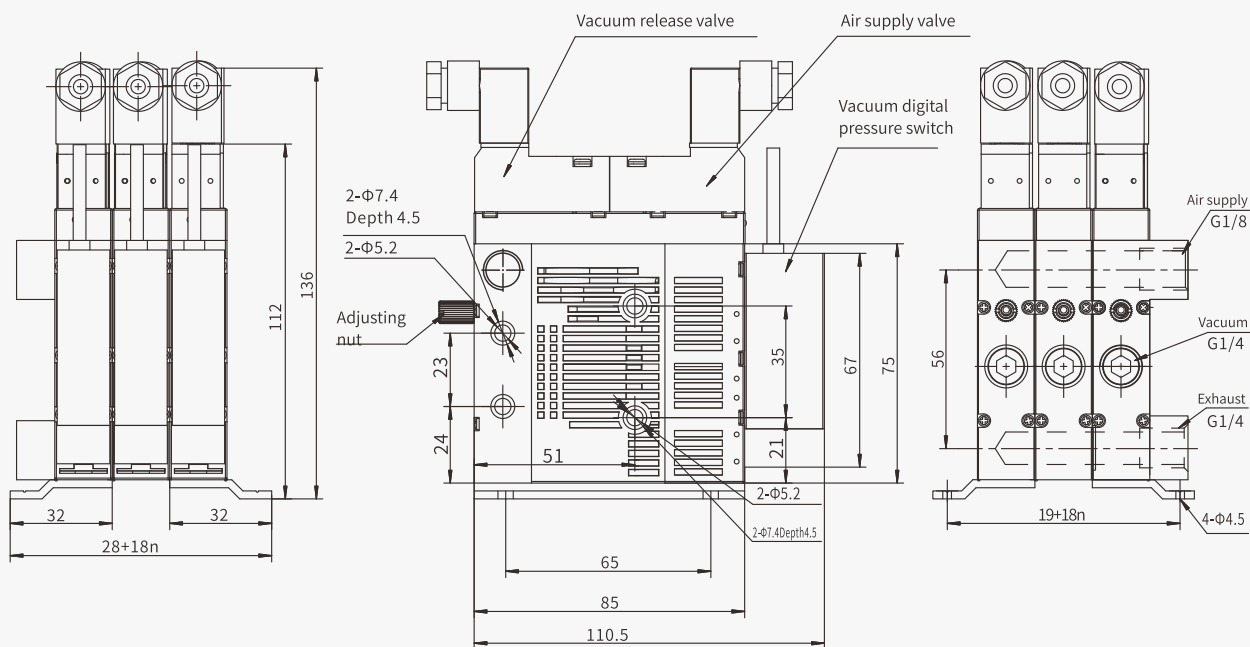
Model	Specification	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight (g)
ASM	05×2	4.5	85	48×2	61 - 85	65-70	500
	05×3			48×3	95 - 133		750
	05×4			48×4	143 - 169		1,000
	05×5			48×5	161 - 210		1,250
	05×6			48×6	193 - 253		1,500
	05×7			48×7	225 - 210		1,750
	05×8			48×8	256 - 335		2,000
	10×2	4.5	85	85×2	81 - 150	65-70	500
	10×3			85×3	121 - 225		750
	10×4			85×4	163 - 302		1,000
	10×5			85×5	202 - 376		1,250
	10×6			85×6	240 - 451		1,500
	10×7			85×7	281 - 523		1,750
	10×8			85×8	323 - 601		2,000
	15×2	4.5	85	115×2	142 - 179	65-70	500
	15×3			115×3	211 - 268		750
	15×4			115×4	283 - 355		1,000
	20×2	4.5	85	132×2	192 - 244	65-70	500
	20×3			132×3	288 - 365		750
	20×4			132×4	384 - 487		1,000
ASX	05×2	4.5	92	46×2	47-61	65-70	500
	05×3			46×3	71-89		750
	05×4			46×4	95-123		1,000
	05×5			46×5	119 - 154		1,250
	05×6			46×6	145 - 181		1,500
	05×7			46×7	169 - 212		1,750
	05×8			46×8	191 - 238		2,000
	10×2	4.5	92	72×2	91 - 153	65 - 70	500
	10×3			72×3	135 - 234		750
	10×4			72×4	183 - 312		1,000
	10×5			72×5	225 - 392		1,250
	10×6			72×6	271 - 468		1,500
	10×7			72×7	315 - 546		1,750
	10×8			72×8	360 - 624		2,000
	15×2	4.5	92	103×2	140 - 184	65 - 70	500
	15×3			103×3	210 - 276		750
	15×4			103×4	280 - 368		1,000
	20×2	4.5	92	110×2	196 - 253	65 - 70	500
	20×3			110×3	294 - 375		750
	20×4			110×4	392 - 498		1,000

Dimensions (mm)

Concentrated air supply + Individual exhaust



Concentrated air supply+Concentrated exhaust





Features

- AM Series** ◇ Low air supply pressure, reach max. vacuum level at 3.4 bar.
◇ Optional energy-saving system(ES) or other control device.
◇ Suitable for occasions requiring large vacuum flow.
- AL Series** ◇ High vacuum flow
◇ Optional energy-saving system(ES) or other control device.
◇ Short evacuation time.
- AH Series** ◇ Especially for non-leakage and non-porous applications.

How to order

AM 25L - D - N - A - ES

① ② ③ ④ ⑤ ⑥

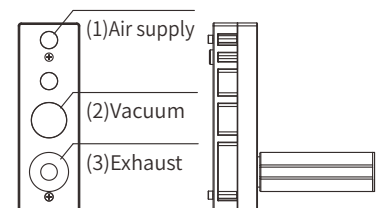
① Series	② Specification			③ Connection plate	④ Sealing
AM - Universal type (-92kPa)	25L	50L	75L	D	N - NBR
	100L	125L	150L	B	E - EPDM
AL - Flow type (-81kPa)	25	50	75	AD	F - Fluorine rubber
	100	125	150	E	
AH - High vacuum level type (-100.8kPa)	40	120		(Refer to table ①)	

⑤ Non-return valve

- Nil** - Standard, without non-return valve
A - With non-return valve

⑥ Control device

- Nil** - Standard, without control device
PD - Electric control air supply
PQ - Pneumatic control air supply
VD - Electric control vacuum breaking
VQ - Pneumatic control vacuum breaking
PVD - Electric control(air supply+vacuum breaking) Combination
PVQ - Pneumatic control(air supply+vacuum breaking) Combination
ES - Energy-saving system



Connection plate table ①

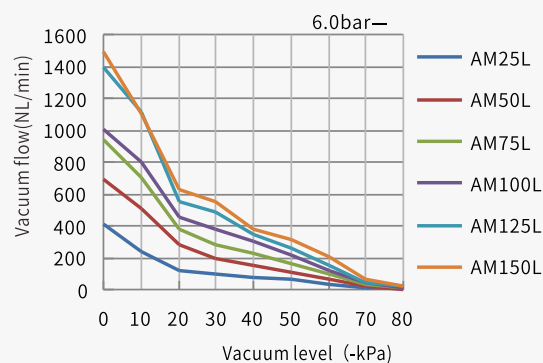
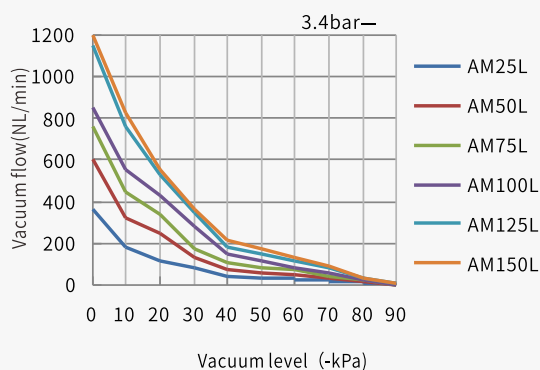
Model	Specification	Connection plate	Air supply(1)	Vacuum(2)	Exhaust(3)	Connection plate material
AM AL	25- 100	D	NPSF1/8	G3/4	G3/4	PPS
		B	NPSF1/8	NPT3/4	NPT3/4	PPS
		AD	G1/4	G3/4	G3/4	Aluminum alloy
		E	NPT1/4	NPT3/4	NPT3/4	Aluminum alloy
AM AL	125-150	D	G1/4	G1"	G1"	PPS
		B	NPT1/4	NPT1"	NPT1"	PPS
		AD	G1/4	G1"	G1"	Aluminum alloy
		E	NPT1/4	NPT1"	NPT1"	Aluminum alloy
AH	40-120	D	NPSF1/8	G3/4	G3/4	PPS
		B	NPSF1/8	NPT3/4	NPT3/4	PPS
		AD	G1/4	G3/4	G3/4	Aluminum alloy
		E	NPT1/4	NPT3/4	NPT3/4	Aluminum alloy

AM/AL/AH Technical parameters

Model	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. vacuum flow (NL/min)	Max. air consumption (NL/min)	Weight (g)	Noise level dB(A)	Recommended hose dia. (mm)	
							(Hose outer dia.) Air supply	(Wired hose inner dia.) Vacuum
AM25L	3.4	92	360	116	675	80	8	19
AM50L			600	230	675	81	10	19
AM75L			760	365	837	81	10	25
AM100L			850	445	837	81	10	25
AM125L			1,150	545	1,075	82	12	32
AM150L			1,200	655	1,075	82	12	32
AM25L	6.0	89	420	185	675	80	8	19
AM50L			700	370	675	81	10	19
AM75L			950	610	837	81	10	25
AM100L			1,010	720	837	81	10	25
AM125L			1,400	780	1,075	82	12	32
AM150L			1,500	810	1,075	82	12	32
AL25	6.0	81	360	105	675	81	8	19
AL50			640	215	675	81	10	19
AL75			850	320	837	81	10	25
AL100			990	390	837	82	10	25
AL125			1,170	480	1,075	82	12	32
AL150			1,230	620	1,075	81	12	32
AH40	6.0	99.8	150	155	675	81	10	19
AH120		100.8	530	440	837	81	12	19

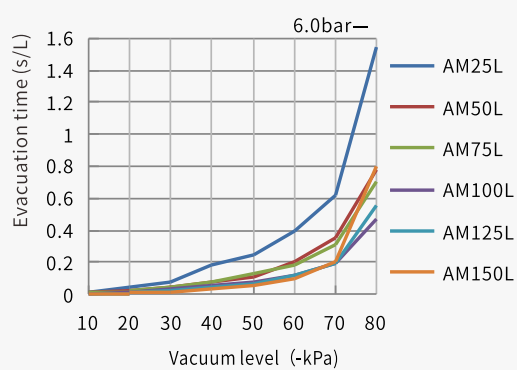
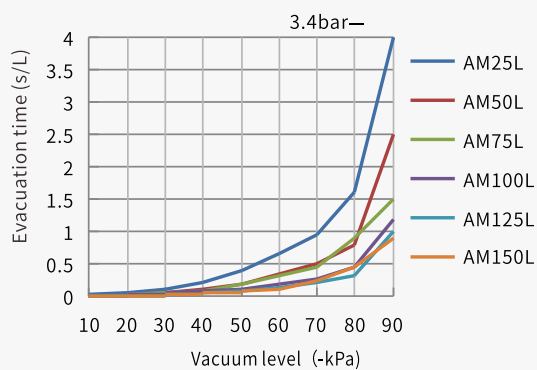
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption 0 (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)	
AM25L	3.4	116	360	180	115	80	43	30	22.5	15.5	7.5	21.2	92
AM50L		230	600	320	250	135	75	60	46	30	13	1.5	
AM75L		365	760	445	340	175	110	85	70	43	20	1.8	
AM100L		445	850	550	430	280	145	115	85	60	28	2.2	
AM125L		545	1,150	760	530	350	180	148	115	78	34.5	3.5	
AM150L		655	1,200	830	550	360	215	170	130	90	36	5	
AM25L	6.0	185	420	240	125	100	82	65	38	12.5	3.5	—	89
AM50L		370	700	510	290	195	160	115	70	22	8	—	
AM75L		610	950	710	380	285	230	170	100	32	11	—	
AM100L		720	1,010	800	460	385	310	215	125	42	15.5	—	
AM125L		780	1,400	1,120	560	490	355	260	150	50	25	—	
AM150L		810	1,500	1,110	630	560	385	315	210	65	26	—	



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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
AM25L	3.4	116	0.022	0.06	0.11	0.21	0.4	0.65	0.95	1.6	4	92
AM50L		230	0.014	0.031	0.06	0.1	0.2	0.34	0.5	0.8	2.5	
AM75L		365	0.012	0.029	0.058	0.095	0.18	0.31	0.46	0.89	1.5	
AM100L		445	0.01	0.025	0.043	0.075	0.11	0.19	0.27	0.45	1.2	
AM125L		545	0.006	0.015	0.029	0.052	0.085	0.145	0.202	0.33	1	
AM150L		655	0.005	0.013	0.027	0.045	0.07	0.105	0.23	0.46	0.9	
AM25L	6.0	185	0.018	0.05	0.08	0.018	0.25	0.4	0.62	1.55	—	89
AM50L		370	0.01	0.022	0.048	0.08	0.11	0.2	0.35	0.78	—	
AM75L		610	0.009	0.019	0.045	0.075	0.13	0.18	0.31	0.7	—	
AM100L		720	0.007	0.018	0.038	0.055	0.08	0.12	0.19	0.47	—	
AM125L		780	0.005	0.013	0.026	0.045	0.062	0.115	0.194	0.56	—	
AM150L		810	0.003	0.009	0.014	0.03	0.06	0.095	0.2	0.8	—	

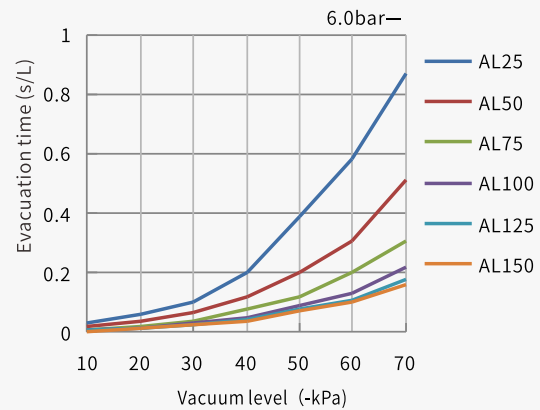
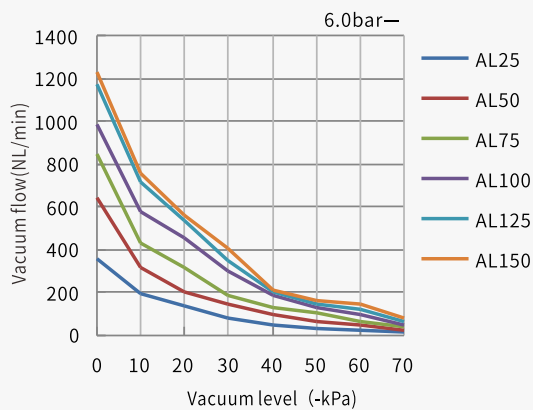


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	Max. vacuum level (-kPa)
AL25	6.0	105	360	196	135	85	45	36	27	17	81
AL50		215	640	320	205	145	95	65	45	25	
AL75		320	850	430	320	190	130	105	65	40	
AL100		390	990	580	460	300	185	130	95	52	
AL125		480	1,170	720	541	350	200	150	125	65	
AL150		620	1,230	760	560	410	210	160	148	85	

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	Max. vacuum level (-kPa)
AL25	6.0	105	0.03	0.06	0.1	0.2	0.39	0.58	0.87	81
AL50		215	0.018	0.039	0.066	0.12	0.2	0.31	0.51	
AL75		320	0.01	0.02	0.04	0.08	0.12	0.2	0.31	
AL100		390	0.008	0.017	0.032	0.05	0.09	0.13	0.22	
AL125		480	0.006	0.016	0.026	0.045	0.078	0.11	0.18	
AL150		620	0.005	0.014	0.024	0.04	0.071	0.1	0.16	

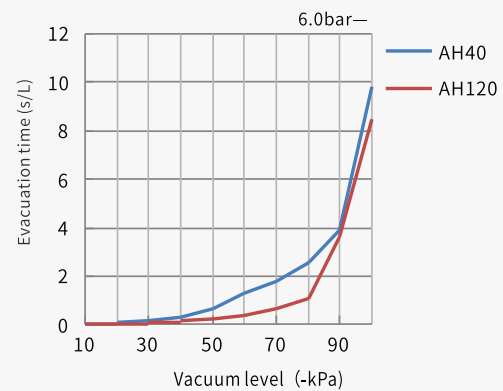
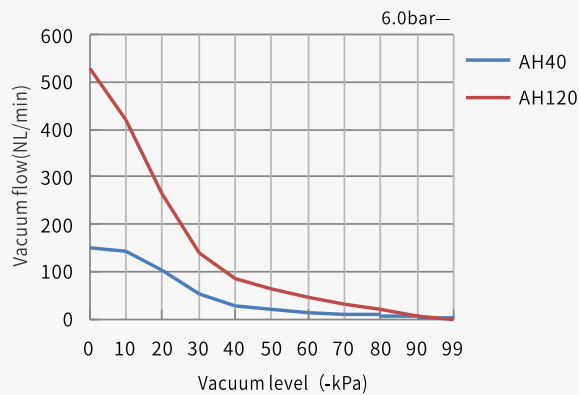


Vacuum flow (NL/min) at different vacuum levels (-kPa)

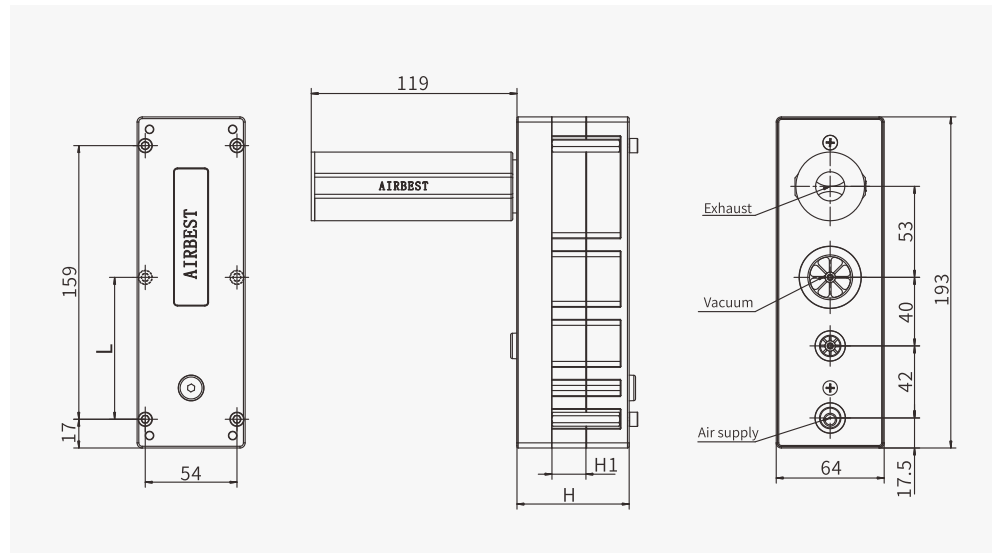
Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	90	99	Max. vacuum level (-kPa)
AH40	6.0	155	150	145	105	52.5	27.5	20.5	15	8.5	5.5	3	0.2	99.8
AH120	6.0	440	530	420	265	141	85	65	45	33	21.5	6	0.5	100.8

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	99	Max. vacuum level (-kPa)
AH40	6.0	155	0.035	0.08	0.18	0.32	0.64	1.3	1.8	2.6	3.9	9.8	99.8
AH120	6.0	440	0.02	0.04	0.08	0.14	0.25	0.38	0.66	1.08	3.6	8.5	100.8

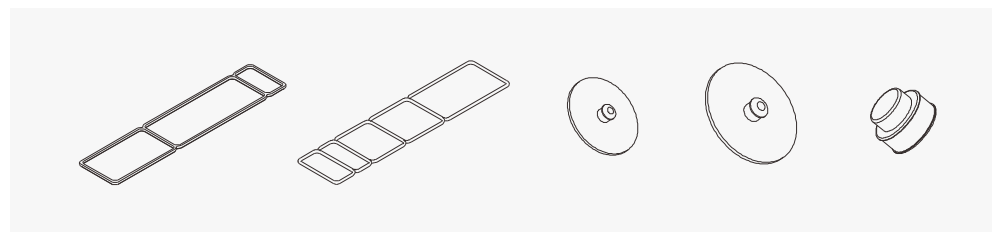


Dimensions (mm)



Model/Size	H	H1	L
AM25-50L	45	—	—
AL25-50			
AH40			
AM75-100L	65	20	—
AL75-100			
AH120			
AM125-150L	85	40	82.7
AL125-150			

Repair kits



Model	Specification	Sealing Nil F E	Repair kits code	Applicable vacuum pump
AM	50L	● ○ ○	PK	AM25L, 50L; AL25, 50; AH40
	100L	● ○ ○		AM75L, 100L; AL75, 100; AH120
	125L	● ○ ○		AM125L, AL125
	150L	● ○ ○		AM150L, AL150

Example: AM100L-E-PK

◇ Note: "●"-standard, in stock. "○"-selective, no stock.



Features

- ◇ Large-flow vacuum pumps are suitable for vacuum system of high leakage and porous material and large vacuum circuit.
- ◇ AH combined type vacuum pump produces high vacuum level while maintaining good flow rate for short reaction time.

How to order

AM 200M P - N - A

① ② ③ ④ ⑤

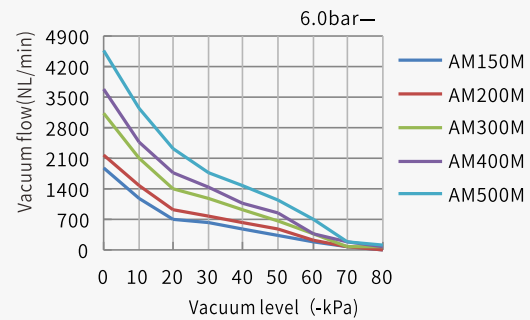
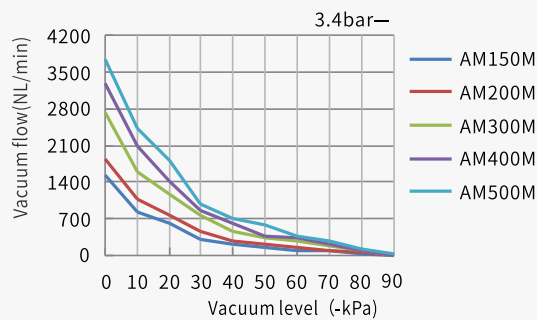
① Series	② Specification	③ Exhaust type	④ Sealing	⑤ Non-return valve
AM - Universal type (-92kPa)	150M 200M 300M 400M	Nil - Standard P - Lateral exhaust	Nil - NBR E - EPDM F - Fluorine rubber	Nil - Standard, without non-return valve A - With non-return valve
AL - Flow type (-81kPa)	500M			
AH - High vacuum level type (-100.5kPa)	240M 480M			

Technical Parameters

Model	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Max. air consumption (NL/min)	Weight (g)	Noise level dB(A)	Recommended hose dia. (mm)	
							(Hose outer dia.) Air supply	(Wired hose inner dia.) Vacuum
AM150M	3.4	92	1,550	720	3,724	80	16	32
AM200M			1,840	930	3,892	81	16	32
AM300M			2,750	1,420	5,525	81	16	45
AM400M			3,290	1,680	6,447	81	16	45
AM500M			3,740	2,440	7,929	82	16	60
AM150M	6.0	89	1,880	1,120	3,724	80	16	32
AM200M			2,200	1,460	3,892	81	16	32
AM300M			3,150	2,200	5,525	81	16	45
AM400M			3,710	2,790	6,447	81	16	60
AM500M			4,570	3,520	7,929	82	16	60
AL150M	6.0	81	1,660	650	3,724	80	16	32
AL200M			1,950	830	3,892	81	16	32
AL300M			2,840	1,240	5,525	81	21	45
AL400M			3,340	1,650	6,447	81	21	45
AL500M			3,970	2,100	7,929	82	16	60
AH240M	6.0	100.5	1,050	960	3,892	81	16	25
AH480M			2,040	1,860	6,447	81	16	32

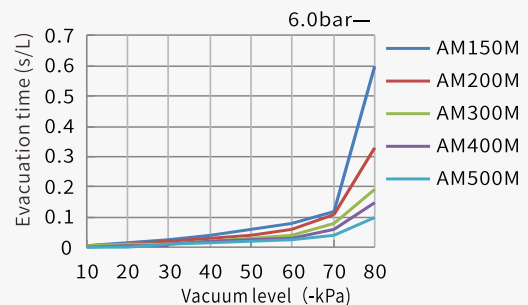
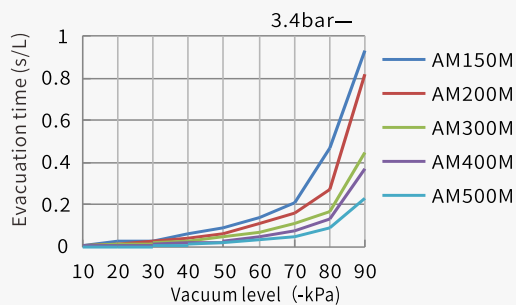
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption 0 (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)	
AM150M	3.4	720	1,550	840	610	315	205	150	95	80	36	2.5	92
AM200M		930	1,840	1,090	770	470	280	210	155	95	50	4	
AM300M		1,420	2,750	1,610	1,160	760	470	325	270	185	80	7.5	
AM400M		1,680	3,290	2,080	1,420	870	620	372	335	215	100	11.5	
AM500M		2,440	3,740	2,420	1,800	970	710	590	360	270	130	15.5	
AM150M	6.0	1,120	1,880	1,210	730	640	490	340	200	75	25	—	89
AM200M		1,460	2,200	1,490	930	800	650	490	245	85	11	—	
AM300M		2,290	3,150	2,100	1,410	1,180	930	660	365	105	75	—	
AM400M		2,790	3,710	2,480	1,800	1,450	1,100	870	370	195	80	—	
AM500M		3,250	4,570	3,240	2,330	1,800	1,470	1,140	700	205	115	—	



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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	Max. vacuum level (-kPa)
AM150M	3.4	720	0.009	0.02	0.03	0.06	0.09	0.14	0.21	0.47	0.93	92
AM200M		930	0.006	0.016	0.028	0.04	0.06	0.11	0.16	0.27	0.82	
AM300M		1,420	0.004	0.014	0.02	0.03	0.05	0.07	0.11	0.17	0.45	
AM400M		1,680	0.004	0.01	0.015	0.023	0.03	0.05	0.08	0.13	0.37	
AM500M		2,440	0.002	0.005	0.008	0.01	0.022	0.04	0.06	0.1	0.25	
AM150M	6.0	1,120	0.007	0.017	0.026	0.04	0.06	0.08	0.12	0.6	—	89
AM200M		1,460	0.005	0.012	0.022	0.03	0.04	0.06	0.11	0.33	—	
AM300M		2,290	0.004	0.01	0.013	0.023	0.03	0.04	0.08	0.19	—	
AM400M		2,790	0.003	0.008	0.012	0.02	0.025	0.03	0.06	0.15	—	
AM500M		3,250	0.002	0.005	0.008	0.015	0.02	0.027	0.05	0.12	—	

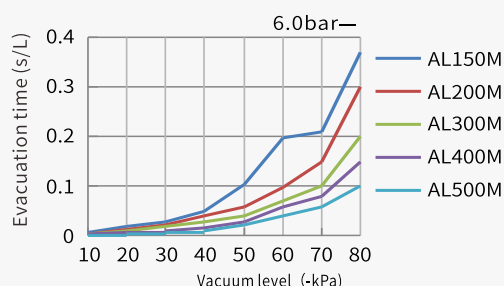
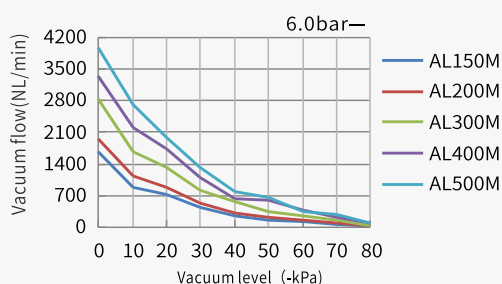


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AL150M	6.0	650	1,660	870	720	450	240	160	115	70	32	81
AL200M		830	1,950	1,140	870	520	305	230	160	105	38	
AL300M		1,240	2,840	1,660	1,330	810	580	360	265	155	45	
AL400M		1,650	3,340	2,200	1,730	1,110	630	590	370	225	80	
AL500M		2,100	3,970	2,710	1,990	1,320	790	660	360	270	92	

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AL150M	6.0	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	
AL300M		1,240	0.004	0.011	0.018	0.03	0.04	0.07	0.1	0.2	
AL400M		1,650	0.003	0.008	0.01	0.15	0.03	0.06	0.08	0.15	
AL500M		2,100	0.002	0.005	0.008	0.01	0.022	0.04	0.06	0.1	

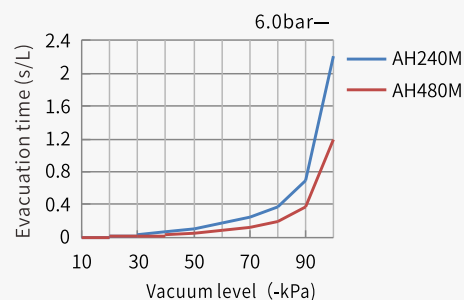
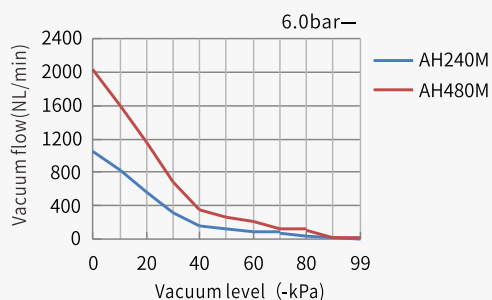


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	90	95	99	Max. vacuum level (-kPa)
AH240M	6.0	960	1,050	820	560	310	155	125	85	70	39	20	8	1.3	100.5
AH480M		1,860	2,040	1,600	1,150	690	345	270	210	120	110	19	15	2.5	

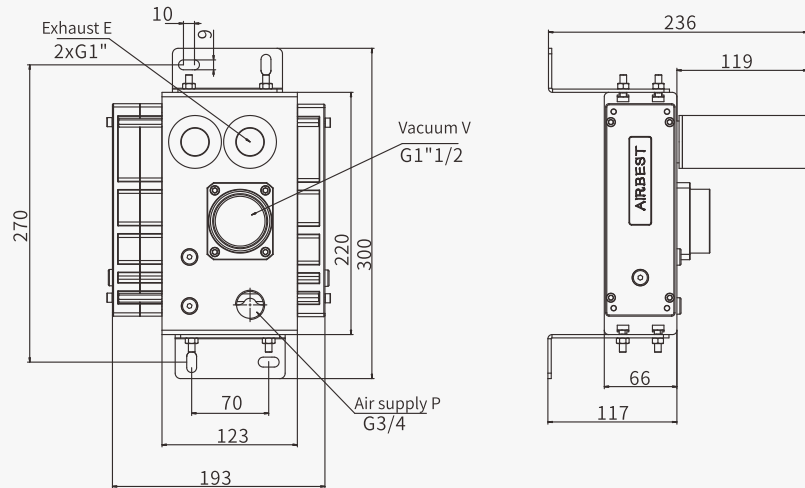
Evacuation time (s/L) to reach different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	90	95	99	Max. vacuum level (-kPa)
AH240M	6.0	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		1,860	0.004	0.01	0.02	0.03	0.05	0.08	0.13	0.2	0.37	0.55	0.12	

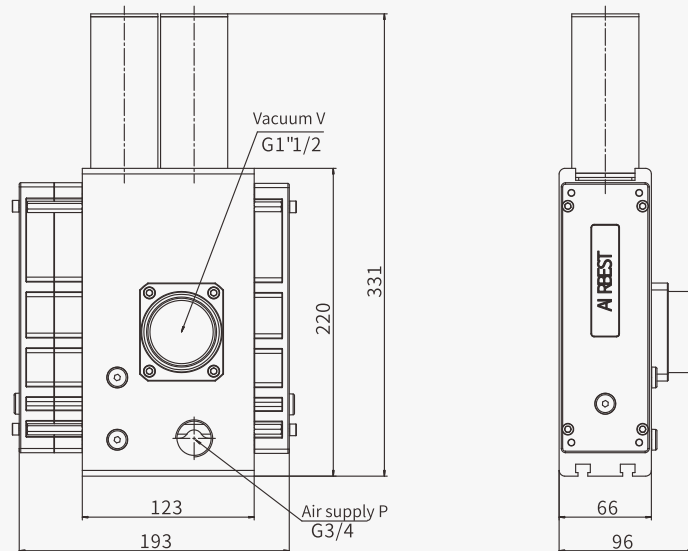


Dimensions (mm)

Standard
AM150M
AL150M

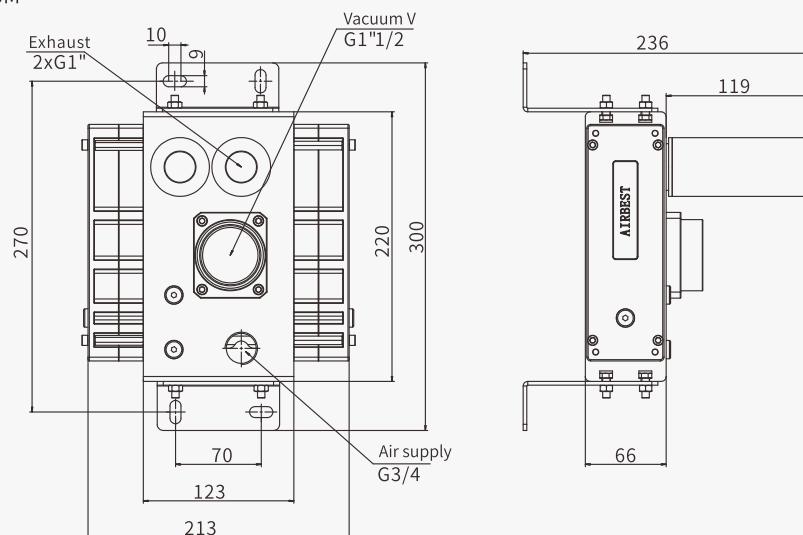


Lateral exhaust
AM150MP
AL150MP

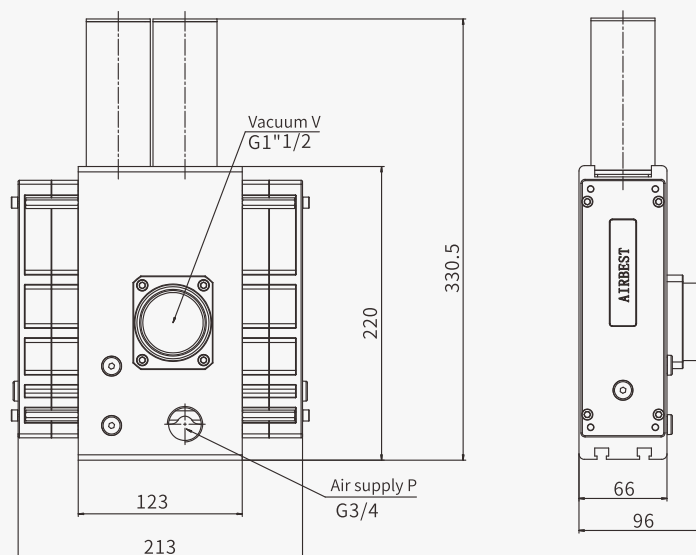


Dimensions (mm)

Standard
AM200M
AL200M
AH240M

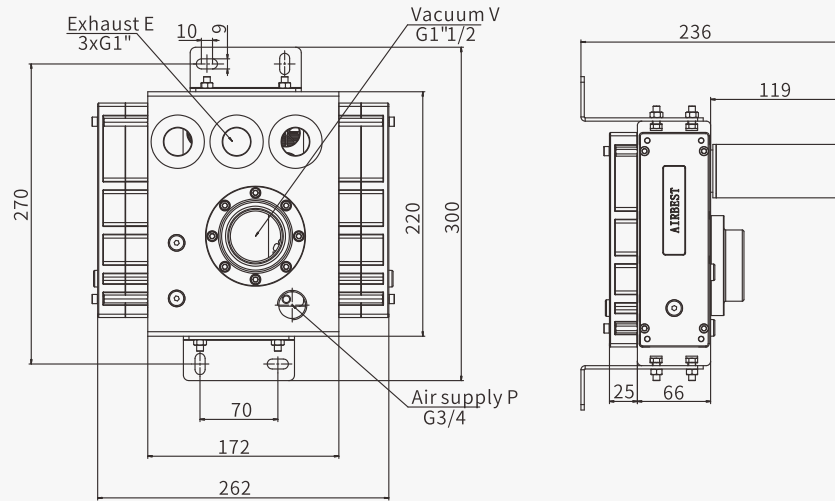


Lateral exhaust
AM200MP
AL200MP
AH240MP

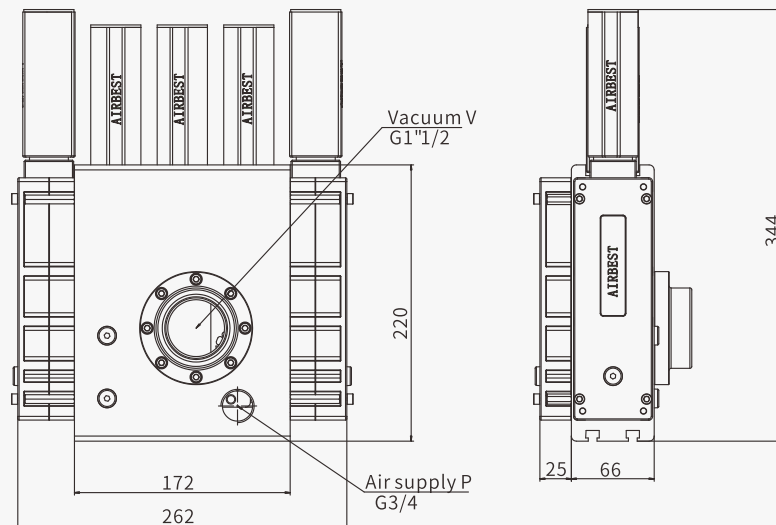


Dimensions (mm)

Standard
AM300M
AL300M



Lateral exhaust
AM300MP
AL300MP



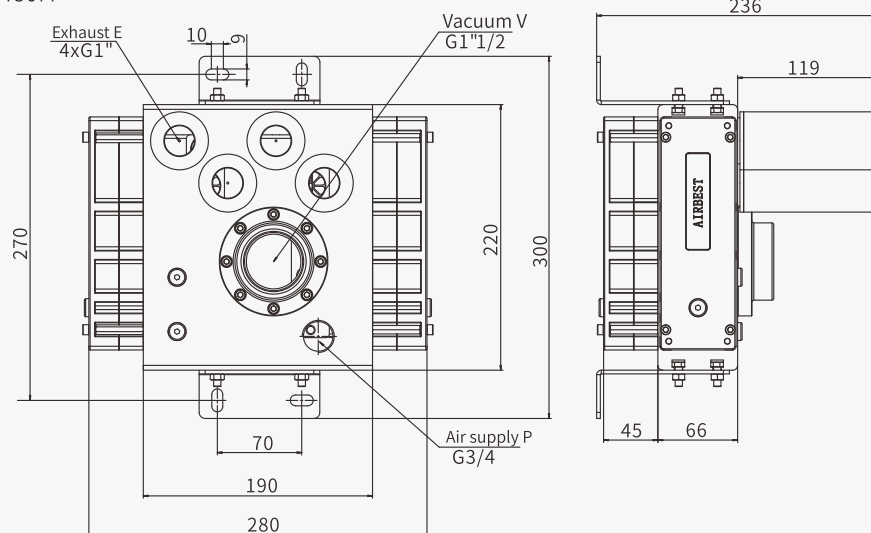
Dimensions (mm)

Standard

AM400M

AL400M

AH480M

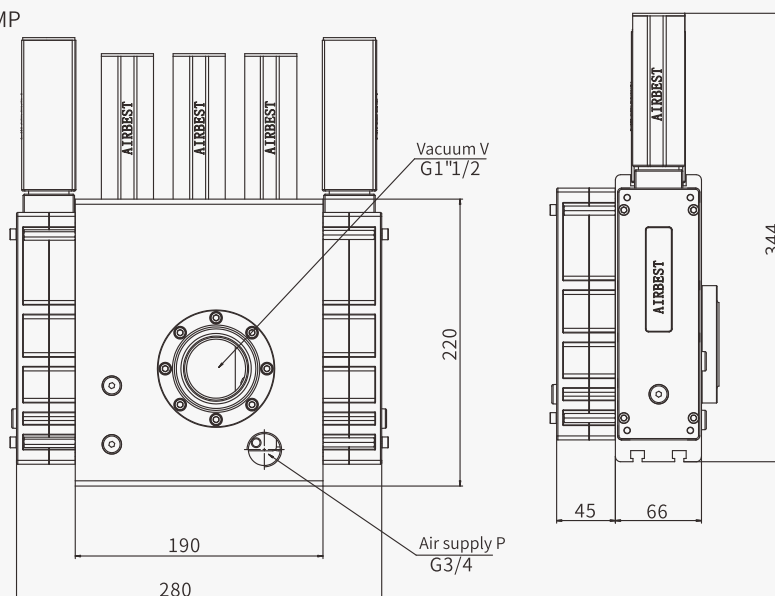


Lateral exhaust

AM400MP

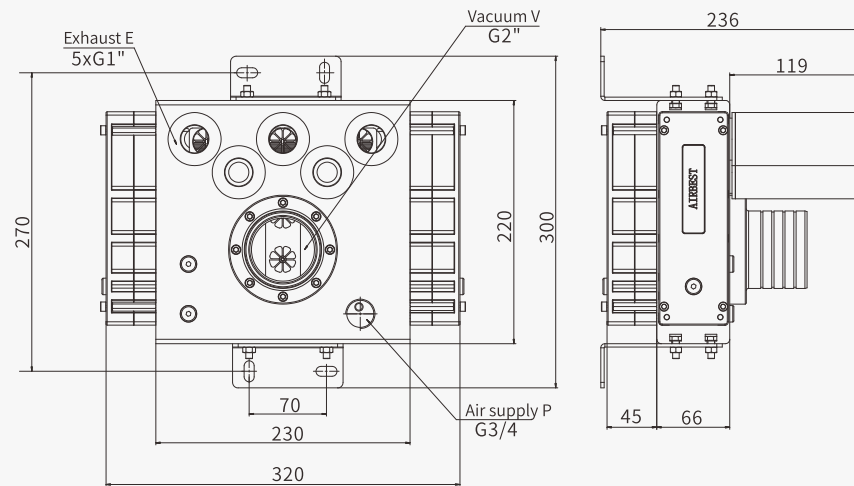
AL400MP

AH480MP

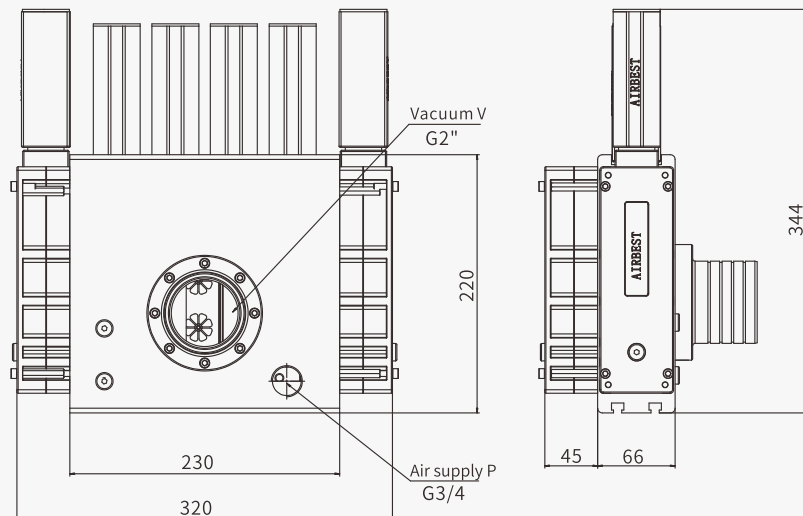


Dimensions (mm)

Standard
AM500M
AL500M



Lateral exhaust
AM500MP
AL500MP





Features

- ◇ Adopt 3 levels rise pressure pipe, enhancing vacuum flow and saving air consumption.
- ◇ Optional solenoid valve and vacuum pressure switch.
- ◇ Internal vacuum filter and vacuum silencer. The filter element is replaceable.
- ◇ A variety of installation directions are available.

How to order

AZL 112- R - P - DVN

① ② ③ ④ ⑤

① Series	② Nozzle diameter	③ Exhaust specification	④ Control valve	⑤ Digital vacuum pressure switch
AZL	112 - 1 × ϕ 1.2 mm 212 - 2 × ϕ 1.2 mm	Nil - Standard, internal silencer R - Rc1/2, Port exhaust G - G1/2 Female thread, port exhaust	Nil - Without supply valve and release valve P - With supply valve A - With supply valve + release valve	Nil - Standard, without vacuum port NP - With vacuum port Rc1/8, without vacuum pressure switch DVN - Vacuum pressure switch (-100~0 kPa), 2NPN+V (1-5V) DVP - Vacuum pressure switch (-100~0 kPa), 2PNP+V (1-5V) DCN - Compound pressure switch (-100~100 kPa), 2NPN+V (1-5V) DCP - Compound pressure switch (-100~100 kPa), 2PNP+V (1-5V) (Refer to ZPDA Series on page 310-315.)

Selection

Model	Exhaust specification			Control valve			Pressure switch					
	Nil	R	G	Nil	P	A	Nil	NP	DVN	DVP	DCN	DCP
AZL112	●	○	○	●	○	●	●	●	●	●	○	○
AZL212	●	○	○	●	—	—	●	●	●	●	○	○

◇Note: "●"- standard, in stock. "○"-selective, no stock. "—"=unavailable.

Technical parameters

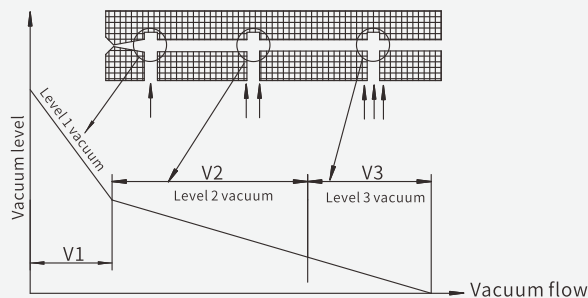
Model	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Operating temperature (°C)	Recommended hose dia. (mm)	
						Air supply (P)	Vacuum (V)
AZL112	4.0	84	100	63	5-50	6	12
AZL212	4.0	84	200	126	5-50	8	12

◇Note:Max. operating pressure 7bar,air supply pressure range 2-5bar.

Control valve specification

Type of actuation	Internal pilot type NC(normally closed)	Pilot exhaust type	Individual exhaust, concentrated exhaust
Operating pressure range	2~5bar	Lubrication	Not required
Rated voltage	24V	Mounting position	Unrestricted
Ambient and fluid temperature	5~50°C	Impact/Vibration resistance	150/30 m/s ²
Response time(at 0.5Mpa)	25ms or less	Enclosure	Dust-proof
Max. operating frequency	5Hz	Lead wire type	Direct lead out type, lead wire length 0.3m
Manual operation	Slotted locking type		

Energy-saving
3 levels rise pressure pipe design



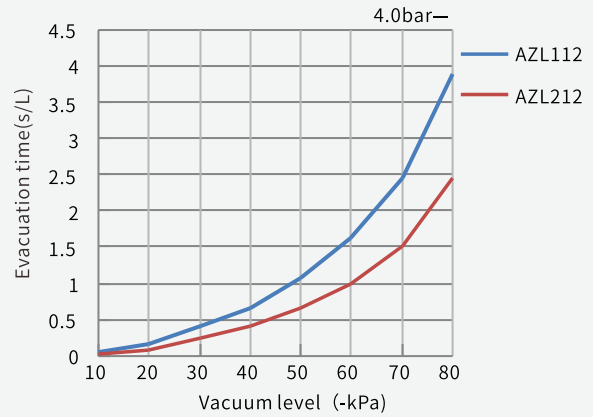
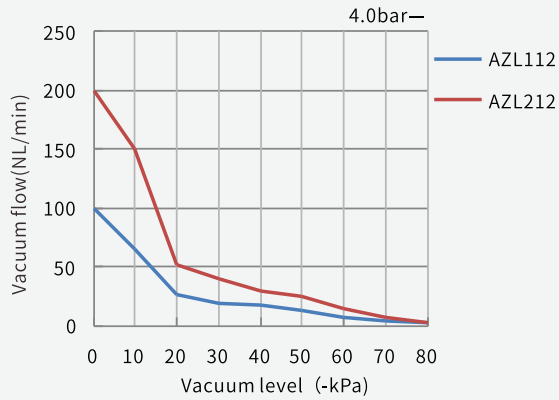
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AZL112	4.0	63	100	65	26	20	18.5	13	8	5	2.8	84
AZL212	4.0	126	200	150	52	40	30	25	15	8	3	84

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AZL112	4.0	63	0.05	0.17	0.4	0.67	1.07	1.63	2.46	3.9	84
AZL212	4.0	126	0.02	0.08	0.25	0.42	0.65	0.98	1.52	2.46	84

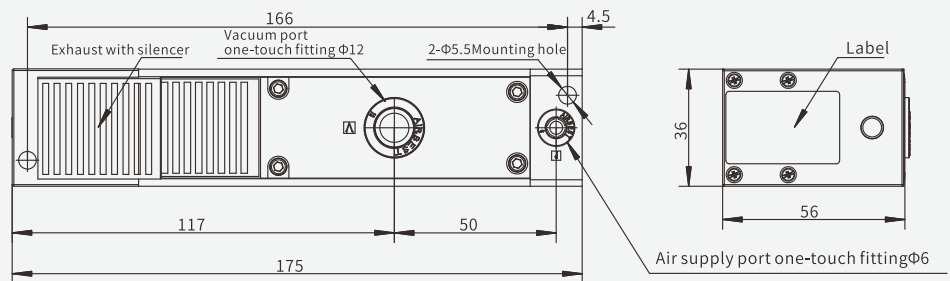
Technical parameters



Dimensions (mm)

Standard

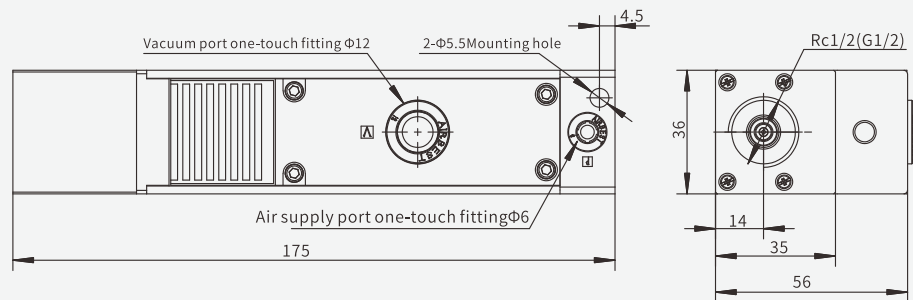
AZL112



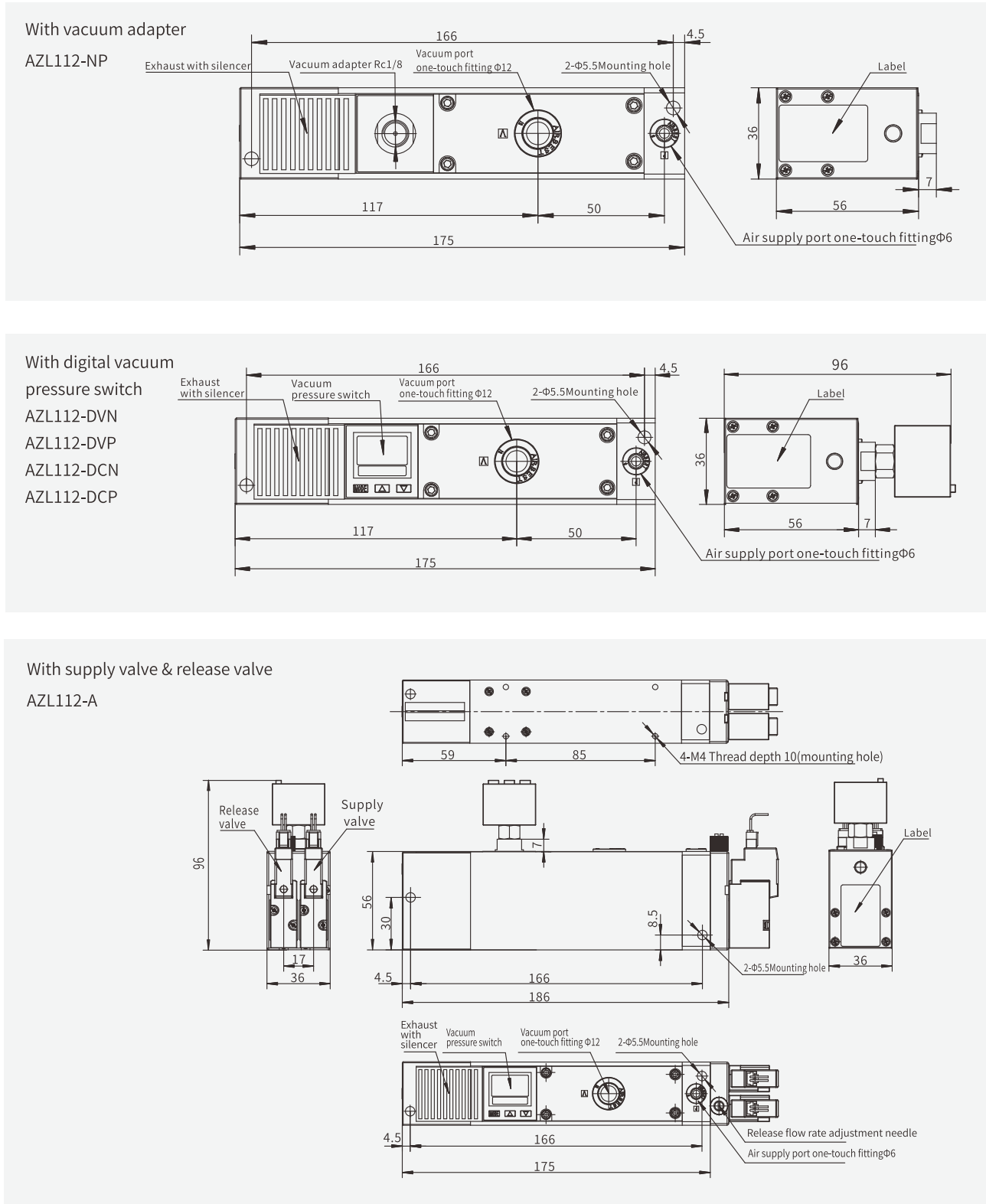
Port exhaust

AZL112-R

AZL112-G



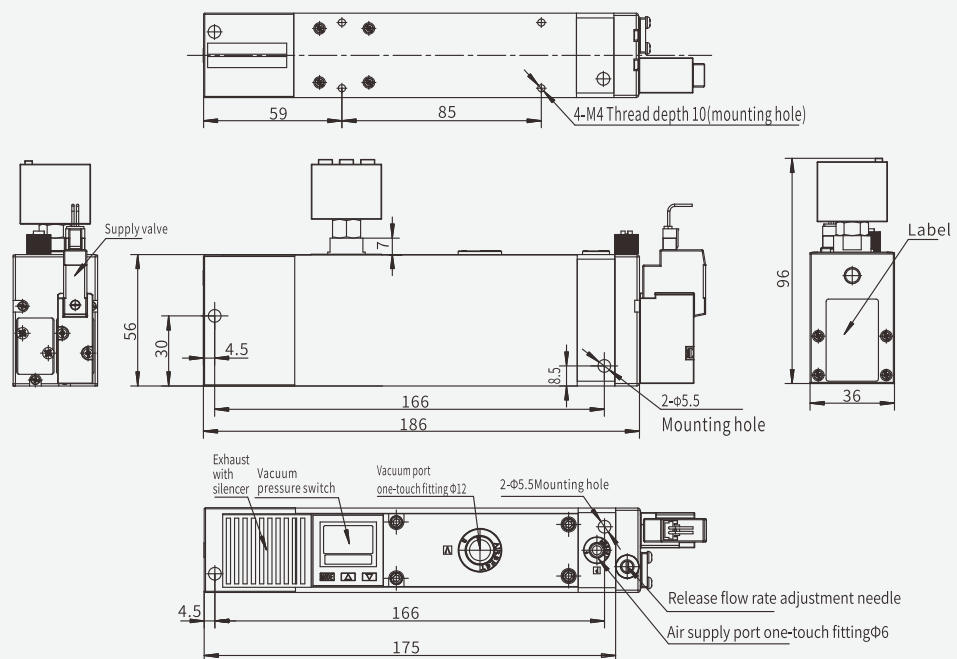
Dimensions (mm)



Dimensions (mm)

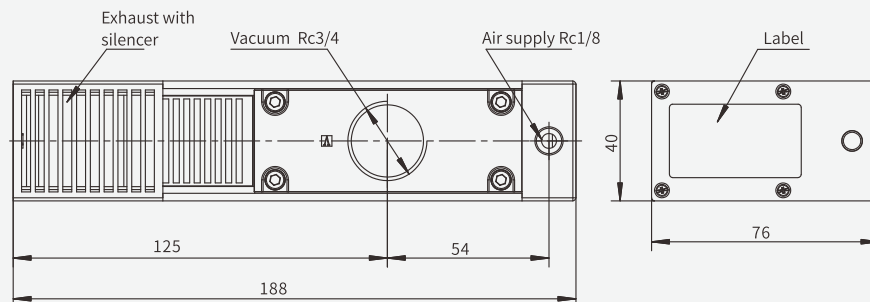
With supply valve

AZL112-P



Standard

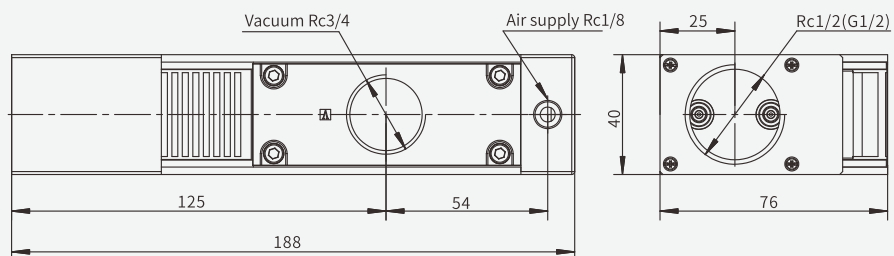
AZL212



Port exhaust

AZL212-R

AZL212-G



Dimensions (mm)

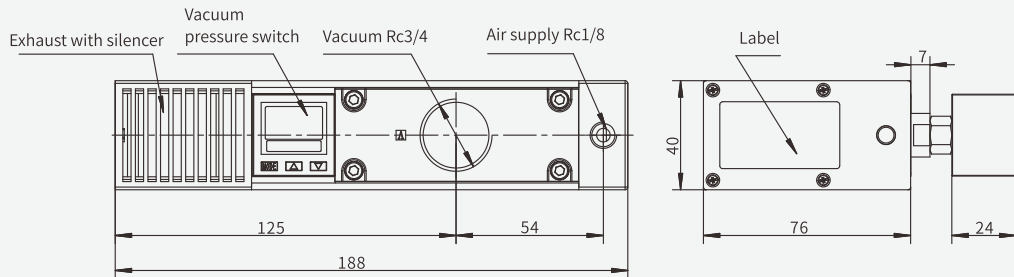
With digital vacuum pressure switch

AZL212-DVN

AZL212-DVP

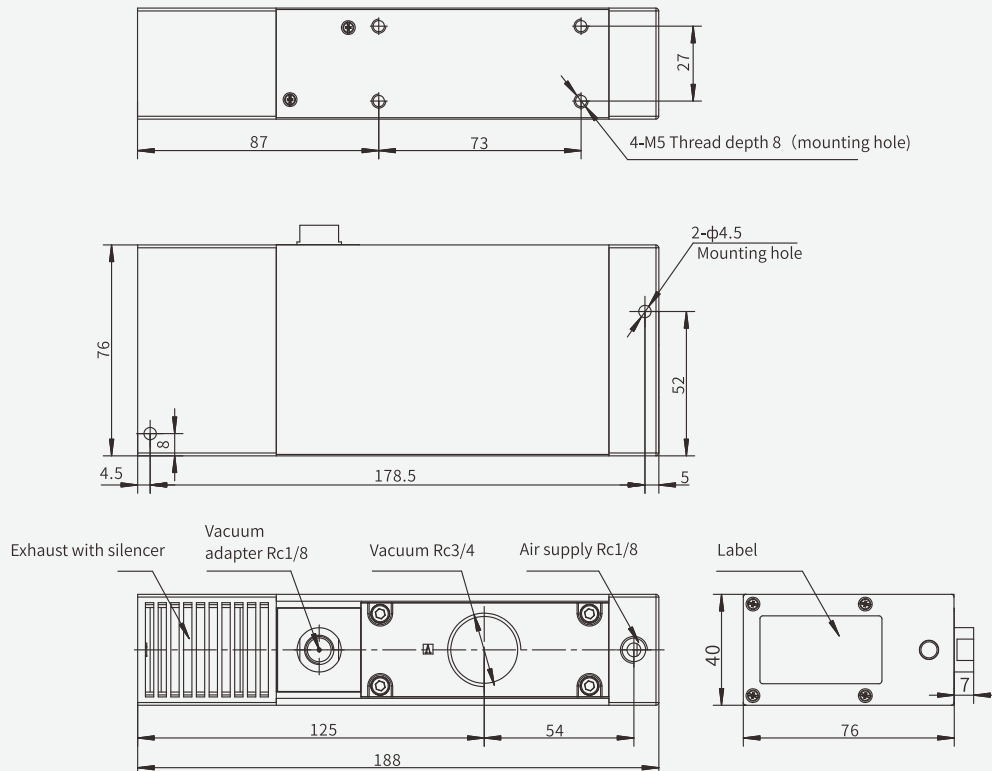
AZL212-DCN

AZL212-DCP



With vacuum adapter

AZL212-NP



ABM/ABX

ABM/ABX
Combined type

ASM/ASX

ASM/ASX
Combined type

AM/AL/AH

AM/AL/AH
Combined type

AZL

ACP

ACPF

ACPS

ACV

AQV

AZH

AZU

ASBP



Features

- ◇ Single stage vacuum pump which is capable of adjusting vacuum flow.
- ◇ Suitable for sucking or removal of particles or small debris.
- ◇ Various materials for different operating conditions.
- ◇ Available in different bore sizes, max flow can be achieved with in line bore size up to 19 mm

Applications

- ◇ Transferring materials
- ◇ Selvedge removal in trimming operation
- ◇ Transferring corn and wheat
- ◇ Transferring powder detergent, plastical powder and plastical particles
- ◇ Debris and powder removal in drilling operation
- ◇ Powder removal in grinding operation

How to order

ACP 250 S

① ② ③

① Series	② Specification	③ Material
ACP	250	Nil - Aluminum alloy 
	375	S - Stainless steel 
	500	
	750	

Selection

Model/Material	Aluminum alloy	Stainless steel
ACP250	●	○
ACP375	●	○
ACP500	●	○
ACP750	●	○

◇Note: "●"- standard, in stock. "○"-selective, no stock.

Technical parameters

Air consumption(NL/min) at different vacuum levels (-kPa)

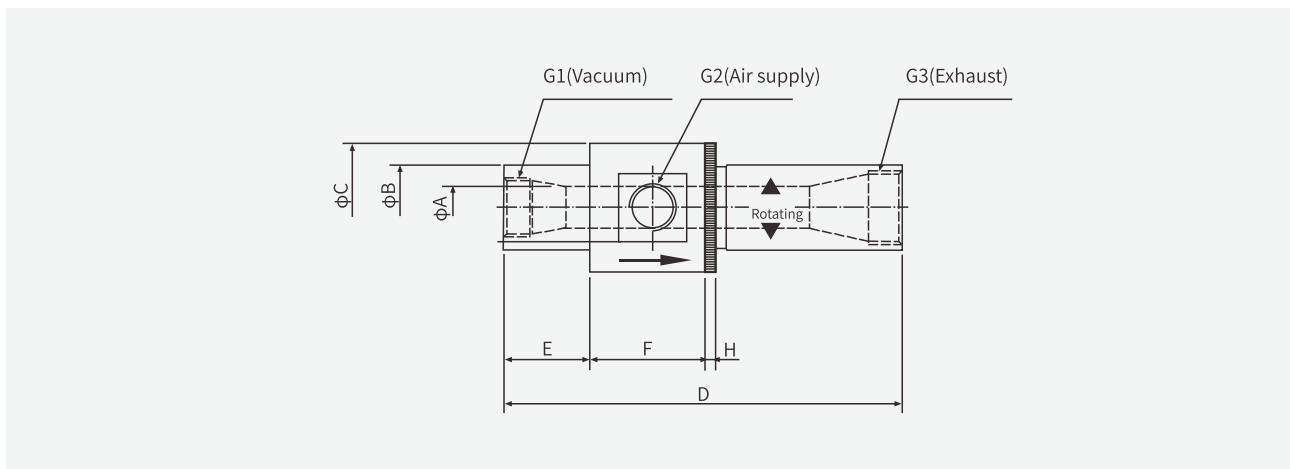
Model	Nozzle diameter (mm)	Air supply pressure (bar)	17	34	50	68	84	Weight(g)		Operating temperature(°C)
								Aluminum alloy	Stainless steel	
ACP250	6.5	5.5	112	169	233	276	342	100	296	-20~80
ACP375	10	5.5	176	327	485	595	825	286	846	-20~80
ACP500	13	5.5	340	625	795	940	1,280	401	1,189	-20~80
ACP750	19	5.5	650	875	1,250	1,790	2,550	540	1,599	-20~80

Vacuum flow (NL/min) to reach different vacuum levels (-kPa)

Model	Air supply pressure (bar)	17	34	50	68	84
ACP250	5.5	280	240	200	162	125
ACP375	5.5	846	735	620	520	395
ACP500	5.5	1,695	1,325	1,130	990	650
ACP750	5.5	3,390	2,460	1,970	1,440	1,130

◇Note:Air supply pressure range 4-6bar,max air supply pressure 7bar and max vacuum level -84kPa.

Dimensions (mm)



Model/Size	A	B	C	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"

ABM/ABX

ABM/ABX
Combined type

ASM/ASX

ASM/ASX
Combined type

AM/AL/AH

AM/AL/AH
Combined type

AZL

ACP

ACPF

ACPS

ACV

AQV

AZH

AZU

ASBP



Features

- ◇ Straight through design avoids blocking while transferring materials and easy to maintain. Suitable for transferring particles, powder and block objects.
- ◇ Available in different bore sizes, max flow can be achieved with in line bore size up to 19 mm
- ◇ Various materials for different operating conditions.

Applications

- ◇ Transferring material
- ◇ Transferring powder detergent, plastical powder and plastical particles
- ◇ Selvedge removal in trimming operation
- ◇ Debris and powder removal in drilling operation
- ◇ Transferring corn and wheat
- ◇ Powder removal in grinding operation

How to order

ACPF 2-3 S

① ② ③

① Series	② Specification	③ Material
ACPF	2- 3	Nil - Aluminum alloy 
	3- 3	S - Stainless steel 
	5- 6	
	7- 6	
	15- 3	
	15- 6	

Selection

Model/Material	Aluminum alloy	Stainless steel
ACPF2-3	●	○
ACPF3-3	●	○
ACPF5-6	●	○
ACPF7-6	●	○
ACPF15-3	●	○
ACPF15-6	●	○

◇Note: "●"- standard, in stock. "○"-selective,no stock.

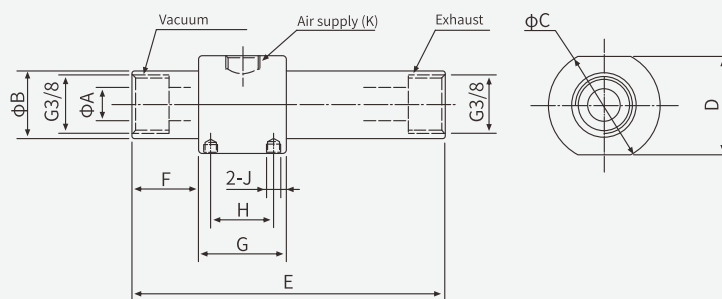
Technical parameters

Model	Nozzle diameter (mm)	Air supply pressure (bar)	Vacuum level (-kPa)	Vacuum flow (NL/min)	Air consumption (NL/min)		Weight(g)		Operating temperature (°C)
					2.8bar	5.5bar	Aluminum alloy	Stainless steel	
ACPF2-3	6.5	6	26	295	85	160	85	252	-20~80
ACPF3-3	9.5	6	16	425	95	170	69	205	-20~80
ACPF5-6	12.5	6	35	870	395	680	170	505	-20~80
ACPF7-6	19	6	28	1,825	790	1,365	388	1,151	-20~80
ACPF15-3	25	6	4.4	4,400	405	695	519	1,537	-20~80
ACPF15-6	38	6	9	5,610	790	1,365	659	1,953	-20~80

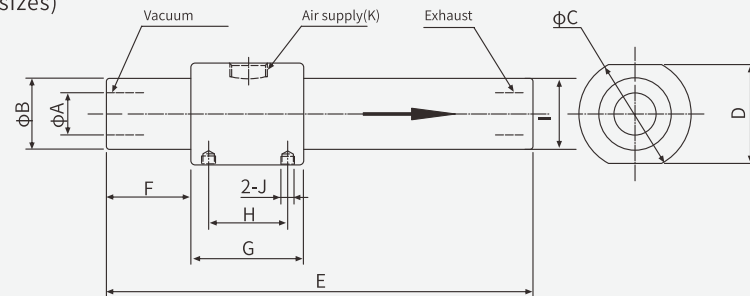
◇Note: Air supply pressure range 4-6bar, Max. air supply pressure 7bar.

Dimensions (mm)

ACPF3-3



ACPF (other sizes)



Model/Size	A	B	C	D	E	F	G	H	I	J	K
ACPF2-3	6.5	18.5	32	30	89	19	25	18	19.5	M4	G1/8
ACPF3-3	9.5	18.5	32	30	89	19	25	18	19.5	M4	G1/8
ACPF5-6	12.5	24	38	34	140	25	32	23	25	M4	G1/4
ACPF7-6	19	32	50	45	190	38	50	35	33	M4	G3/8
ACPF15-3	25	38	59	55	198	40	56	40	38	M4	G3/8
ACPF15-6	38	49.6	69	65	205	40	60	42	49.6	M4	G3/8

◇Note: ACPF3-3 is designed with G3/8 female thread at both ends, the other models are through-hole design.

ABM/ABX

 ABM/ABX
Combined type

ASM/ASX

 ASM/ASX
Combined type

AM/AL/AH

 AM/AL/AH
Combined type

AZL

ACP

ACPF

ACPs

ACV

AQV

AZH

AZU

ASBP



Features

- ◇ Straight through design avoids blocking while transferring materials and easy to maintain. Suitable for transferring particles.
- ◇ Available in different bore sizes, max flow can be achieved with in line bore size up to 75 mm

Applications

- ◇ Transferring materials
- ◇ Transferring porous material such as textile, paper, foam, etc.
- ◇ Transferring particles such as powder, beans, coffee beans and other bulk goods.
- ◇ Removal of non-corrosive vapour and gas.

How to order

ACPS 10

①

②

① Series	② Nozzle diameter	Material
ACPS	10 - ϕ 10mm	Nil - Aluminum alloy 
	20 - ϕ 20mm	
	40 - ϕ 40mm	
	75 - ϕ 75mm	

Selection

Model/Material	Aluminum alloy
ACPS10	●
ACPS20	●
ACPS40	●
ACPS75	○

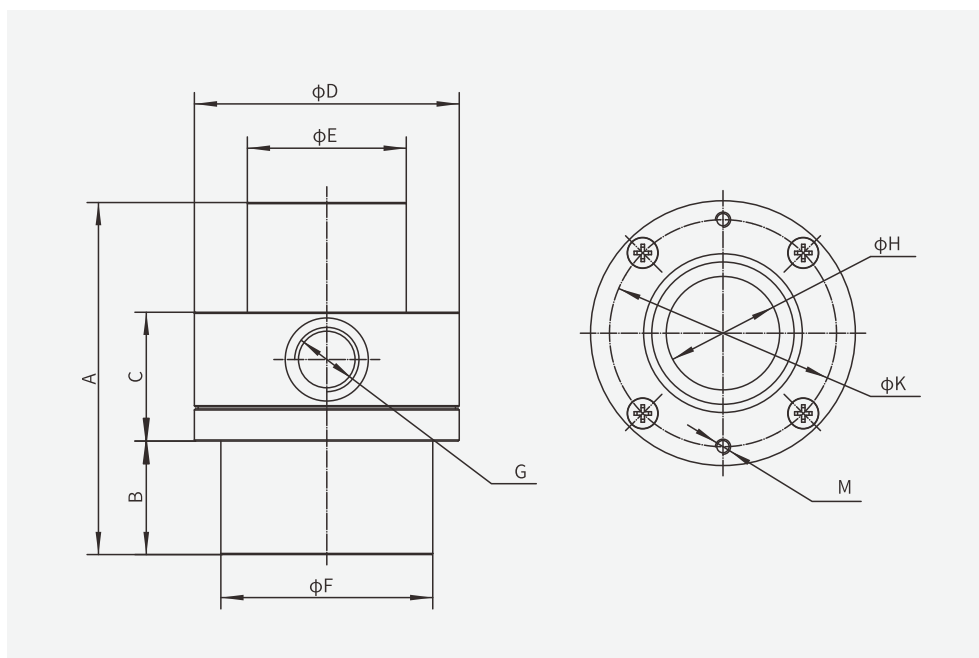
◇Note: "●"- standard, in stock. "○"-selective,no stock.

Technical parameters

Model	Nozzle diameter (mm)	Air supply pressure (bar)	Vacuum level (-kPa)	Vacuum flow (NL/min)	Air consumption (NL/min)	Weight (g)	Operating temperature (°C)
ACPS10	10	5	12	655	118	77	-20~80
ACPS20	20	5	2-8	1,950	221	189	-20~80
ACPS40	40	5	2-8	2,900	430	522	-20~80
ACPS75	75	5	2-8	8,588	876	2,308	-20~80

◇Note: Air supply pressure 2-6 bar.

Dimensions (mm)



Model/Size	A	B	C	D	E	F	G	H	K	M
ACPS10	70	23	21	37	19	19	G1/8	10	29	M4
ACPS20	90	30	30	50	32	38	G1/4	20	41.5	M4
ACPS40	94	30	34	84	52	75	G3/8	40	72	M4
ACPS75	180	35	65	140	100	125	G1/2	75	126	M6

ABM/ABX

 ABM/ABX
Combined type

ASM/ASX

 ASM/ASX
Combined type

AM/AL/AH

 AM/AL/AH
Combined type

AZL

ACP

ACPF

ACPS

ACV

AQV

AZH

AZU

ASBP



Features

- ◇ Compact structure and easy to install, optional pressure switch.
- ◇ Nozzle and body are made of metal, ensuring long lifetime.
- ◇ Standard item is equipped with silencer to minimize noise.
- Easy to install and maintain with connection thread.

Applications

- ◇ Suitable for occasions where vacuum is required for each station in fast operation.
- ◇ Handling of electronic components and small parts.
- ◇ Various specifications to meet different operation requirements.

How to order

ACV 05 H K

① ② ③ ④

① Series	② Nozzle diameter	③ Performance specification	④ Pressure switch
ACV	05 - ϕ 0.5mm 10 - ϕ 1.0mm 15 - ϕ 1.5mm 20 - ϕ 2.0mm 25 - ϕ 2.5mm 30 - ϕ 3.0mm	H - High vacuum level type (-87kPa) L - Large vacuum flow type (-57kPa)	Nil - Without pressure switch K - With adjustable pressure switch C - With unadjustable pressure switch

Selection

Model	H			L		
	Without pressure switch	K	C	Without pressure switch	K	C
ACV05	●	●	○	●	●	○
ACV10	●	●	○	●	●	○
ACV15	●	●	○	●	●	○
ACV20	●	●	○	●	●	○
ACV25	●	○	○	○	○	○
ACV30	●	○	○	○	○	○

◇Note: "●"- standard, in stock. "○"-selective, no stock.

Technical parameters

Model	Nozzle diameter (mm)	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight(g)			Recommended hose dia.(mm)	
							Without switch	K	C	Air supply(P)	Vacuum(V)
ACV05H	0.5	5.0	87	7	13	68	80	120	95	8	8
ACV10H	1.0	5.0	90	27	44	68	80	120	95	8	8
ACV15H	1.5	5.0	90	63	100	72	140	190	165	8	8
ACV20H	2.0	5.0	90	110	180	72	350	460	435	8	10
ACV25H	2.5	5.0	90	160	265	75	730	700	675	10	12
ACV30H	3.0	5.0	90	225	385	75	870	846	821	10	12
ACV05L	0.5	5.0	57	10	13	68	75	115	90	8	8
ACV10L	1.0	5.0	57	36	44	68	75	115	90	8	8
ACV15L	1.5	5.0	57	95	100	72	135	180	155	8	8
ACV20L	2.0	5.0	57	170	180	72	330	440	415	8	10
ACV25L	2.5	5.0	57	250	265	75	710	680	655	10	12
ACV30L	3.0	5.0	57	350	385	75	840	816	781	10	12

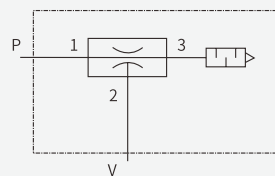
◇Note: Pressure range1-6bar, standard pressure 5bar. Fluid and ambient temperature 0-60°C.

Pressure switch specification

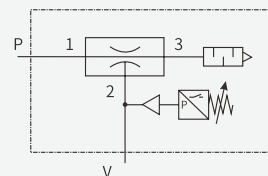
Model	ACV-K (Adjustable pressure switch)	ACV-C (Unadjustable pressure switch)
Fluid	Air	Air
Set pressure range (-kPa)	20~53	50
Ambient temperature	0~60°C (Non-freezing)	0~60°C (Non-freezing)
Operating accuracy (-kPa)	±5.3	±5
Hysteresis (-kPa)	4.0~13.3	-
Operating voltage (V)	DC24V below	DC24V below
Load current (A)	0.2	0.2
Effective length of lead wire (m)	0.7	0.7

Symbol

ACV (Standard)



ACV-K (With pressure switch)

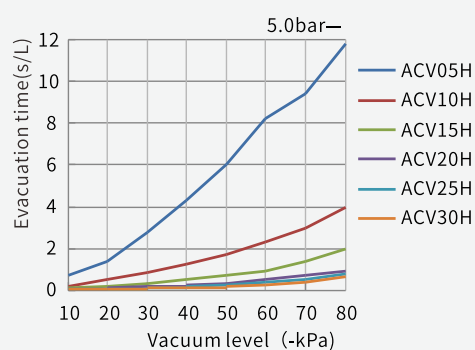
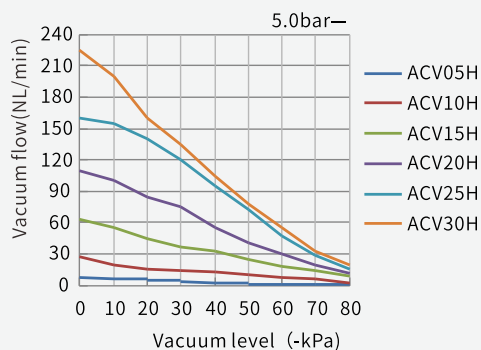


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
ACV05H	5.0	13	7	5.5	4.2	3	1.5	0.8	0.5	0.2	0.05	87
ACV10H		44	27	19	16	14.5	13	10.5	8	6.5	2.5	90
ACV15H		100	63	55	44	37	32.5	25	18	14	9	90
ACV20H		180	110	100	85	75	55	40.5	30	20	12	90
ACV25H		265	160	155	140	120	95	72	47	28	15	90
ACV30H		385	225	200	160	135	105	78	55	33	19	90

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
ACV05H	5.0	13	0.68	1.38	2.77	4.32	6.02	8.25	9.44	11.82	87
ACV10H		44	0.20	0.49	0.82	1.25	1.74	2.32	2.95	4.00	90
ACV15H		100	0.08	0.19	0.32	0.48	0.69	0.92	1.38	1.95	90
ACV20H		180	0.04	0.10	0.17	0.23	0.34	0.49	0.71	0.92	90
ACV25H		265	0.03	0.07	0.11	0.17	0.24	0.35	0.49	0.75	90
ACV30H		385	0.03	0.06	0.09	0.14	0.20	0.27	0.41	0.63	90

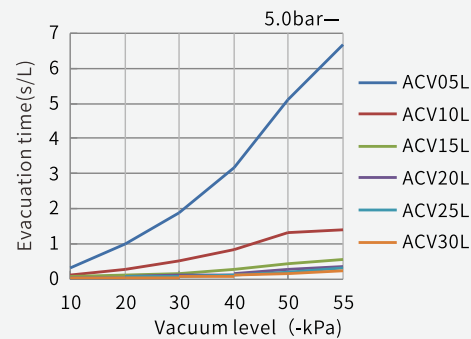
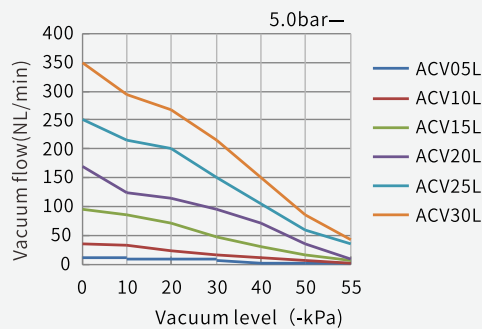


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	55	Max. vacuum level (-kPa)
ACV05L	5.0	13	10	9	8	6.5	2.5	1.8	0.7	57
ACV10L		44	36	31.5	23.5	16.5	10	6.5	2.5	
ACV15L		100	95	85	70	47.5	30.5	15.5	5.5	
ACV20L		180	170	125	115	95	70	35.5	7.5	
ACV25L		265	250	215	200	150	105	60	36	
ACV30L		385	350	295	267	215	150	85	41	

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

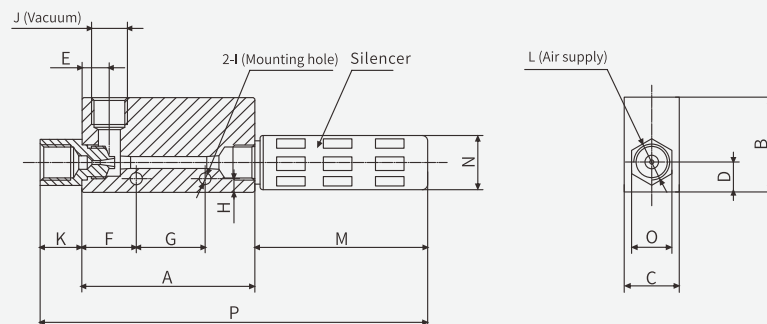
Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	55	Max. vacuum level (-kPa)
ACV05L	5.0	13	0.31	0.98	1.89	3.17	5.12	6.7	57
ACV10L		44	0.12	0.28	0.51	0.83	1.32	1.4	
ACV15L		100	0.45	0.10	0.15	0.26	0.42	0.56	
ACV20L		180	0.03	0.06	0.11	0.14	0.25	0.34	
ACV25L		265	0.02	0.05	0.08	0.12	0.18	0.3	
ACV30L		385	0.02	0.04	0.06	0.09	0.13	0.22	



Dimension (mm)

Standard

ACV

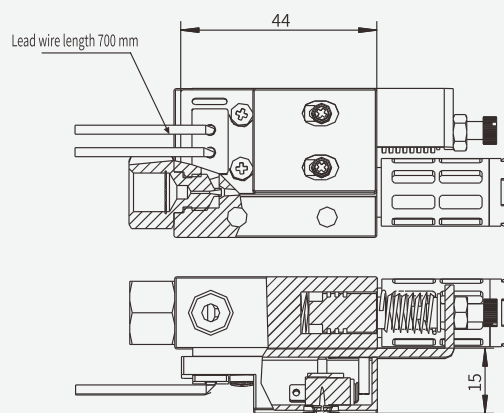


Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
ACV05	45	33	16	10	8	14	20	4.5	2-φ4.5	Rp1/8	10	Rp1/8	30	φ15	14	85
ACV10	45	33	16	10	8	14	20	4.5	2-φ4.5	Rp1/8	10	Rp1/8	30	φ15	14	85
ACV15	63	35	20	11	10	20	25	5	2-φ4.5	Rp1/4	15	Rp1/4	51	φ19	17	129
ACV20	85	40	30	15	13	28	32	7	2-φ6	Rp3/8	20	Rp1/4	56	φ28	24	161
ACV20K	85	50	30	15	13	28	32	7	2-φ6	Rp3/8	20	Rp1/4	56	φ28	24	161
ACV25	100	60	40	20	16	20	50	5.5	2-φ6	Rc1/2	17	Rc3/8	119	φ40	27	236
ACV30	118	60	40	20	20	33	50	5.5	2-φ6	Rc3/4	20	Rc1/2	119	φ40	30	257

Dimensions (mm)

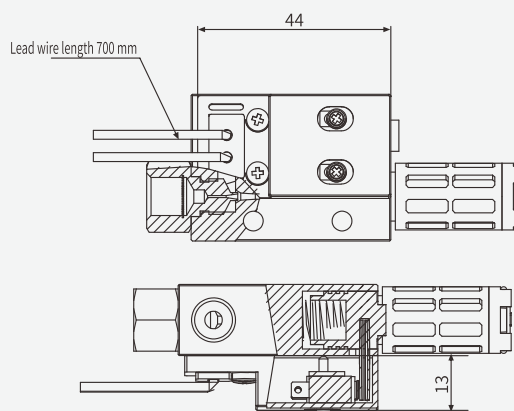
With adjustable pressure switch

ACV-K



With unadjustable pressure switch

ACV-C



Repair kits

Model of silencer	Connection thread	Color	Applicable vacuum pump
ZSB-F-G1M	G1/8 Male thread	Blue	ACV05H,10H
ZSB-X-G1M	G1/8 Male thread	Orange	ACV05L, 10L
ZSB-F-G2M	G1/4 Male thread	Blue	ACV15H
ZSB-X-G2M	G1/4 Male thread	Orange	ACV15L
ZSB-F-G4M	G1/2 Male thread	Black	ACV20H
ZSB-X-G4M	G1/2 Male thread	Black	ACV20L
ZSA-G6M	G3/4 Male thread	Black	ACV25H /L,30H / L

◇Note:The above silencers are standard .



Features

- ◇ Various specifications of male thread are available for easy installation.
- ◇ It can be fast connected to the matching suction cup.
- ◇ Mini size design, light weight.
- ◇ Various specifications are available.

Applications

- ◇ Suitable for occasions where vacuum is required for each station in fast operation.
- ◇ Handling of electronic components.
- ◇ Various specifications to meet different operation requirements.
- ◇ Suitable for occasions of limited installing space and simple connecting.

How to order

AQV – G1 S – EW

① ② ③ ④

① Series	② Mounting thread	③ Vacuum port connection	④ Mesh filter
AQV	M5 - M5 Male thread M8 - M8 Male thread G1 - G1/8 Male thread G2 - G1/4 Male thread	T - Male thread connection S - Push into the suction cup directly	Nil - Standard, without mesh filter EW - Built-in mesh filter

Selection

Model/Vacuum port connection	T	T-EW	S	S-EW
AQV-M5	●	—	●	—
AQV-M8	●	—	●	—
AQV-G1	●	○	●	○
AQV-G2	●	○	●	○

AQV-M5S suits suction cup: SU10, SU15; SF15; SB12, SB15.

AQV-M8S suits suction cup: SU4, SU6, SU8; SB5, SB8.

AQV-G1S suits suction cup: SU20, SU25, SU30; SF20, SF25, SF30; SB17, SB20; SBL20.

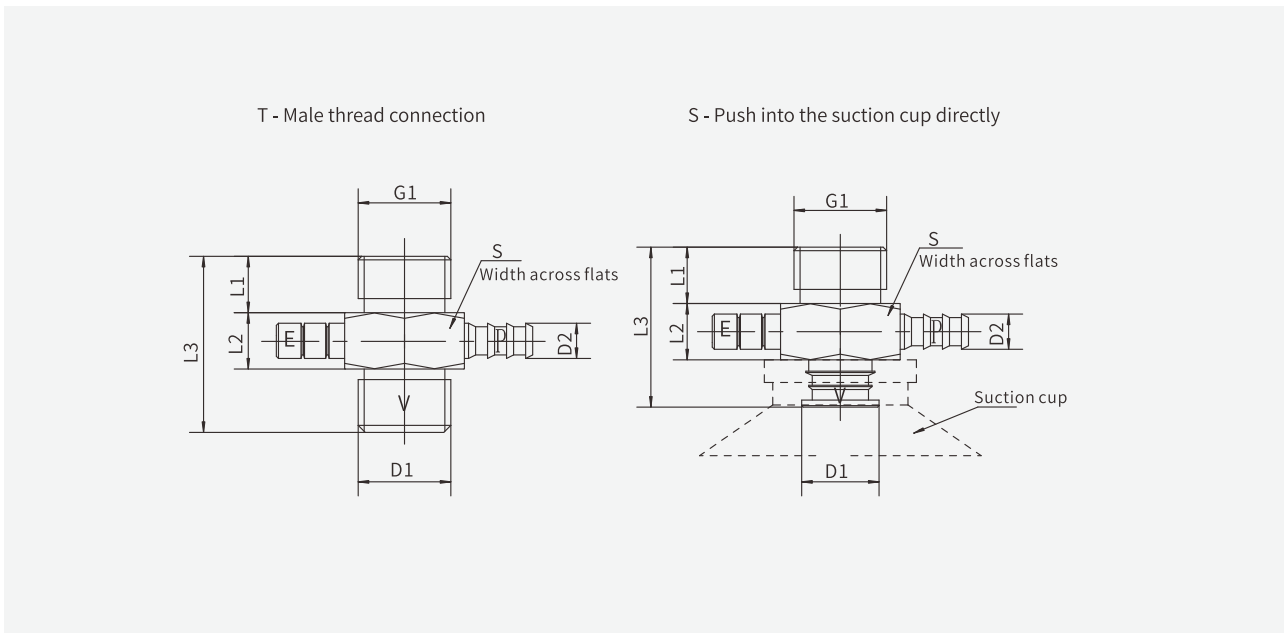
AQV-G2S suits suction cup: SU40; SF40; SB30, SB40; SBL40.

◇ Note: "●" - standard, in stock. "○" - selective, no stock. "—" - unavailable.

Technical parameters

Model	Connection thread	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)
AQV-M5	M5	6	78	4	12
AQV-M8	M8	6	78	2	11
AQV-G1	G1/8	6	78	3.5	14.5
AQV-G2	G1/4	6	80	11.5	27

Dimensions (mm)



Model/Size	L1	L2	L3	D1	D2	S	G1
AQV-M5T	5	7	17	M5	φ3.5	10	M5
AQV-M5S	5	7	19.5	φ5.3	φ3.5	10	M5
AQV-M8T	8	17.5	27.5	M8	φ5	13	M8
AQV-M8S	8	17.5	28	φ3.1	φ5	13	M8
AQV-G1T	7	7	21	G1/8	φ5	14	G1/8
AQV-G1S	7	7	19.3	φ8	φ5	14	G1/8
AQV-G2T	8	8	25	G1/4	φ5	17	G1/4
AQV-G2S	8	8	22.7	φ11	φ5	17	G1/4



Features

- ◇ Equipped with One-touch fitting, easy to install.
- ◇ Resin made housing, small volume and light weight.
- ◇ Available in high vacuum level type and large vacuum flow type.

Applications

- ◇ Suitable for occasions where vacuum is required for each station in fast operation.
- ◇ Handling of electronic components.
- ◇ Various specifications to meet different operation requirements.
- ◇ Used in separation system for plastic and metal plate processing.

How to order

AZH 05 B H - A

① ② ③ ④ ⑤

① Series	② Nozzle diameter	③ Body type	④ Specification	⑤ Connection thread
AZH	05 - $\phi 0.5\text{mm}$ 07 - $\phi 0.7\text{mm}$ 10 - $\phi 1.0\text{mm}$ 13 - $\phi 1.3\text{mm}$ 15 - $\phi 1.5\text{mm}$ 18 - $\phi 1.8\text{mm}$ 20 - $\phi 2.0\text{mm}$	B - Box type (internal silencer) D - Body ported type (without silencer)	H - High vacuum level type (-88kPa) L - Large vacuum flow type (-48kPa)	A - One-touch fitting T - Female thread

Selection

Model/Body type	BH		BL		DH		DL	
	A	T	A	T	A	T	A	T
AZH05	●	●	●	●	●	●	●	●
AZH07	●	●	●	●	●	●	●	●
AZH10	●	●	●	●	●	●	●	●
AZH13	●	●	●	●	●	●	●	●
AZH15	—	—	—	—	●	●	●	●
AZH18	—	—	—	—	●	●	●	●
AZH20	—	—	—	—	●	●	●	●

◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

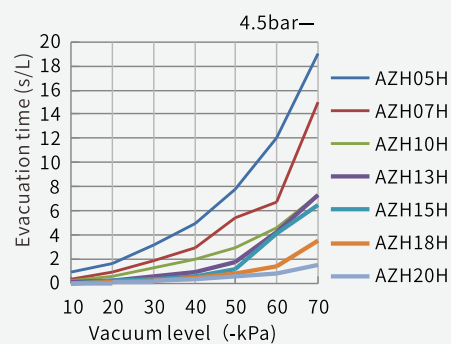
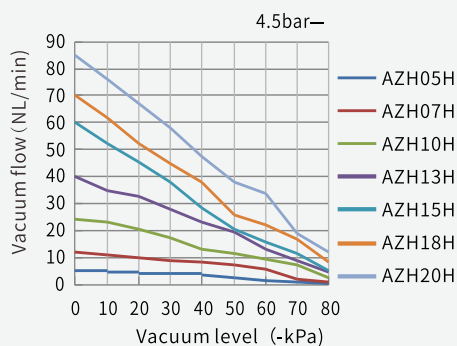
Model	Nozzle diameter (mm)	Air supply pressure (bar)	Max. vacuum level (-kPa)		Max. Vacuum flow (NL/min)		Air consumption (NL/min)	Recommended hose dia.(mm)		
			H	L	H	L		Air supply(S)	Vacuum(V)	Exhaust(E)
AZH05B	0.5	4.5	88	48	5	9	13.5	φ6	φ6	—
AZH07B	0.7				12	22	23.5	φ6	φ6	—
AZH10B	1.0				24	34	46	φ6	φ6	—
AZH13B	1.3				40	75	78	φ8	φ10	—
AZH05D	0.5	4.5	88	48	7.5	9	13.5	φ6	φ6	φ6
AZH07D	0.7				12	22	23.5	φ6	φ6	φ6
AZH10D	1.0				24	34	46	φ6	φ6	φ8
AZH13D	1.3				40	75	78	φ8	φ10	φ10
AZH15D	1.5	4.5	88	53	60	80	97	φ10	φ12	φ12
AZH18D	1.8				70	110	150	φ12	φ12	φ12
AZH20D	2.0				85	140	185	φ12	φ16	φ16

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AZH05H	4.5	13.5	5	4.5	4.1	3.8	3.3	2.3	1.6	0.9	0.3	88
AZH07H		23.5	12	11	10	9	8	7	5.5	2.1	0.8	
AZH10H		46	24	23	20.5	17.5	13	11.5	9.5	7	2.5	
AZH13H		78	40	35	32.5	28	23	19.5	13	9	4.5	
AZH15H		97	60	52.5	45.5	38	28.5	20.5	15.5	11.5	5	
AZH18H		150	70	62	52	45	38	26	22	16.5	8.5	
AZH20H		185	85	76	67	58	47.5	38	33.5	19	12	

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	Max. vacuum level (-kPa)
AZH05H	4.5	13.5	0.89	1.7	3.2	5	7.8	12	19	88
AZH07H		23.5	0.37	1	1.9	3	5.4	6.7	15	
AZH10H		46	0.25	0.6	1.25	2	2.9	4.6	7.3	
AZH13H		78	0.1	0.27	0.53	1	1.75	4.2	7.3	
AZH15H		97	0.04	0.21	0.35	0.63	1.23	4.1	6.5	
AZH18H		150	0.02	0.15	0.29	0.46	0.78	1.38	3.51	
AZH20H		185	0.02	0.12	0.21	0.34	0.55	0.85	1.58	

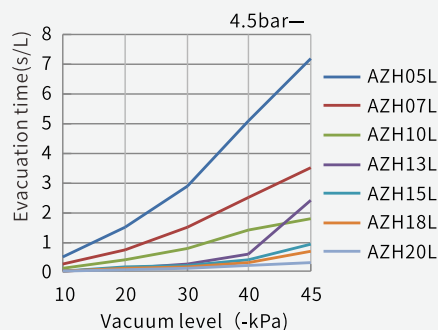
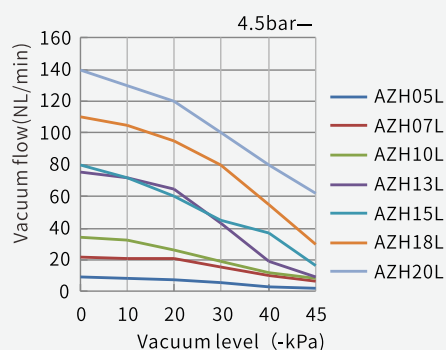


Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	45	Max. vacuum level (-kPa)
AZH05L	4.5	13.5	9	8	7	6	3	1.9	48
AZH07L		23.5	22	21	20.5	15.5	10.5	6.8	
AZH10L		46	34	32	26	19	12	8	
AZH13L		78	75	72	65	43	19	9	53
AZH15L		97	80	72	60	45	36.5	16	
AZH18L		150	110	105	95	80	55	30	
AZH20L		185	140	130	120	100	80	62	

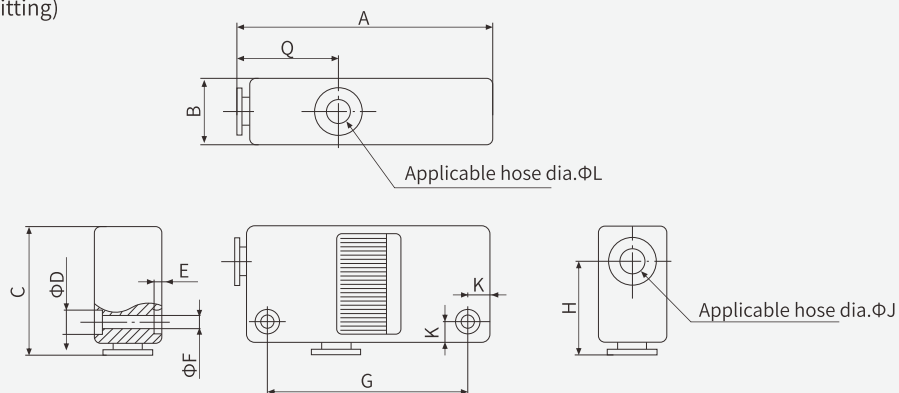
Evacuation time (s/L) to reach different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	45	Max. vacuum level (-kPa)
AZH05L	4.5	13.5	0.49	1.5	2.9	5.1	7.2	48
AZH07L		23.5	0.28	0.75	1.5	2.5	3.5	
AZH10L		46	0.14	0.4	0.81	1.4	1.8	
AZH13L		78	0.04	0.12	0.24	0.62	2.4	53
AZH15L		97	0.03	0.15	0.23	0.4	0.92	
AZH18L		150	0.02	0.1	0.18	0.32	0.67	
AZH20L		185	0.01	0.08	0.14	0.2	0.3	



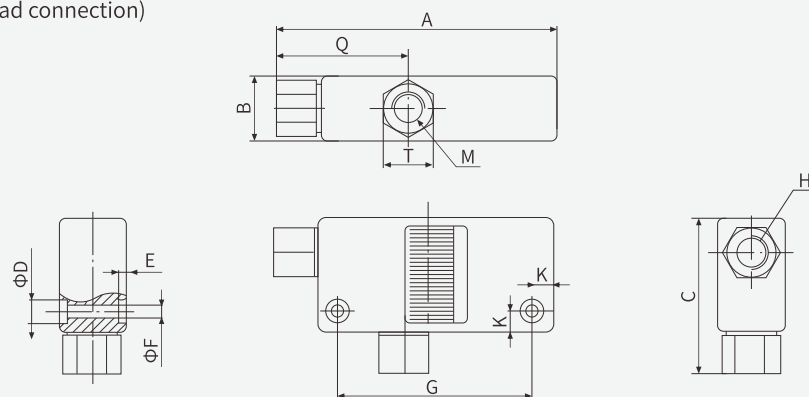
Dimensions (mm)

B - Box type (One-touch fitting)



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

B - Box type (Female thread connection)

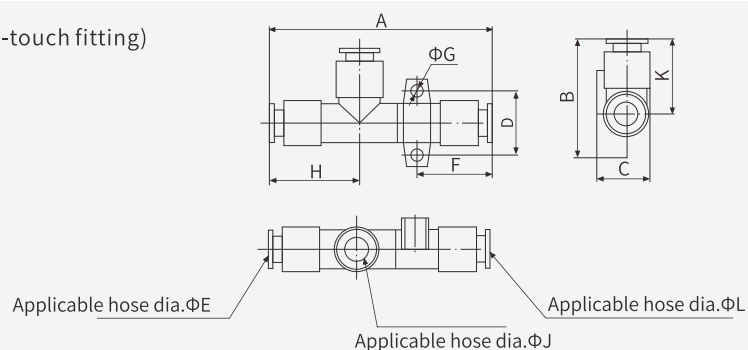


◇Note:B-Box type with internal silencer.

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

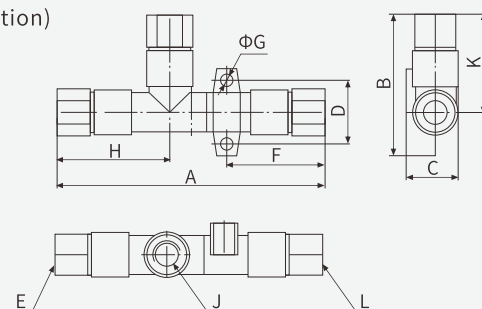
Dimensions (mm)

D-Body ported type (One-touch fitting)



Model/Size	A	B	C	D	E	F	G	H	L	K	J
AZH05D-A	58.5	34	14.2	17	6	21	3.2	24	6	22	6
AZH07D-A	61	34	14.2	17	6	22	3.2	24	6	22	6
AZH10DH-A	66	37	17.2	20	6	24.5	4.2	26	8	23	6
AZH10DL-A	70	37	17.2	20	6	24.5	4.2	26	8	23	6
AZH13DH-A	74	42.5	20	22	8	27	4.2	28	10	27.5	10
AZH13DL-A	79.5	42.5	20	22	8	27	4.2	28	10	27.5	10
AZH15D-A	93.3	47	22.5	27	10	32.8	4.2	31.5	12	29.5	12
AZH18D-A	114	41	21	10	12	50	3.5	35.5	12	30.5	12
AZH20D-A	124.6	46	27	12	12	54.3	3.5	38.5	16	32.7	16

D-Body ported type (Female thread connection)



Model/Size	A	B	C	D	E	F	G	H	L	K	J
AZH05D-T	73.5	41.5	14.2	17	Rc1/8	28.5	3.2	31.5	Rc1/8	29.5	Rc1/8
AZH07D-T	76	41.5	14.2	17	Rc1/8	29.5	3.2	31.5	Rc1/8	29.5	Rc1/8
AZH10DH-T	82	44.5	17.2	20	Rc1/8	33	4.2	33.5	Rc1/8	30.5	Rc1/8
AZH10DL-T	86	44.5	17.2	20	Rc1/8	33	4.2	33.5	Rc1/8	30.5	Rc1/8
AZH13DH-T	94.5	54	20	22	Rc1/8	38.5	4.2	36.5	Rc1/4	39	Rc1/4
AZH13DL-T	99.5	54	20	22	Rc1/8	38.5	4.2	36.5	Rc1/4	39	Rc1/4
AZH15D-T	116.5	58.5	22.5	27	Rc1/4	44.5	4.2	43	Rc3/8	41	Rc3/8
AZH18D-T	133	52.5	21	10	Rc3/8	57.5	3.5	47	Rc3/8	42	Rc3/8
AZH20D-T	151	61	27	12	Rc3/8	69.3	3.5	50	Rc1/2	47.7	Rc1/2



Features

- ◇ Tube structure design, no need to install.
- ◇ Equipped with one-touch fitting, easy connection.
- ◇ Resin made housing, small volume and light weight.
- ◇ Available in high vacuum level type and large vacuum flow type.

Applications

- ◇ Suitable for occasions where vacuum is required for each station in fast operation.
- ◇ Handling of electronic components.
- ◇ Various specifications to meet different operation requirements.
- ◇ Used in separation system for plastic and metal plate processing.

How to order

AZU 05 S

① ② ③

① Series	② Nozzle diameter	③ Performance specification	Hose connection
AZU	05 - ϕ 0.5 mm	S - High vacuum level type (-85kPa)	Standard, hose ϕ 6mm.
	07 - ϕ 0.7 mm	L - Large vacuum flow type (-48kPa)	

Selection

Model	S - High vacuum level type	L - Large vacuum flow type
AZU05	●	●
AZU07	●	●

◇Note: "●"- standard, in stock.

Technical parameters

Model	Nozzle diameter (mm)	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)	Air consumption (NL/min)	Noise level dB(A)	Weight (g)	Recommended hose dia. (mm)	
								Air supply (P)	Vacuum (V)
AZU05S	0.5	4.5	85	7	9	68	6.5	φ6	φ6
AZU07S	0.7	4.5	85	12	19	68	7.0		
AZU05L	0.5	4.5	48	12	9	70	6.5	φ6	φ6
AZU07L	0.7	4.5	48	21	19	70	7.0		

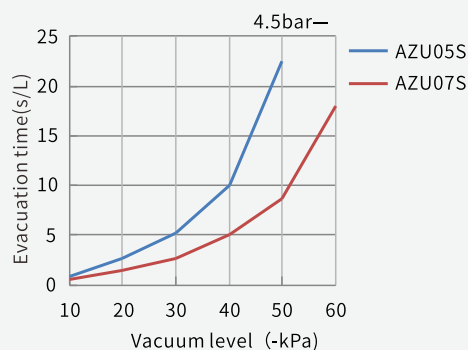
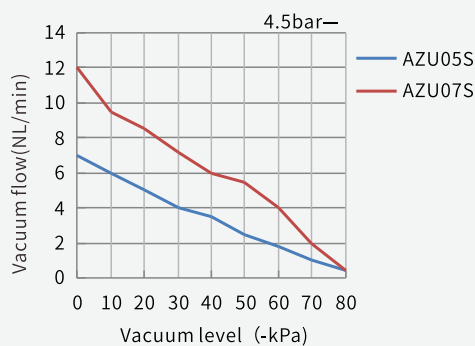
◇Note:Max. operating pressure 7 bar, standard operating pressure 4.5 bar. Fluid and ambient temperature 5-60°C.

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
AZU05S	4.5	9	7	6	5	4	3.5	2.5	1.8	1	0.4	85
AZU07S		19	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	Air supply pressure (bar)	Air consumption (NL/min)							Max. vacuum level (-kPa)
			10	20	30	40	50	60	
AZU05S	4.5	9	0.9	2.6	5.2	10	22.5	-	85
AZU07S		19	0.53	1.4	2.7	5	8.7	18	

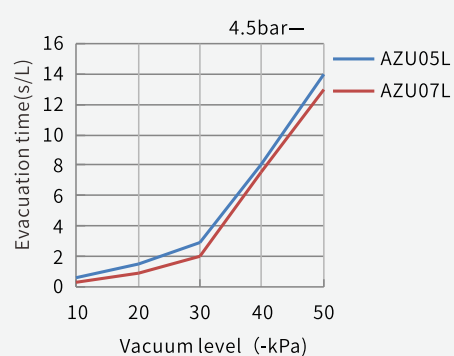
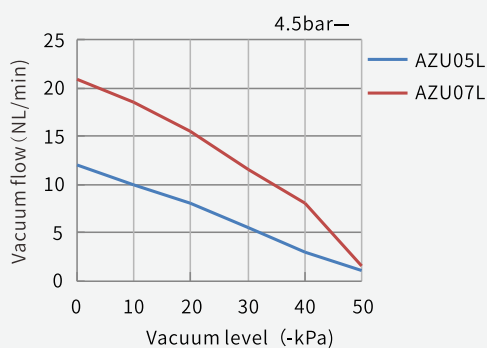


Vacuum flow(NL/min) at different vacuum levels (-kPa)

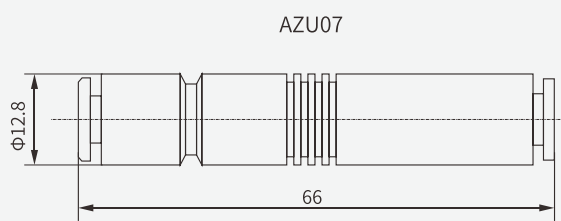
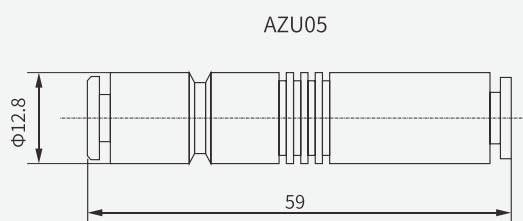
Model	Air supply pressure (bar)	Air consumption (NL/min)							Max. vacuum level (-kPa)
			0	10	20	30	40	48	
AZU05L	4.5	9	12	10	8	5.5	3	1	48
AZU07L		19	21	18.5	15.5	11.5	8	1.5	

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

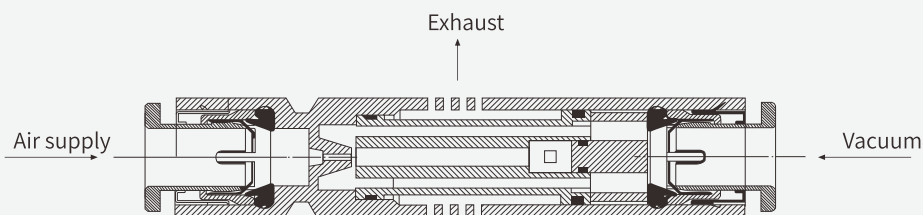
Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	45	Max. vacuum level (-kPa)
AZU05L	4.5	9	0.6	1.5	2.9	8	14	48
AZU07L		19	0.34	0.9	2	7.5	13	



Dimensions (mm)



Structural diagram





Features

- ◇ Pleasing industrial design, with mounting holes, easy to install
- ◇ Connection of compressed air and vacuum with threaded holes.
- ◇ Resin made housing, small size and light weight.
- ◇ Available in two types of vacuum flow specification.

Applications

- ◇ Ideal for decentralized vacuum generation in highly dynamic processes.
- ◇ Handling of electronic components.
- ◇ Construction of ejector blocks for decentralized individual control of suction cups.
- ◇ Used in separation system for plastic and metal plate processing.

How to order

ASBP 10

① ②

① Series	② Nozzle diameter	Silencer
ASBP	10 - ϕ 1.0 mm	Standard, with silencer
	15 - ϕ 1.5 mm	

Selection

Model	Standard silencer
ASBP10	●
ASBP15	●

◇Note: "●"- standard, in stock.

Technical parameters

Model	Nozzle diameter (mm)	Air supply pressure (bar)	Max. vacuum level (-kPa)	Max. Vacuum flow (NL/min)
ASBP10	1.0	4.5	85	38
ASBP15	1.5	4.5	85	72

Model	Air consumption (NL/min)	Noise level dB(A)	Weight (g)	Recommended hose dia. (mm)	
				Air supply (P)	Vacuum (V)
ASBP10	50	59	22	ϕ 6	ϕ 8
ASBP15	110	65	22		

◇Note: Max. operating pressure 7bar, standard operating pressure 4.5bar. Fluid and ambient temperature 0-60°C.

ABM/ABX

 ABM/ABX
Combined type

ASM/ASX

 ASM/ASX
Combined type

AM/AL/AH

 AM/AL/AH
Combined type

AZL

ACP

ACPF

ACPS

ACV

AQV

AZH

AZU

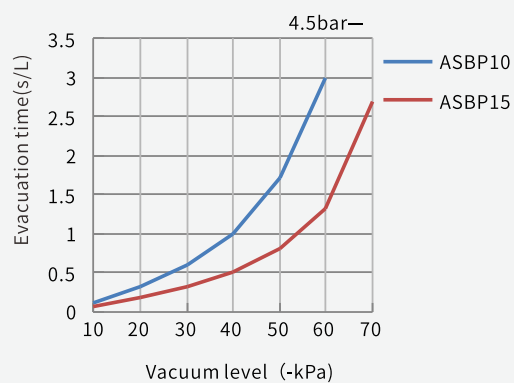
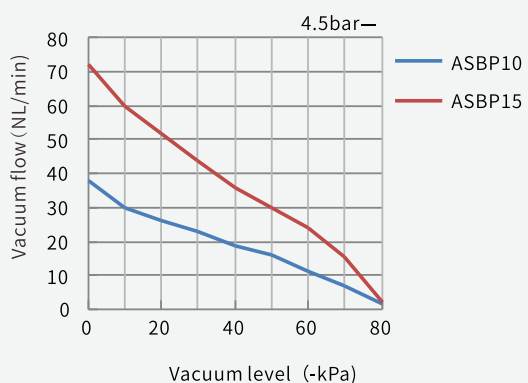
ASBP

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

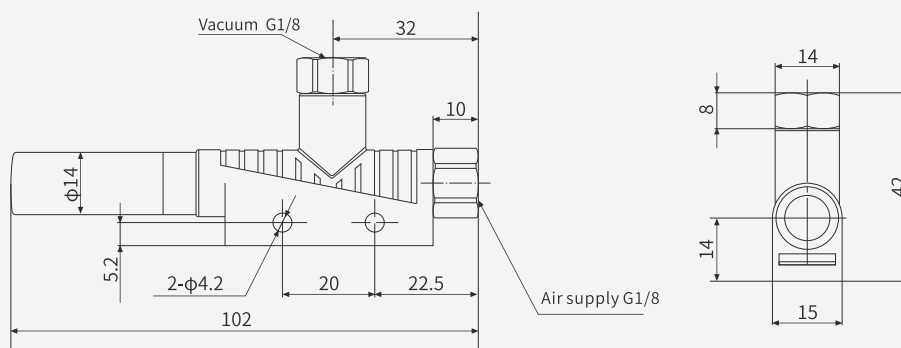
Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	80	Max. vacuum level (-kPa)
ASBP10	4.5	50	38	30	26	23	18.6	16	11	7	1.8	85
ASBP15	4.5	110	72	60	52	44	36	30	24	15.5	2.2	85

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

Model	Air supply pressure (bar)	Air consumption (NL/min)	10	20	30	40	50	60	70	Max. vacuum level (-kPa)
ASBP10	4.5	50	0.13	0.33	0.6	1	1.72	3	-	85
ASBP15	4.5	110	0.06	0.18	0.32	0.52	0.81	1.32	2.7	85



Dimensions (mm)





C Suction Cup

85	SB Series	135	SFP Series
89	SBA Series	137	SBP Series
91	SBB Series	140	SXP Series
93	SBF Series	143	SGP Series
95	SBOF Series	146	SDL Series
97	SFT Series	147	SH Series
100	STP Series	155	SHB Series
101	SBL Series	163	SZD Series
104	SBLP Series	163	SZC Series
106	SF Series	163	SZU Series
111	SU Series	163	SZB Series
115	SUF Series	174	SAN Series
116	SFG Series	176	SAO Series
117	STC Series	183	SPA Series
120	SFF Series	192	SPC Series
123	SFM Series	198	SPF Series
126	SDM Series	212	SPJ Series
127	SOB Series	222	SPU Series
130	SOF Series	231	SNP Series
133	SOG Series	233	SOP Series



Features

- ◇ 1.5 bellows suction cup, which can be horizontal adjusted for transferring objects with height difference.
- ◇ Various materials are available for different workpiece. Conductive silicone material can effectively prevent static damage to electronic products.
- ◇ Various sizes for option.

Applications

- ◇ Smooth wooden plate
- ◇ Smooth steel plate
- ◇ Carton box
- ◇ Electronic component

How to order

SB 30 N - G1F

① ② ③ ④

① Series	② Diameter		③ Material & Hardness		④ Connection thread
SB	5 - φ5mm	20 - φ20mm	N - NBR	55 ★	Nil -Standard, suction cup alone
	6 - φ6mm	30 - φ30mm	S - Silicone	50 ★	M5M - M5 Male thread
	8 - φ8mm	40 - φ40mm	WS - White silicone	50	G1F - G1/8 Female thread
	10 - φ10mm	50 - φ50mm	CS - Conductive silicone	55	G1M - G1/8 Male thread
	12 - φ12mm	75 - φ75mm			G2F - G1/4 Female thread
	15 - φ15mm	110 - φ110mm			G2M - G1/4 Male thread
	17 - φ17mm	150 - φ150mm			G3F - G3/8 Female thread
					G4F - G1/2 Female thread

◇Note: "★" -common material, in stock. For other materials, please consult with AIRBEST.

Selection

Model/ Connection thread	M5M	G1F	G1M	G2F	G2M	G3F	G3M	G4F
SB5 - 15	●	—	—	—	—	—	—	—
SB17 - 40	—	●	●	—	—	—	—	—
SB50	—	—	—	●	●	●	●	—
SB75	—	—	—	●	—	—	—	—
SB110 -150	—	—	—	—	—	—	—	●

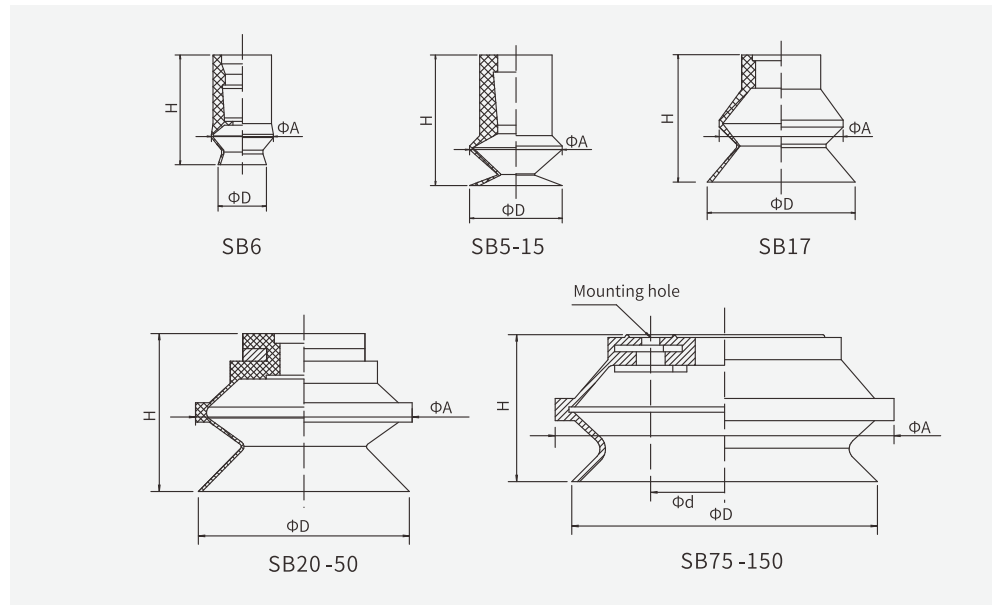
◇Note: "●" - standard, in stock. "—" - unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SB5	0.8	<0.1	8	4
SB6	1.2	<0.1	8	4
SB8	2.1	<0.1	10	4
SB10	3.2	0.4	12	4
SB12	4.7	0.8	15	6
SB15	7.4	0.5	20	6
SB17	9.5	1.1	25	6
SB20	18	1.2	30	6
SB30	33	14	35	6
SB40	60	18	50	6
SB50	92	26	80	8
SB75	210	96	60	8
SB110	412	314	120	12
SB150	740	798	160	12

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	A	H
SB5	5.8	6.2	9.2
SB6	7	9	13.5
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

Model/ Size	D	A	H	d	Mounting hole
SB20	22	24	19	—	—
SB30	34	36	26	—	—
SB40	43	46	28	—	—
SB50	53	58	35	—	—
SB75	78	83	37	35	4-Φ6.5
SB110	115	124	54	55	8-Φ6
SB150	155	166	71	70.5	8-Φ6

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

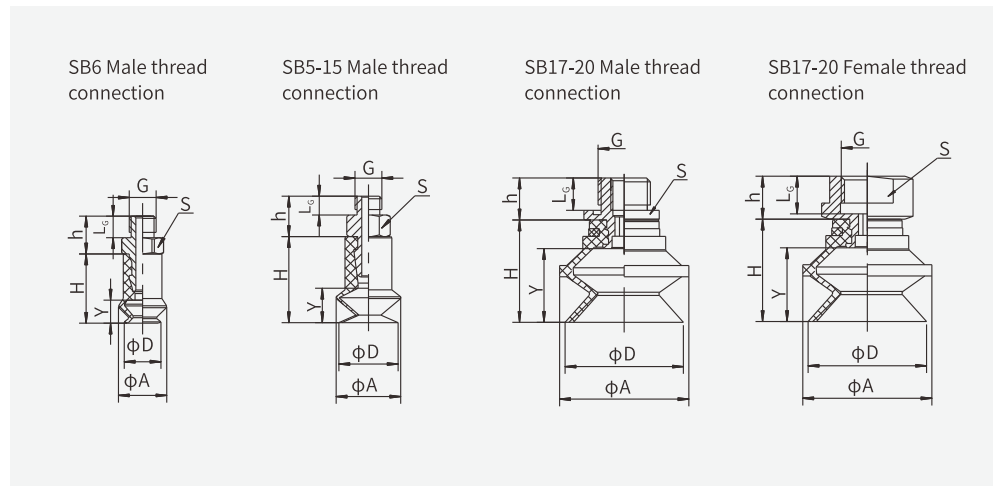
SPF

SPJ

SPU

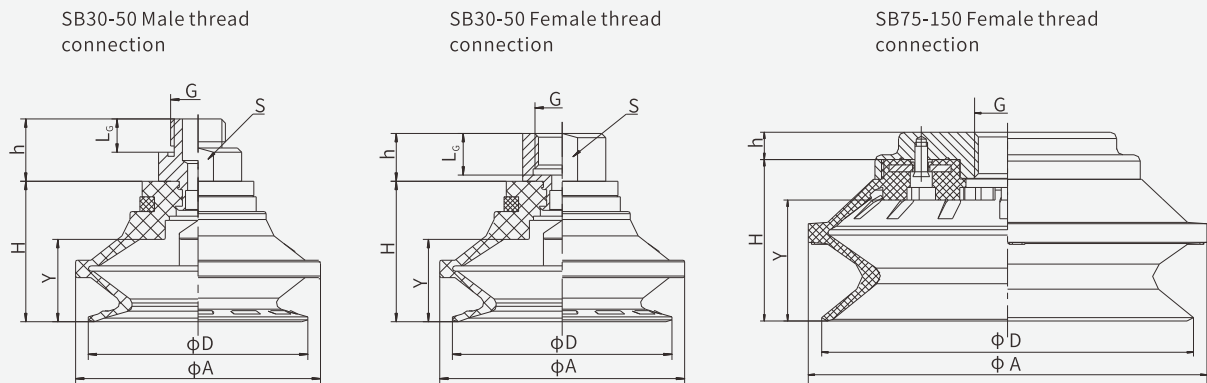
SNP

SOP

Dimensions (mm)


Model/ Size	D	A	H	G	L _g	h	S	Y
SB5-M5M	5.8	6.2	9.2	M5	3.5	7.5	7	—
SB6-M5M	7	9	13.5	M5	4	7	7	4.5
SB8-M5M	8.8	9.6	11.9	M5	3.5	7.5	7	6.5
SB10-M5M	11	12	16	M5	3.5	7.5	7	7
SB12-M5M	12	14	16.5	M5	3.5	7.5	7	5.5
SB15-M5M	15.5	17.5	19.5	M5	3.5	7.5	7	10
SB17-G1F	18.5	16.6	15.6	G1/8	7	8	13	10.5
G1M	18.5	16.6	15.6	G1/8	6	7.8	13	10.5
SB20-G1F	22	24	19	G1/8	7	8	13	9
G1M	22	24	19	G1/8	6	7.8	13	9

Dimensions (mm)



Model/ Size	D	A	H	G	L _G	h	S	Y
SB30-G1F	34	36	26	G1/8	7	10	17	19
G1M					6	12		
SB40-G1F	43	46	28	G1/8	7	10	17	20
G1M					6	12		
SB50-G2F	53	58	35	G1/4	10	13	24	20
G2M					9	17		
G3F			28	G3/8	10	13		
G3M					10	18		
SB75-G2F	78	38	37	G1/4	—	13	—	27
SB110-G4F	115	124	54	G1/2	—	9	—	38.5
SB150-G4F	155	166	71	G1/2	—	10	—	44.5

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M -Male thread	
Fitting for suction cup	—	PJS-M5M-SC1	SB6
	—	PJS-M5M-SC2	Sb5, 8
	—	PJS-M5M-SC3	Sb10, 12, 15
	PJS-G1F-SF1	PJS-G1M-SF1	Sb17, 20
	PJS-G1F-SF2	PJS-G1M-SF2	Sb30, 40
	PJS-G2F-SF3	PJS-G2M-SF3	SB50
	PJS-G3F-SF3	PJS-G3M-SF3	
	PJS-G2F-SF4	—	SB75
	PJS-G4F-SF5	—	SB110
	PJS-G4F-SF6	—	SB150

◇Note:Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ 1.5 bellows suction cup, which can be horizontal adjusted for transferring objects with height difference.
- ◇ Various materials are available for different workpiece.
- ◇ Various sizes for option.
- ◇ On the basis of bellows suction cup SBA, we install PEEK accessories to the plug of SBA suction cup to prevent static electricity and sucking mark during handling.

Applications

- ◇ Smooth wooden plate
- ◇ Smooth steel plate
- ◇ Carton box
- ◇ Electronic component

How to order

SBA 11 N - M5M - PK

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Plug
SBA	11 - φ11mm 14 - φ14mm 16 - φ16mm 20 - φ20mm 33 - φ33mm	N - NBR 55 WS - White silicone 50 E - EPDM 55 HD - High Temp/ mark free material 60	Nil - Suction cup alone M5M - M5 Male thread M8M - M8 Male thread	Nil - Without mark free plug PK - PEEK material, with mark free plug

Selection

Model/ Connection thread	M5M	M8M	Plug
SBA11 - 20	●	—	●
SBA33	—	●	●

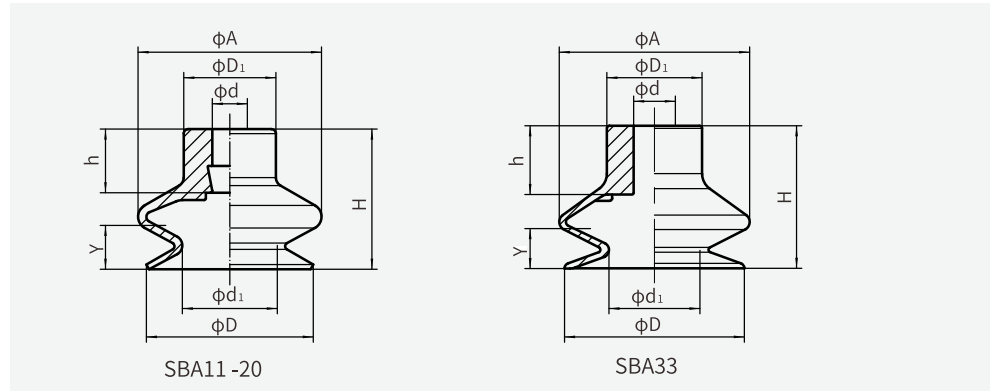
◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

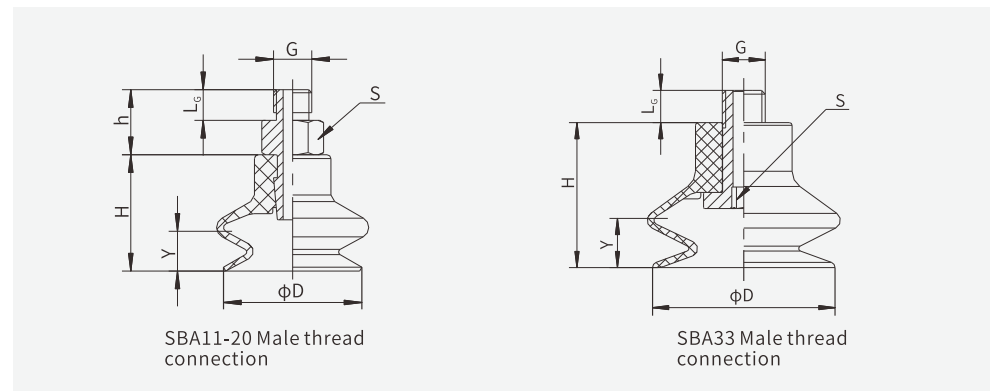
Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SBA11	0.95	0.23	10	6
SBA14	1.2	0.42	13	6
SBA16	2.3	0.75	20	6
SBA20	4.7	1.15	30	6
SBA33	13.6	3.15	40	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of Pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	H	A	D ₁	d	d ₁	h	Y
SBA11	10.4	16	12	10	4	5	6.9	4
SBA14	12.8	15.5	13.7	10	4	8	6.9	5
SBA16	15.6	19.2	17	10	4	8.5	6.9	7
SBA20	18.1	15.2	20	10	4	11	6.9	5
SBA33	34	27	36	18	8	17	13	9



Model/ Size	D	H	G	L _g	h	S	Y
SBA11-M5M	10.4	16	M5	3.5	7.5	7	4
SBA14-M5M	12.8	15.5	M5	3.5	7.5	7	5
SBA16-M5M	15.6	19.2	M5	3.5	7.5	7	7
SBA20-M5M	18.1	15.2	M5	3.5	7.5	7	5
SBA33-M8M	34	27	M8	6	8	4	9

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-SC3	SBA11, 14, 16, 20
	PJS-M8M-ST5	SBA33

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



Features

- ◇ 1.5 bellows. It has good sealing performance for workpiece with uneven surface and height compensation during handling.
- ◇ Aluminum alloy mounting plate and vacuum pad are integrally vulcanized, stable and reliable.
- ◇ With soft and tapered lip, and support frame on bottom

Applications

- ◇ Objects with uneven surface
- ◇ Steel plate
- ◇ Carton box
- ◇ Rubber products

How to order

SBB 200 N - G4F

① ② ③ ④

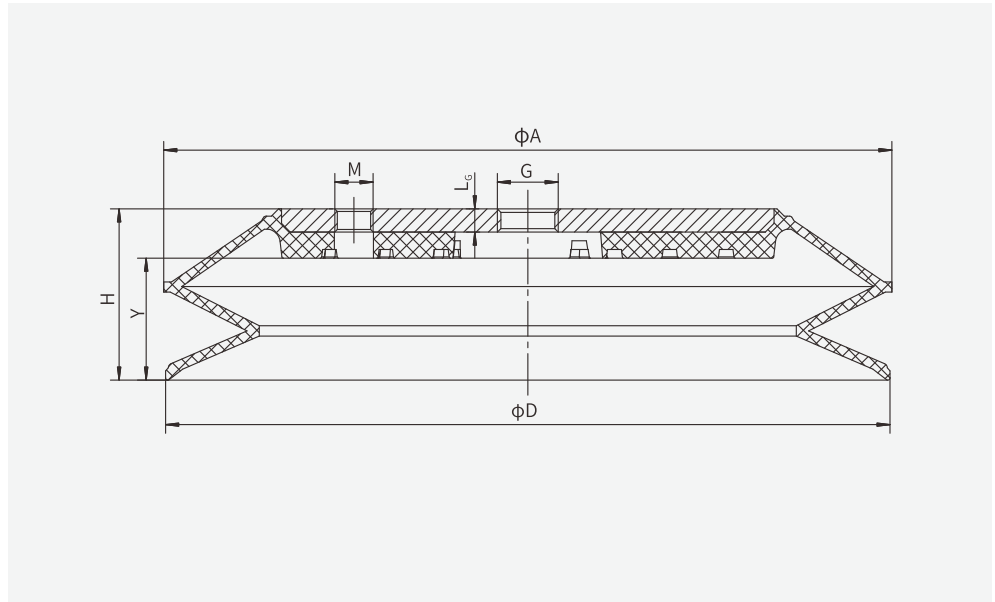
① Series	② Diameter	③ Material & Hardness	④ Connection thread
SBB	200 - $\phi 200\text{mm}$ 250 - $\phi 250\text{mm}$ 300 - $\phi 300\text{mm}$	N - NBR 60	G4F - G1/2 Female thread

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
SBB200	850	790	350	12	860
SBB250	1,620	1,677	480	12	1,012
SBB300	2,390	2,950	580	12	1,650

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	A	H	Y	G	L_g	M
SBB200	200	206	57	40	G1/2	8	—
SBB250	250	251	60	43	G1/2	8	G1/4
SBB300	300	306	77	57	G1/2	8	G1/4

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

- SB
- SBA
- SBB**
- SBF
- SBOF
- SFT
- STP
- SBL
- SBLP
- SF
- SU
- SUF
- SFG
- STC
- SFF
- SFM
- SDM
- SOB
- SOF
- SOG
- SFP
- SBP
- SXP
- SGP
- SDL
- SH
- SHB
- SZ
- SAN
- SAO
- SPA
- SPC
- SPF
- SPJ
- SPU
- SNP
- SOP



Features

- ◇ 1.5 bellows. It has good sealing performance for workpiece with uneven surface and height compensation during handling.
- ◇ PU material, good wear resistance.
- ◇ Various sizes for option.

Applications

- ◇ Automotive steel plate
- ◇ Plywood
- ◇ Stamping steel plate

How to order

SBF 30 U - G2F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SBF	30 - ϕ 32mm	U - PU 70	G2F - G1/4 Female thread
	40 - ϕ 42mm		G2M - G1/4 Male thread
	50 - ϕ 51.5mm		G3F - G3/8 Female thread
	60 - ϕ 64mm		M10M - M10 Male thread
	80 - ϕ 84mm		RA - Rectangular adapter
	100 - ϕ 103mm		

Selection

Model/ Connection thread	G2F	G2M	G3F	M10M	RA
SBF30 - 40	●	○	—	○	○
SBF50 - 100	—	○	●	○	○

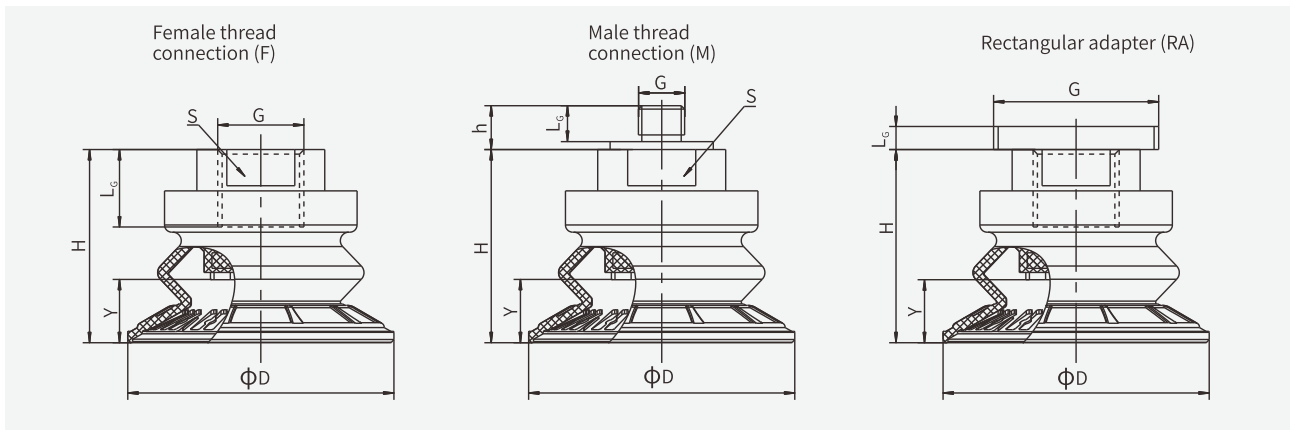
◇Note: "●"- standard, in stock. "○"-selective, can be achieved in other way(e.g.adapter)."—"-unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
SBF30	33	5.5	30	6	18.5
SBF40	60	7	45	6	20
SBF50	103	11.5	50	8	40
SBF60	145	22	55	8	45
SBF80	235	60	72	10	75
SBF100	380	98	97	10	118

◇Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	H	G	L _g	h	S (Width across flats)	Y
SBF30-G2F	32	28	G1/4	10	—	17	7
G2M			G1/4	12	13.5	17	
M10M			M10	12	13.5	17	
RA			□32	4.7	—	—	
SBF40-G2F	42	29	G1/4	10	—	17	9
G2M			G1/4	12	13.5	17	
M10M			M10	12	13.5	17	
RA			□32	4.7	—	—	
SBF50-G3F	51.5	37	G3/8	13	—	22	12.5
G2M			G1/4	12	13.5	22	
M10M			M10	12	13.5	22	
RA			□32	4.7	—	—	
SBF60-G3F	64	41.5	G3/8	13	—	22	15
G2M			G1/4	12	13.5	22	
M10M			M10	12	13.5	22	
RA			□32	4.7	—	—	
SBF80-G3F	84	49.5	G3/8	13	—	22	23
G2M			G1/4	12	13.5	22	
M10M			M10	12	13.5	22	
RA			□32	4.7	—	—	
SBF100-G3F	103	55	G3/8	13	—	22	22
G2M			G1/4	12	13.5	22	
M10M			M10	12	13.5	22	
RA			□32	4.7	—	—	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



Features

- ◇ Strong suction force and good wear resistance.
- ◇ Suitable for case unpacking machine and soft and rigid packing material.
- ◇ Suitable for applications of washing packing bags which have chlorinated disinfectant. (pharmaceuticals industry).
- ◇ Bellows structure and soft seal lip are suitable for handling fragile and long and thin workpiece.

Applications

- ◇ CD & DVD
- ◇ Thin and long package
- ◇ Packing box, packing bag

How to order

SBOF 35×28 V - M10M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SBOF	35×28mm 45×28mm	V - Vinyl 55	Nil - Suction cup alone M10M - M10 Male thread G2M - G1/4 Male thread G2F - G1/4 Female thread

Selection

Model/ Connection thread	M10M	G2M	G2F
SBOF35×28	●	●	●
SBOF45×28	●	●	●

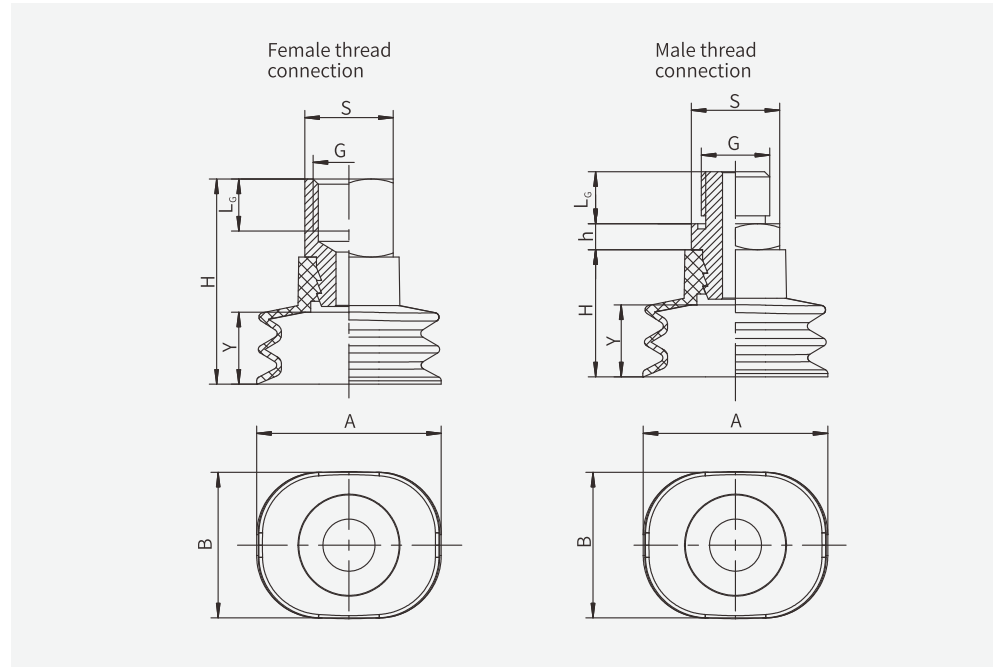
◇Note: "●"- standard, in stock.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SBOF35×28	44	22	39	8
SBOF45×28	57	26	39	8

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	A	B	H	Y	h	G	L _c	S
SBOF35×28-M10M	35	28	24.5	12	5	M10	10	17
G2M			24.5		5	G1/4	10	
G2F			39.5		—	G1/4	12	
SBOF45×28-M10M	45	28	25	13	5	M10	10	17
G2M			25		5	G1/4	10	
G2F			40		—	G1/4	12	

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M10M-SBOF PJS-G2M-SBOF PJS-G2F-SBOF	SBOF35×28, 45×28

◇ Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



PAPER



PLASTIC



PLASTIC BAG ANTI-DEFORMATION



Features

- ◇ Various sizes are available for workpiece of different shapes and sizes.
- ◇ Non-mark absorption can be achieved even in high temperature.
- ◇ Large inner support to avoid wrinkles while handling paper and plastic film.

Applications

- ◇ Plastic film
- ◇ Paper
- ◇ Wood sheet
- ◇ Solar wafer

How to order

SFT 15 WS - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SFT	15 - φ15mm 20 - φ20mm 24 - φ24mm 30 - φ30mm 34 - φ34mm 35 - φ35mm 40 - φ40mm	WS - White silicone 50 HD - High Temp / mark 60 free material	Nil - Suction cup alone M5M - M5 Male thread G1M - G1/8 Male thread G1F - G1/8 Female thread G2M - G1/4 Male thread G2F - G1/4 Female thread

Selection

Model/ Connection thread	M5M	G1M	G1F	G2M	G2F
SFT15 - 24	●	●	●	—	—
SFT30 - 40	—	—	—	●	●

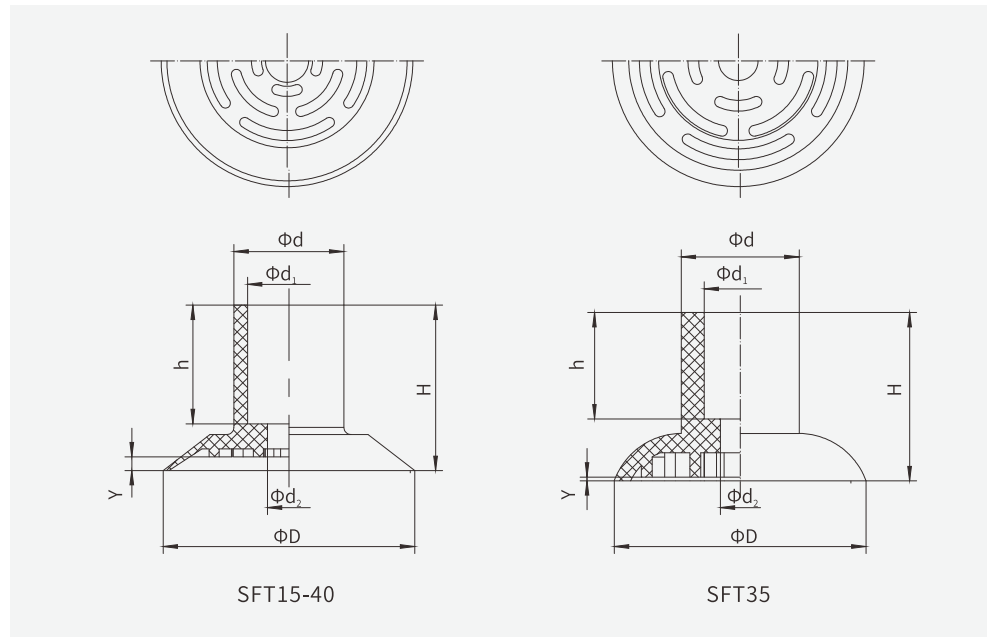
◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

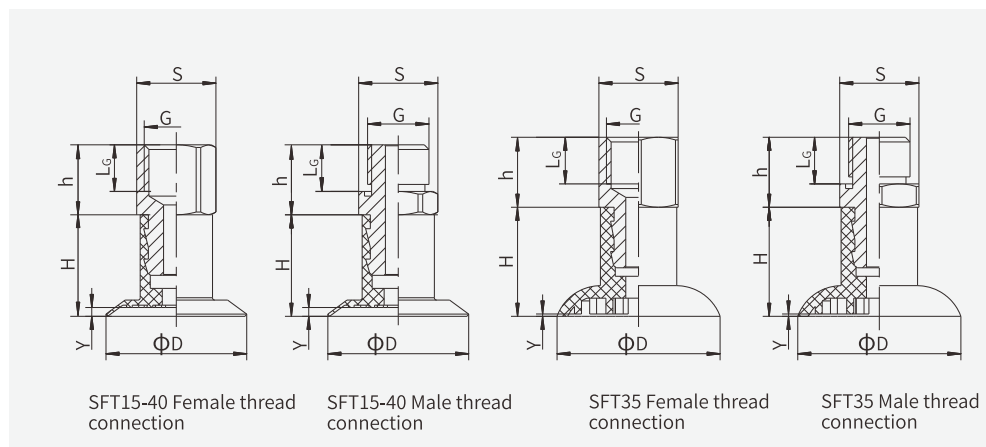
Model	Pull-out force N	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SFT15	8	0.2	16	6
SFT20	14	0.5	18	6
SFT24	20	0.7	23	6
SFT30	32	1.3	28	8
SFT34	41	2	33	8
SFT35	43	1.5	19	8
SFT40	56.5	3	39	8

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	H	d	h	d ₁	d ₂	Y
SFT15	14.5	10	9	7.2	4.5	3.5	0.9
SFT20	20.9	10.4	10.5	7.2	4.5	3.5	1.5
SFT24	24.4	10.8	10	7.2	4.5	3.5	1.7
SFT30	30.6	21.8	15.6	15.7	11.2	6.6	2
SFT34	34.5	23	14.8	16.8	11.2	5.8	1.4
SFT35	35	23.5	16.5	14.8	10	5.4	0.5
SFT40	40.5	20.5	16	14.5	8	5	2.3

Dimensions (mm)


Model/ Size	D	H	h	G	L _g	Y	S
SFT15-M5M	14.5	10	10	M5	5	0.9	7
G1M	14.5	10	13.5	G1/8	7.5	0.9	14
G1F	14.5	10	12	G1/8	8	0.9	14
SFT20-M5M	20.9	10.4	10	M5	5	1.5	7
G1M	20.9	10.4	13.5	G1/8	7.5	1.5	14
G1F	20.9	10.4	12	G1/8	8	1.5	14
SFT24-M5M	24.4	10.8	10	M5	5	1.7	7
G1M	24.4	10.8	13.5	G1/8	7.5	1.7	14
G1F	24.4	10.8	12	G1/8	8	1.7	14
SFT30-G2M	30.6	22.2	15	G1/4	10	2	17
G2F	30.6	22.2	15	G1/4	10	2	17
SFT34-G2M	34.5	23	15	G1/4	10	1.4	17
G2F	34.5	23	15	G1/4	10	1.4	17
SFT35-G2M	34	23.5	15	G1/4	10	0.5	17
G2F	35	23.5	15	G1/4	10	0.5	17
SFT40-G2M	40.5	20.5	15	G1/4	10	2.3	17
G2F	40.5	20.5	15	G1/4	10	2.3	17

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	—	PJS-M5M-SFT24	SFT15, 20, 24
	PJS-G1F-SFT24	PJS-G1M-SFT24	
	PJS-G2F-SFT34	PJS-G2M-SFT34	SFT30, 34
	PJS-G2F-SFT35	PJS-G2M-SFT35	SFT35
	PJS-G2F-SFT40	PJS-G2M-SFT40	SFT40

◇Note: Please refer to suction cup with locking fitting and level compensator on page A25



Features

- ◇ Ultrathin(0.25mm) flower-shaped lip design is better to fit a variety of soft bag packaging, to ensure tightness during handling.
- ◇ The inner wedge-shaped support structure can effectively enhance the support strength and ensure the maximum gripping strength
- ◇ The lateral ports of fitting are evenly distributed, which can effectively prevent the soft packaging bag from blocking the port.

Applications

- ◇ Suitable for soft packaging bag(washing powder, laundry detergent, instant noodles, bread in bags, courier bags)

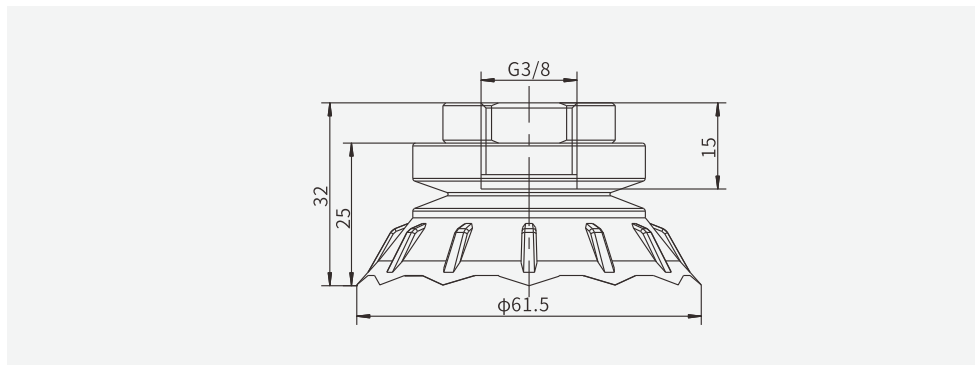
How to order

STP 60 S - G3F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
STP	60 -φ60mm	S - Silicone 35	Nil - Suction cup alone G3F - G3/8 Female thread

Dimensions (mm)



Mounting parts

Item	Model
Fitting for suction cup	PJS-G3F-STP60

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
 SBA
 SBB
 SBF
 SBOF
 SFT
STP
 SBL
 SBLP
 SF
 SU
 SUF
 SFG
 STC
 SFF
 SFM
 SDM
 SOB
 SOF
 SOG
 SFP
 SBP
 SXP
 SGP
 SDL
 SH
 SHB
 SZ
 SAN
 SAO
 SPA
 SPC
 SPF
 SPJ
 SPU
 SNP
 SOP


FOOD
PACKAGING


PLASTIC BAG



FDA



Features

- ◇ 4.5 bellows suction cup, suitable for transferring objects with height differences.
- ◇ High safety for handling fragile objects.
- ◇ Handling food with plastic package.

Applications

- ◇ Egg
- ◇ Glass cup
- ◇ Bread
- ◇ Products in plastic package

How to order

SBL 15 N- M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SBL	15 - ϕ 15mm	N - NBR 55	Nil - Suction cup alone
	20 - ϕ 20mm	S - Silicone 50	M5M - M5 Male thread
	30 - ϕ 30mm	WS - White silicone 50	G1F - G1/8 Female thread
	40 - ϕ 40mm		G1M - G1/8 Male thread
	50 - ϕ 50mm		G2F - G1/4 Female thread
			G2M - G1/4 Male thread
			G3F - G3/8 Female thread
			G3M - G3/8 Male thread

Selection

Model/ Connection thread	M5M	G1F	G1M	G2F	G2M	G3F	G3M
SBL15	●	—	—	—	—	—	—
SBL20 - 40	—	●	●	—	—	—	—
SBL50	—	—	—	●	●	●	●

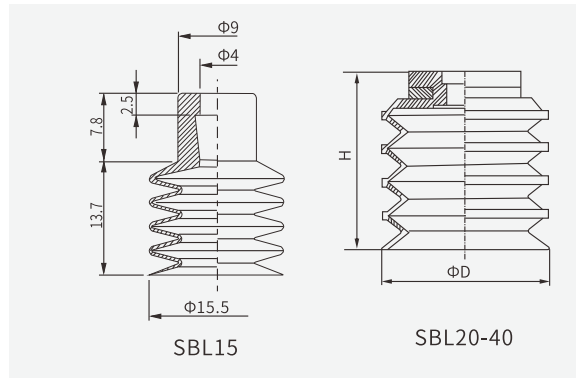
◇Note: "●"- standard, in stock. "—"-unavailable.

Technical parameters

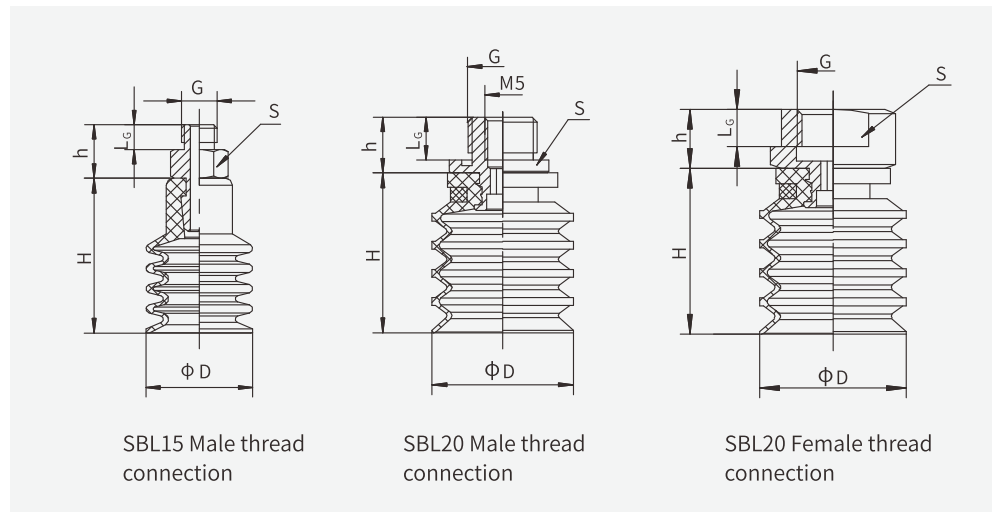
Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SBL15	8	1.95	12	6
SBL20	14	4	17	6
SBL30	31	13	25	6
SBL40	56	27	34	6
SBL50	88	55	42	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)

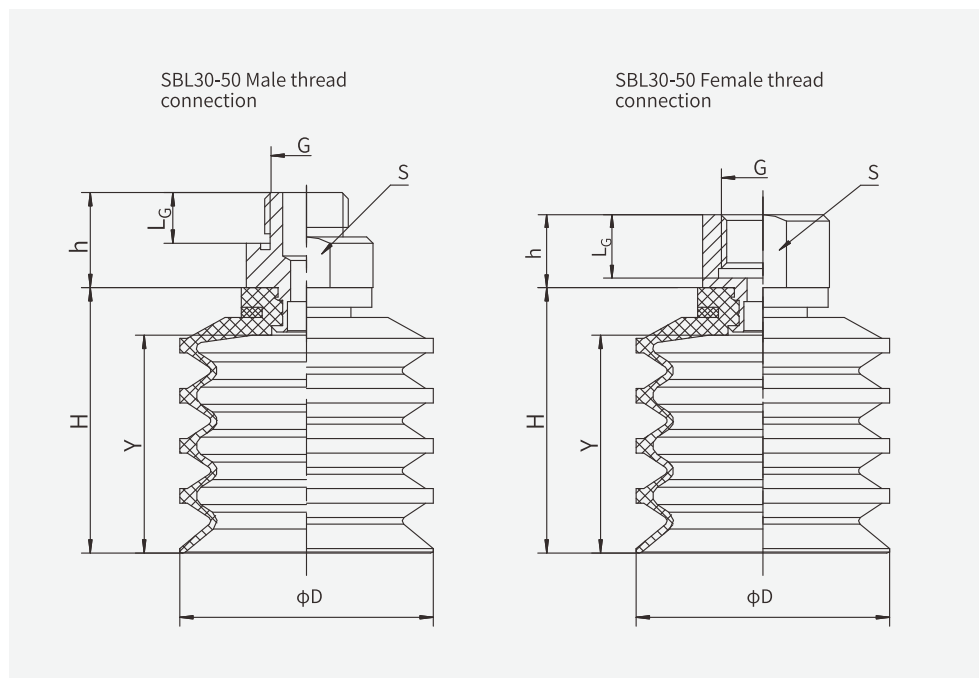


Model/ Size	D	H
SBL20	20	23
SBL30	30	32
SBL40	40	42
SBL50	50	52



Model/ Size	D	H	G	L _G	h	S
SBL15-M5M	15.5	21.5	M5	5	9	7
SBL20-G1F	20	23	G1/8	7	8	13
G1M	20	23	G1/8	6	7.8	13

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)


Model/ Size	D	H	G	L _g	h	S
SBL30-G1F	30	32	G1/8	7	10	17
G1M				6	12	
SBL40-G1F	40	42	G1/8	7	10	17
G1M				6	12	
SBL50-G2F	50	52	G1/4	10	13	24
G2M				9	17	
G3F	50	52	G3/8	10	18	24
G3M				10	13	

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	—	PJS-M5M-SC3	SBL15
	PJS-G1F-SF1	PJS-G1M-SF1	SBL20
	PJS-G1F-SF2	PJS-G1M-SF2	SBL30, 40
	PJS-G2F-SF3	PJS-G2M-SF3	SBL50
	PJS-G3F-SF3	PJS-G3M-SF3	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ Large bellows,suitable for handling workpiece for height difference.
- ◇ Good sealing with flat and thin lip.
- ◇ Large flow,handling objects quickly.
- ◇ Silicone material, working temperature range(-40~200°C)

Applications

- ◇ Suitable for handling bags with irregular shapes.
- ◇ Frozen food bags
- ◇ Water bags

Usage

SBLP series suction cup have a large inner space due to the multi bellows design. While handling light and thin workpiece(such as thin plastic bags, paper, etc.),the workpiece usually deforms and it will be sucked into the inner space of suction cup. Therefore, AIRBEST offers an improved solution with a special plug at the bottom to prevent excessive deformation of the workpiece and ensure normal suction.

T1(White round plug):For thin and soft workpiece with large deformation.

T2(Blue flower shape plug):For slightly hard workpiece with small deformation.

How to order

SBLP 30 S - G2M - T2

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Plug
SBLP	30 - φ30mm 40 - φ40mm 50 - φ50mm	S - Silicone 40	Nil - Suction cup alone G2M - G1/4 Male thread G3M - G3/8 Male thread G4M - G1/2 Male thread	Nil - Without plug T1 - Round plug (White) T2 - Flow shape plug (Blue)

Selection

Model/ Connection thread	G2M	G3M	G4M	T1	T2
SBLP30	●	—	—	○	●
SBLP40	—	●	—	●	●
SBLP50	—	—	●	○	●

◇Note: "●"- standard, in stock. "○"-selective,no stock."—"-"-unavailable.

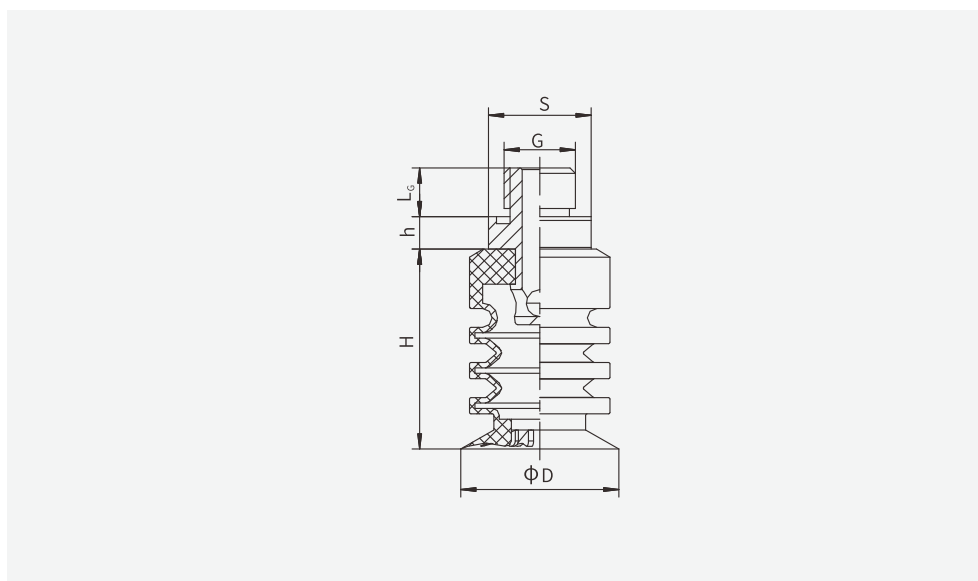
SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SBLP30	9	8	17	8
SBLP40	15	14	22	8
SBLP50	25	38	30	10

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	H	h	L _g	G	S
SBLP30-G2M	30	36.5	6	9	G1/4	19
SBLP40-G3M	40	40	6	10	G3/8	22
SBLP50-G4M	50	55	6	10	G1/2	28

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-G2M-SBLP30	SBLP30
	PJS-G3M-SBLP40	SBLP40
	PJS-G4M-SBLP50	SBLP50

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ Suitable for handling flat objects.
- ◇ Various materials for different workpieces. Conductive silicone can effectively prevent static damage to electronic products. Fluorine rubber material has good corrosion resistance, which can effectively reduce the mark left on workpiece after mark free treatment.
- ◇ Various sizes are available with workpiece with different sizes.

Applications

- ◇ Smooth wooden plate
- ◇ Plywood
- ◇ Electronic component
- ◇ Smooth steel plate
- ◇ Plastic plate

How to order

SF 50 N - G2F - EB

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Cone valve
SF	15 - φ15mm	N - NBR	Nil - Suction cup alone	Nil - Without cone valve
	20 - φ20mm	S - Silicone	M5M - M5 Male thread	EB - With cone valve
	25 - φ25mm	WS - White silicone	G1F - G1/8 Female thread	
	30 - φ30mm	CS - Conductive silicone	G1M - G1/8 Male thread	
	40 - φ40mm		G2F - G1/4 Female thread	
	50 - φ50mm		G2M - G1/4 Male thread	
	75 - φ75mm		G3F - G3/8 Female thread	
	110 - φ110mm		G3M - G3/8 Male thread	
	150 - φ150mm		G4F - G1/2 Female thread	
	200 - φ200mm		G6F - G3/4 Female thread	
	300 - φ300mm			

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST. Cone valve suits suction cup SF50-150.

Selection

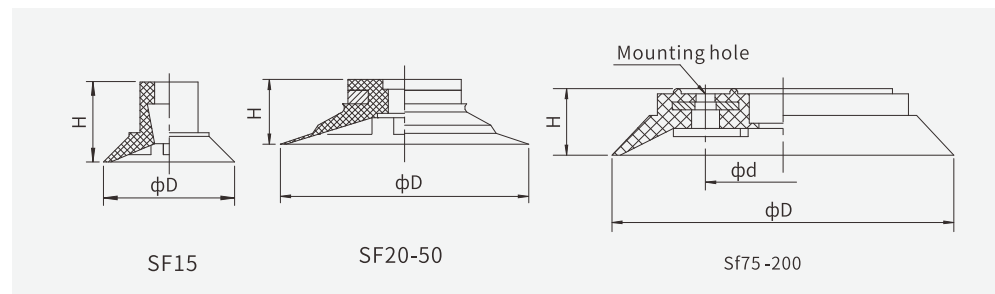
Model/ Connection thread	M5M	G1F	G1M	G2F	G2M	G3F	G3M	G4F	G6F	EB
SF15	●	—	—	—	—	—	—	—	—	—
SF20 — 30	—	●	●	—	—	—	—	—	—	—
SF40	—	●	●	—	—	—	—	—	—	—
SF50	—	—	—	●	●	●	●	—	—	○
SF75	—	—	—	●	—	—	—	—	—	○
SF110 — 200	—	—	—	—	—	—	—	●	—	—
SF300	—	—	—	—	—	—	—	—	●	—

◇Note: "●" - standard, in stock. "○" - selective, no stock. "—" - unavailable.

Technical parameters

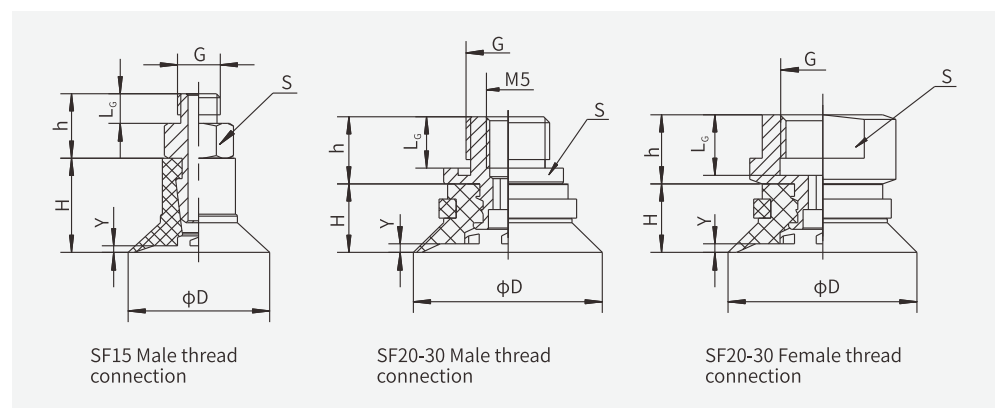
Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SF15	8	0.5	6
SF20	14.5	0.8	6
SF25	22	1.2	6
SF30	32	1.5	6
SF40	60	3	6
SF50	88	7	6
SF75	200	20	8
SF110	430	60	10
SF150	795	160	10
SF200	1500	550	12
SF300	3200	730	12

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

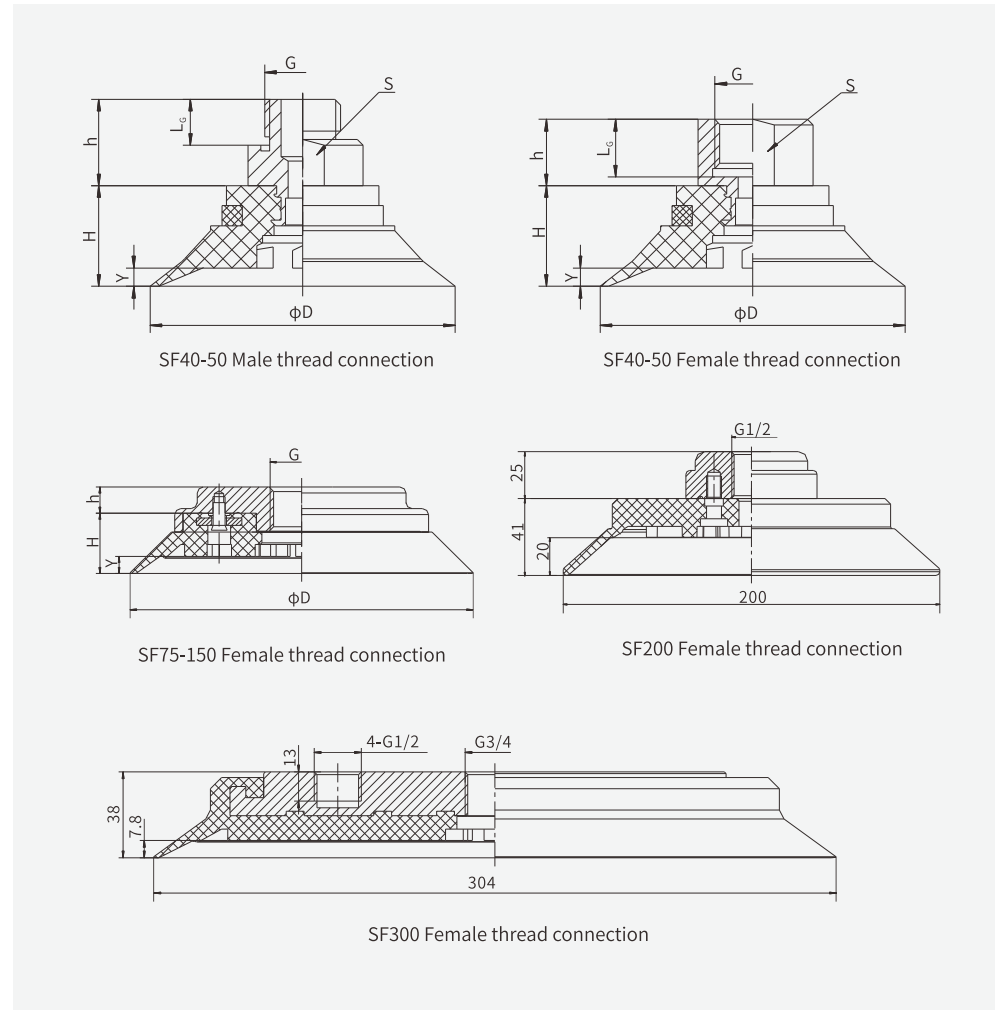
Dimensions (mm)


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

Model/ Size	D	H	d	Mounting hole
SF75	77	13	35	4-φ6.5
SF110	112	20	55	8-φ6
SF150	152	26	70	8-φ6
SF200	200	45	40	4-φ9



Dimensions (mm)



Model/ Size	D	H	G	L_s	h	S	Y
SF15- M5M	16.5	11	M5	3.5	7.5	7	0.8
SF20- G1F	22	8	G1/8	7	8	13	1
G1M				6	7.8		
SF25- G1F	27	9	G1/8	7	8	13	1
G1M				6	7.8		
SF30- G1F	32	10	G1/8	7	8	13	1.2
G1M				6	7.8		
SF40- G1F	42	13	G1/8	7	10	17	1.2
G1M				6	12		
SF50- G2F	53	17.5	G1/4	10	13	24	3.2
G2M				9	17		
G3F	53	17.5	G3/8	10	13	24	3.2
G3M				10	18		
SF75- G2F	77	13	G1/4	—	13	—	4
SF110- G4F	112	20	G1/2	—	9	—	6
SF150- G4F	152	26	G1/2	—	10	—	8

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

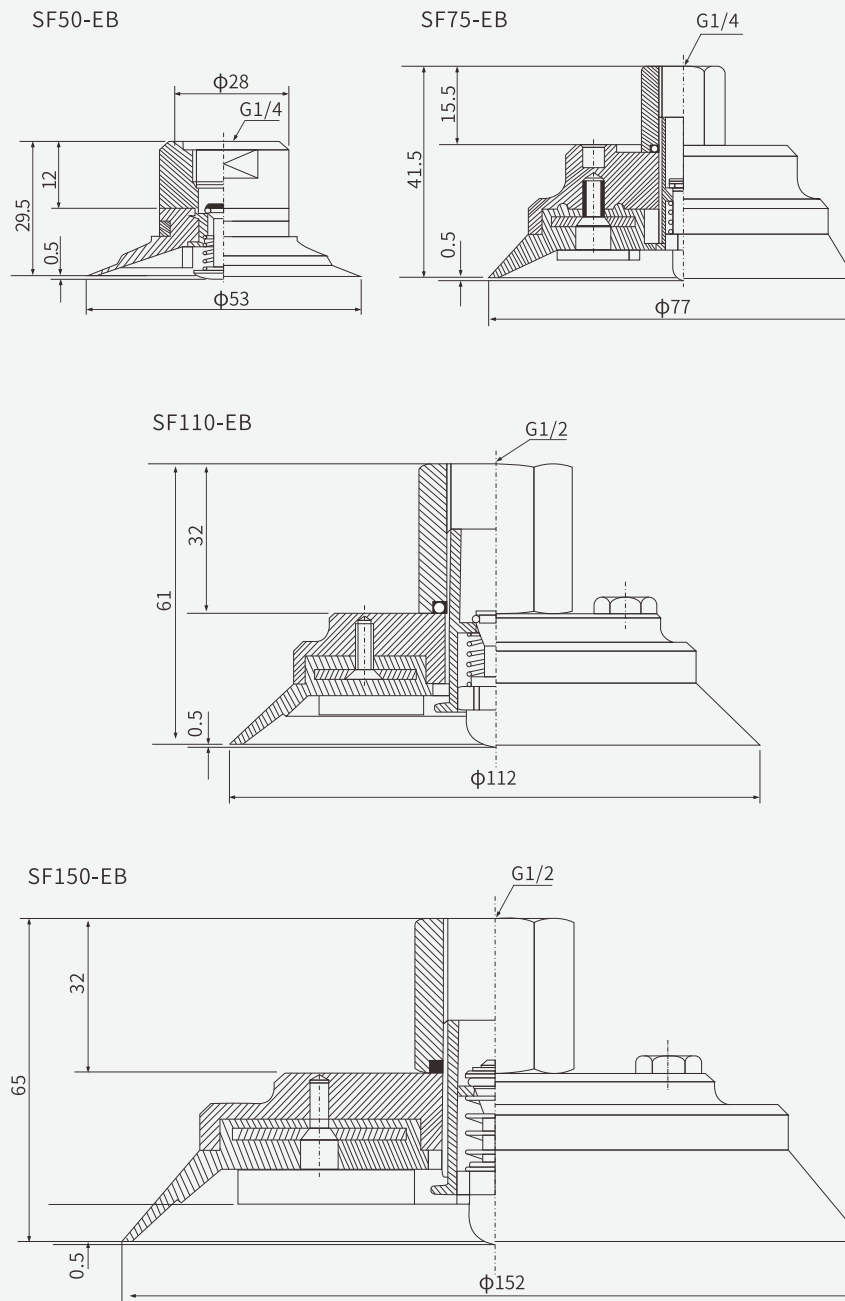
SPU

SNP

SOP

Dimensions(mm)

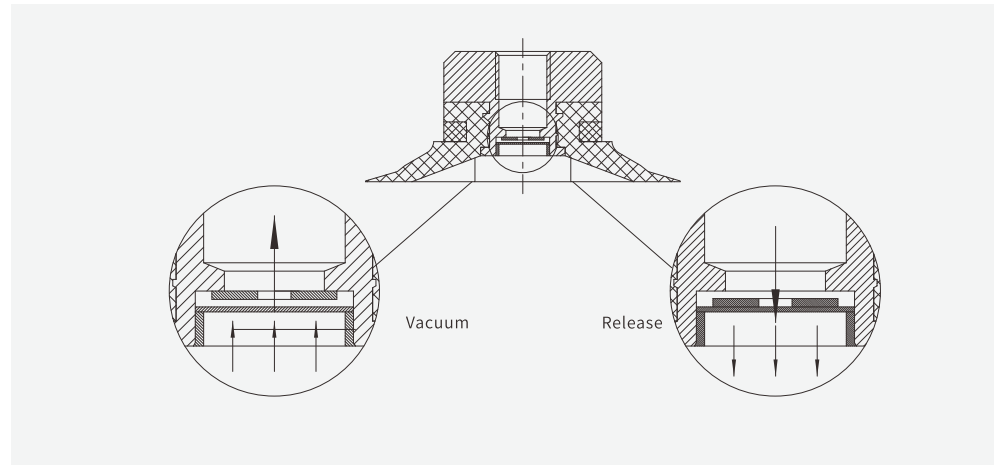
(Suction cup with cone valve)



Accessories

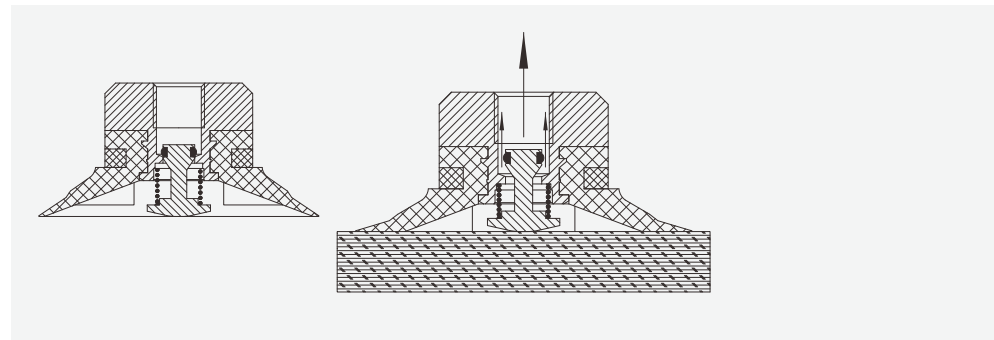
Vacuum efficiency valve (EH)

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 suction cup is not in contact with the object, the vacuum efficiency valve fitting can reduce leakage minimally.



Cone valve (EB)

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



- SB
- SBA
- SBB
- SBF
- SBOF
- SFT
- STP
- SBL
- SBLP
- SF**
- SU
- SUF
- SFG
- STC
- SFF
- SFM
- SDM
- SOB
- SOF
- SOG
- SFP
- SBP
- SXP
- SGP
- SDL
- SH
- SHB
- SZ
- SAN
- SAO
- SPA
- SPC
- SPF
- SPJ
- SPU
- SNP
- SOP

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	—	PJS-M5M-SC3	SF15
	PJS-G1F-SF1	PJS-G1M-SF1	Sf20, 25, 30
	PJS-G1F-SF2	PJS-G1M-SF2	SF40
	PJS-G2F-SF3	PJS-G2M-SF3	SF50
	PJS-G3F-SF3	PJS-G3F-SF3	
	PJS-G2F-SF4	—	SF75
	PJS-G4F-SF5	—	SF110
	PJS-G4F-SF6	—	SF150
	PJS-G4F-SF7	—	SF200

◇Note:Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ Suitable for handling workpiece with curve surface.
- ◇ Various materials for different workpieces. Conductive silicone can effectively prevent static damage to electronic products. Fluorine rubber material has good corrosion resistance.
- ◇ Various sizes are available for workpiece with different shapes and sizes.

Applications

- ◇ Paper box packaging
- ◇ Small semiconductor material

How to order

SU 30 N - G1F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SU	2 - ϕ 2mm	20 - ϕ 20mm	Nil - Suction cup alone M5M - M5 Male thread G1F - G1/8 Female thread G1M - G1/8 Male thread G2F - G1/4 Female thread G2M - G1/4 Male thread
	4 - ϕ 4mm	25 - ϕ 25mm	
	6 - ϕ 6mm	30 - ϕ 30mm	
	8 - ϕ 8mm	40 - ϕ 40mm	
	10 - ϕ 10mm	50 - ϕ 50mm	
	15 - ϕ 15mm	80 - ϕ 80mm	
		N - NBR 55 ★ S - Silicone 50 ★ WS - White silicone 50 CS - Conductive silicone 55	

◇Note: "★" - common materials, in stock. For other materials, please consult with AIRBEST.

Selection

Model/ Connection thread	M5M	G1M	G1F	G2F	G2M	G3F	G3M
SU2 - 8	●	—	—	—	—	—	—
SU20 - 40	—	●	●	—	—	—	—
SU50	—	—	—	●	●	●	●
SU80	—	—	●	—	—	—	—

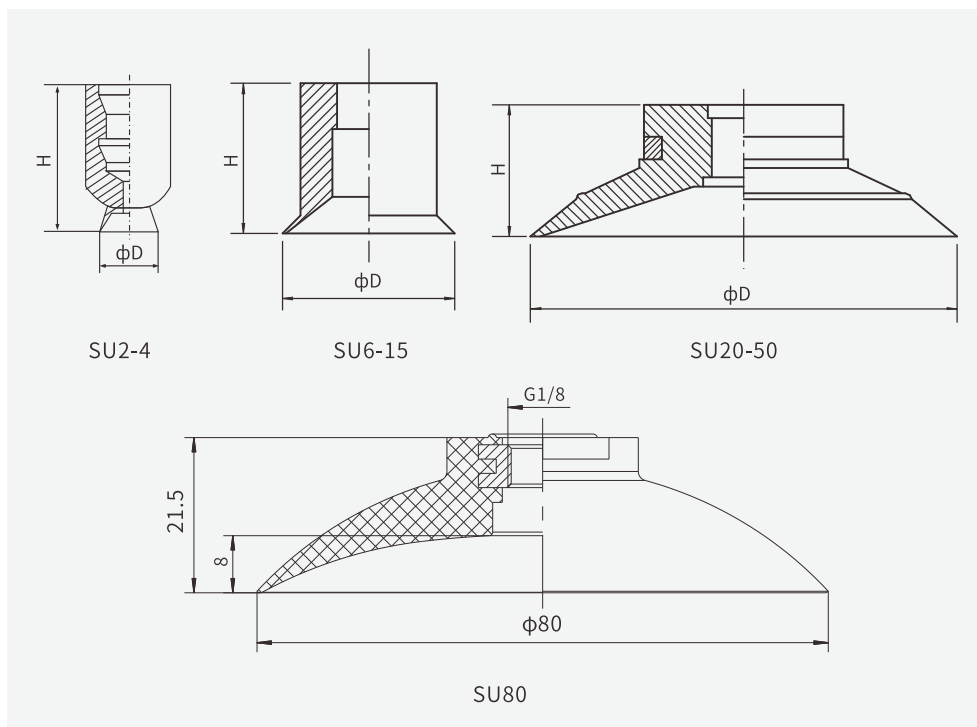
◇Note: "●" - standard, in stock. "—" - unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SU2	0.8	<0.1	3	4
SU4	1.2	<0.1	4	4
SU6	2.1	<0.1	7.5	4
SU8	3.2	<0.1	10	4
SU10	4.7	<0.1	12	6
SU15	7.4	0.5	20	6
SU20	9.5	0.8	30	6
SU25	18	1.2	45	6
SU30	33	1.5	45	6
SU40	60	3	65	6
SU50	92	7	80	6
SU80	210	24	120	8

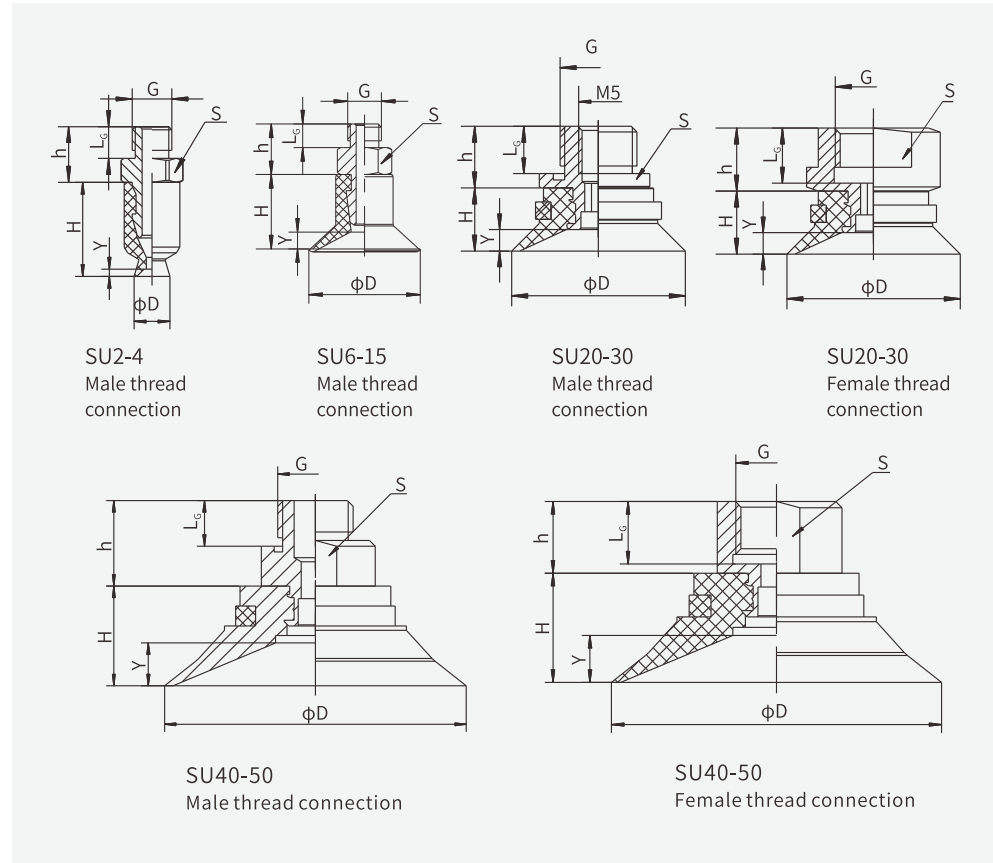
◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/Size	D	H
SU2	2.6	12
SU4	4.6	12
SU6	7	6.5
SU8	9	7
SU10	11	10.5
SU15	16.5	11

Model/Size	D	H
SU20	22	8
SU25	27	9
SU30	32	9.5
SU40	42	13
SU50	53	17.5

Dimensions (mm)


Model/ Size	D	H	G	L_6	h	S	Y
SU2-M5M	2.6	12	M5	4	7	7	0.6
SU4-M5M	4.6	12	M5	4	7	7	0.9
SU6-M5M	7	6.5	M5	3.5	7.5	7	1.5
SU8-M5M	9	7	M5	3.5	7.5	7	2
SU10-M5M	11	10.5	M5	3.5	7.5	7	2
SU15-M5M	16.5	11	M5	3.5	7.5	7	3
SU20-G1F	22	8	G1/8	7	8	13	2.2
G1M				6	7.8		
SU25-G1F	27	9	G1/8	7	8	13	2.9
G1M				6	7.8		
SU30-G1F	32	9.5	G1/8	7	8	13	4.5
G1M				6	7.8		
SU40-G1F	42	13	G1/8	7	10	17	5.2
G1M				6	12		
SU50-G2F	53	17.5	G1/4	10	13	24	7
G2M				9	17		
G3F	53	17.5	G3/8	10	13	24	7
G3M				10	18		

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	—	PJS-M5M-SC1	Su2, 4
	—	PJS-M5M-SC2	Su6, 8
	—	PJS-M5M-SC3	Su10, 15
	PJS-G1F-SF1	PJS-G1M-SF1	Su20, 25, 30
	PJS-G1F-SF2	PJS-G1M-SF2	SU40
	PJS-G2F-SF3	PJS-G2M-SF3	SU50
	PJS-G3F-SF3	PJS-G3M-SF3	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP


Features

- ◇ Suitable for objects with slightly uneven surface.
- ◇ Suitable for all kinds of objects with smooth surface.

Applications

- ◇ Electronic components ◇ Solar wafer ◇ Sheet metal

How to order
SUF 3.5 N - M5M

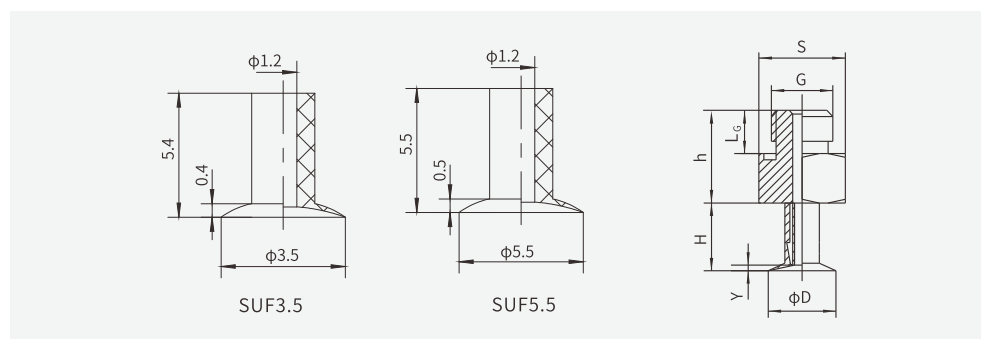
① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SUF	3.5 - $\phi 3.5\text{mm}$	N - NBR 55	Nil - Suction cup alone
	5.5 - $\phi 5.5\text{mm}$	S - Silicone 50	M5M - M5 Male thread

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SUF3.5	0.4	<0.1	6	4
SUF5.5	0.7	<0.1	10	4

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions(mm)


Model/ Size	D	Y	H	h	G	L _g	S
SUF3.5-M5M	3.5	0.4	5.4	4	M5	3.5	7
SUF5.5-M5M	5.5	0.5	5.5	4	M5	3.5	7

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-SUF5.5	SUF3.5, 5.5

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ The steep lip ensures the best suction force and ideal buffer effect.
- ◇ It has high suction force and lateral suction force in high-intensity operation due to the large effective suction area.
- ◇ Small inner volume and short compression stroke can reduce evacuation time and working cycle during adjusting operation.
- ◇ With inner intense pattern, high lateral suction force.

Applications

- ◇ Handling workpiece with smooth surface such as glass, plastic plate, etc.
- ◇ Handling thin workpiece such as sheet glass or coated glass.
- ◇ Handling glass plate surfaced with partitioning powder or autostrip powder.

How to order

SFG 400 N - G4F

① ② ③ ④

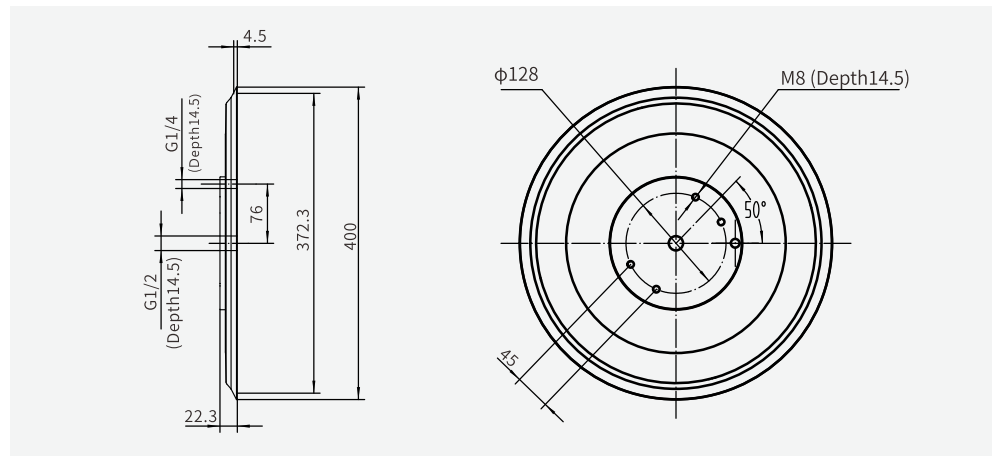
① Series	② Diameter	③ Material & Hardness	④ Connection thread
SFG	400 - Φ400mm	N - NBR 55 S - Silicone 50	G4F - G1/2 Female thread

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)	Weight (g)
SFG400	7,520	550	12	2,635

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



Features

- ◇ 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 handling process.
- ◇ 1.5 Bellows structure has good sealing and buffer to workpiece with uneven surface

Applications

- ◇ Car stamped steel plate with irregular shapes, oily steel plate.
- ◇ Glass, stamping parts, plywood
- ◇ Handling normal sheet metal (to avoid deformation)

How to order

STC 22 N - G2F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
STC	22 - ϕ 22mm	N - NBR 60	G2F - G1/4 Female thread
	30 - ϕ 30mm		G2M - G1/4 Male thread
	40 - ϕ 40mm		G3F - G3/8 Female thread
	50 - ϕ 50mm		M10M - M10 Male thread
	60 - ϕ 60mm		M14M - M14×1.5 Male thread
	80 - ϕ 80mm		RA - Rectangular adapter
	100- ϕ 100mm		
	125- ϕ 125mm		

Selection

Model/ Connection thread	G2M	G2F	G3F	M10M	M14M	RA
STC22 - 40	○	●	—	○	○	○
STC50 - 125	○	—	●	○	○	○

◇Note: "●"- standard, in stock. "○"-selective,no stock."—"-unavailable.

Technical parameters

Model	Vertical pull-out force (N)	Lateral pull-out force (N)	Lateral pull-out force N(oily surface)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
STC22	23	20	6.5	1.5	20	6	8.6
STC30	35	28	12	6.3	35	6	12
STC40	62	37	34	7.2	40	6	13.5
STC50	85	58	55	11.2	45	8	21
STC60	141	88	83	22.5	52	8	29
STC80	236	141	136	57	70.5	8	51
STC100	371	228	221	92	95	8	77
STC125	558	352	335	191	140	10	165

◇Note: Testing vacuum level -60kPa.Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

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SXP

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SDL

SH

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SAN

SAO

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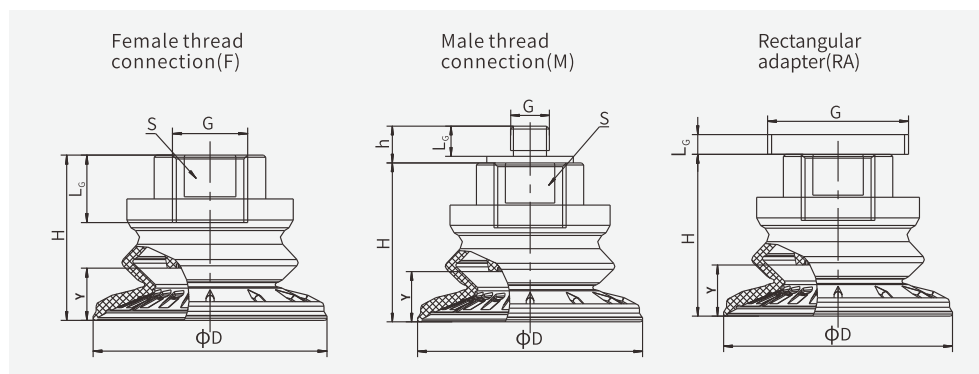
SPF

SPJ

SPU

SNP

SOP

Dimensions (mm)


Model/ Size	D	H	G	L _g	h	S	Y
STC22-G2M	22	25	G1/4	12	13.5	16	5.5
G2F			G1/4	11	—	16	
M10M			M10	12	13.5	16	
M14M			M14×1.5	12	13.5	16	
RA			□32	4.7	—	—	
STC30-G2M	32	28	G1/4	12	13.5	17	9.5
G2F			G1/4	11	—	17	
M10M			M10	12	13.5	17	
M14M			M14×1.5	12	13.5	16	
RA			□32	4.7	—	—	
STC40-G2M	42	28.5	G1/4	12	13.5	17	10
G2F			G1/4	11	—	17	
M10M			M10	12	13.5	17	
M14M			M14×1.5	12	13.5	17	
RA			□32	4.7	—	—	
STC50-G2M	52	37	G1/4	12	13.5	22	11.5
G3F			G3/8	13	—	22	
M10M			M10	12	13.5	22	
M14M			M14×1.5	12	13.5	22	
RA			□32	4.7	—	—	
STC60-G2M	62.5	41	G1/4	12	13.5	22	14.5
G3F			G3/8	13	—	22	
M10M			M10	12	13.5	22	
M14M			M14×1.5	12	13.5	22	
RA			□32	4.7	—	—	
STC80-G2M	82	50.5	G1/4	12	13.5	22	22.5
G3F			G3/8	13	—	22	
M10M			M10	12	13.5	22	
M14M			M14×1.5	12	13.5	22	
RA			□32	4.7	—	—	
STC100-G2M	102.5	56	G1/4	12	13.5	22	25
G3F			G3/8	13	—	22	
M10M			M10	12	13.5	22	
M14M			M14×1.5	12	13.5	22	
RA			□32	4.7	—	—	
STC125-G2M	128	68	G1/4	12	13.5	22	32
G3F			G3/8	13	—	22	
M10M			M10	12	13.5	22	
M14M			M14×1.5	12	13.5	22	
RA			□32	4.7	—	—	



Features

- ◇ Large inner support structure can protect the sheet metal 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 handling process.
- ◇ 2 hardness of material for option(45 & 60), suitable for sheet metal with different thickness and shapes.

Applications

- ◇ Car stamped steel plate, oily steel plate
- ◇ Glass, stamping parts, plywood
- ◇ Handling normal sheet metal(to avoid deformation)

How to order

SFF 30 N - G2F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SFF	30 - ϕ 30mm	N - NBR 60	G2F - G1/4 Female thread
	40 - ϕ 40mm	NG - NBR 45	G2M - G1/4 Male thread
	50 - ϕ 50mm		G3F - G3/8 Female thread
	60 - ϕ 60mm		M10M - M10 Male thread
	80 - ϕ 80mm		M14M - M14 $\times$ 1.5 Male thread
	100 - ϕ 100mm		RA - Rectangular adapter
	125 - ϕ 125mm		

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

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SNP

SOP

Selection

Model/ Connection thread	G2M	G2F	G3F	M10M	M14M	RA
SFF30 - 40	○	●	—	○	○	○
SFF50 - 125	○	—	●	○	○	○

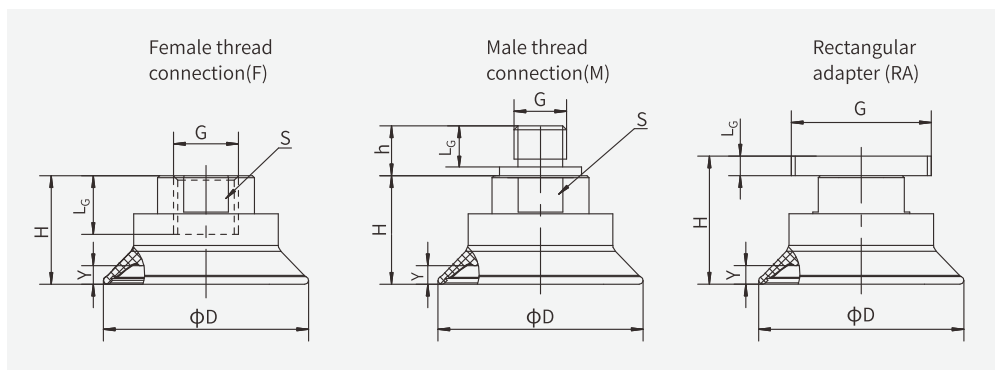
◇Note: "●"- standard, in stock. "○"-selective,no stock."—"-unavailable.

Technical parameters

Model	Vertical pull-out force (N)	Lateral pull-out force (N)	Lateral pull-out force N(oily surface)	Inner volume (cm3)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
SFF30	45	35	33	1.6	35	6	11
SFF40	72	54	51	3.5	47.5	6	13
SFF50	112	90	86	7.5	70	8	20
SFF60	145	102	93	12.6	81	8	26
SFF80	288	212	190	35	11	8	43
SFF100	445	322	308	60	141	8	57
SFF125	660	475	400	115	165	10	145

◇ Note: Vacuum level is -60kPa, workpiece surface is smooth and clean. The above pull-out force are specified without any safety factor. The value will changes according to different surface conditions of workpiece

Dimensions (mm)



Model/ Size	D	H	G	L ₆	h	S	Y
SFF30-G2M	32	20	G1/4	12	13.5	16	2.7
G2F		20	G1/4	11	—	16	
M10M		20	M10	12	13.5	16	
M14M		20	M14×1.5	12	13.5	16	
RA		24.7	□32	4.7	—	—	
SFF40-G2M	42	22	G1/4	12	13.5	17	3.7
G2F		22	G1/4	11	—	17	
M10M		22	M10	12	13.5	17	
M14M		22	M14×1.5	12	13.5	17	
RA		26.7	□32	4.7	—	—	
SFF50-G2M	52	28	G1/4	12	13.5	22	4.7
G3F		28	G3/8	13	—	22	
M10M		28	M10	12	13.5	22	
M14M		28	M14×1.5	12	13.5	22	
RA		32.7	□32	4.7	—	—	
SFF60-G2M	62.5	31	G1/4	12	13.5	22	6
G3F		31	G3/8	13	—	22	
M10M		31	M10	12	13.5	22	
M14M		31	M14×1.5	12	13.5	22	
RA		35.7	□32	13	—	22	
SFF80-G2M	82	34	G1/4	12	13.5	22	6
G3F		34	G3/8	13	—	22	
M10M		34	M10	12	13.5	22	
M14M		34	M14×1.5	12	13.5	22	
RA		38.7	□32	13	—	22	
SFF100-G2M	103	36	G1/4	12	13.5	22	9.2
G3F		36	G3/8	13	—	22	
M10M		36	M10	12	13.5	22	
M14M		36	M14×1.5	12	13.5	22	
RA		40.7	□32	4.7	—	—	
SFF125-G2M	128	43	G1/4	12	13.5	22	12.5
G3F		43	G3/8	13	—	22	
M10M		43	M10	12	13.5	22	
M14M		43	M14×1.5	12	13.5	22	
RA		47.7	□32	4.7	—	—	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB

SBA

SBB

SBF

SBOF

SFT

STP

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SBLP

SF

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SUF

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SDM

SOB

SOF

SOG

SFP

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SPU

SNP

SOP


 CURVED
SURFACE

 METAL
SHEET

 SLIPPING
RESISTANCE

 LONG TIME
LIFE

 OILY
SURFACE


Features

- ◇ Large stroke and good flexibility, easy to fit close to workpiece with various shapes.
- ◇ The internal large-area support structure can effectively improve the lateral friction force and has a good anti-slipping effect on the handling of oily steel plate.
- ◇ Modular structure design, each part can be separated and replaced quickly for cycle use, which reduces cost greatly.
- ◇ PU material, excellent wear resistance and oil resistance.

How to order

SFM 30 U – G1F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SFM	30 -φ30mm 40 -φ40mm 50 -φ50mm 60 -φ60mm 80 -φ80mm 100 -φ100mm 120 -φ120mm	U - PU 70	Nil - Suction cup alone G1F - G1/8 Female thread G2F - G1/4 Female thread G2M - G1/4 Male thread G3F - G3/8 Female thread M10M - M10 Male thread M14M - M14×1.5 Male thread RA - Rectangular adapter

Selection

Model/ Connection thread	G1F	G2F	G2M	G3F	M10M	M14M	RA
SFM30 - 40	●	—	—	—	○	—	○
SFM50 - 120	—	●	○	●	○	○	○

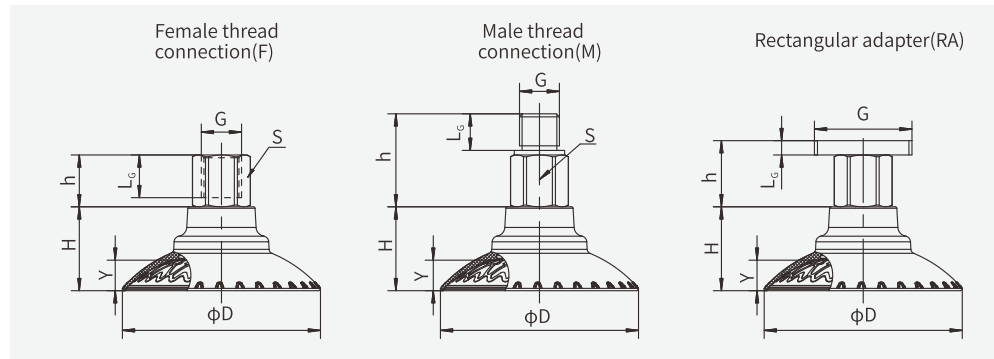
◇Note: "●"- standard, in stock. "○"-selective,no stock. "—" -unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
SFM30	45	4.5	25	6	3.5
SFM40	70	8.5	30	6	5
SFM50	112	18.6	35	8	8.5
SFM60	150	26	40	8	11
SFM80	285	56	60	8	21
SFM100	420	105	70	10	35
SFM120	580	153	90	10	55

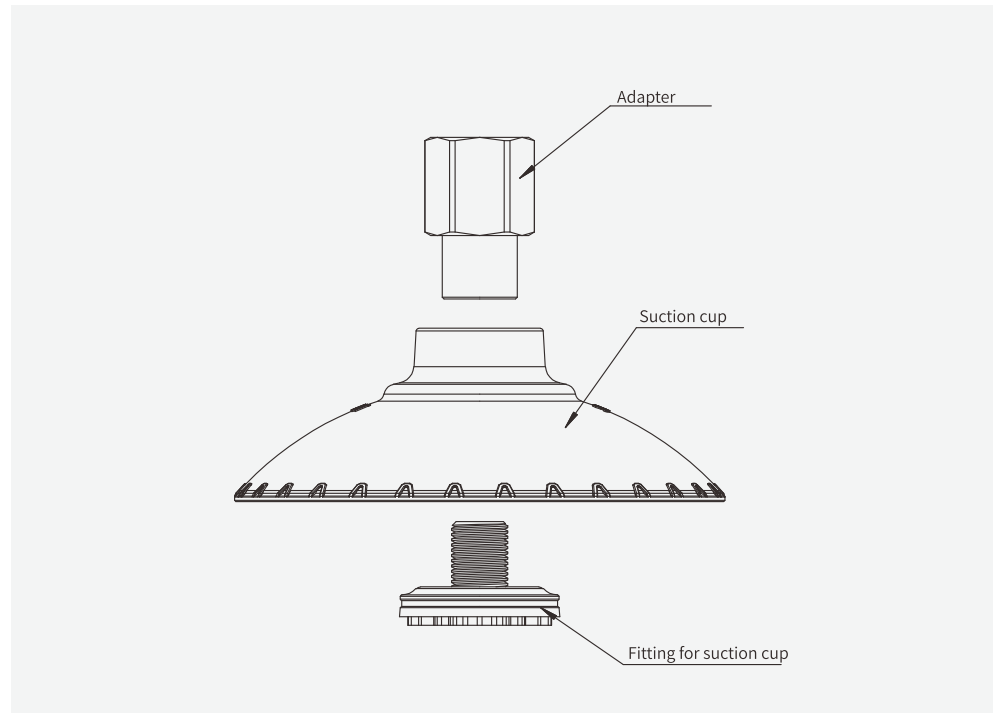
◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/Size	D	H	h	Y	G	L _g	S
SFM30-G1F	33.5	17.5	14	4	G1/8	10	14
M10M			27.5		M10	12	14
RA			18.7		□32	4.7	—
SFM40-G1F	43.5	20	14	6.3	G1/8	10	14
M10M			27.5		M10	12	14
RA			18.7		□32	4.7	—
SFM50-G2F	54	25	17	7.8	G1/4	12	17
G2M			30.5		G1/4	12	17
G3F			17		G3/8	12	22
M10M			30.5		M10	12	17
M14M			30.5		M14×1.5	12	17
RA			21.7		□32	4.7	—
SFM60-G2F	65	27.5	17	10	G1/4	12	17
G2M			30.5		G1/4	12	17
G3F			17		G3/8	12	22
M10M			30.5		M10	12	17
M14M			30.5		M14×1.5	12	17
RA			21.7		□32	4.7	—
SFM80-G2F	85	30	17	13	G1/4	12	17
G2M			30.5		G1/4	12	17
G3F			17		G3/8	12	22
M10M			30.5		M10	12	17
M14M			30.5		M14×1.5	12	17
RA			21.7		□32	4.7	—
SFM100-G2F	103	38	17	15.5	G1/4	12	17
G2M			30.5		G1/4	12	17
G3F			17		G3/8	12	22
M10M			30.5		M10	12	17
M14M			30.5		M14×1.5	12	17
RA			21.7		□32	4.7	—
SFM120-G2F	123	41	17	18.5	G1/4	12	17
G2M			30.5		G1/4	12	17
G3F			17		G3/8	12	22
M10M			30.5		M10	12	17
M14M			30.5		M14×1.5	12	17
RA			21.7		□32	4.7	—

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
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SH
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SAN
SAO
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Structure diagram

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS- M8M- SFM40	SFM30, 40
	PJS- G1M- SFM80	SFM50, 60, 80
	PJS- G1M- SFM120	SFM100, 120
Adapter	PJT- M8F - G1F	SFM30, 40
	PJT- G1F - G2F	SFM50, 60, 80, 100, 120
	PJT- G1F - G3F	

◇Note:Please refer to suction cup with locking fitting and level compensator on page 24.



METAL
SHEET



LONG LIFE
TIME



ANTI-
DEFORMATION



Features

- ◇ High-strength PU material, thickened wall and internal reinforced rib structure design can effectively prevent deformation during the handling of sheet metal.

Applications

- ◇ Sheet metal

How to order

SDM 100 U - G3F

① ② ③ ④

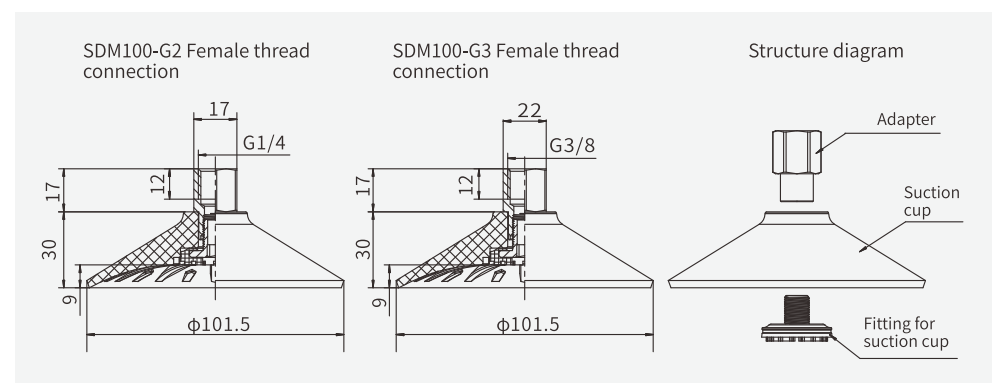
① Series	② Diameter	③ Material & Hardness	④ Connection thread
SDM	100 - $\phi 100$ mm	U - PU 55	Nil - Suction cup alone G2F - G1/4 Female thread G3F - G3/8 Female thread

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SDM100	375	56	160	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Mounting parts

Item	Adapter	Fitting for suction cup
Connector	PJT-G1M-G2F PJT-G1M-G3F	PJS-G1M-SFM80

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ Large inner support structure protects the sheet metal from deformation and damage during the handling process.
- ◇ Slot structure efficiently improves the friction force between vacuum pad and workpiece in order to prevent the oily sheet metal from slipping during the handling process.
- ◇ 1.5 bellows structure has good sealing and buffer to workpiece with uneven surface.
- ◇ Oval suction cup is more suitable for long and narrow workpiece with flat surface and curved surface.

Applications

- ◇ Car stamped steel plate, oily steel plate
- ◇ Long and thin workpiece with slightly curved surface

How to order

SOB 30×60 N - G2F

① ② ③ ④

① Series	② Dimension	③ Material & Hardness	④ Connection thread
SOB	30×60	N -NBR 60	G2M - G1/4 Male thread
	40×80		G2F - G1/4 Female thread
	55×110		G3F - G3/8 Female thread
	70×140		M10M - M10 Male thread
			M14M - M14×1.5 Male thread
			RA - Rectangular adapter

Selection

Model/ Connection thread	G2F	G2M	G3F	M10M	M14M	RA
SOB30×60	●	○	○	○	○	○
SOB40×80	●	○	○	○	○	○
SOB55×110	○	○	●	○	○	○
SOB70×140	○	○	●	○	○	○

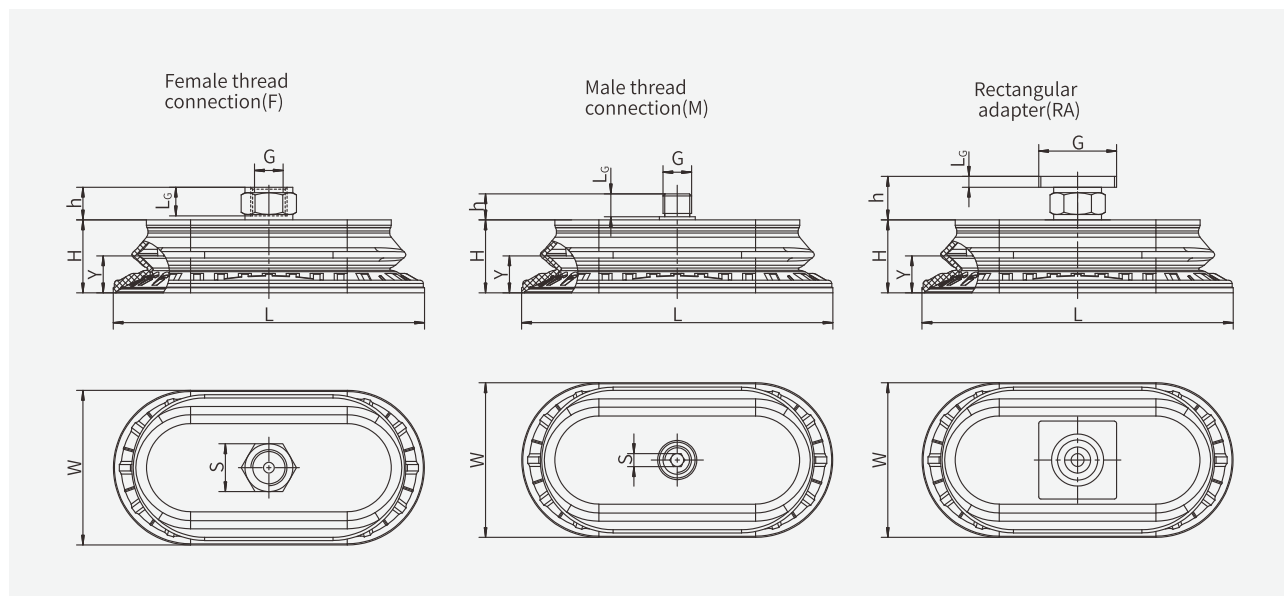
◇ Note: "●"- standard, in stock. "○"-selective, can be achieved in other way (e. g.adapter).

Technical parameters

Model	Vertical pull-out force (N)	Lateral pull-out force (N)	Lateral pull-out force (N) (oily surface)	Recommended hose dia. (mm)	Weight (g)	Inner volume (cm3)	Min. curve radius of workpiece (mm)
SOB30×60	53	60	50	6	26	8.7	25
SOB40×80	110	118	101	8	33	20	32
SOB55×110	197	200	183	8	75	50	50
SOB70×140	275	295	267	8	117	100	70

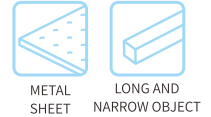
◇ Note: Vacuum level is -60kPa,workpiece surface is smooth and clean. The above pull-out force are specified without any safety factor. The value will changes according to different surface conditions of workpiece.

SB
SBA
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SBF
SBOF
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STP
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SBLP
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SUF
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SDM
SOB
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SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)


Model/ Size	L	W	H	G	L _c	h	S	Y
SOB30x60-G2F	62	32	20	G1/4	11	14	17	6
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOB40x80-G2F	82	42	23	G1/4	11	14	17	8.8
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOB55x110-G2F	112	57	29	G1/4	11	14	17	12.5
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOB70x140-G2F	143	72	33.5	G1/4	11	14	17	17
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ Large inner support structure protects the sheet metal from deformation and damage during the handling process.
- ◇ Slot structure efficiently improves the friction force between suction cup and workpiece in order to prevent the oily sheet metal from slipping during the handling process.
- ◇ Oval suction cup is suitable for long and narrow workpieces.
- ◇ 2 types hardness of material for option(45 & 60), suitable for metal sheet with different thickness and shapes.

Applications

- ◇ Car stamped steel plate, oily steel plate
- ◇ Long and thin workpiece

How to order

SOF 16×50 N - G2F

① ② ③ ④

① Series	② Diemnsion	③ Material & Hardness	④ Connection thread
SOF	16×50 40×110	N - NBR 60 NG - NBR 45	G2F - G1/4 Female thread
	20×80 50×100		G2M - G1/4 Male thread
	23×60 60×120		G3F - G3/8 Female thread
	30×90 70×140		M10M - M10 Male thread
	40×80		M14M - M14×1.5 Male thread
			RA - Rectangular adapter

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SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Selection

Model/ Connection thread	G2F	G2M	G3F	M10M	M14M	RA
SOF16×50	●	○	○	○	○	○
SOF23×60	●	○	○	○	○	○
SOF20×80	●	○	○	○	○	○
SOF30×90	●	○	○	○	○	○
SOF40×80	●	○	○	○	○	○
SOF40×110	○	○	●	○	○	○
SOF50×100	○	○	●	○	○	○
SOF60×120	○	○	●	○	○	○
SOF70×140	○	○	●	○	○	○

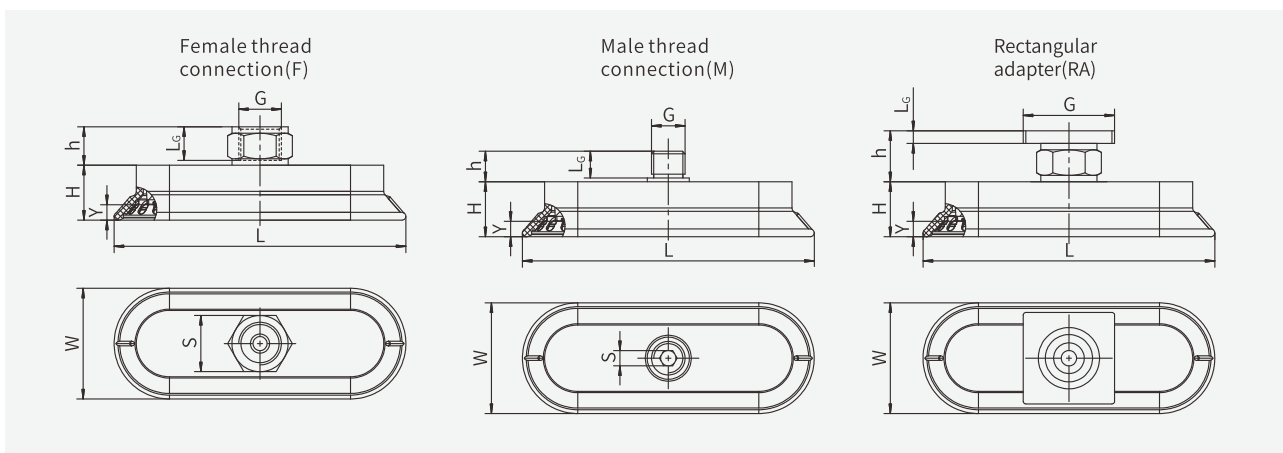
◇ Note: "●"- standard, in stock. "○"-selective, can be achieved in other ways (eg, adapter).

Technical parameters

Model	Vertical pull-out force (N)	Lateral pull-out force (N)	Lateral pull-out force N(oily surface)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)	Weight (g)
SOF16×50	33	24	12	2	8	4	17
SOF20×80	78	38	35	5	25	4	23
SOF23×60	57	37	33	3	20	4	29
SOF30×90	125	77	60	10	30	4	24
SOF40×80	141	110	100	11	50	6	43
SOF40×110	200	188	118	25	35	6	47
SOF50×100	217	181	121	20	75	6	56
SOF60×120	312	254	170	35	75	6	70
SOF70×140	445	344	230	52	90	8	77

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Dimensions (mm)

Model/ Size	L	W	H	G	L _G	h	S	Y
SOF16×50-G2F	50	16	19.5	G1/4	11	14	17	3
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF20×80-G2F	84	24	15.5	G1/4	11	14	17	5
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF23×60-G2F	62	25	12	G1/4	11	14	17	3
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF30×90-G2F	93	33	16	G1/4	11	14	17	5
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF40×80-G2F	82	43	14	G1/4	11	14	17	4
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF40×110-G2F	113	43	21.5	G1/4	11	14	17	6
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF50×100-G2F	103	54	16	G1/4	11	14	17	5
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF60×120-G2F	123	65	18	G1/4	11	14	17	6
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	
SOF70×140-G2F	143	76	19	G1/4	11	14	17	7
G2M				G1/4	12	13.5	5	
G3F				G3/8	11	14	22	
M10M				M10	12	13.5	5	
M14M				M14×1.5	12	13.5	5	
RA				□32	4.7	18.7	—	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB

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SNP

SOP



Features

- ◇ Concave oval structure, suitable for cylindrical workpiece.
- ◇ The internal slot structure can effectively increase the friction force between suction cup and workpiece.

Applications

- ◇ Lithium battery
- ◇ Cylindrical workpiece
- ◇ Tubular workpiece

How to order

SOG 15×40 N - M5F

① ② ③ ④

① Series	② Dimension	③ Material & Hardness	④ Connection thread
SOG	15×40 35×100	NG - NBR 45	M5F - M5 Female thread M5M - M5 Male thread G2F - G1/4 Female thread G2M - G1/4 Male thread G3F - G3/8 Female thread M10M - M10 Male thread M14M - M14×1.5 Male thread RA - Rectangular adapter

Selection

Model/ Connection thread	M5F	M5M	G2F	G2M	G3F	M10M	M14M	RA
SOG15×40	●	●	—	—	—	—	—	—
SOG35×100	—	—	●	○	○	○	○	○

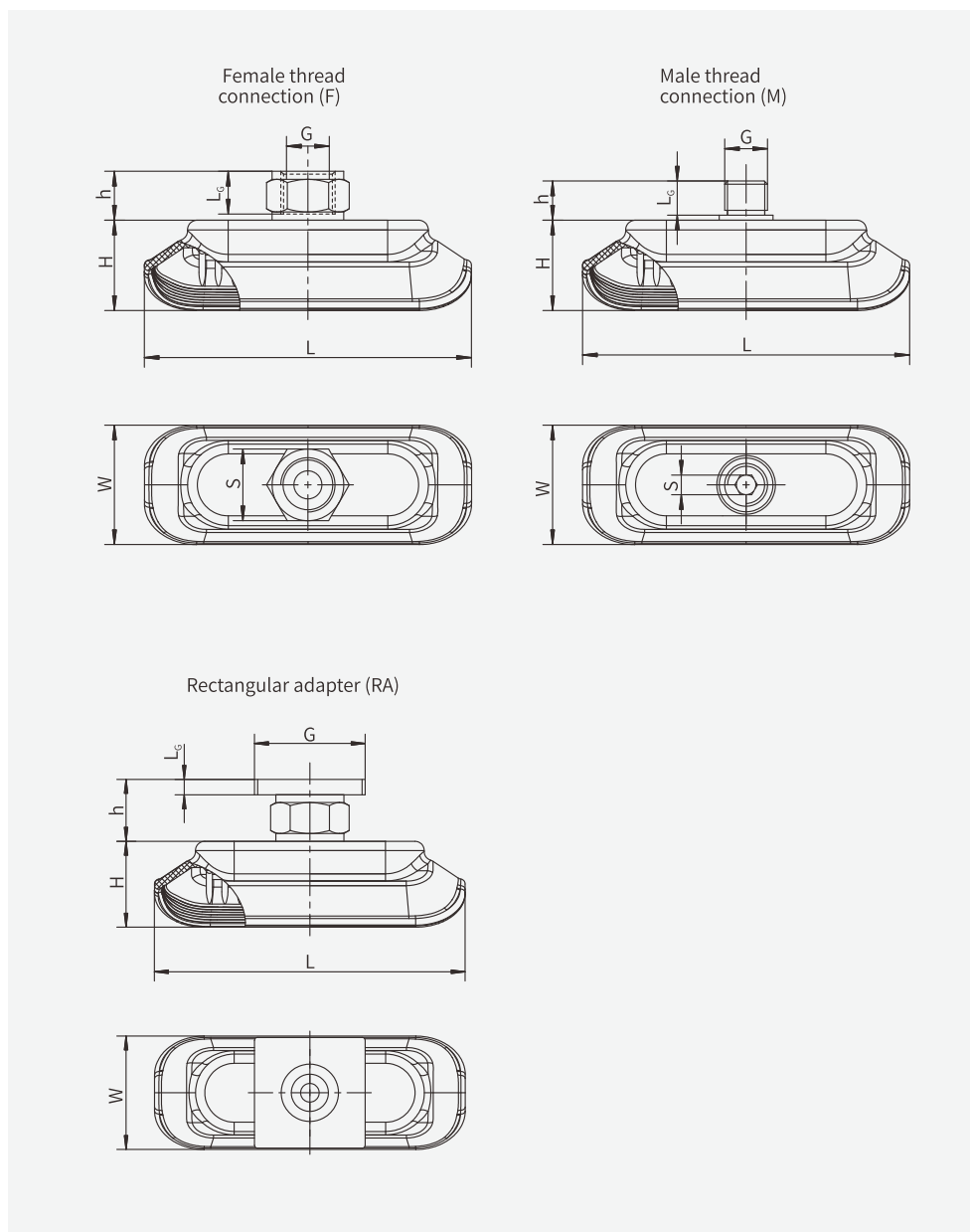
◇Note: "●"- standard, in stock. "○"-selective, can be achieved in other ways (eg, adapter)."—"-unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SOG15×40	22	1.3	18	6
SOG35×100	122	11	25	8

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	L	W	H	G	L _c	h	S
SOG15×40-M5F	42	15.5	14	M5	—	—	—
M5M				M5	5	9	8
SOG35×100-G2F	100.5	36.5	28	G1/4	11	14	17
G2M				G1/4	12	13.5	5
G3F				G3/8	11	14	22
M10M				M10	12	13.5	5
M14M				M14×1.5	12	13.5	5
RA				□32	4.7	18.7	—

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

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SOP



Features

- ◇ Good wear resistance and oil resistance.
 - ◇ Good elasticity and high tensile strength
 - ◇ PU material, suitable for handling carton and workpiece with even surface.
- Its life time is 2-3 times longer than rubber.

Applications

- ◇ Workpiece with even surface
- ◇ Paper box

How to order

SFP 20 U - G1F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SFP	20 -φ20mm	U - PU 60	Nil - Suction cup alone
	30 -φ30mm	UY - PU 40	G1F - G1/8 Female thread
	40 -φ40mm		G1M - G1/8 Male thread

Selection

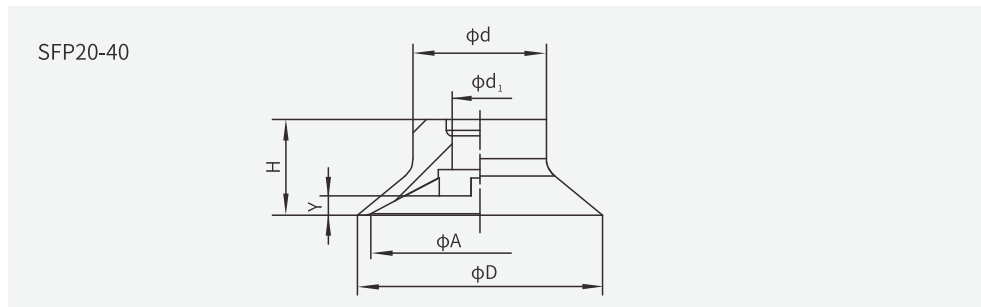
Model/ Connection thread	G1F	G1M
SFP20 - 40	●	●

◇Note: "●"- standard, in stock.

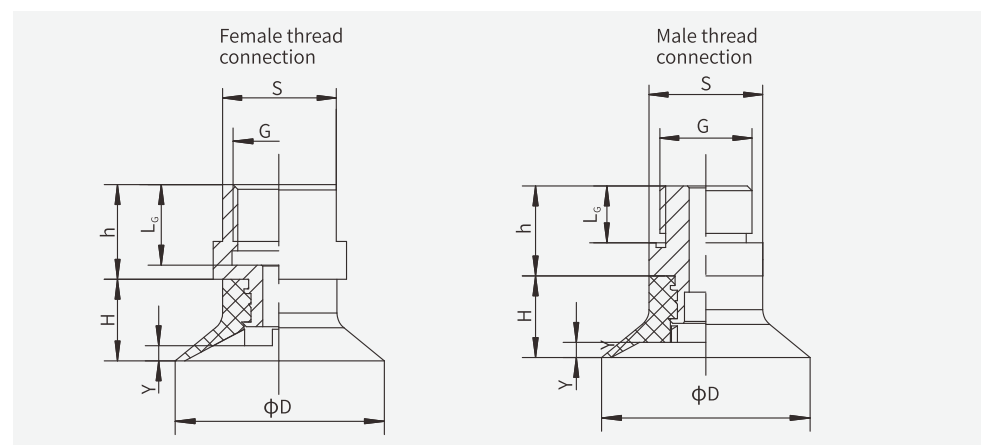
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SFP20	14	0.36	24	6
SFP30	21	1	42	6
SFP40	56.5	2.7	52	6

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)


Model/ Size	D	H	A	d	d ₁	Y
SFP20	22	8.6	20	12	5	1.6
SFP30	31	10.5	30	15.8	5	2
SFP40	41	4	40	21	6.5	2.5



Model/ Size	D	H	G	h	L _g	Y	S
SFP20-G1F	22	8.6	G1/8	8	7	1.6	13
G1M				7.8	6		
SFP30-G1F	31	10.5	G1/8	8	7	2	13
G1M				7.8	6		
SFP40-G1F	41	14	G1/8	8	7	2.5	17
G1M				12	6		

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	PJS-G1F-SF1-EW	PJS-G1M-SF1-EW	SFP20, 30
	PJS-G1F-SF2-EW	PJS-G1M-SF2-EW	SFP40

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB

SBA

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SBF

SBOF

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STP

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SBLP

SF

SU

SUF

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STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

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SPA

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SOP



Features

- ◇ Good wear resistance and oil resistance.
- ◇ Good elasticity and high tensile strength
- ◇ PU material. Long life time. Its life time is 3-4 times longer than other material .
- ◇ 1.5 bellows structure has good sealing and buffer to workpiece with uneven surface.

Applications

- ◇ Stamping parts
- ◇ Smooth steel plate
- ◇ Carton box

How to order

SBP 10 UY - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SBP	10 -φ10mm	U - PU 60	Nil - Suction cup alone
	15 -φ15mm	UY - PU 40	M5M - M5 Male thread
	20 -φ20mm	UD - PU 30 60	G1F - G1/8 Female thread
	30 -φ30mm		G1M - G1/8 Male thread
	40 -φ40mm		G2F - G1/4 Female thread
	50 -φ50mm		G2M - G1/4 Male thread
	70 -φ70mm		G3F - G3/8 Female thread
			G3M - G3/8 Male thread

Selection

Model/ Connection thread	M5M	G1F	G1M	G2F	G2M	G3F	G3M
SBP10 - 15	●	—	—	—	—	—	—
SBP20 - 40	—	●	●	—	—	—	—
SBP50	—	—	—	●	●	●	●
SBP70	—	—	—	—	—	●	●

◇Note: "●"- standard, in stock. "—" -unavailable.

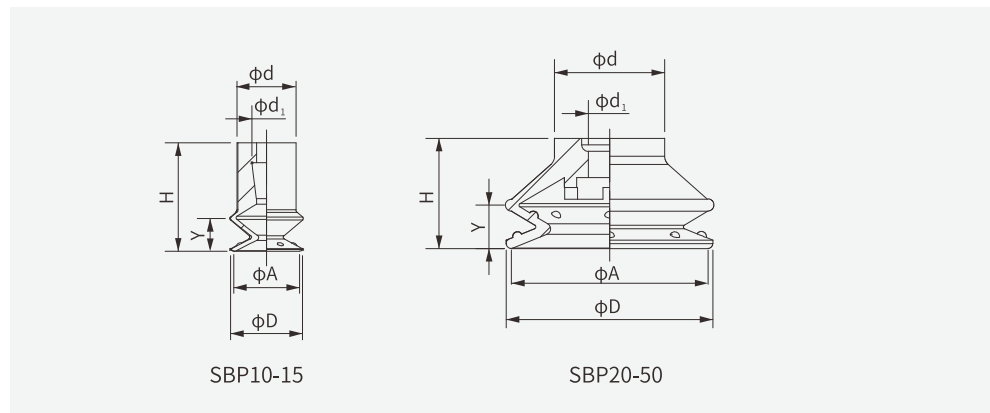
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SBP10	3.5	0.2	10	6
SBP15	7.9	0.5	25	6
SBP20	14	2	31	6
SBP30	31	4	47	6
SBP40	56.5	9	59	6
SBP50	88	17	68	8
SBP70	173	55	91	10

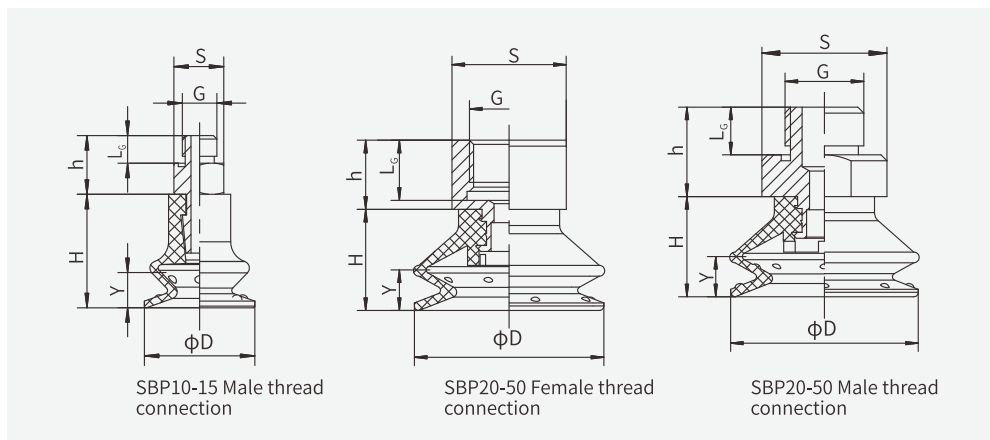
◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

SB
SBA
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Dimensions (mm)

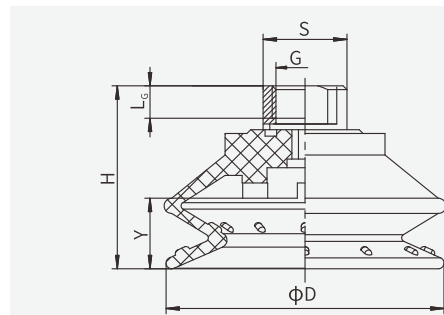


Model/ Size	D	H	A	d	d ₁	Y
SBP10	10.9	16.5	10	9	5	5
SBP15	16	19	15	9	5.5	5.8
SBP20	21	18	20	12	5	7.5
SBP30	31.5	16.8	30	16.8	6.5	6.6
SBP40	42	22.4	40	22.4	6.5	8.8
SBP50	52.5	29.3	50	28	10.5	12.3

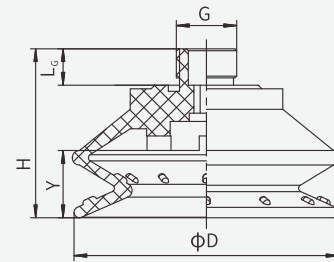


Dimensions(mm)

Model/ Size	D	H	G	h	L _G	Y	S
SBP10-M5M	10.9	16.5	M5	7.5	3.5	5	7
SBP15-M5M	16	19	M5	7.5	3.5	5.8	7
SBP20-G1F	21	18	G1/8	8	7	7.5	13
G1M				7.8	6		
SBP30-G1F	31.5	16.8	G1/8	10	7	6.6	17
G1M				12	6		
SBP40-G1F	42	22.4	G1/8	10	7	8.8	17
G1M				12	6		
SBP50-G2F	52.5	29.3	G1/4	13	10	12.3	24
G2M				17	9		
G3M			G3/8	13	10		
G3F				18	10		



SBP70 Female thread connection



SBP70 Male thread connection

Model/ Size	D	H	G	h	L _G	Y	S
SBP70-G3F	73	48	G3/8	—	11.5	16.5	22
SBP70-G3M	73	46.5	G3/8	—	10	16.5	—

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	—	PJS-M5M-SC3	SBP10, 15
	PJS-G1F-SF1-EW	PJS-G1M-SF1-EW	SBP20
	PJS-G1F-SF2-EW	PJS-G1M-SF2-EW	SBP30, 40
	PJS-G2F-SF3-EW	PJS-G2M-SF3-EW	SBP50
	PJS-G3F-SF3-EW	PJS-G3M-SF3-EW	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.



Features

- ◇ 2.5 bellows suction cup
- ◇ Good wear resistance and oil resistance.
- ◇ High tensile strength
- ◇ PU material, long life time. It lasts 2-4 times longer than other materials.

Applications

- ◇ Workpiece with uneven surface
- ◇ Smooth steel plate

How to order

SXP 20 UG - G1F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SXP	20 - ϕ 20mm	U - PU 60	Nil - Suction cup alone
	25 - ϕ 25mm	UD - PU 30 60	G1F - G1/8 Female thread
	30 - ϕ 30mm	UG - PU 55	G1M - G1/8 Male thread
	35 - ϕ 35mm		G2F - G1/4 Female thread
	40 - ϕ 40mm		G2M - G1/4 Male thread
	50 - ϕ 50mm		G3F - G3/8 Female thread
	70 - ϕ 70mm		G3M - G3/8 Male thread

Selection

Model/ Connection thread	G1F	G1M	G2F	G2M	G3F	G3M
SXP20 - 40	●	●	—	—	—	—
SXP50	—	—	●	●	●	●
SXP70	—	—	—	—	●	●

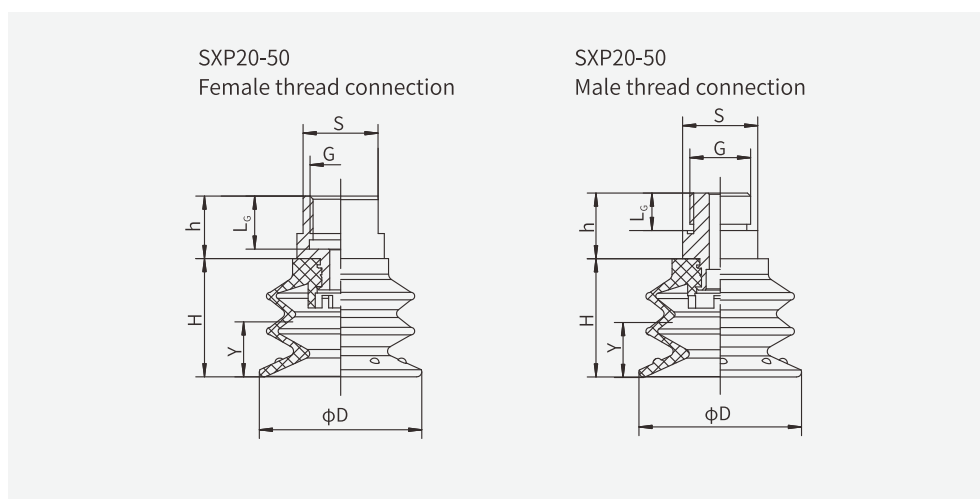
◇Note: "●"- standard, in stock. "—"-unavailable.

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SOP

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SXP20	14	2	24	6
SXP25	22	3	31	6
SXP30	31	5	30	6
SXP35	43	9	39	6
SXP40	56.5	11	45	6
SXP50	88	21	55	10
SXP70	173	55	80	10

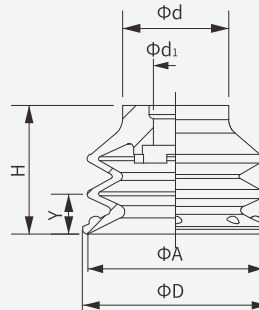
◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)


Model/ Size	D	H	G	h	L _G	Y	S
SXP20-G1F	21	14.8	G1/8	8	7	4.5	13
G1M				7.8	6		
SXP25-G1F	26	18.9	G1/8	8	7	7.3	13
G1M				7.8	6		
SXP30-G1F	30	21.3	G1/8	8	7	8	13
G1M				7.8	6		
SXP35-G1F	35	25.3	G1/8	10	7	9.8	17
G1M				12	6		
SXP40-G1F	40	28.4	G1/8	10	7	10.6	17
G1M				12	6		
SXP50-G2F	50	35.5	G1/4	13	10	13.4	24
G2M				17	9		
G3F			G3/8	13	10		
G3M				18	10		

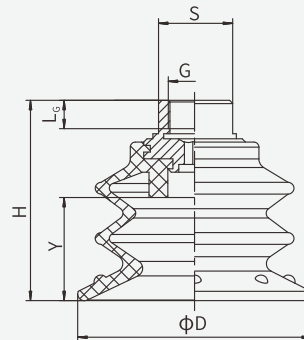
Dimensions (mm)

SXP20-50

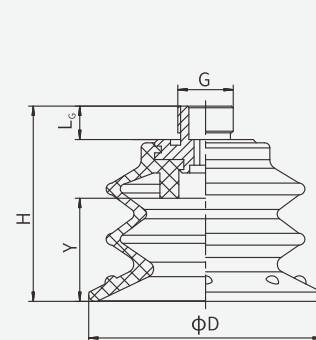


Model/ Size	D	H	A	d	d ₁	Y
SXP20	21	14.8	20	12	5	4.5
SXP25	26	18.9	24.4	15.4	5	7.3
SXP30	30	21.3	28	16.5	5	8
SXP35	35	25.3	33	21	6.5	9.8
SXP40	40	28.4	37.5	22	6.5	10.6
SXP50	50	35.5	47	27.5	10.5	13.4

SXP70
Female thread connection



SXP70
Male thread connection



Model/ Size	D	H	G	h	L _g	Y	S
SXP70-G3F	70	60	G3/8	—	11.5	18.6	22
SXP70-G3M	70	58.5	G3/8	—	10	18.6	—

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	PJS-G1F-SF1-EW	PJS-G1M-SF1-EW	SXP20, 25, 30
	PJS-G1F-SF2-EW	PJS-G1M-SF2-EW	SXP35, 40
	PJS-G2F-SF3-EW	PJS-G2M-SF3-EW	SXP50
	PJS-G3F-SF3-EW	PJS-G3M-SF3-EW	

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
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STP
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SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



Features

- ◇ 2.5 bellows vacuum pad
- ◇ Good elasticity and high tensile strength.
- ◇ Good wear resistance and oil resistance.
- ◇ PU material. Long life time. Its life time is 2-4 times longer than other material.

Applications

- ◇ Suitable for objects with uneven net-patterned surface.
- ◇ Suitable for plastic industry.

How to order

SGP 25 U - G1F

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SGP	25-φ25mm	U - PU 55	Nil - Suction cup alone
	35-φ35mm	UD - PU 30	G1F - G1/8 Female thread
	45-φ45mm		G1M - G1/8 Male thread
	55-φ55mm		G2F - G1/4 Female thread
			G2M - G1/4 Male thread

Selection

Model/ Connection thread	G1F	G1M	G2F	G2M	G3F	G3M
SGP25 - 45	●	●	-	-	-	-
SGP55	-	-	●	●	●	●

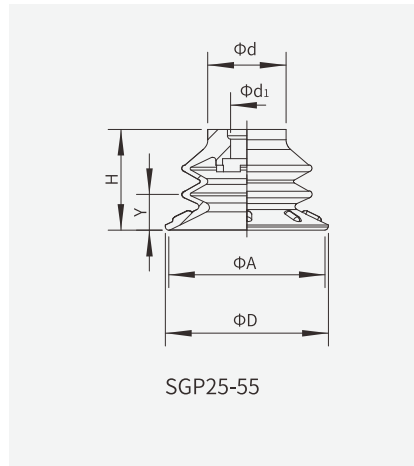
◇Note: "●"- standard, in stock. "-"- unavailable.

Technical parameters

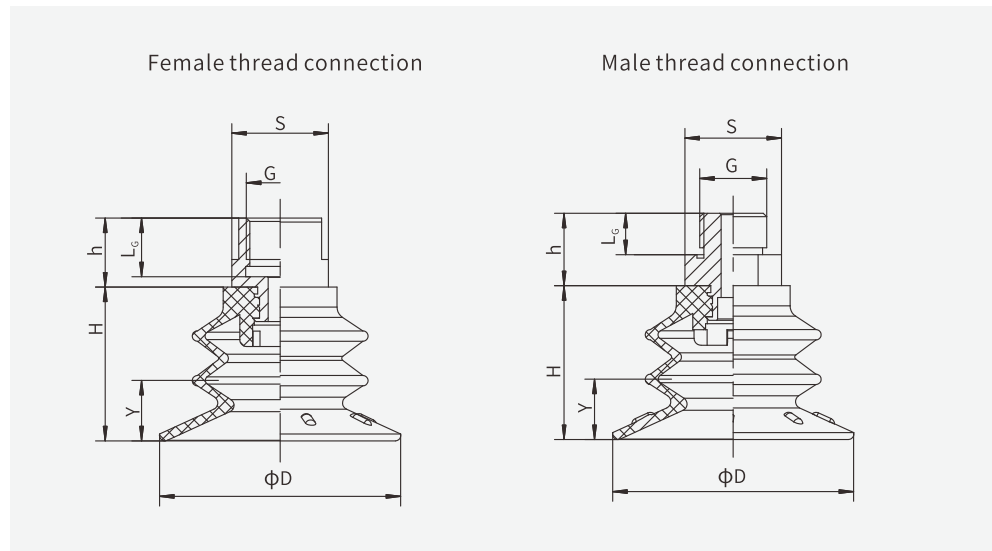
Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia.(mm)
SGP25	22	3	31	6
SGP35	43	6	42	6
SGP45	71	13	54	6
SGP55	106	23	64	10

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	H	A	d	d ₁	Y
SGP25	25	15.5	24	12	5	5.5
SGP35	35	22.3	33.4	16.5	5	8.4
SGP45	45	29.3	42.8	16.8	6.6	11.5
SGP55	55	36.3	52.4	27.5	10.5	12.9



Model/ Size	D	H	G	h	L _g	Y	S
SGP25-G1F	25	15.5	G1/8	8	7	5.5	13
G1M				7.8	6		
SGP35-G1F	35	22.3	G1/8	8	7	8.5	13
G1M				7.8	6		
SGP45-G1F	45	29.3	G1/8	10	7	11.5	17
G1M				12	6		
SGP55-G2F	55	36.3	G1/4	13	10	13	24
G2M				17	9		
G3F	55	36.3	G3/8	13	10	13	24
G3M				18	10		

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SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
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SPF
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SNP
SOP

Mounting parts

Item	Model		Applicable suction cup
	F - Female thread	M - Male thread	
Fitting for suction cup	PJS-G1F-SF1-EW	PJS-G1M-SF1-EW	SGP25, 35
	PJS-G1F-SF2-EW	PJS-G1M-SF2-EW	SGP45
	PJS-G2F-SF3-EW	PJS-G2M-SF3-EW	SGP55
	PJS-G3F-SF3-EW	PJS-G3M-SF3-EW	

◇Note: Please refer to suction cup with fixed fitting and spring plunger on page 24.



Features

- ◇ The Suction cup is closed annular structure, consisting of inner and outer sealing lips
- ◇ Annular installation is firm and prevents the suction cup from loosening.
- ◇ Customer can design the inspection instrument according to the hollow part, so as to separate the annular vacuum part from the inspection inductor.

Applications

- ◇ Steel plate ◇ Plastic plate ◇ Metal sheet
- ◇ Annular metal stamped parts ◇ Plywood

How to order

SDL 100 N - G1F

① ② ③ ④

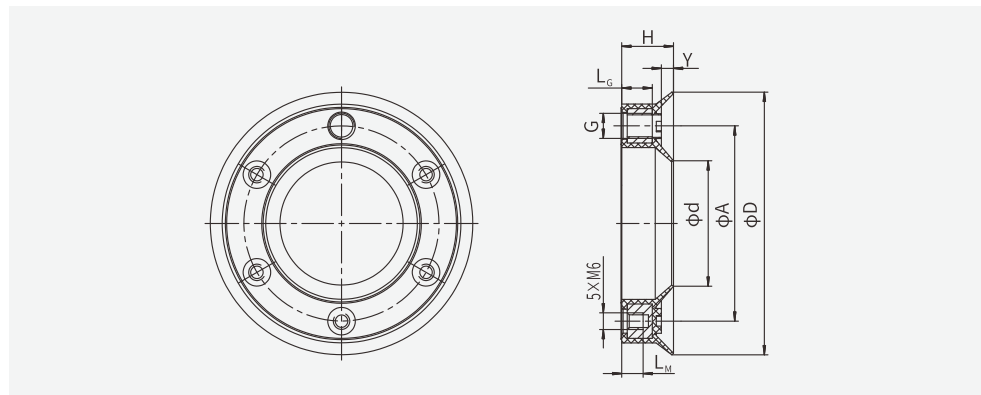
① Series	② Diameter	③ Material & Hardness	④ Connection thread
SDL	100 - ϕ100mm	N - NBR 55	G1F - G1/8 Female thread

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SDL100	353	44	76	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



Model/ Size	D	d	H	Y	A	G	L _g	L _m
SDL100	100	47.5	21	5	74	G1/8	11.5	9



Features

- ◇ Flat structure and short stroke, suitable for handling workpiece with even surface.
- ◇ Split type fitting for suction cup, quick replacement of wearing parts, recyclable, significantly cost reduction.
- ◇ Heavy load design, suitable for handling heavy workpiece.

Applications

- ◇ Steel plate
- ◇ Wooden plate
- ◇ Heavy workpiece

How to order

SH 40 N

① ② ③

① Series	② Diameter	③ Material & Hardness
SH	40 -φ40mm	N - NBR 55
	50 -φ50mm	WS- White silicone 50
	63 -φ63mm	F - Fluorine rubber 65
	80 -φ80mm	
	100-φ100mm	
	125-φ125mm	

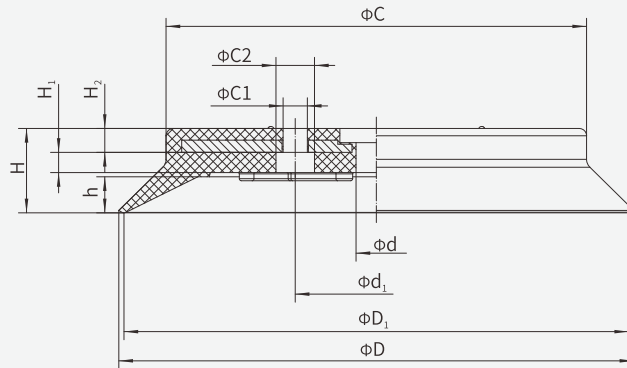
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia.(mm)
SH40	56	4	8
SH50	88	6.9	8
SH63	140	11.5	8
SH80	226	24	8
SH100	353	55	10
SH125	552	85	10

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)

SH40-125



Model/ Size	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	3-Φ4	3-Φ6.5
SH50	52	50	6	18	11.5	3.5	3.5	3.5	42	3-Φ4	3-Φ6.5
SH63	65	63	8	34	14.5	4.5	4.5	3.5	51	4-Φ5	4-Φ8
SH80	82	80	8	34	16.5	4.5	4.5	4.5	68	4-Φ5	4-Φ8
SH100	103	100	10	40	21	5	6	7.5	80	4-Φ6	4-Φ9.5
SH125	127	125	10	40	21	5	6	7.5	104	4-Φ6	4-Φ9.5

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How to order

SH40N - LR1 - M10F

①

②

③

① Model	② Vacuum port direction and connection thread	③ Connection thread
Refer to suction cup on page 147-148	Nil - Vertical, Female thread	M10F - M10 Female thread
	R1 - Vertical (Rc1/8), Male thread	M12F - M12 Female thread
	LR1 - Lateral (Rc1/8), Female thread	G2F - G1/4 Female thread
		G3F - G3/8 Female thread
		M14M - M14x1 Male thread
		M16M - M16x1.5 Male thread

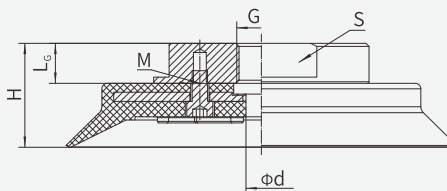
Selection

Model	Vacuum port direction and connection thread	M10F	M12F	G2F	G3F	M14M	M16M
SH40-80	Nil	●	—	●	—	—	—
SH100-125	Nil	—	●	—	●	—	—
SH40-50	R1	—	—	—	—	●	—
SH63-125	R1	—	—	—	—	—	●
SH40-125	LR1	●	—	—	—	—	—

◇Note: "●"- standard, in stock. "—" -unavailable.

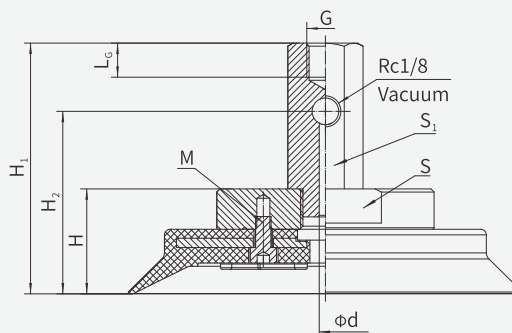
Dimensions (mm)

Vertical direction connection - Female thread



Model/ Size	d	H	h	G	M	L _g	S
SH40-G2F	6	23	3	G1/4	3-M3	11.5	24
SH40-M10F	6	23	3	M10×1.5	3-M3	11.5	24
SH50-G2F	6	23	3	G1/4	3-M3	11.5	24
SH50-M10F	6	23	3	M10×1.5	3-M3	11.5	24
SH63-G2F	8	26	3.5	G1/4	3-M3	11.5	37
SH63-M10F	8	26	3.5	M10×1.5	4-M4	11.5	37
SH80-G2F	8	28	4.5	G1/4	4-M4	11.5	37
SH80-M10F	8	28	4.5	M10×1.5	4-M4	11.5	37
SH100-G3F	10	34	7.5	G3/8	4-M5	13	60
SH100-M12F	10	34	7.5	M12×1.75	4-M4	13	60
SH125-G3F	10	34	7.5	G3/8	4-M5	13	60
SH125-M12F	10	34	7.5	M12×1.75	4-M5	13	60

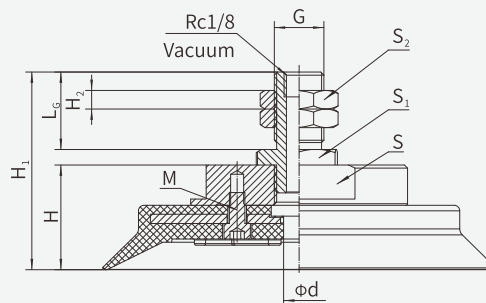
Lateral direction connection - Female thread



Model/ Size	d	H	H ₁	H ₂	h	G	M	L _g	S	S ₁
SH40-LR1-M10F	3	23	60	38	3	M10×1.5	3-M3	11	24	21
SH50-LR1-M10F	3	23	60	38	3	M10×1.5	3-M3	11	24	21
SH63-LR1-M10F	4	26	63	41	3.5	M10×1.5	4-M4	11	37	21
SH80-LR1-M10F	4	28	65	43	4.5	M10×1.5	4-M4	11	37	21
SH100-LR1-M10F	10	34	71	49	7.5	M10×1.5	5-M5	11	60	21
SH125-LR1-M10F	10	34	71	49	7.5	M10×1.5	5-M5	11	60	21

Dimensions (mm)

Vertical direction connection - Male thread



Model/ Size	d	H	H ₁	H ₂	h	G	M	L _G	S	S ₁	S ₂
SH40-R1-M14M	3	23	53	5	3	M14×1	3-M3	25	24	19	19
SH50-R1-M14M	3	23	53	5	3	M14×1	3-M3	25	24	19	19
SH63-R1-M16M	8	26	56	6	3.5	M16×1.5	4-M4	25	37	24	22
SH80-R1-M16M	8	28	58	6	4.5	M16×1.5	4-M4	25	37	24	22
SH100-R1-M16M	8	34	64	6	7.5	M16×1.5	5-M5	25	60	24	22
SH125-R1-M16M	8	34	64	6	7.5	M16×1.5	5-M5	25	60	24	22



How to order

SH40N - H E 25 LR1 - M18

① ② ③ ④ ⑤ ⑥

① Model	② Level compensator type	③ Buffer style
Refer to suction cup on page 147-148	H - PSPH Series	E - External spring
④ Buffer stroke	⑤ Vacuum port direction	⑥ Mounting thread
25	Nil - Vertical, Rc1/8 Female thread	M18 - M18x1.5
50	LR1 - Lateral, Rc1/8 Female thread	M22 - M22x1.5
75		
100		

Selection

Model	Buffer stroke				Mounting thread	
	25	50	75	100	M18	M22
SH40 - 80	●	●	●	—	●	—
SH100 - 125	●	●	●	●	—	●

◇Note: "●"- standard, in stock. "—"-unavailable.

SB

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SBF

SBOF

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STP

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SBLP

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SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

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SH

SHB

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SAN

SAO

SPA

SPC

SPF

SPJ

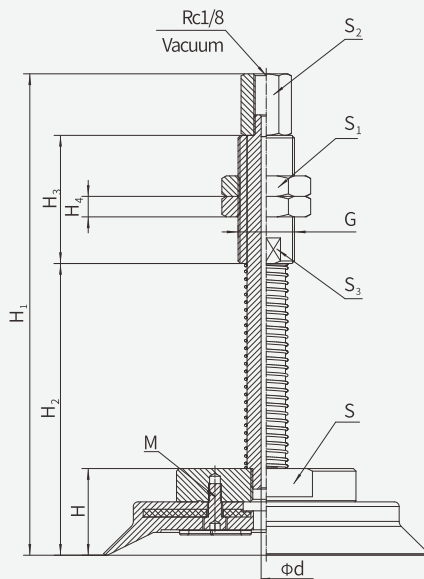
SPU

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Dimensions (mm)

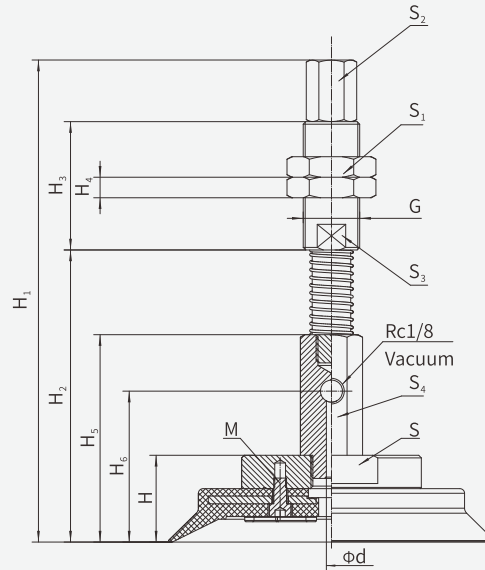
Vertical direction connection



Model/ Size	H	H ₁	H ₂	H ₃	H ₄	d	G	M	S	S ₁	S ₂	S ₃
SH40-HE25-M18	23	118.5	63	35	6	3	M18×1.5	3-M3	24	27	14	16
SH40-HE50-M18	23	153.5	98	35	6	3	M18×1.5	3-M3	24	27	14	16
SH40-HE75-M18	23	189.5	134	35	6	3	M18×1.5	3-M3	24	27	14	16
SH50-HE25-M18	23	118.5	63	35	6	3	M18×1.5	3-M3	24	27	14	16
SH50-HE50-M18	23	153.5	98	35	6	3	M18×1.5	3-M3	24	27	14	16
SH50-HE75-M18	23	189.5	134	35	6	3	M18×1.5	3-M3	24	27	14	16
SH63-HE25-M18	26	121.5	66	35	6	3	M18×1.5	4-M4	37	27	14	16
SH63-HE50-M18	26	156.5	101	35	6	3	M18×1.5	4-M4	37	27	14	16
SH63-HE75-M18	26	192.5	137	35	6	3	M18×1.5	4-M4	37	27	14	16
SH80-HE25-M18	28	123.5	68	35	6	3	M18×1.5	4-M4	37	27	14	16
SH80-HE50-M18	28	158.5	103	35	6	3	M18×1.5	4-M4	37	27	14	16
SH80-HE75-M18	28	194.5	139	35	6	3	M18×1.5	4-M4	37	27	14	16
SH100-HE25-M22	34	152	78	50	8	4	M22×1.5	4-M5	60	30	17	19
SH100-HE50-M22	34	188	114	50	8	4	M22×1.5	4-M5	60	30	17	19
SH100-HE75-M22	34	228	154	50	8	4	M22×1.5	4-M5	60	30	17	19
SH100-HE100-M22	34	263	189	50	8	4	M22×1.5	4-M5	60	30	17	19
SH125-HE25-M22	34	152	78	50	8	4	M22×1.5	4-M5	60	30	17	19
SH125-HE50-M22	34	188	114	50	8	4	M22×1.5	4-M5	60	30	17	19
SH125-HE75-M22	34	228	154	50	8	4	M22×1.5	4-M5	60	30	17	19
SH125-HE100-M22	34	263	189	50	8	4	M22×1.5	4-M5	60	30	17	19

Dimensions (mm)

Lateral direction connection



Model/ Size	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
SH40-HE25LR1-M18	23	151	100	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH40-HE50LR1-M18	23	186	135	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH40-HE75LR1-M18	23	222	171	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH50-HE25LR1-M18	23	151	100	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH50-HE50LR1-M18	23	186	135	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH50-HE75LR1-M18	23	222	171	35	6	60	38	3	M18×1.5	3-M3	24	27	14	16	21
SH63-HE25LR1-M18	26	154	103	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH63-HE50LR1-M18	26	189	136	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH63-HE75LR1-M18	26	225	172	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH80-HE25LR1-M18	28	156	105	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH80-HE50LR1-M18	28	191	138	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH80-HE75LR1-M18	28	227	174	35	6	63	41	3	M18×1.5	4-M4	37	27	14	16	21
SH100-HE25LR1-M22	34	186	115	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH100-HE50LR1-M22	34	222	151	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH100-HE75LR1-M22	34	262	191	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH100-HE100LR1-M22	34	297	226	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH125-HE25LR1-M22	34	186	115	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH125-HE50LR1-M22	34	222	151	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH125-HE75LR1-M22	34	262	191	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21
SH125-HE100LR1-M22	34	297	226	50	8	71	49	4	M22×1.5	4-M5	60	30	17	19	21

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Features

- ◇ 1.5 bellows, long stroke, suitable for handling workpiece with uneven and irregular surface.
- ◇ Split type fitting for suction cup, quick replacement of wearing parts, recyclable, significantly cost reduction.
- ◇ Heavy load design, suitable for handling heavy workpiece.

Applications

- ◇ Steel plate
- ◇ Wooden plate
- ◇ Heavy workpiece

How to order

SHB 40 N

① ② ③

① Series	② Diameter	③ Material & Hardness
SHB	40 - ϕ 40mm	N - NBR 55
	50 - ϕ 50mm	WS - White silicone 50
	63 - ϕ 63mm	F - Fluorine rubber 65
	80 - ϕ 80mm	
	100- ϕ 100mm	
	125- ϕ 125mm	

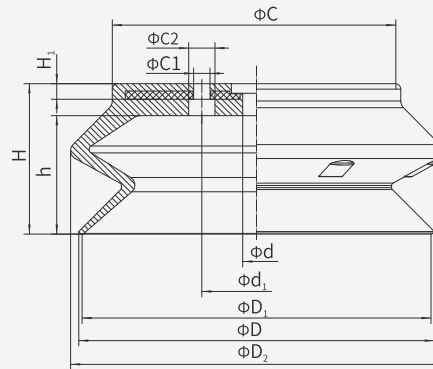
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SHB40	56	15	8
SHB50	88	27	8
SHB63	140	45	8
SHB80	226	98	8
SHB100	353	240	10
SHB125	552	384	10

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)

SHB40-125



Model/ Size	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	4-Φ5	4-Φ8
SHB80	83	80	85	8	34	37	5	27.5	64	4-Φ5	4-Φ8
SHB100	103	100	106.5	10	40	47.5	6	35.5	80	4-Φ6	4-Φ9.5
SHB125	128.5	125	135	10	40	56	6	44	105	4-Φ6	4-Φ9.5

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How to order
SHB40N - LR1 - M10F

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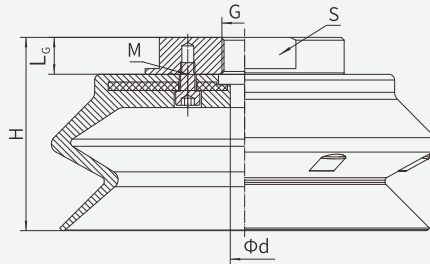
① Model	② Vacuum port direction and connection thread	③ Connection thread
Refer to suction cup on page 155-156	Nil - Vertical, Female thread	M10F - M10 Female thread
	R1 - Vertical (Rc1/8), Male thread	M12F - M12 Female thread
	LR1 - Lateral (Rc1/8), Female thread	G2F - G1/4 Female thread
		G3F - G3/8 Female thread
		M14M - M14x1 Male thread
		M16M - M16x1.5 Male thread

Selection

Model	Vacuum port direction and connection thread	M10F	M12F	G2F	G3F	M14M	M16M
SHB40-80	Nil	●	—	●	—	—	—
SHB100-125	Nil	—	●	—	●	—	—
SHB40-50	R1	—	—	—	—	●	—
SHB63-125	R1	—	—	—	—	—	●
SHB40-125	LR1	●	—	—	—	—	—

◇Note: "●"- standard, in stock. "○"-selective, no stock. "—" -unavailable.

Dimensions (mm)

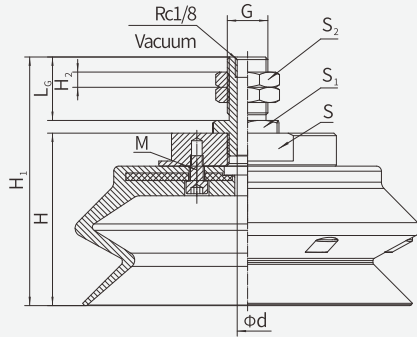


Vertical direction connection- Female thread

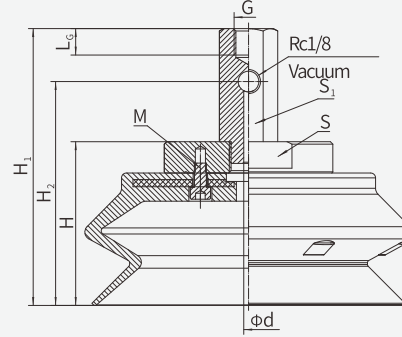
Model/ Size	d	H	G	M	L _G	S
SHB40-G2F	6	32	G1/4	3-M3	11.5	24
SHB40-M10F	6	32	M10×1.5	3-M3	11.5	24
SHB50-G2F	6	35.5	G1/4	3-M3	11.5	24
SHB50-M10F	6	35.5	M10×1.5	3-M3	11.5	24
SHB63-G2F	8	43	G1/4	3-M4	11.5	37
SHB63-M10F	8	43	M10×1.5	4-M4	11.5	37
SHB80-G2F	8	48.5	G1/4	4-M4	11.5	37
SHB80-M10F	8	48.5	M10×1.5	4-M4	11.5	37
SHB100-G3F	10	60.5	G3/8	5-M5	13	60
SHB100-M12F	10	60.5	M12×1.75	5-M5	13	60
SHB125-G3F	10	69	G3/8	5-M5	13	60
SHB125-M12F	10	69	M12×1.75	5-M5	13	60

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Dimensions (mm)



Vertical direction connection- Male thread



Lateral direction connection- Female thread

Model/ Size	d	H	H ₁	H ₂	G	M	L ₆	S	S ₁	S ₂
SHB40-R1-M14M	3	32	62	5	M14×1	3-M3	25	24	19	19
SHB50-R1-M14M	3	35.5	65.5	5	M14×1	3-M3	25	24	19	19
SHB63-R1-M16M	8	43	73	6	M16×1.5	4-M4	25	37	24	22
SHB80-R1-M16M	8	48.5	78.5	6	M16×1.5	4-M4	25	37	24	22
SHB100-R1-M16M	8	60.5	90.5	6	M16×1.5	5-M5	25	60	24	22
SHB125-R1-M16M	8	69	99	6	M16×1.5	5-M5	25	60	24	22
SHB40-LR1-M10F	3	32	69	47	M10×1.5	3-M3	11	24	21	—
SHB50-LR1-M10F	3	35.5	72.5	50.5	M10×1.5	3-M3	11	24	21	—
SHB63-LR1-M10F	4	43	80	58	M10×1.5	4-M4	11	37	21	—
SHB80-LR1-M10F	4	48.5	85.5	63.5	M10×1.5	4-M4	11	37	21	—
SHB100-LR1-M10F	4	60.5	97.5	75.5	M10×1.5	5-M5	11	60	21	—
SHB125-LR1-M10F	4	69	106	84	M10×1.5	5-M5	11	60	21	—



How to order

SHB40N - H E 25 LR1 - M18

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① Model	② Level compensator type	③ Buffer style
Refer to suction cup on page 155-156	H-PSPH Series	E - External spring
④ Buffer stroke	⑤ vacuum port direction	⑥ Mounting thread
25	Nil - Vertical, Rc1/8 Female thread	M18 - M18x1.5
50	LR1 - Lateral, Rc1/8 Female thread	M22 - M22x1.5
75		
100		

Selection

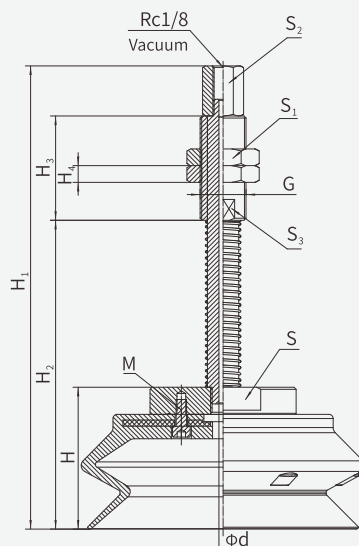
Model	Buffer stroke				Mounting thread	
	25	50	75	100	M18	M22
SHB40 - 80	●	●	●	—	●	—
SHB100 - 125	●	●	●	●	—	●

◇Note: "●"- standard, in stock. "—"-unavailable.

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Dimensions (mm)

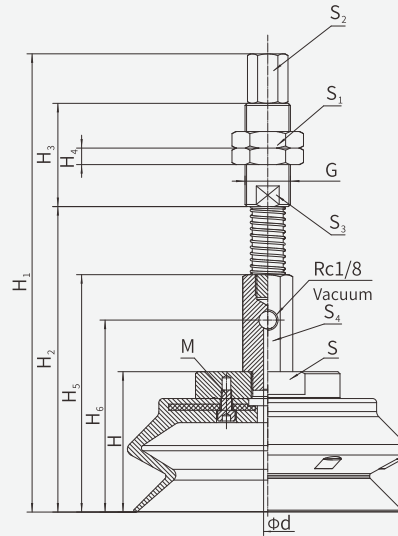
Vertical direction connection



Model/ Size	H	H ₁	H ₂	H ₃	H ₄	d	G	M	S	S ₁	S ₂	S ₃
SHB40-HE25-M18	32	127.5	72	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB40-HE50-M18	32	162.5	107	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB40-HE75-M18	32	198.5	143	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB50-HE25-M18	35.5	131	75.5	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB50-HE50-M18	35.5	166	110.5	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB50-HE75-M18	35.5	202	146.5	35	6	3	M18×1.5	3-M3	24	27	14	16
SHB63-HE25-M18	43	138.5	83	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB63-HE50-M18	43	173.5	118	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB63-HE75-M18	43	209.5	154	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB80-HE25-M18	48.5	144	88.5	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB80-HE50-M18	48.5	179	123.5	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB80-HE75-M18	48.5	215	159.5	35	6	3	M18×1.5	4-M4	37	27	14	16
SHB100-HE25-M22	60.5	178.5	104.5	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB100-HE50-M22	60.5	214.5	140.5	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB100-HE75-M22	60.5	254.5	180.5	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB100-HE100-M22	60.5	289.5	215.5	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB125-HE25-M22	69	187	113	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB125-HE50-M22	69	223	149	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB125-HE75-M22	69	263	189	50	8	4	M22×1.5	4-M5	60	30	17	19
SHB125-HE100-M22	69	298	224	50	8	4	M22×1.5	4-M5	60	30	17	19

Dimensions (mm)

Lateral direction connection



Model/ Size	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
SHB40-HE25LR1-M18	32	160	109	35	6	69	47	3	M18×1.5	3-M3	24	27	14	16	21
SHB40-HE50LR1-M18	32	195	144	35	6	69	47	3	M18×1.5	3-M3	24	27	14	16	21
SHB40-HE75LR1-M18	32	231	180	35	6	69	47	3	M18×1.5	3-M3	24	27	14	16	21
SHB50-HE25LR1-M18	35.5	163.5	112.5	35	6	72.5	50.5	3	M18×1.5	3-M3	24	27	14	16	21
SHB50-HE50LR1-M18	35.5	198.5	147.5	35	6	72.5	50.5	3	M18×1.5	3-M3	24	27	14	16	21
SHB50-HE75LR1-M18	35.5	234.5	183.5	35	6	72.5	50.5	3	M18×1.5	3-M3	24	27	14	16	21
SHB63-HE25LR1-M18	43	171	120	35	6	80	58	3	M18×1.5	4-M4	37	27	14	16	21
SHB63-HE50LR1-M18	43	206	155	35	6	80	58	3	M18×1.5	4-M4	37	27	14	16	21
SHB63-HE75LR1-M18	43	242	191	35	6	80	58	3	M18×1.5	4-M4	37	27	14	16	21
SHB80-HE25LR1-M18	48.5	176.5	125.5	35	6	85.5	63.5	3	M18×1.5	4-M4	37	27	14	16	21
SHB80-HE50LR1-M18	48.5	211.5	160.5	35	6	85.5	63.5	3	M18×1.5	4-M4	37	27	14	16	21
SHB80-HE75LR1-M18	48.5	247.5	196.5	35	6	85.5	63.5	3	M18×1.5	4-M4	37	27	14	16	21
SHB100-HE25LR1-M22	60.5	212.5	141.5	50	8	97.5	75.5	4	M22×1.5	4-M5	60	30	17	19	21
SHB100-HE50LR1-M22	60.5	248.5	177.5	50	8	97.5	75.5	4	M22×1.5	4-M5	60	30	17	19	21
SHB100-HE75LR1-M22	60.5	288.5	217.5	50	8	97.5	75.5	4	M22×1.5	4-M5	60	30	17	19	21
SHB100-HE100LR1-M22	60.5	323.5	252.5	50	8	97.5	75.5	4	M22×1.5	4-M5	60	30	17	19	21
SHB125-HE25LR1-M22	69	221	150	50	8	106	84	4	M22×1.5	4-M5	60	30	17	19	21
SHB125-HE50LR1-M22	69	257	186	50	8	106	84	4	M22×1.5	4-M5	60	30	17	19	21
SHB125-HE75LR1-M22	69	297	226	50	8	106	84	4	M22×1.5	4-M5	60	30	17	19	21
SHB125-HE100LR1-M22	69	332	261	50	8	106	84	4	M22×1.5	4-M5	60	30	17	19	21

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SZU-Flat type

SZC-Flat with ribs type

SZB-Bellows type

SZD-Deep type

Features

- ◇ Internal rib structure can effectively increases friction force between suction cup and workpiece.
- ◇ Flat structure is suitable for handling workpiece with even surface.
- ◇ 1.5 Bellows structure is suitable for handling workpiece with irregular shape.
- ◇ Deep structure is suitable for block shape and ball shape workpiece.
- ◇ Various materials are available. Conductive material can effectively prevent static damage to electronic products.
- ◇ Various sizes suitable for workpiece with different sizes.

Applications

- ◇ Cardboard box
- ◇ Small semiconductor profile
- ◇ Electronic products
- ◇ Food
- ◇ Spherical object

How to order

SZ B 10 N

① ② ③ ④

① Series	② Suction cup type	② Diameter	③ Material & Hardness
SZ	U - Flat	2 -φ2mm 16 -φ16mm	N - NBR 50 ★
	C - Flat with ribs	4 -φ4mm 20 -φ20mm	WS - White silicone 45 ★
	B - Bellows	6 -φ6mm 25 -φ25mm	CN - Conductive NBR 55
	D - Deep	8 -φ8mm 32 -φ32mm	CS - Conductive silicone 55
		10 -φ10mm 40 -φ40mm	F - Fluorine rubber 65
		13 -φ13mm 50 -φ50mm	E - EPDM 55
			HP - Mark free NBR 50

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST.

◇Note: HP material suits suction cup SZU10-50, SZB10-50.

Selection

Diameter/ Suction cup type	U	C	B	D
2	●	-	-	-
4	●	-	-	-
6	●	-	●	-
8	●	-	●	-
10	●	●	●	●
13	●	●	●	-
16	●	●	●	●
20	●	●	●	-
25	●	●	●	●
32	●	●	●	-
40	●	●	●	●
50	●	●	●	-

◇Note: "●"- standard, in stock. "-"-unavailable.

Technical parameters

Diameter	Pull—out force (N)	Inner volume (cm ³)				Recommended hose dia.(mm)
		U	C	B	D	
2	0.15	<0.1	—	—	—	4
4	0.6	<0.1	—	—	—	4
6	1.2	<0.1	—	<0.1	—	4
8	2.2	<0.1	—	<0.1	—	4
10	3.5	0.15	0.15	0.3	0.3	6
13	6	0.2	0.2	0.9	—	6
16	9.6	0.3	0.3	1.3	0.6	6
20	15	0.6	0.6	2.2	—	6
25	24	0.9	0.9	3.3	1.5	6
32	38	1.6	1.6	7.2	—	6
40	60	3.5	3.5	15	9	6
50	92	6	6	25	—	6

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

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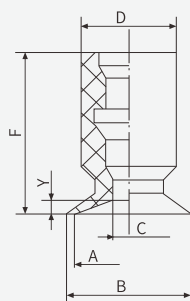
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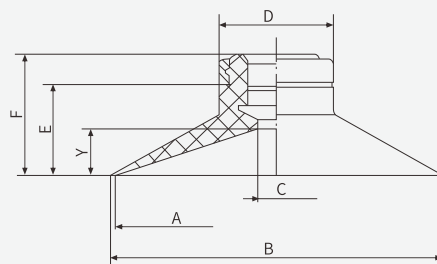
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Dimensions (mm)

U-Flat suction cup



SZU2-8



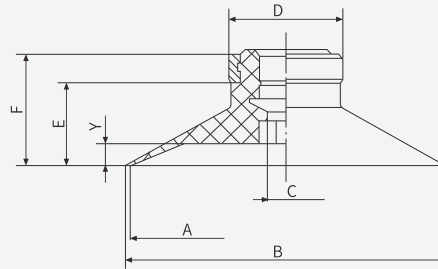
SZU10-50

Model/Size	A	B	C	D	E	F	Y
SZU2	2	2.6	1.2	7	—	12	0.5
SZU4	4	4.8	1.6	7	—	12	0.8
SZU6	6	7	2.5	7	—	12	0.8
SZU8	8	9	2.5	7	—	12	1
SZU10	10	12	4	13	7.7	12	3
SZU13	13	15	4	13	7.7	12	3
SZU16	16	18	4	13	8.2	12.5	3.5
SZU20	20	23	4	15	9.5	14	4
SZU25	25	28	4	15	9.5	14	4
SZU32	32	35	4	15	10	14.5	4.5
SZU40	40	43	7	18	13.7	18.5	6.5
SZU50	50	53	7	18	14.7	19.5	7.5

Dimensions (mm)

 C-Flat with ribs
suction cup

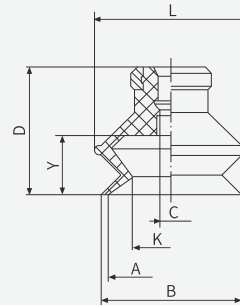
SZC10-50



Model/Size	A	B	C	D	E	F	Y
SZC10	10	12	4	13	7.7	12	1.7
SZC13	13	15	4	13	7.7	12	1.8
SZC16	16	18	4	13	8.2	12.5	1.2
SZC20	20	23	4	15	9.5	14	1.7
SZC25	25	28	4	15	9.5	14	1.8
SZC32	32	35	4	15	10	14.5	2.3
SZC40	40	43	7	18	13.7	18.5	3.3
SZC50	50	53	7	18	14.7	19.5	3.8

 B-Bellows
suction cup

SZB6-50

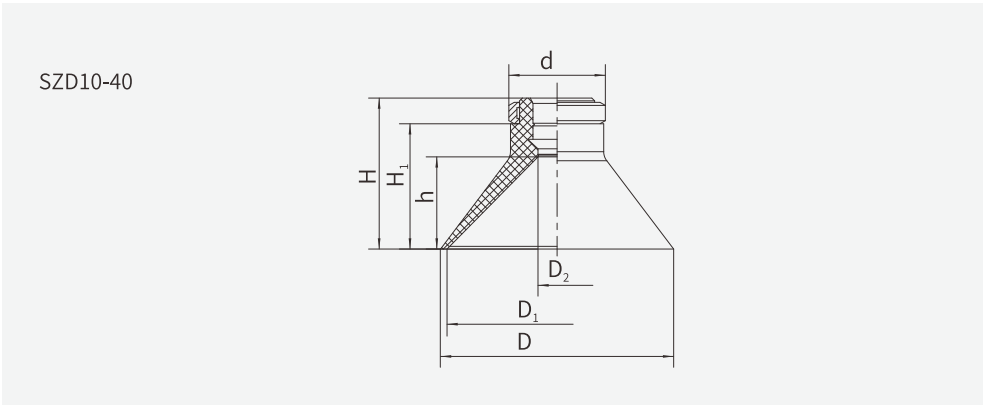


Model/Size	A	B	C	D	K	L	Y
SZB6	6	7	2.5	13	3.3	9.1	4
SZB8	8	9	2.5	13	4.7	10.1	4
SZB10	10	12	4	16	5.5	13.8	5.5
SZB13	13	15	4	18.5	8.7	19	7.5
SZB16	16	18	4	20	9.9	21	8.5
SZB20	20	22	4	23.5	12.4	25	10.5
SZB25	25	27	4	24	15.6	28	10.5
SZB32	32	34	4	29	18.9	37	14
SZB40	40	43	7	34	24.4	48	16
SZB50	50	53	7	38	32.4	57	19

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Dimensions (mm)

D-Deep suction cup



Model/ Size	D	D ₁	D ₂	d	H	H ₁	h
SZD10	12	10	4	13	15	10.7	6
SZD16	18	16	4	13	16	11.7	7
SZD25	28	25	4	15	20	15.5	10
SZD40	43.5	41	7	18	28	23.5	17


How to order
SZU10N - LA4 - M5M

①

②

③

① Model	② Vacuum port direction and connection thread	③ Mounting thread
Refer to suction cup on page 163-167	Nil - Vertical LA4 - Lateral, one touch fittingφ4 hose LA6 - Lateral, one touch fittingφ6 hose	M5M - M5×0.8 Male thread M6M - M6×1 Male thread M8M - M8×1 Male thread M5F - M5×0.8 Female thread M8F - M8×1.25 Female thread

Selection

Diamter	Vacuum port direction and connection thread			Mounting thread				
	Nil	LA4	LA6	M5M	M6M	M8M	M5F	M8F
2 - 8	●	●	●	●	—	—	●	—
10 - 16	●	●	●	●	—	—	●	—
20 - 32	●	●	●	—	●	—	●	—
40 - 50	●	—	●	—	—	●	—	●

◇Note: "●"- standard, in stock. "—" -unavailable.

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

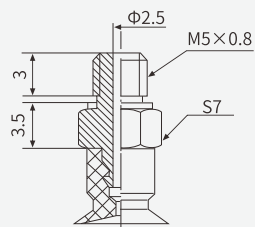
SPU

SNP

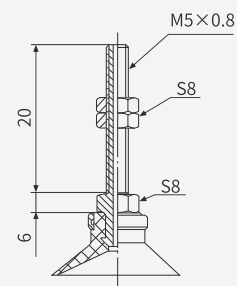
SOP

Dimensions (mm)

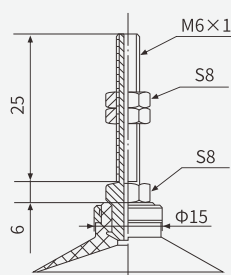
Vertical direction connection- Male thread



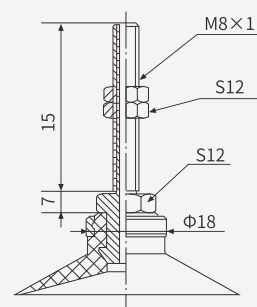
Suction cup diameter 2-8



Suction cup diameter 10-16

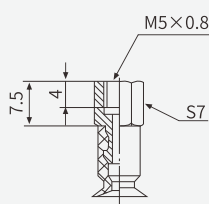


Suction cup diameter 20-32

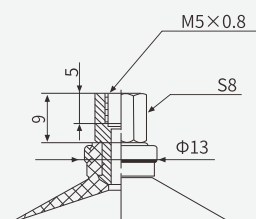


Suction cup diameter 40-50

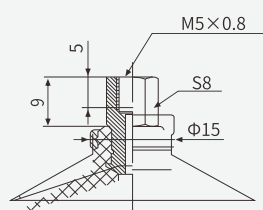
Vertical direction connection- Female thread



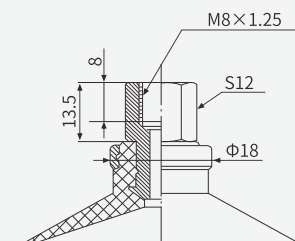
Suction cup diameter 2-8



Suction cup diameter 10-16



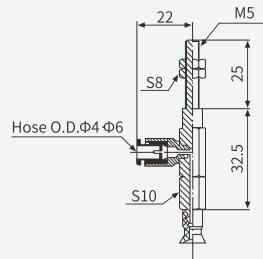
Suction cup diameter 20-32



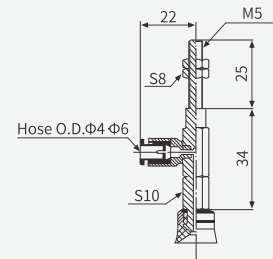
Suction cup diameter 40-50

Dimensions (mm)

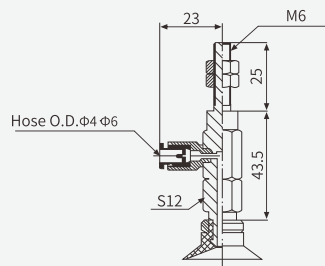
Lateral direction connection - Male thread



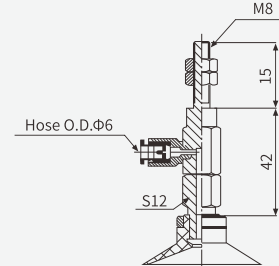
Suction cup diameter 2-8



Suction cup diameter 10-16

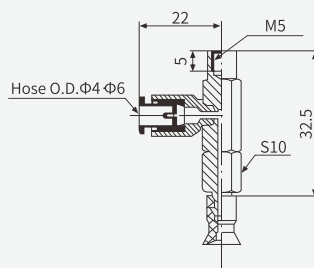


Suction cup diameter 20-32

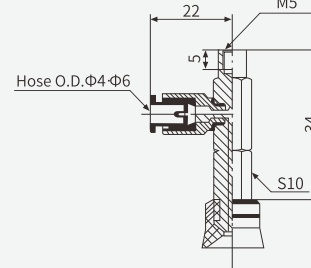


Suction cup diameter 40-50

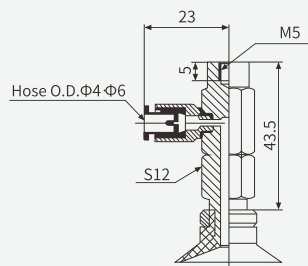
Lateral direction connection - Female thread



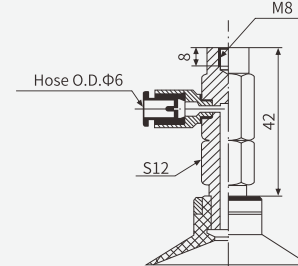
Suction cup diameter 2-8



Suction cup diameter 10-16



Suction cup diameter 20-32



Suction cup diameter 40-50

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

SPU

SNP

SOP



How to order

SZU10N - E I 10 R A6 - M10

①

②

③

④

⑤

⑥

⑦

① Model	② Level compensator type	③ Buffer style	④ Buffer stroke	
Refer to suction cup on page 163-167	E -PSPE Series	I -Internal spring	6	20
			10	30
			15	40
			25	50

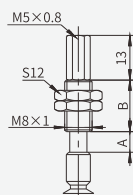
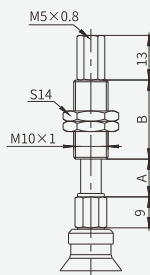
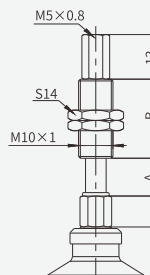
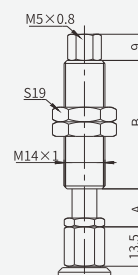
⑤ Rotary type	⑥ Vacuum port connection	⑦ Mounting thread
Nil - Vertical rotating	Nil - M5×0.8 Female thread	M8 - M8×1
R - Vertical non-rotating	A4 - One touch fitting φ4 hose	M10 - M10×1
L - Lateral rotating	A6 - One touch fitting φ6 hose	M14 - M14×1
B - Lateral non-rotating	B4 - Pagoda fitting φ4 hose	
	B6 - Pagoda fitting φ6 hose	

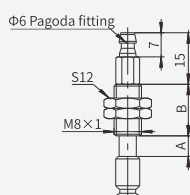
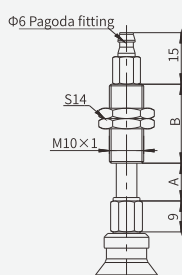
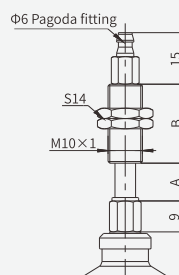
Selection

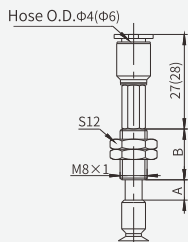
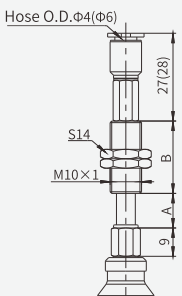
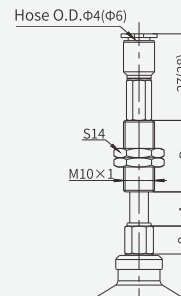
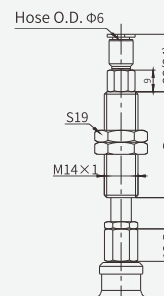
Diameter	Buffer stroke	Rotary type				Vacuum port connection					Mounting thread
		Nil	R	L	B	Nil	A4	A6	B4	B6	
2 - 8	6, 10, 15, 25	●	●	●	●	●	●	●	●	—	M8
10 - 32	10, 20, 30, 40, 50	●	●	●	●	●	●	●	—	●	M10
40 - 50	10, 20, 30, 50	●	—	●	—	●	—	●	—	—	M14

◇Note: "●"- standard, in stock. "—" -unavailable.

Dimensions (mm)

 Vertical direction
connection -
Female thread

 Suction cup diameter
2-8

 Suction cup diameter
10-16

 Suction cup diameter
20-32

 Suction cup diameter
40-50

 Vertical direction
connection -
Pagoda fitting

 Suction cup diameter
2-8

 Suction cup diameter
10-16

 Suction cup diameter
20-32

 Vertical direction
connection -
One touch fitting

 Suction cup diameter
2-8

 Suction cup diameter
10-16

 Suction cup diameter
20-32

 Suction cup diameter
40-50

Suction cup diameter	A	B	Buffer stroke	F1(N)	F2(N)
2 - 8	6	15	6	0.8	1.2
	11	43	10		
	16	43	15		
	26	43	25		
10 - 32	11.5	23	10	1.0	3.0
	21.5	51	20		
	31.5	51	30		
	41.5	77	40		
	51.5	77	50		
40 - 50	13	44	10	2.0	5.5
	23	44	20		
	33	44	30		
	53	75	50		

◇Note: "F1" means spring force at 0 stroke, "F2" means spring force at max stroke.

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

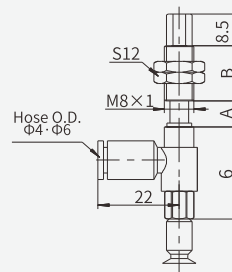
SPJ

SPU

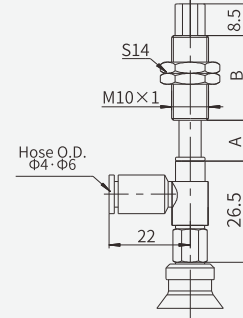
SNP

SOP

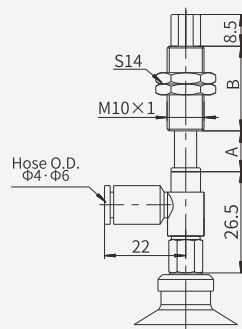
Dimensions (mm)



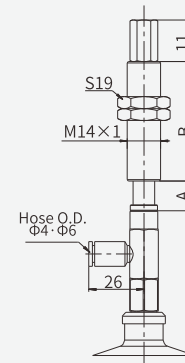
Suction cup diameter 2-8



Suction cup diameter 10-16



Suction cup diameter 20-32



Suction cup diameter 40-50

Suction cup diameter	A	B	Buffer stroke	F1(N)	F2(N)
2-8	8	15	6	0.8	1.2
	11	43	10		
	16	43	15		
	26	43	25		
10-32	11	23	10	1.0	3.0
	21	51	20		
	31	51	30		
	41	77	40		
	51	77	50		
40-50	13	44	10	2.0	5.5
	23	44	20		
	33	44	30		
	53	75	50		

◇Note: "F1" means spring force at 0 stroke,"F2" means spring force at max stroke.



Features

- ◇ Unique nozzle design.
- ◇ Quick handling during suction .
- ◇ Micro suction cup with small diameter.

Applications

- ◇ Foil
- ◇ Electronic component

How to order

SAN 0.8 N - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SAN	0.8 -φ0.8mm	N - NBR	55 ★ Nil - Suction cup alone
	1.1 -φ1.1mm	WS - White silicone	50 ★ M5M - M5 Male thread
		CN - Conductive NBR	55
		CS - Conductive silicone	55

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST.

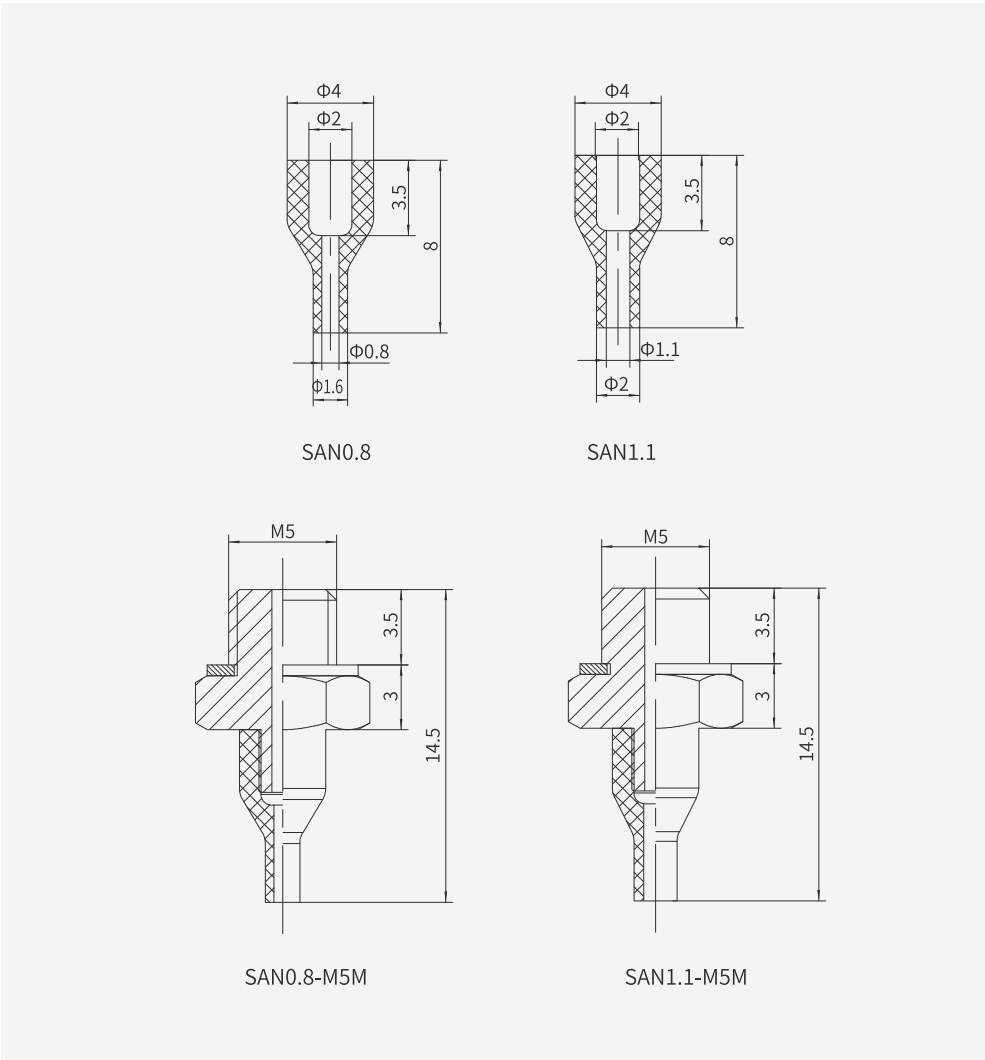
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SAN0.8	2.3	2.3	4
SAN1.1	4.2	4.3	4

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)



Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-SAN1.1	SAN0.8, 1.1



Features

- ◇ Oval Flat structure, suitable for handling long and thin workpiece.
- ◇ Suction cup with different materials are suitable for different workpieces.
- ◇ Various sizes, suitable for workpiece with different sizes.

Applications

- ◇ Long and thin workpiece
- ◇ Electronic product

How to order

SAO 8×20 N
① ② ③

① Series	② Dimension	③ Material & Hardness
SAO	3.5×7 6×20	N - NBR 55★
	4×10 8×20	WS - White silicone 50★
	5×10 4×30	CN - Conductive NBR 55
	6×10 5×30	CS - Conductive silicone 55
	4×20 6×30	
	5×20 8×30	

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST.

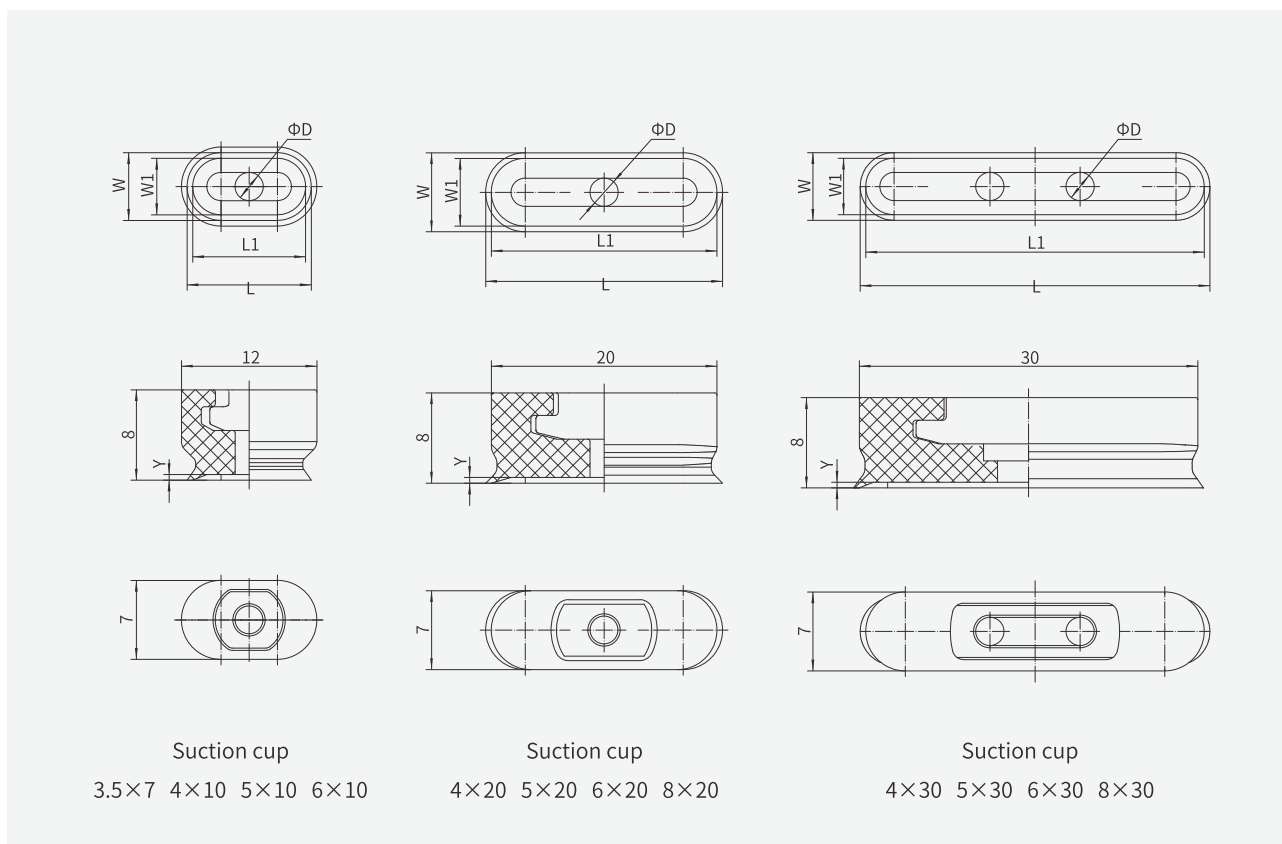
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia.(mm)
SAO3.5×7	0.9	<0.1	6	4
SAO4×10	1.6	<0.1	7	4
SAO5×10	2	<0.1	9	4
SAO6×10	2.4	<0.1	13	4
SAO4×20	3.2	<0.1	8	4
SAO5×20	4.2	<0.1	11	4
SAO6×20	5	<0.1	14	4
SAO8×20	6.5	<0.1	16	4
SAO4×30	5.2	<0.1	8	4
SAO5×30	6.5	<0.1	10	4
SAO6×30	7.8	<0.1	14	4
SAO8×30	10.2	0.1	18	4

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)



Model/ Size	W	L	W ₁	L ₁	D	Y
SAO3.5×7	4.5	8	3.5	7	2-1.5	0.5
SAO4×10	5	11	4	10	2-1.5	0.5
SAO5×10	6	11	5	10	2.5	0.5
SAO6×10	7	11	6	10	2.5	0.5
SAO4×20	5	21	4	20	2-1.8	0.5
SAO5×20	6	21	5	20	2-2	0.5
SAO6×20	7	21	6	20	2.5	0.5
SAO8×20	9	21	8	20	3	0.8
SAO4×30	5	31	4	30	2-1.8	0.5
SAO5×30	6	31	5	30	2-2.5	0.5
SAO6×30	7	31	6	30	2-2.5	0.5
SAO8×30	9	31	8	30	2-2.5	0.8



How to order

SAO8×20N - LA4 - M5F

①

②

③

① Model	② Vacuum port direction	③ Connection thread
Refer to suction cup on page 177-178	Nil - Vertical LA4 - Lateral, one touch fittingφ4 hose LA6 - Lateral, one touch fittingφ6 hose	M5M - M5 Male thread M5F - M5 Female thread

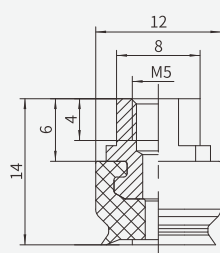
Selection

Vacuum port direction/ Connection thread	M5M	M5F
Nil	—	●
LA4	●	●
LA6	●	●

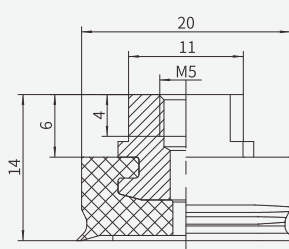
◇Note: "●"- standard, in stock. "—"unavailable.

Dimensions (mm)

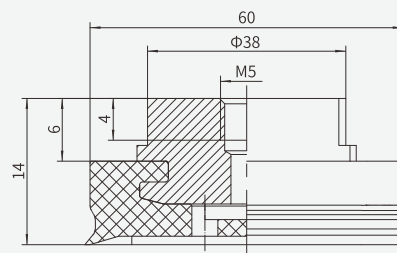
Vertical direction connection- Female thread



Suction cup
3.5×7 4×10 5×10 6×10



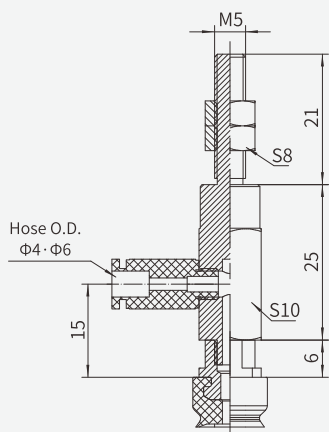
Suction cup
4×20 5×20 6×20 8×20



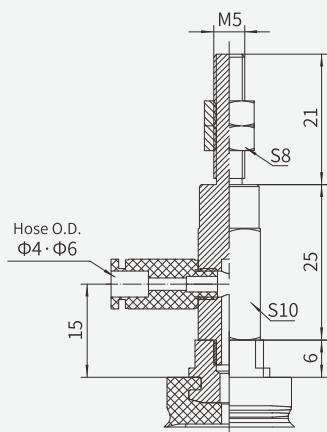
Suction cup
4×30 5×30 6×30 8×30

Dimensions (mm)

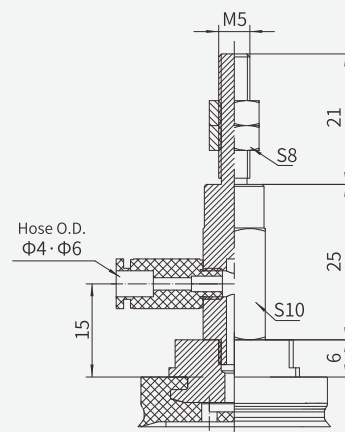
Lateral direction connection- Male thread



Suction cup
3.5×7 4×10 5×10 6×10

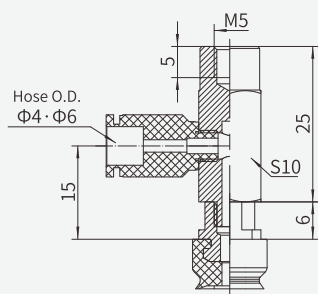


Suction cup
4×20 5×20 6×20 8×20

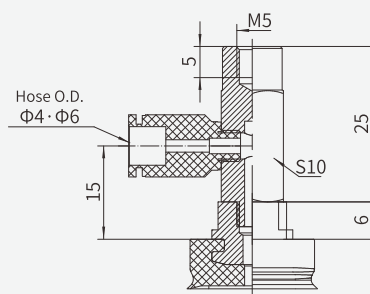


Suction cup
4×30 5×30 6×30 8×30

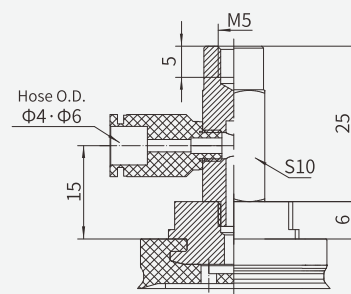
Lateral direction connection- Female thread



Suction cup
3.5×7 4×10 5×10 6×10



Suction cup
4×20 5×20 6×20 8×20



Suction cup
4×30 5×30 6×30 8×30



How to order

SAO8×20N - E I10 R A6 - M10

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Level compensator type	③ Buffer style	④ Buffer stroke	
Refer to suction cup on page 177-178	E -PSPE Series	I -Built-in spring	10	40
			20	50
			30	
⑤ Rotary type		⑥ Vacuum port connection	⑦ Mounting thread	
R- Vertical non- rotating	Nil - M5×0.8 Female thread		M10 - M10×1	
B- Lateral non- rotating	A4 - One touch fittingφ4 hose			
	A6 - One touch fittingφ6 hose			

Selection

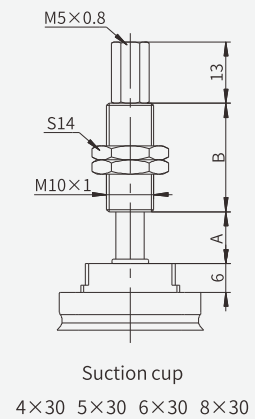
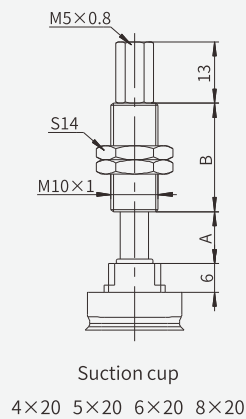
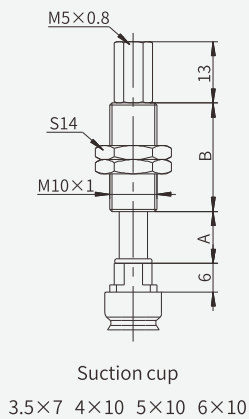
Rotary type/ Vacuum port connection	Nil	A4	A6
R	●	●	●
L	—	●	●

◇Note: "●"- standard, in stock. "—" -unavailable.

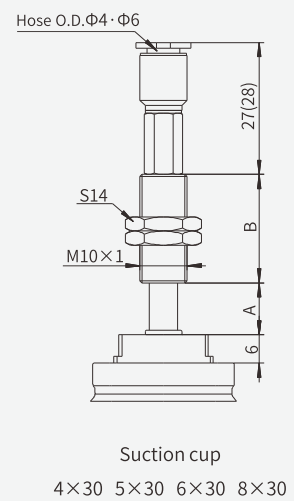
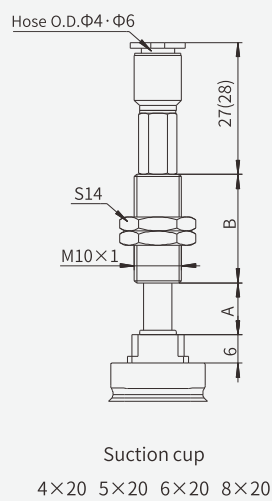
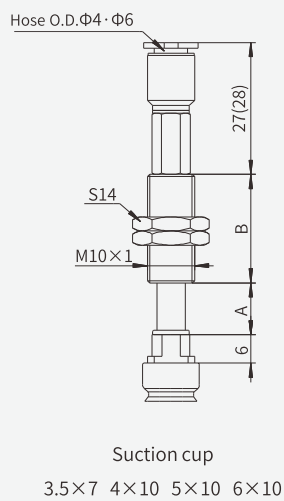
SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)

Female thread connection



One touch fitting connection

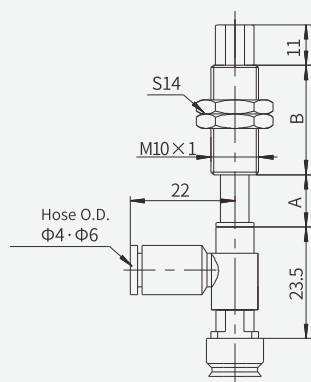


Model/ Size	A	B	Buffer stroke	F1(N)	F2(N)
SAO	11	23	10	1.0	3.0
	21	51	20		
	31	51	30		
	41	77	40		
	51	77	50		

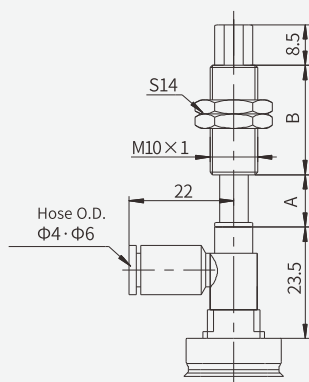
◇Note: "F1" means spring force at 0 stroke, "F2" means spring force at max stroke.

Dimensions (mm)

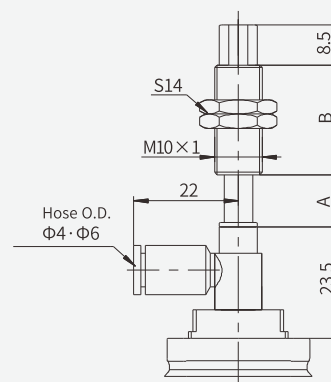
One touch fitting connection



Suction cup
3.5×7 4×10 5×10 6×10



Suction cup
4×20 5×20 6×20 8×20



Suction cup
4×30 5×30 6×30 8×30

Model/ Size	A	B	Buffer stroke	F1(N)	F2(N)
SAOR	11	23	10	1.0	3.0
	21	51	20		
	31	51	30		
	41	77	40		
	51	77	50		

◇Note: "F1" means spring force at 0 stroke,"F2" means spring force at max stroke.

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5F-SAO10	SAO3.5×7, 4×10, 5×10, 6×10
	PJS-M5F-SAO20	SAO4×20, 5×20, 6×20, 8×20
	PJS-M5F-SAO30	SAO4×30, 5×30, 6×30, 8×30

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

SPU

SNP

SOP



Features

- ◇ Thin lip and short stroke, suitable for handling thin and smooth workpiece.
- ◇ Suction cups with different materials are suitable for different workpieces.
- ◇ Various sizes, suitable for workpiece with different sizes.

Applications

- ◇ Paper ◇ Plastic film
- ◇ Aluminum foil, copper foil

How to order

SPA 15 A N - M5M

① ② ③ ④ ⑤

① Series	② Diameter	③ Stroke	③ Material & Hardness		④ Connection thread
SPA	10 -φ10mm	A - High stroke	N - NBR	55 ★	Nil - Suction cup alone
	15 -φ15mm	B - Low stroke	WS - White silicone	50 ★	M5M - M5 Male thread
	20 -φ20mm	X - Ultralow stroke	CN - Conductive NBR	55	M6M - M6 Male thread
	25 -φ25mm		CS - Conductive silicone	55	M8M - M8 Male thread
	30 -φ30mm				
	40 -φ40mm				
	50 -φ50mm				

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST.

Selection

Model	A				B		X	
	Nil	M5M	M6M	M8M	Nil	M5M	Nil	M5M
SPA10	●	●	—	—	●	●	—	—
SPA15	●	●	—	—	●	●	●	●
SPA20	●	●	—	—	●	●	—	—
SPA25	—	—	○	●	—	—	—	—
SPA30	—	—	○	●	●	●	—	—
SPA40	—	—	○	●	—	—	—	—
SPA50	—	—	○	●	—	—	—	—

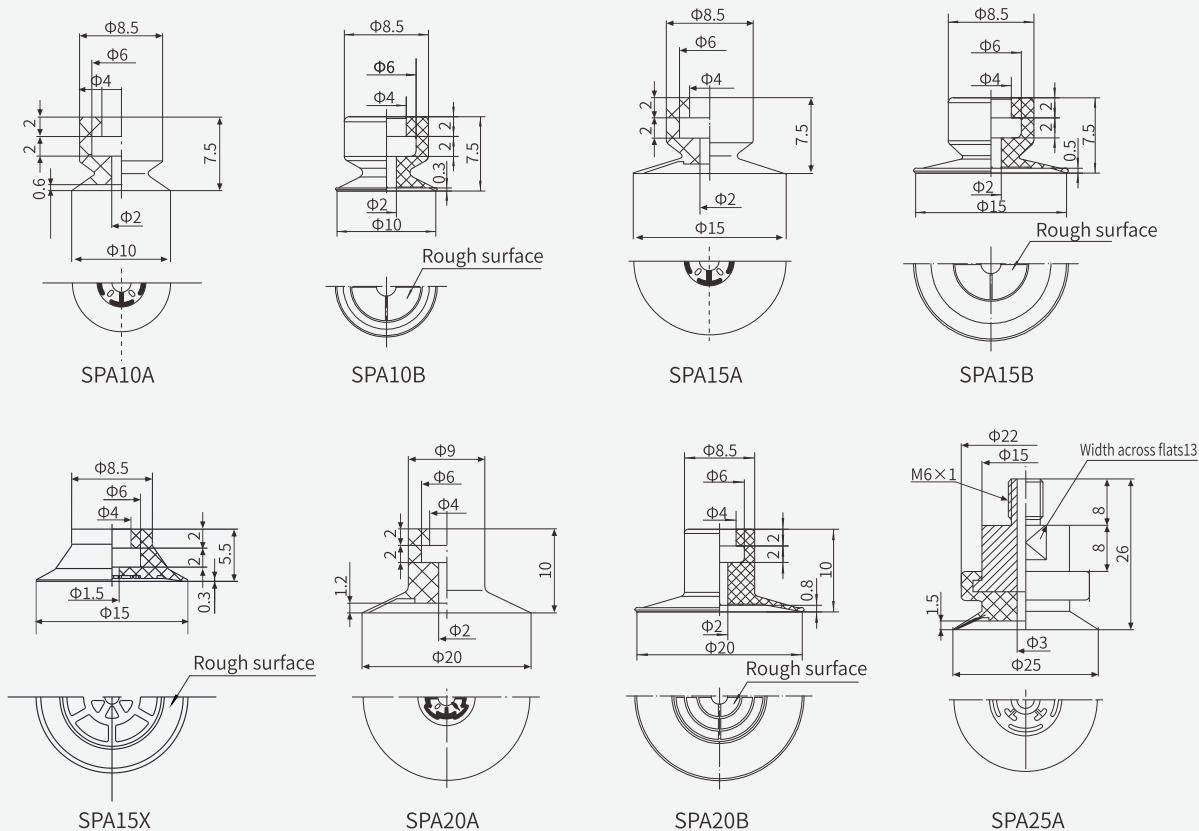
◇Note: "●" - standard, in stock. "○" - selective, no stock. "—" - unavailable.

Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SPA10A	3.5	<0.1	4
SPA10B	3.5	<0.1	4
SPA15A	8	<0.1	4
SPA15B	8	<0.1	4
SPA15X	8	<0.1	4
SPA20A	15	0.3	4
SPA20B	15	<0.1	4
SPA25A	22	0.6	4
SPA30A	32	1.1	4
SPA30B	32	0.2	4
SPA40A	56	2.6	6
SPA50A	88	5.8	6

◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)



SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

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SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

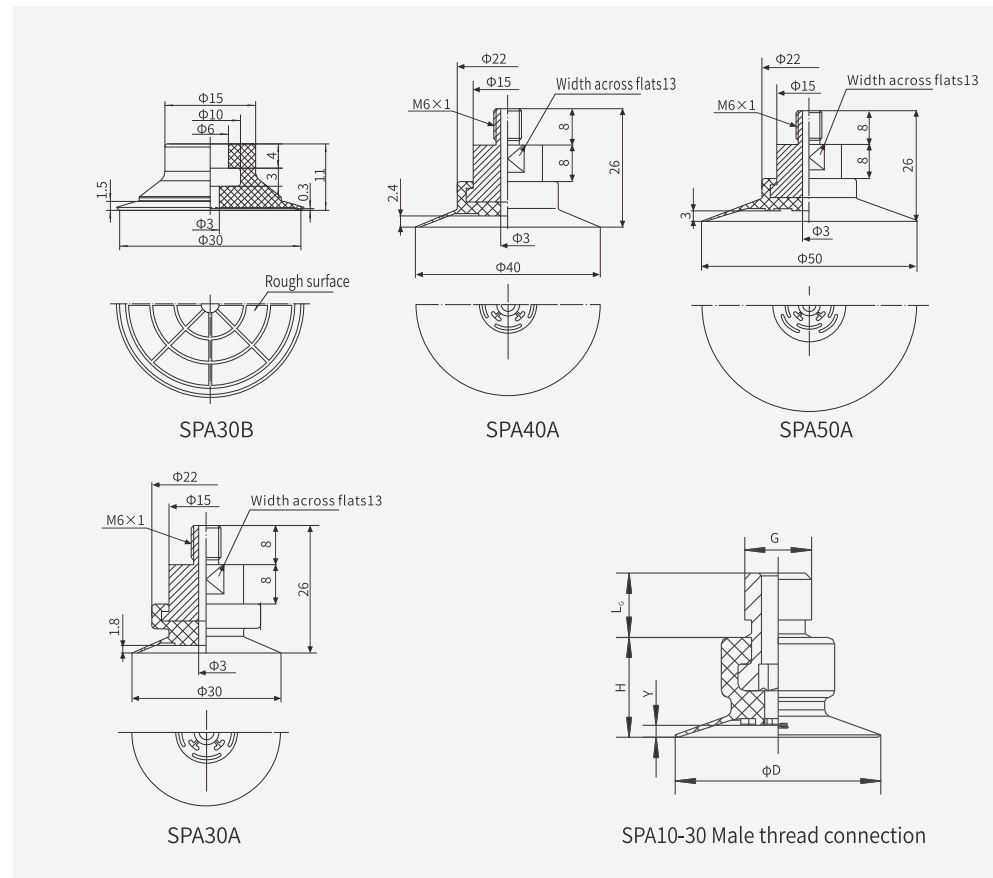
SPJ

SPU

SNP

SOP

Dimensions (mm)



Model/ Size	D	H	Y	G	L _G
SPA10A-M5M	10	7.5	0.6	M5	5
SPA10B-M5M	10	7.5	0.3	M5	5
SPA15A-M5M	15	7.5	0.9	M5	5
SPA15B-M5M	15	7.5	0.5	M5	5
SPA15X-M5M	15	5.5	0.3	M5	5
SPA20A-M5M	20	10	1.2	M5	5
SPA20B-M5M	20	10	0.8	M5	5
SPA30B-M5M	30	11	0.3	M5	5

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-ST2	SPA10A, 10B SPA15A, 15B, 15X SPA20A, 20B
	PJS-M5M-ST3	SPA30B
	PJS-M6M-ST7	SPA25A, 30A, 40A, 50A



How to order

SPA15AN - L B6 - M9M

①

②

③

④

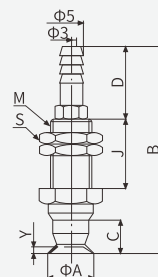
① Model	② Vacuum port direction	③ Connection	④ Connection thread
Refer to suction cup on page 183-185	Nil - Vertical L - Lateral	A6 - One touch fitting $\phi 6$ hose B6 - Pagoda fitting $\phi 6$ hose	M4F - M4 Female thread M6F - M6 Female thread M9M - M9 $\times$ 1 Male thread M10M - M10 $\times$ 1 Male thread M12M - M12 $\times$ 1 Male thread M14M - M14 $\times$ 1 Male thread

Selection

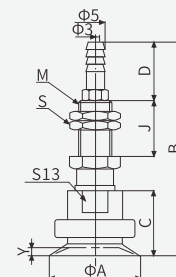
Model	Vacuum port connection	Mounting thread
SPA10-20	A6	M12M
	LA6 LB6	M4F
	B6	M9M
SPA25-50	A6	M14M
	LA6 LB6	M6F
	B6	M10M

Dimensions (mm)

Vertical direction
connection-Pagoda fitting



Suction cup diameter 15-20



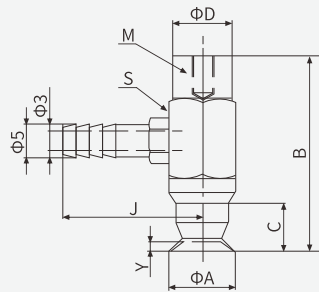
Suction cup diameter 25-50

SB
SBA
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SBOF
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STP
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SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
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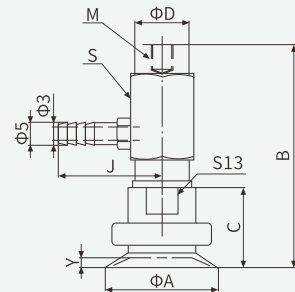
Dimensions (mm)

Model/ Size	A	B	C	D	Y	S	M	J
SPA10A-B6-M9M	10	46	7.5	16	0.6	12	M9×1	15.5
SPA10B-B6-M9M	10	46	7.5	16	0.3	12	M9×1	15.5
SPA15A-B6-M9M	15	46	7.5	16	0.9	12	M9×1	15.5
SPA15B-B6-M9M	15	46	7.5	16	0.5	12	M9×1	15.5
SPA15X-B6-M9M	15	44	5.5	16	0.3	12	M9×1	15.5
SPA20A-B6-M9M	20	48.5	10	16	1.2	12	M9×1	15.5
SPA20B-B6-M9M	20	48.5	10	16	0.8	12	M9×1	15.5
SPA25A-B6-M10M	25	67.2	18	16	1.5	14	M10×1	20
SPA30A-B6-M10M	30	67.2	18	16	1.8	14	M10×1	20
SPA30B-B6-M10M	30	60.2	11	16	1.5	14	M10×1	20
SPA40A-B6-M10M	40	67.2	18	16	2.4	14	M10×1	20
SPA50A-B6-M10M	50	67.2	18	16	3	14	M10×1	20

Lateral direction connection-Pagoda fitting



Suction cup diameter 15-20

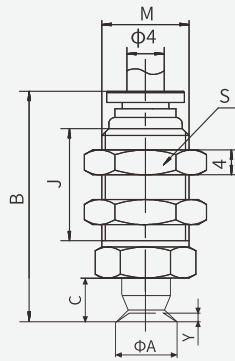


Suction cup diameter 25-30

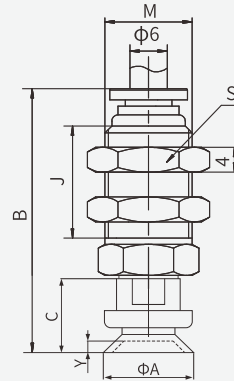
Model/ Size	A	B	C	D	Y	S	M	J
SPA10A-LB6-M4F	10	30	7.5	10	0.6	12	M4 Depth 6	21
SPA10B-LB6-M4F	10	30	7.5	10	0.3	12	M4 Depth 6	21
SPA15A-LB6-M4F	15	30	7.5	10	0.9	12	M4 Depth 6	21
SPA15B-LB6-M4F	15	30	7.5	10	0.5	12	M4 Depth 6	21
SPA15X-LB6-M4F	15	28	5.5	10	0.3	12	M4 Depth 6	21
SPA20A-LB6-M4F	20	32.5	10	10	1.2	12	M4 Depth 6	21
SPA20B-LB6-M4F	20	32.5	10	10	0.8	12	M4 Depth 6	21
SPA25A-LB6-M6F	25	51.5	18	12	1.5	14	M6 Depth 8	23
SPA30A-LB6-M6F	30	51.5	18	12	1.8	14	M6 Depth 8	23
SPA30B-LB6-M6F	30	44.5	11	12	1.5	14	M6 Depth 8	23
SPA40A-LB6-M6F	40	51.5	18	12	2.4	14	M6 Depth 8	23
SPA50A-LB6-M6F	50	51.5	18	12	3	14	M6 Depth 8	23

Dimensions (mm)

Vertical direction connection-One touch fitting



Suction cup diameter 15-20



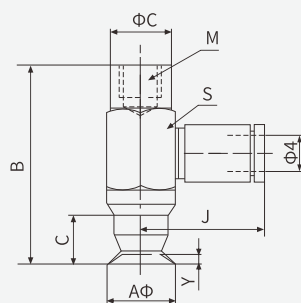
Suction cup diameter 25-50

Model/ Size	A	B	C	J	M	Y	S
SPA10A-A4-M12M	10	35	7.5	17.5	M12×1	0.6	14
SPA10B-A4-M12M	10	35	7.5	17.5	M12×1	0.3	14
SPA15A-A4-M12M	15	35	7.5	17.5	M12×1	0.9	14
SPA15B-A4-M12M	15	35	7.5	17.5	M12×1	0.5	14
SPA15X-A4-M12M	15	33	5.5	17.5	M12×1	0.3	14
SPA20A-A4-M12M	20	37.5	10	17.5	M12×1	1.2	14
SPA20B-A4-M12M	20	37.5	10	17.5	M12×1	0.8	14
SPA25A-A4-M12M	25	48	18	18	M14×1	1.5	17
SPA30A-A6-M14M	30	48	18	18	M14×1	1.8	17
SPA30B-A6-M14M	30	40	11	18	M14×1	1.5	17
SPA40A-A6-M14M	40	48	18	18	M14×1	2.4	17
SPA50A-A6-M14M	50	48	18	18	M14×1	3	17

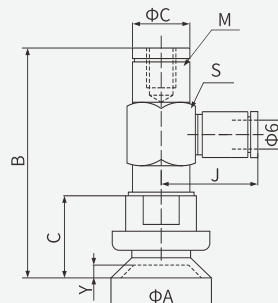
- SB
- SBA
- SBB
- SBF
- SBOF
- SFT
- STP
- SBL
- SBLP
- SF
- SU
- SUF
- SFG
- STC
- SFF
- SFM
- SDM
- SOB
- SOF
- SOG
- SFP
- SBP
- SXP
- SGP
- SDL
- SH
- SHB
- SZ
- SAN
- SAO
- SPA**
- SPC
- SPF
- SPJ
- SPU
- SNP
- SOP

Dimensions (mm)

Lateral direction connection-One touch fitting



Suction cup diameter 15-20



Suction cup diameter 25-50

Model/ Size	A	B	C	D	J	M	Y	S
SPA10A-LA4-M4F	10	30	7.5	7.5	20	M4 Depth 6	0.6	10
SPA10B-LA4-M4F	10	30	7.5	7.5	20	M4 Depth 6	0.3	10
SPA15A-LA4-M4F	15	30	7.5	7.5	20	M4 Depth 6	0.9	10
SPA15B-LA4-M4F	15	30	7.5	7.5	20	M4 Depth 6	0.5	10
SPA15X-LA4-M4F	15	28	5.5	7.5	20	M4 Depth 6	0.3	10
SPA20A-LA4-M4F	20	32.5	10	7.5	20	M4 Depth 6	1.2	10
SPA20B-LA4-M4F	20	32.5	10	7.5	20	M4 Depth 6	0.8	10
SPA25A-LA6-M6F	25	51.5	18	12	23	M6 Depth 8	1.5	14
SPA30A-LA6-M6F	30	51.5	18	12	23	M6 Depth 8	1.8	14
SPA30B-LA6-M6F	30	44.5	11	12	23	M6 Depth 8	1.5	14
SPA40A-LA6-M6F	40	51.5	18	12	23	M6 Depth 8	2.4	14
SPA50A-LA6-M6F	50	51.5	18	12	23	M6 Depth 8	3	14



How to order

SPA10AN - F E 10 LB6 - M11

① ② ③ ④ ⑤ ⑥

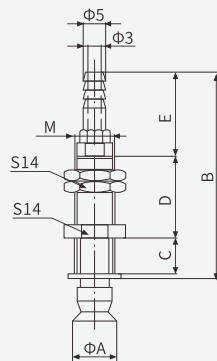
① Model	② Level compensator type	③ Buffer style
Refer to suction cup on page 183-185	F -PSPF Series	E -External spring
④ Buffer stroke	⑤ Vacuum entry connection	⑥ Mounting thread
4 10	B6 - Vertical, One touch fitting $\phi 6$ hose	M11 - M11 $\times$ 1
6 15	LB6 - Lateral, One touch fitting $\phi 6$ hose	M14 - M14 $\times$ 1

Selection

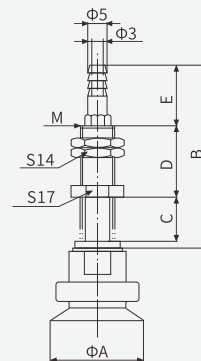
Model	Buffer stroke	Mounting thread
SPA10-20	4 10	M11 $\times$ 1
SPA25-50	6 15	M14 $\times$ 1

Dimensions (mm)

Lateral direction connection-Pagoda fitting



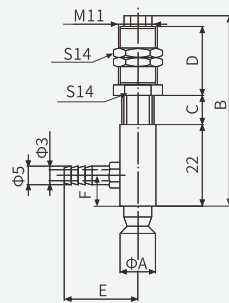
Suction cup diameter 10-20



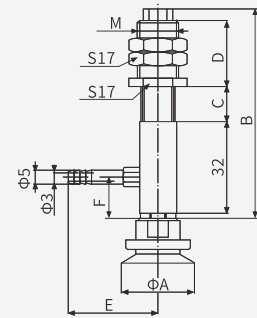
Suction cup diameter 25-50

Dimensions (mm)

Model/ Size	A	B	C	D	E	M
SPA10-FE4B6-M11	10	46	8	19	16	M11×1
SPA10-FE10B6-M11	10	58	20	19	16	M11×1
SPA15-FE4B6-M11	15	46	8	19	16	M11×1
SPA15-FE10B6-M11	15	58	20	19	16	M11×1
SPA20-FE4B6-M11	20	46	8	19	16	M11×1
SPA20-FE10B6-M11	20	58	20	19	16	M11×1
SPA25-FE6B6-M14	25	57	13	24	17	M14×1
SPA25-FE15B6-M14	25	74	30	24	17	M14×1
SPA30-FE6B6-M14	30	57	13	24	17	M14×1
SPA30-FE15B6-M14	30	74	30	24	17	M14×1
SPA40-FE6B6-M14	40	57	13	24	17	M14×1
SPA40-FE15B6-M14	40	74	30	24	17	M14×1
SPA50-FE6B6-M14	50	57	13	24	17	M14×1
SPA50-FE15B6-M14	50	74	30	24	17	M14×1

 Lateral direction
connection-Pagoda fitting


Suction cup diameter 10-20



Suction cup diameter 25-50

Model/ Size	A	B	C	D	E	F	M
SPA10-FE4LB6-M11	10	52	8	19	21	9	M11×1
SPA10-FE10LB6-M11	10	64	20	19	21	9	M11×1
SPA15-FE4LB6-M11	15	52	8	19	21	9	M11×1
SPA15-FE10LB6-M11	15	64	20	19	21	9	M11×1
SPA20-FE4LB6-M11	20	52	8	19	21	9	M11×1
SPA20-FE10LB6-M11	20	64	20	19	21	9	M11×1
SPA25-FE6LB6-M14	25	73	13	24	23	12	M14×1
SPA25-FE15LB6-M14	25	90	30	24	23	12	M14×1
SPA30-FE6LB6-M14	30	73	13	24	23	12	M14×1
SPA30-FE15LB6-M14	30	90	30	24	23	12	M14×1
SPA40-FE6LB6-M14	40	73	13	24	23	12	M14×1
SPA40-FE15LB6-M14	40	90	30	24	23	12	M14×1
SPA50-FE6LB6-M14	50	73	13	24	23	12	M14×1
SPA50-FE15LB6-M14	50	90	30	24	23	12	M14×1



Features

- ◇ 2.5 bellows with long buffer stroke, suitable for handling workpiece with irregular surface.
- ◇ Suction cups with different materials are suitable for different workpieces.
- ◇ Various sizes, suitable for workpiece with different sizes.

Applications

- ◇ Carton box
- ◇ Molding plastic

How to order

SPC 15 N - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SPC	5 - ϕ 5mm	20 - ϕ 20mm	N - NBR
	7 - ϕ 7mm	30 - ϕ 30mm	WS - White silicone
	10 - ϕ 10mm	40 - ϕ 40mm	CN - Conductive NBR
	15 - ϕ 15mm	60 - ϕ 60mm	CS - Conductive silicone
	18 - ϕ 18mm	90 - ϕ 90mm	E - EPDM
			55 ★
			50 ★
			55
			50
			55
			Nil - Suction cup alone
			M5M - M5 Male thread
			M8M - M8 Male thread
			G1M - G1/8 Male thread

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST.

Selection

Model	M5M	M8M	G1M
SPC5 - 20	●	—	—
SPC30 - 60	—	●	—
SPC90	—	—	●

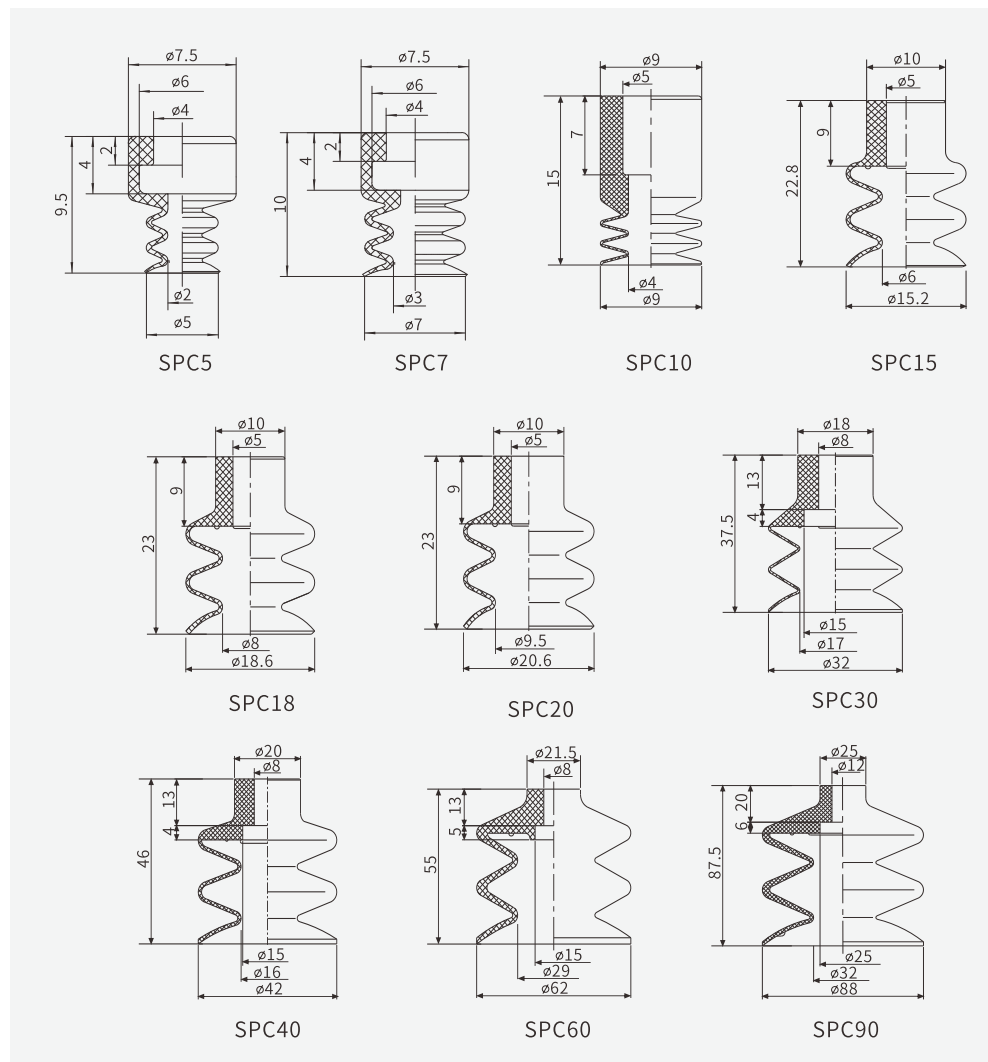
◇Note: "●" - standard, in stock. "—" - unavailable.

SB
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SBLP
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SUF
SFG
STC
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SFM
SDM
SOB
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SOG
SFP
SBP
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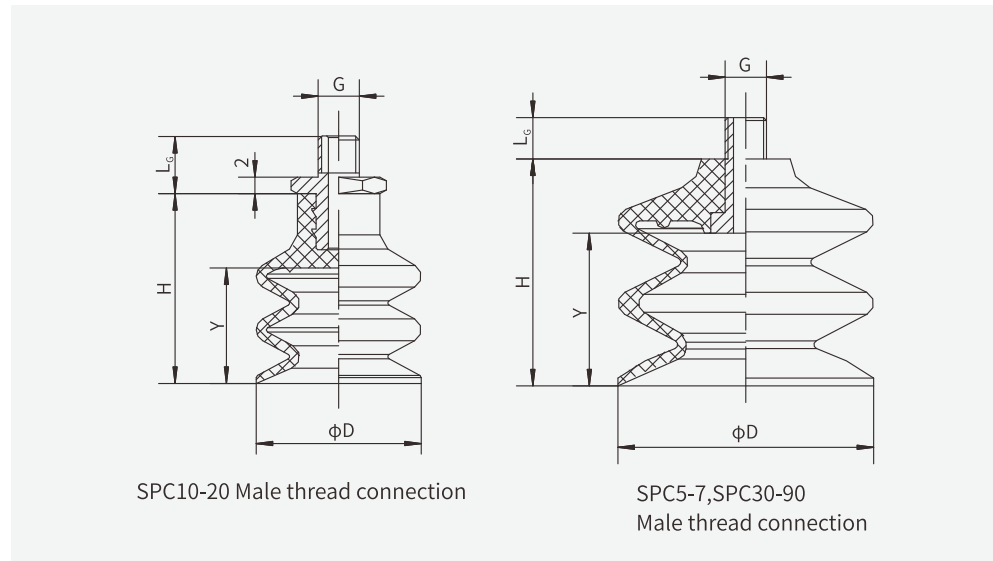
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SPC5	0.9	<0.1	7.5	4
SPC7	1.7	<0.1	12	4
SPC10	3.5	0.2	13	6
SPC15	8	0.9	15	6
SPC18	11.5	1.5	20	6
SPC20	14	2	27	6
SPC30	32	8.3	35	6
SPC40	56	16.5	60	8
SPC60	127	52	75	8
SPC90	286	135	85	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)


Dimensions (mm)



Model/ Size	D	H	Y	G	L _c
SPC5-M5M	5	9.5	4	M5	5
SPC7-M5M	7	10	5	M5	5
SPC10-M5M	10	15	6	M5	5
SPC15-M5M	15.2	22.8	13.8	M5	7
SPC18-M5M	18.6	23	14	M5	7
SPC20-M5M	20.6	23	14	M5	7
SPC30-M8M	32	37.5	20.5	M8	6.5
SPC40-M8M	42	46	29	M8	6.5
SPC60-M8M	62	55	37	M8	6.5
SPC90-G1M	88	87.5	61.5	G1/8	7

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M5M-ST2	SPC5, 7
	PJS-M5M-SPC10	SPC10
	PJS-M5M-SPC20	SPC15, 18, 20
	PJS-M8M-ST6	SPC30, 40, 60
	PJS-G1M-ST8	SPC90

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



How to order

SPC10N - L B6 - M8M

①

②

③

④

① Model	② Vacuum port direction	③ Vacuum port connection	④ Mounting thread
Refer to suction cup on page 192-194	Nil - Vertical L - Lateral	B6 - Pagoda fitting $\phi 6$ hose	M4F - M4 Female thread M6F - M6 Female thread M8M - M8×1 Male thread M10M - M10×1 Male thread

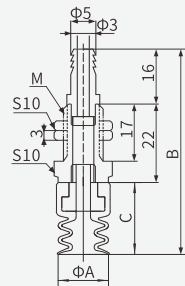
Selection

Model/ Mounting thread	Vacuum port connection	M4F	M6F	M8M	M10M
SPC5-20	B6	—	—	●	—
	LB6	●	—	—	—
SPC30-60	B6	—	—	—	●
	LB6	—	●	—	—

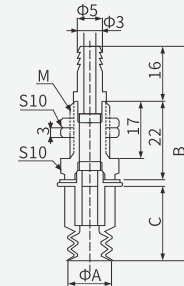
◇Note: "●"- standard, in stock. "—" - unavailable.

Dimensions (mm)

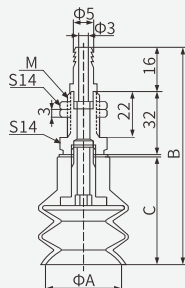
Vertical direction
connection -Pagoda fitting



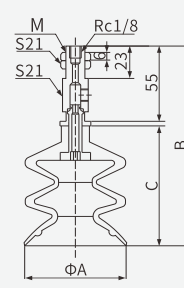
Suction cup diameter 5-7



Suction cup diameter 10-20



Suction cup diameter 30-60



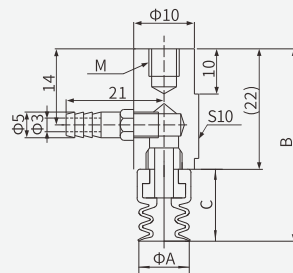
Suction cup diameter 90

Model/ Size	A	B	C	M
SPC5-B6-M8M	5	47.5	9.5	M8×1
SPC7-B6-M8M	7	48	10	M8×1
SPC10-B6-M8M	10	56.2	15	M8×1
SPC15-B6-M8M	15.2	64	22.8	M8×1
SPC18-B6-M8M	18.6	64.2	23	M8×1
SPC20-B6-M8M	20.6	64.2	23	M8×1
SPC30-B6-M10M	32	86.8	37.5	M10×1
SPC40-B6-M10M	42	95.3	46	M10×1
SPC60-B6-M10M	62	104.3	55	M10×1
SPC90-R1-M16M	88	144.8	87.5	M16×1.5

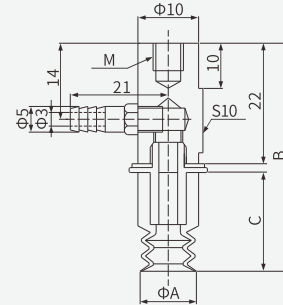
SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
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SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)

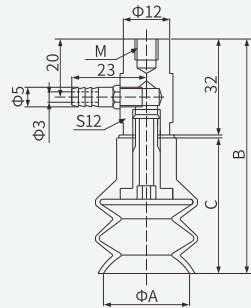
Lateral direction
connection-Pagoda fitting



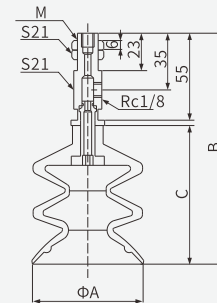
Suction cup diameter 5-7



Suction cup diameter 10-20



Suction cup diameter 30-60



Suction cup diameter 90

Model/ Size	A	B	C	M
SPC5-LB6-M4F	5	31.5	9.5	M4 Depth 6
SPC7-LB6-M4F	7	32	10	M4 Depth 6
SPC10-LB6-M4F	10	40.2	15	M4 Depth 6
SPC15-LB6-M4F	15.2	48.2	22.8	M4 Depth 6
SPC18-LB6-M4F	18.6	48.2	23	M4 Depth 6
SPC20-LB6-M6F	20.6	42.5	23	M4 Depth 6
SPC30-LB6-M6F	32	70.8	37.5	M6 Depth 8
SPC40-LB6-M6F	42	79.3	46	M6 Depth 8
SPC60-LB6-M6F	62	88.3	55	M6 Depth 8
SPC90-LR1-M16M	88	144.8	87.5	M16×1.5



Features

- ◇ Standard flat suction cup, suitable for handling workpiece with even surface.
- ◇ Various sizes, suitable for workpiece with different sizes.

Applications

- ◇ Steel plate ◇ Wooden plate ◇ Plywood

How to order

SPF 15 N - M5M

① ② ③ ④

① Series	② Diameter		③ Material & Hardness		④ Connection thread
SPF	2	- φ2mm	35	- φ35mm	N - NBR 55 ★ WS - White silicone 50 ★ CN - Conductive NBR 55 CS - Conductive silicone 55 F - Fluorine rubber 65 E - EPDM 50 HD - High Temp/Mark free material 60 HP - Mark free rubber 55
	3.5	- φ3.5mm	40	- φ40mm	
	5	- φ5mm	50	- φ50mm	
	6	- φ6mm	60	- φ60mm	
	8	- φ8mm	80	- φ80mm	
	10	- φ10mm	95	- φ95mm	
	15	- φ15mm	120	- φ120mm	
	20	- φ20mm	150	- φ150mm	
	25	- φ25mm	200	- φ200mm	
	30	- φ30mm			
					Nil - Suction cup alone M3M - M3 Male thread M5M - M5 Male thread M8M - M8 Male thread M10F - M10x1.25 Female thread G1F - G1/8 Female thread

◇Note: "★" - Common material, in stock. For other materials, please consult with AIRBEST.

◇Note: HP material suits suction cup SPF10-50.

Selection

Model	M3M	M5M	M8M	M10F	G1F
SPF2 - 3.5	●	—	—	—	—
SPF5 - 40	—	●	—	—	—
SPF50	—	—	●	—	—
SPF60 - 95	—	—	—	●	—
SPF120 - 200	—	—	—	—	●
Connected by 4 pcs M8 hexagon socket head cap screws					

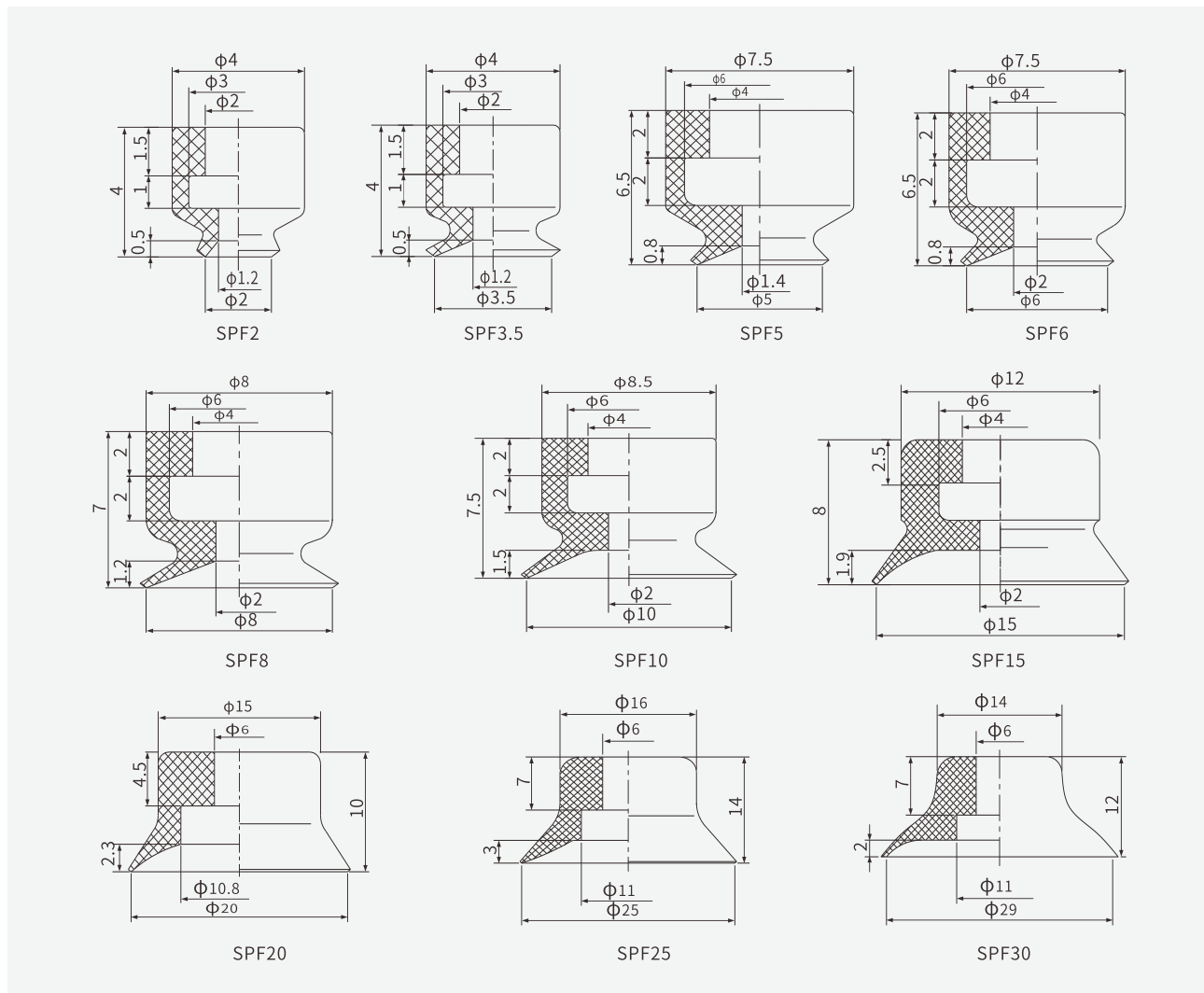
◇Note: "●" - standard, in stock. "—" - unavailable.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

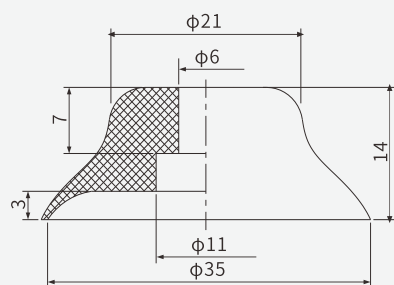
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)	Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SPF2	0.15	<0.1	4	SPF35	43	2.4	6
SPF3.5	0.4	<0.1	4	SPF40	60	3.4	6
SPF5	0.9	<0.1	4	SPF50	92	5.7	8
SPF6	1.2	<0.1	4	SPF60	127	11	8
SPF8	2.2	<0.1	4	SPF80	226	25.3	8
SPF10	3.5	<0.1	4	SPF95	319	38	10
SPF15	8	0.2	6	SPF120	510	81	10
SPF20	15	0.5	6	SPF150	800	171	12
SPF25	24	1.1	6	SPF200	1,410	364	12
SPF30	32	1	6				

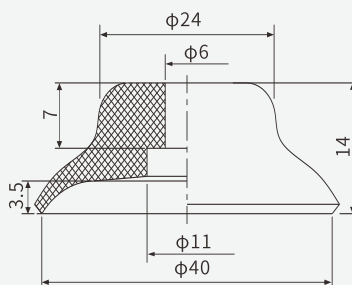
◇ Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)


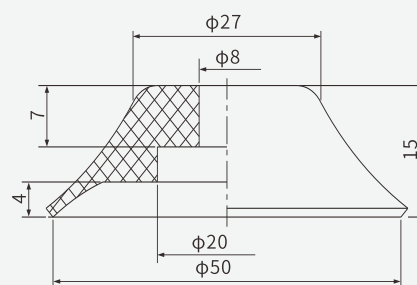
Dimensions (mm)



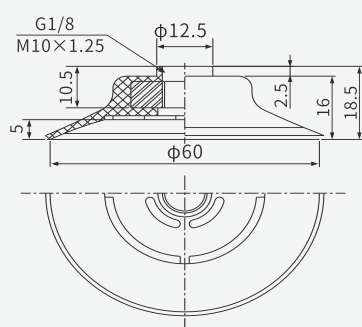
SPF35



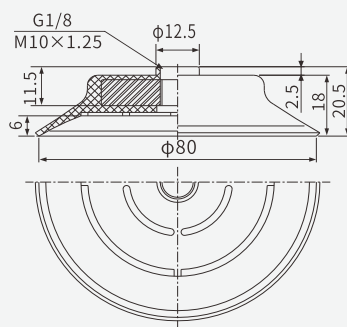
SPF40



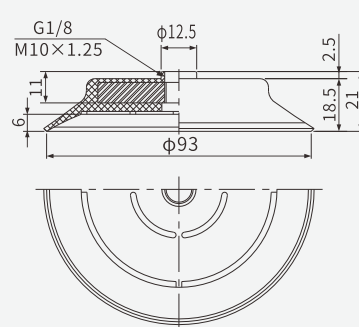
SPF50



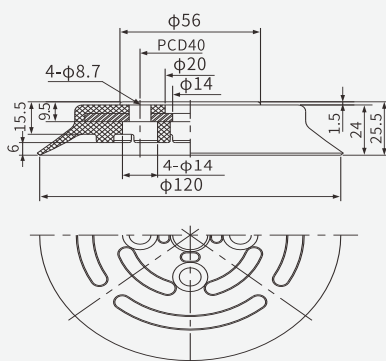
SPF60



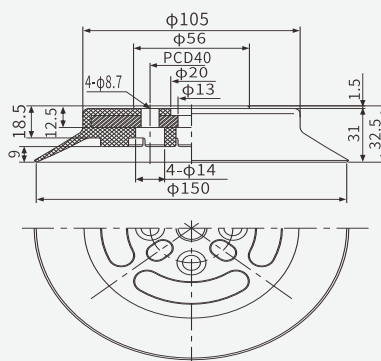
SPF80



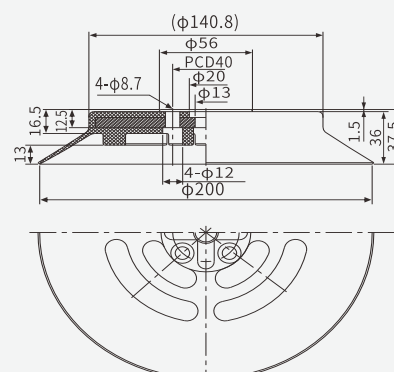
SPF95



SPF120



SPF150



SPF200

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

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SXP

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SDL

SH

SHB

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SAO

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SPC

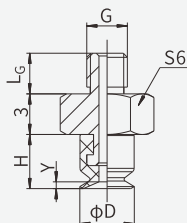
SPF

SPJ

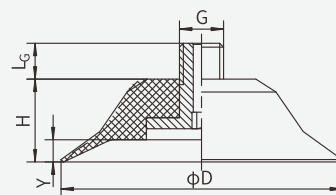
SPU

SNP

SOP

Dimensions (mm)


SPF2-3.5 Male thread connection



SPF2-50 Male thread connection

Model/ Size	D	H	Y	G	L ₆
SPF2-M3M	2.5	4	0.5	M3	5
SPF3.5-M3M	3.9	4	0.5	M3	5
SPF5-M5M	5	6.5	0.8	M5	5
SPF6-M5M	6.5	6.5	0.8	M5	5
SPF8-M5M	8.5	7	1.2	M5	5
SPF10-M5M	10.5	7.5	1.5	M5	5
SPF15-M5M	15.5	8	1.9	M5	5
SPF20-M5M	21	10	2.3	M5	5
SPF25-M5M	25.5	14	3	M5	5
SPF30-M5M	30	12	2	M5	5
SPF35-M5M	36	14	3	M5	5
SPF40-M5M	42	14	3.5	M5	5
SPF50-M8M	51	15	4	M8	6.5

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M3M-ST1	SPF2, 3.5
	PJS-M5M-ST2	SPF5, 6, 8, 10, 15
	PJS-M5M-ST3	SPF20
	PJS-M5M-ST4	SPF25, 30, 35, 40
	PJS-M8M-ST6	SPF50

◇Note: Please refer to suction cup, locking fitting and level compensator on page



How to order

SPF10N - L B6 - M8M

①

②

③

④

① Model

Refer to suction
cup on page
198-201

② Vacuum port direction

Nil - Vertical
L - Lateral

③ Vacuum port connection

A4 - One touch fitting $\phi 4$ hose
B4 - Pagoda fitting $\phi 4$ hose
A6 - One touch fitting $\phi 6$ hose
B6 - Pagoda fitting $\phi 6$ hose
R1 - G1/8 Female thread

④ Mounting thread

M3F - M3 Female thread
M4F - M4 Female thread
M6F - M6 Female thread
M8F - M8 Female thread
M16F - M16 Female thread

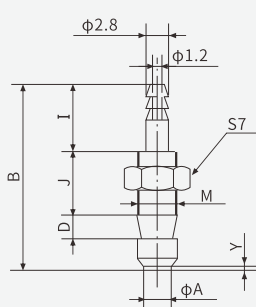
M5M - M5 $\times$ 0.5 Male thread
M8M - M8 $\times$ 1 Male thread
M10M - M10 $\times$ 1 Male thread
M16M - M16 $\times$ 1.5 Male thread

Selection

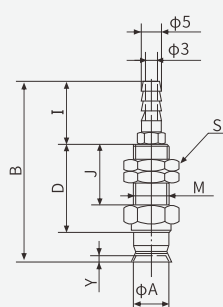
Model	Vacuum port connection	Mounting thread
SPF2-3.5	B4	M5M
	LB4	M3F
SPF5-15	A4	M12M
	LA6 LB6	M4F
	B6	M8M
SPF20-50	A6	M14M
	LA6 LB6	M6F
	A6	M10M
SPF60-95	R1	M16M
	LR1	M8F
SPF120-200	LR1	M16F

Dimensions (mm)

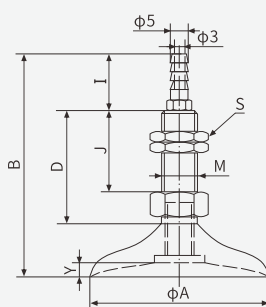
Vertical direction connection-Pagoda fitting



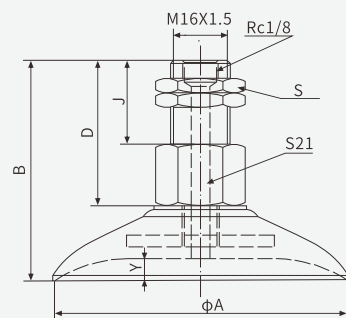
Suction cup diameter 2-3.5



Suction cup diameter 5-10



Suction cup diameter 15-50

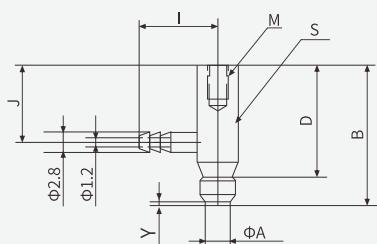


Suction cup diameter 60-95

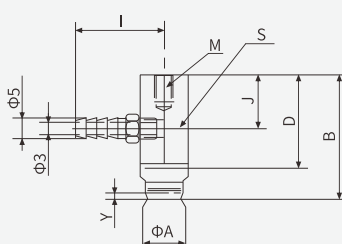
Model/ Size	A	B	D	I	J	M	Y	S
SPF2-B4-M5M	2	23.5	3	8.5	8	M5×0.5	0.5	7
SPF3.5-B4-M5M	3.5	23.5	3	8.5	8	M5×0.5	0.5	7
SPF5-B6-M8M	5	30.5	14	10	11	M8×1	0.8	12
SPF6-B6-M8M	6	30.5	14	10	11	M8×1	0.8	12
SPF8-B6-M8M	8	31	14	10	11	M8×1	1.2	12
SPF10-B6-M8M	10	45.5	22	16	17	M8×1	1.5	12
SPF15-B6-M8M	15	46	22	16	17	M8×1	1.9	12
SPF20-B6-M10M	20	58	32	16	22	M10×1	2.3	14
SPF25-B6-M10M	25	62	32	16	22	M10×1	3.0	14
SPF30-B6-M10M	30	60	32	16	22	M10×1	2.0	14
SPF35-B6-M10M	35	62	32	16	22	M10×1	3.0	14
SPF40-B6-M10M	40	62	32	16	22	M10×1	3.5	14
SPF50-B6-M10M	50	63	32	16	22	M10×1	4.0	14
SPF60-R1-M16M	60	58	42	—	23	M16×1.5	5.0	21
SPF80-R1-M16M	80	60	42	—	23	M16×1.5	6.0	21
SPF95-R1-M16M	95	60.5	42	—	23	M16×1.5	6.0	21

Dimensions (mm)

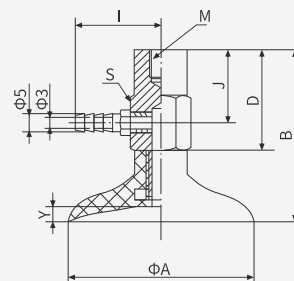
Lateral direction connection-Pagoda fitting



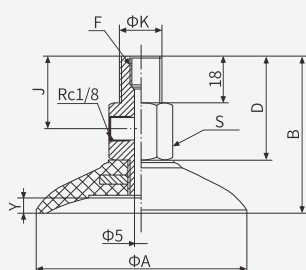
Suction cup diameter 2-3.5



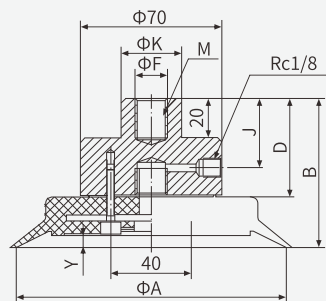
Suction cup diameter 5-10



Suction cup diameter 15-50



Suction cup diameter 60-95



Suction cup diameter 120-200

Model/ Size	A	B	D	I	J	M	Y	S
SPF2-LB4-M3F	2	20	16	11	11	M3 Depth 5	0.5	5
SPF3.5-LB4-M3F	3.5	20	16	11	11	M3 Depth 5	0.5	5
SPF5-LB6-M4F	5	28.5	22	21	14	M4 Depth 6	0.8	10
SPF6-LB6-M4F	6	28.5	22	21	14	M4 Depth 6	0.8	10
SPF8-LB6-M4F	8	29	22	21	14	M4 Depth 6	1.2	10
SPF10-LB6-M4F	10	29.5	22	21	14	M4 Depth 6	1.5	10
SPF15-LB6-M4F	15	30	22	21	14	M4 Depth 6	1.9	10
SPF20-LB6-M4F	20	32	22	21	14	M4 Depth 6	2.3	10
SPF25-LB6-M6F	25	46	32	23	20	M6 Depth 8	3	14
SPF30-LB6-M6F	30	44	32	23	20	M6 Depth 8	2	14
SPF35-LB6-M6F	35	46	32	23	20	M6 Depth 8	3	14
SPF40-LB6-M6F	40	46	32	23	20	M6 Depth 8	3.5	14
SPF50-LB6-M6F	50	47	32	23	20	M6 Depth 8	4	14
SPF60-LR1-M8F	60	58	42	—	28	M8 Depth 8	5	21
SPF80-LR1-M8F	80	58.5	42	—	28	M8 Depth 8	6	21
SPF95-LR1-M8F	95	59	42	—	28	M8 Depth 8	6	21
SPF120-LR1-M16F	120	75.5	50	—	38	M16 Depth 20	6	—
SPF150-LR1-M16F	150	82.5	50	—	38	M16 Depth 20	9	—
SPF200-LR1-M16F	200	87.5	50	—	38	M16 Depth 20	13	—

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

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SPF

SPJ

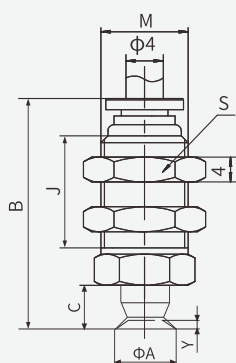
SPU

SNP

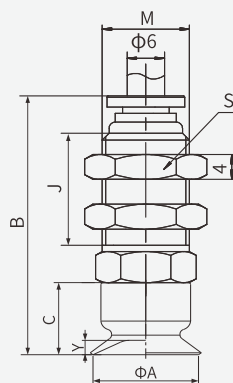
SOP

Dimensions (mm)

Vertical direction connection-One touch fitting



Suction cup diameter 15-20

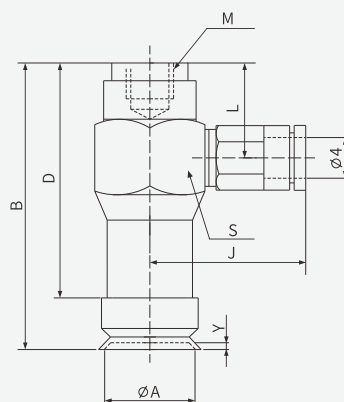


Suction cup diameter 25-50

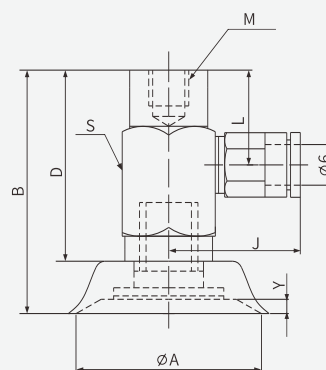
Model/ Size	A	B	C	J	M	Y	S
SPF5-A4-M12M	5	34	6.5	17.5	M12×1	0.8	14
SPF6-A4-M12M	6	34	6.5	17.5	M12×1	0.8	14
SPF8-A4-M12M	8	34.5	7	17.5	M12×1	1.2	14
SPF10-A4-M12M	10	35	7.5	17.5	M12×1	1.5	14
SPF15-A4-M12M	15	35.5	8	17.5	M12×1	1.9	14
SPF20-A6-M14M	20	40	10	18	M14×1	2.3	17
SPF25-A6-M14M	25	44	14	18	M14×1	3.0	17
SPF30-A6-M14M	30	42	12	18	M14×1	2.0	17
SPF35-A6-M14M	35	44	14	18	M14×1	3.0	17
SPF40-A6-M14M	40	44	14	18	M14×1	3.5	17
SPF50-A6-M14M	50	45	15	18	M14×1	4.0	17

Dimensions (mm)

Lateral direction connection-One touch fitting



Suction cup diameter 5-10



Suction cup diameter 20-50

Model/ Size	A	B	D	J	M	Y	S
SPF5-LA4-M4F	5	28.5	22	20	M4 Depth 6	0.8	10
SPF6-LA4-M4F	6	28.5	22	20	M4 Depth 6	0.8	10
SPF8-LA4-M4F	8	29	22	20	M4 Depth 6	1.2	10
SPF10-LA4-M4F	10	29.5	22	20	M4 Depth 6	1.5	10
SPF15-LA4-M4F	15	30	22	20	M4 Depth 6	1.9	10
SPF20-LA6-M6F	20	42	32	23	M6 Depth 8	2.3	14
SPF25-LA6-M6F	25	46	32	23	M6 Depth 8	3.0	14
SPF30-LA6-M6F	30	44	32	23	M6 Depth 8	2.0	14
SPF35-LA6-M6F	35	46	32	23	M6 Depth 8	3.0	14
SPF40-LA6-M6F	40	46	32	23	M6 Depth 8	3.5	14
SPF50-LA6-M6F	50	47	32	23	M6 Depth 8	4.0	14

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

SBP

SXP

SGP

SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

SPU

SNP

SOP


How to order

SPF10N - F E 10 LB6 - M11

①

②

③

④

⑤

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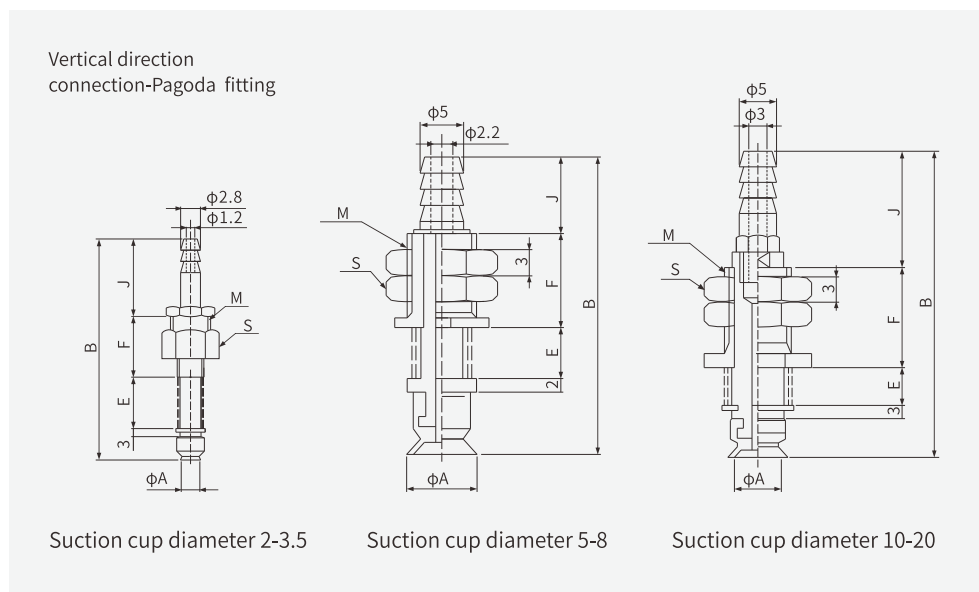
① Model	② Level compensator type	③ Buffer style	④ Buffer stroke	
Refer to suction cup on page 198-201	F -PSPF Series	E -External spring	2	6
			3	10
			4	15
			5	30

⑤ Vacuum port connection	⑥ Mounting thread
B4 - Vertical, One touch fitting $\phi 4$ hose	M5 - M5 $\times$ 0.5
B6 - Vertical, One touch fitting $\phi 6$ hose	M9 - M9 $\times$ 1
LB4 - Lateral, One touch fitting $\phi 4$ hose	M11 - M11 $\times$ 1
LB6 - Lateral, One touch fitting $\phi 6$ hose	M14 - M14 $\times$ 1
LR1 - Lateral, Rc1/8 Female thread	M16 - M16 $\times$ 1.5

Selection

Model	Buffer stroke		Vacuum port connection		Mounting thread
SPF2-3.5	2	5	B4	LB4	M5
SPF5-8	3	10	B6	LB6	M9
SPF10-15	4	10	B6	LB6	M11
SPF20-50	6	15	B6	LB6	M14
SPF60-95	10	30	—	LR1	M16

Dimensions (mm)



Model/ Size	A	B	E	F	J	M	S	Buffer stroke
SPF2-FE2B4-M5	2	28.5	5	8	8.5	M5×0.5	7	2.5
SPF2-FE5B4-M5	2	33.5	10	8	8.5	M5×0.5	7	5
SPF3.5-FE2B4-M5	3.5	28.5	5	8	8.5	M5×0.5	7	2.5
SPF3.5-FE5B4-M5	3.5	33.5	10	8	8.5	M5×0.5	7	5
SPF5-FE3B6-M9	5	37.5	6	13	10	M9×1	12	3
SPF5-FE10B6-M9	5	51.5	20	13	10	M9×1	12	10
SPF6-FE3B6-M9	6	37.5	6	13	10	M9×1	12	3
SPF6-FE10B6-M9	6	51.5	20	13	10	M9×1	12	10
SPF8-FE3B6-M9	8	38	6	13	10	M9×1	12	3
SPF8-FE10B6-M9	8	52	20	13	10	M9×1	12	10
SPF10-FE4B6-M11	10	53.5	8	19	16	M11×1	14	4
SPF10-FE10B6-M11	10	65.5	20	19	16	M11×1	14	10
SPF15-FE4B6-M11	15	54	8	19	16	M11×1	14	4
SPF15-FE10B6-M11	15	66	20	19	16	M11×1	14	10
SPF20-FE4B6-M11	20	56	8	19	16	M11×1	14	4
SPF20-FE10B6-M11	20	68	20	19	16	M11×1	14	10

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

SFG

STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

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SXP

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SDL

SH

SHB

SZ

SAN

SAO

SPA

SPC

SPF

SPJ

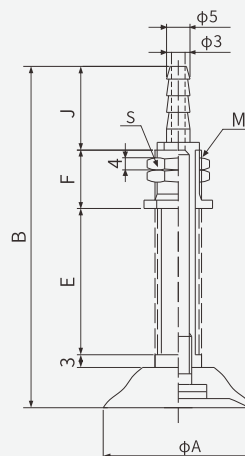
SPU

SNP

SOP

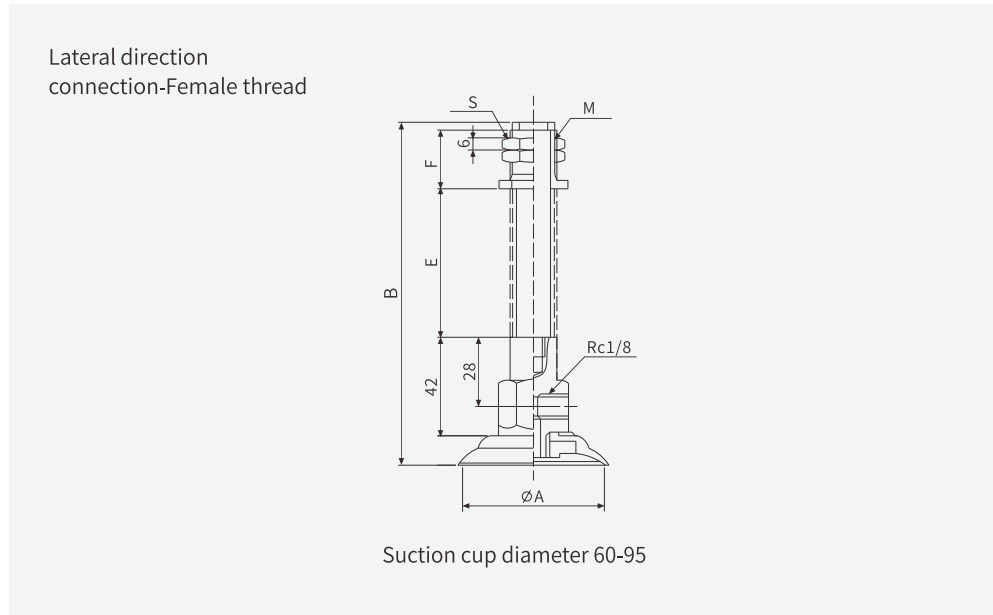
Dimensions (mm)

Vertical direction connection-Pagoda fitting



Suction cup diameter 25-50

Model/ Size	A	B	E	F	J	M	S	Buffer stroke
SPF25-FE6B6-M14	25	71	13	24	17	M14×1	17	6
SPF25-FE15B6-M14	25	88	30	24	17	M14×1	17	15
SPF30-FE6B6-M14	30	69	13	24	17	M14×1	17	6
SPF30-FE15B6-M14	30	86	30	24	17	M14×1	17	15
SPF35-FE6B6-M14	35	71	13	24	17	M14×1	17	6
SPF35-FE15B6-M14	35	88	30	24	17	M14×1	17	15
SPF40-FE6B6-M14	40	71	13	24	17	M14×1	17	6
SPF40-FE15B6-M14	40	88	30	24	17	M14×1	17	15
SPF50-FE6B6-M14	50	72	13	24	17	M14×1	17	6
SPF50-FE15B6-M14	50	89	30	24	17	M14×1	17	16

Dimensions (mm)


Model/ Size	A	B	E	F	M	S	Buffer stroke
SPF60-FE10LR1-M16	60	110	20	28	M16×1.5	21	10
SPF60-FE30LR1-M16	60	150	60	28	M16×1.5	21	30
SPF80-FE10LR1-M16	80	112	20	28	M16×1.5	21	10
SPF80-FE30LR1-M16	80	152	60	28	M16×1.5	21	30
SPF95-FE10LR1-M16	95	112.5	20	28	M16×1.5	21	10
SPF95-FE30LR1-M16	95	152.5	60	28	M16×1.5	21	30



Features

- ◇ 1.5 bellows suction cup suitable for workpiece with uneven surface.
- ◇ Thin lip and short stroke, suitable for handling light and thin workpiece.
- ◇ Various sizes, suitable for workpiece with different sizes.

Applications

- ◇ Panel ◇ Paper ◇ Plastic film

How to order

SPJ 15 N - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SPJ	4 - 4mm 30 - 30mm	N - NBR 55 ★	Nil - Suction cup alone
	6 - 6mm 35 - 35mm	WS - White silicone 50 ★	M3M - M3 Male thread
	8 - 8mm 40 - 40mm	CN - Conductive NBR 55	M5M - M5 Male thread
	10 - 10mm 50 - 50mm	CS - Conductive silicone 55	M8M - M8 Male thread
	15 - 15mm 60 - 60mm	F - Fluorine rubber 65	M10F - M10x1.25 Female thread
	20 - 20mm 70 - 70mm	E - EPDM 55	G1F - G1/8 Female thread
	25 - 25mm 80 - 80mm	HP - Mark free rubber 55	

◇Note: "★" - common material, in stock. For other materials, please consult with AIRBEST. HP material suits suction cup SPJ10-50

Selection

Model	M3M	M5M	M8M	M10F	G1F
SPJ4	●	—	—	—	—
SPJ6	—	●	—	—	—
SPJ8 - 40	—	●	—	—	—
SPJ50	—	—	●	—	—
SPJ60 - 80	—	—	—	●	●

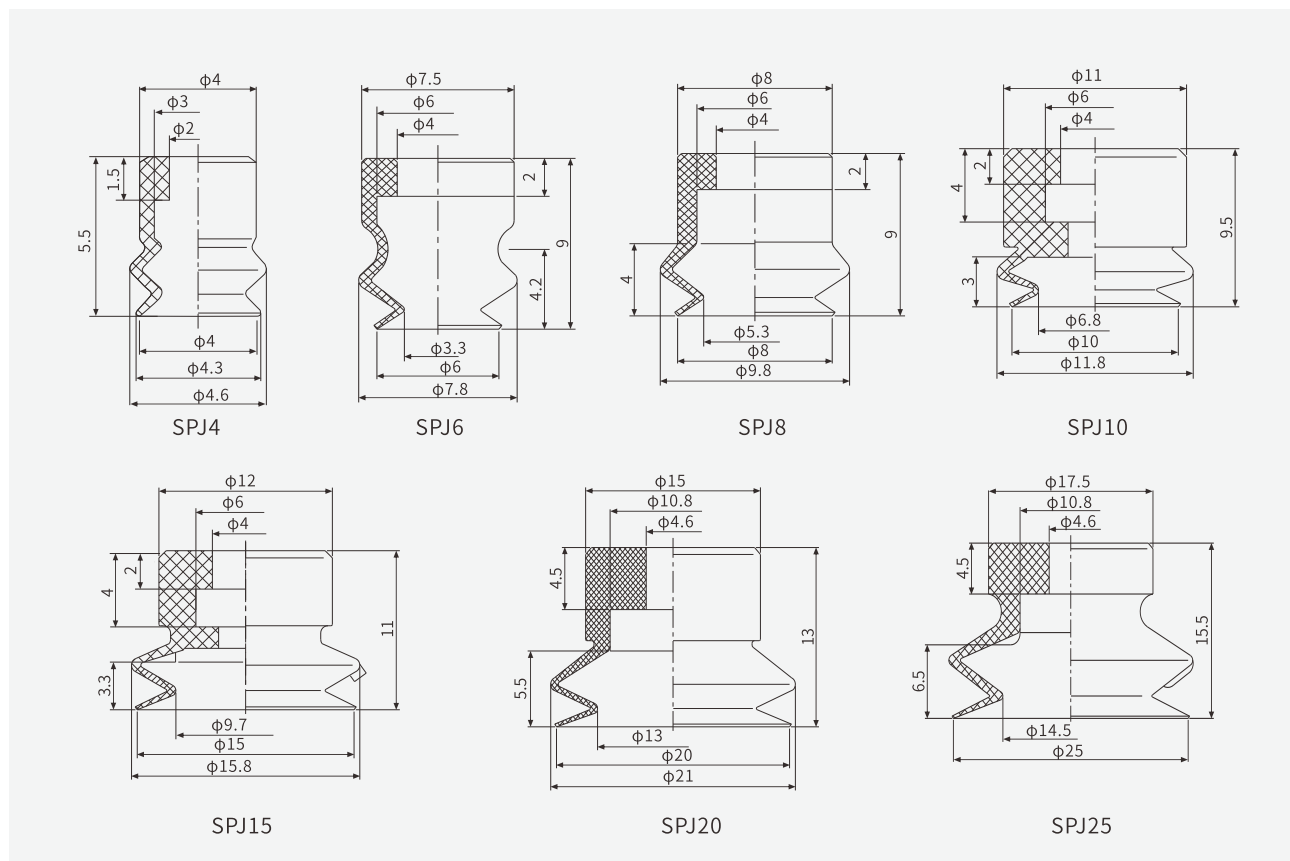
◇Note: "●" - standard, in stock. "—" - unavailable.

Technical parameters

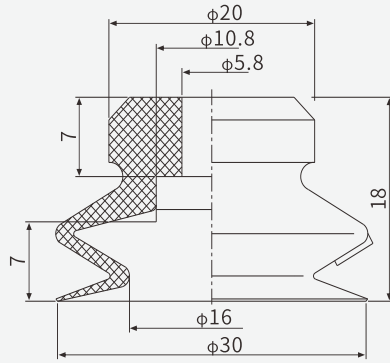
Model	Pull-out force (N)	Inner volume (cm ³)	Min. curve radius of workpiece (mm)	Recommended hose dia. (mm)
SPJ4	0.6	<0.1	4	4
SPJ6	1.2	<0.1	6	4
SPJ8	2.2	<0.1	8	4
SPJ10	3.5	0.2	12	4
SPJ15	8	0.5	20	6
SPJ20	15	1.1	27	6
SPJ25	24	2.2	40	6
SPJ30	32	3	55	6
SPJ35	43	4.5	65	6
SPJ40	60	6	80	6
SPJ50	92	11.7	95	8
SPJ60	127	20	125	8
SPJ70	173	30	150	8
SPJ80	226	40	140	8

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

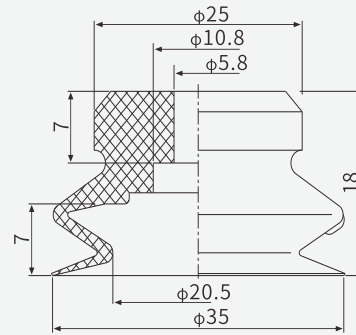
Dimensions (mm)



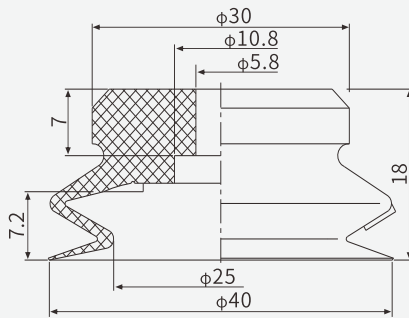
Dimensions (mm)



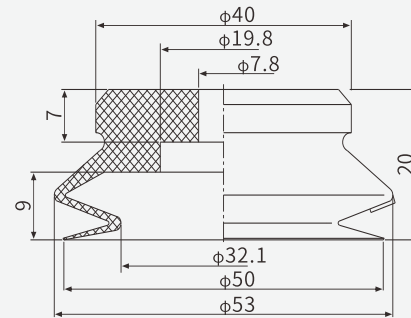
SPJ30



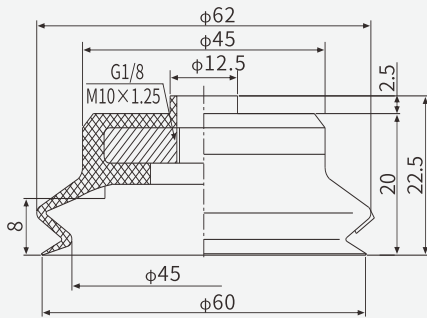
SPJ35



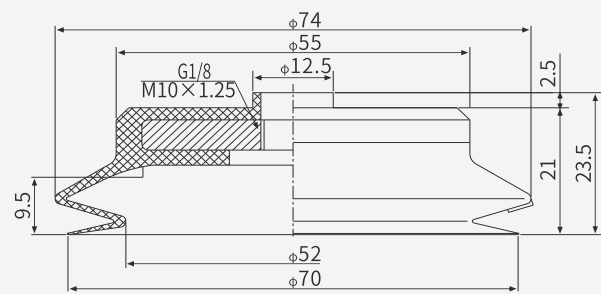
SPJ40



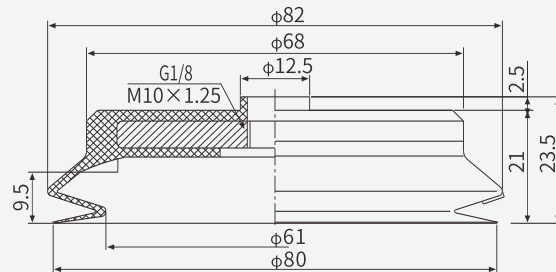
SPJ50



SPJ60

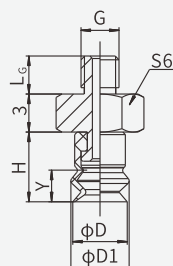


SPJ70

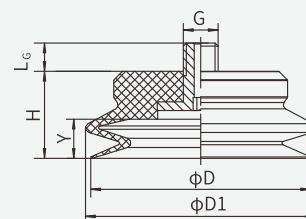


SPJ80

SB
SBA
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SBF
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STP
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STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)


SPJ4 Male thread connection



SPJ6-50 Male thread connection

Model/Size	D	D1	H	Y	G	L _g
SPJ4-M3M	4	4.6	5.5	2.3	M3	5
SPJ6-M5M	6	7.8	9	4.2	M5	5
SPJ8-M5M	8	9.8	9	4	M5	5
SPJ10-M5M	10	11.8	9.5	3	M5	5
SPJ15-M5M	15	15.8	11	3.3	M5	5
SPJ20-M5M	20	21	13	5.5	M5	5
SPJ25-M5M	25	—	15.5	6.5	M5	5
SPJ30-M5M	30	—	18	7	M5	5
SPJ35-M5M	35	—	18	7	M5	5
SPJ40-M5M	40	—	18	7.2	M5	5
SPJ50-M8M	50	53	20	9	M8	6.5

Mounting parts

Item	Model	Applicable suction cup
Fitting for suction cup	PJS-M3M-ST1	SPJ4
	PJS-M5M-ST2	SPJ6, 8, 10, 15
	PJS-M5M-ST3	SPJ20, 25
	PJS-M5M-ST4	SPJ30, 35, 40
	PJS-M8M-ST6	SPJ50



How to order

SPJ10N - L B6 - M8M

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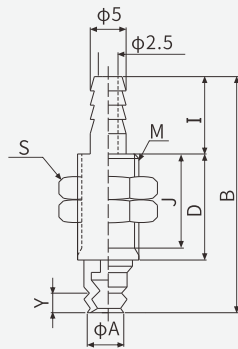
① Model	② vacuum port direction	③ Vacuum port connection	④ Mounting thread
Refer to suction cup on page 21-215	Nil - Vertical L - Lateral	B6 - Pagoda fitting $\phi 6$ hose R1 - G1/8 Female thread	M4F - M4 Female thread M6F - M6 Female thread M8F - M8 Female thread M8M - M8 $\times$ 1 Male thread M9M - M9 $\times$ 1 Male thread M10M - M10 $\times$ 1 Male thread M16M - M16 $\times$ 1.5 Male thread

Selection

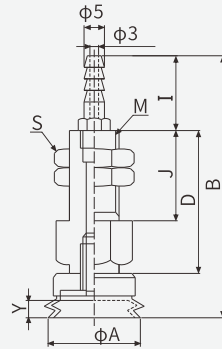
Model	Vacuum port connection	Mounting thread
SPJ6-8	B6	M9M
	LB6	M4F
SPJ10-20	B6	M8M
	LB6	M6F
SPJ30-50	B6	M10M
	LB6	M6F
SPJ60-80	R1	M16M
	LR1	M8F

Dimensions (mm)

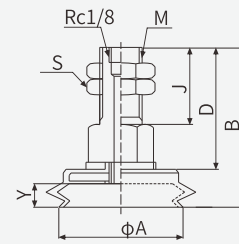
Vertical direction connection-Pagoda fitting



Suction cup diameter 6-8



Suction cup diameter 10-50

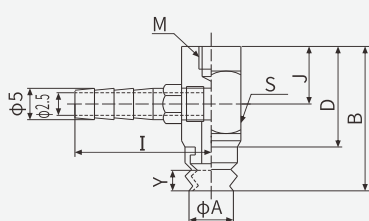


Suction cup diameter 60-80

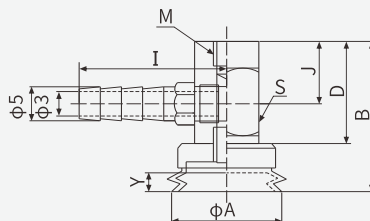
Model/ Size	A	B	D	I	J	M	Y	S
SPJ6-B6-M9M	6	33	14	10	11	M9×1	4.2	12
SPJ8-B6-M9M	8	33	14	10	11	M9×1	4	12
SPJ10-B6-M8M	10	47.5	22	16	17	M8×1	3	12
SPJ15-B6-M8M	15	49	22	16	17	M8×1	3.3	12
SPJ20-B6-M8M	20	51	22	16	17	M8×1	5.5	12
SPJ25-B6-M10M	25	63.5	32	16	22	M10×1	6.5	14
SPJ30-B6-M10M	30	66	32	16	22	M10×1	7	14
SPJ35-B6-M10M	35	66	32	16	22	M10×1	7	14
SPJ40-B6-M10M	40	66	32	16	22	M10×1	7.2	14
SPJ50-B6-M10M	50	68	32	16	22	M10×1	9	14
SPJ60-R1-M16M	60	62	42	—	23	M16×1.5	8	21
SPJ80-R1-M16M	70	63	42	—	23	M16×1.5	9.5	21
SPJ95-R1-M16M	80	63	42	—	23	M16×1.5	9.5	21

Dimensions (mm)

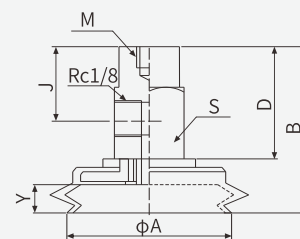
Lateral direction connection-Pagoda fitting



Suction cup diameter 6-8



Suction cup diameter 10-50



Suction cup diameter 60-80

Model/ Size	A	B	D	I	J	M	Y	S
SPJ6-LB6-M4F	6	31	22	21	14	M4 depth 6	4.2	10
SPJ8-LB6-M4F	8	31	22	21	14	M4 depth 6	4	10
SPJ10-LB6-M4F	10	31.5	22	21	14	M4 depth 6	3	10
SPJ15-LB6-M4F	15	33	22	21	14	M4 depth 6	3.3	10
SPJ20-LB6-M4F	20	35	22	21	14	M4 depth 6	5.5	10
SPJ25-LB6-M6F	25	47.5	32	23	20	M6 depth 8	6.5	14
SPJ30-LB6-M6F	30	50	32	23	20	M6 depth 8	7	14
SPJ35-LB6-M6F	35	50	32	23	20	M6 depth 8	7	14
SPJ40-LB6-M6F	40	50	32	23	20	M6 depth 8	7.2	14
SPJ50-LB6-M6F	50	52	32	23	20	M6 depth 8	9	14
SPJ60-LR1-M8F	60	62	42	—	28	M8 depth 8	8	21
SPJ70-LR1-M8F	70	63	42	—	28	M8 depth 8	9.5	21
SPJ80-LR1-M8F	80	63	42	—	28	M8 depth 8	9.5	21

SB

SBA

SBB

SBF

SBOF

SFT

STP

SBL

SBLP

SF

SU

SUF

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STC

SFF

SFM

SDM

SOB

SOF

SOG

SFP

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How to order

SPJ10N - F E 10 LB6 - M11

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① Model	② Level compensator type	③ Buffer style	④ Buffer stroke
Refer to suction cup on page 212-215	F -PSPF Series	E -External spring	3 10
			4 15
			6 30

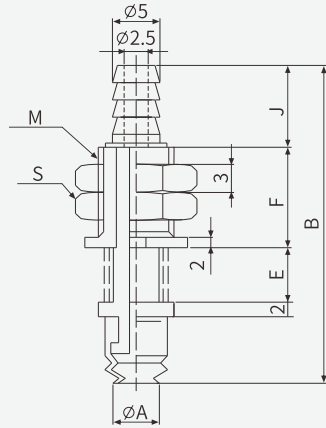
⑤ Vacuum port connection	⑥ Mounting thread
B6 - Vertical, One touch fitting $\phi 6$ hose	M9 - M9 $\times$ 1
LB6 - Lateral, One touch fitting $\phi 6$ hose	M11 - M11 $\times$ 1
LR1 - Lateral, Rc1/8 Female thread	M14 - M14 $\times$ 1
	M16 - M16 $\times$ 1.5

Selection

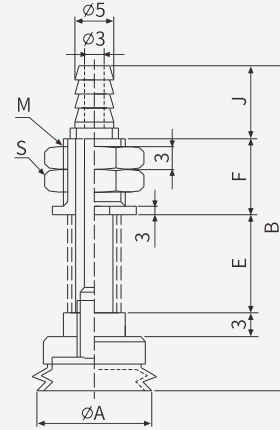
Model	Buffer stroke	Vacuum port connection	Mounting thread
SPJ6-8	3 10	B6 LB6	M9
SPJ10-20	4 10	B6 LB6	M11
SPJ25-50	6 15	B6 LB6	M14
SPJ60-80	10 30	- LR1	M16

Dimensions (mm)

Vertical direction connection-Pagoda fitting



Suction cup diameter 6-8



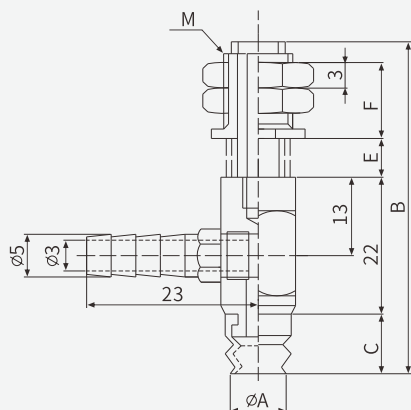
Suction cup diameter 10-50

Model/ Size	A	B	E	F	J	M	S	Buffer stroke
SPJ6-FE3B6-M9	6	40	6	13	10	M9×1	12	3
SPJ6-FE10B6-M9	6	54	20	13	10	M9×1	12	10
SPJ8-FE3B6-M9	8	40	6	13	10	M9×1	12	3
SPJ8-FE10B6-M9	8	54	20	13	10	M9×1	12	10
SPJ10-FE4B6-M11	10	55.5	8	19	16	M11×1	14	4
SPJ10-FE10B6-M11	10	67.5	20	19	16	M11×1	14	10
SPJ15-FE4B6-M11	15	57	8	19	16	M11×1	14	4
SPJ15-FE10B6-M11	15	69	20	19	16	M11×1	14	10
SPJ20-FE4B6-M11	20	59	8	19	16	M11×1	14	4
SPJ20-FE10B6-M11	20	71	20	19	16	M11×1	14	10
SPJ25-FE6B6-M14	25	72.5	13	24	17	M14×1	17	6
SPJ25-FE15B6-M14	25	89.5	30	24	17	M14×1	17	15
SPJ30-FE6B6-M14	30	75	13	24	17	M14×1	17	6
SPJ30-FE15B6-M14	30	92	30	24	17	M14×1	17	15
SPJ35-FE6B6-M14	35	75	13	24	17	M14×1	17	6
SPJ35-FE15B6-M14	35	92	30	24	17	M14×1	17	15
SPJ40-FE6B6-M14	40	75	13	24	17	M14×1	17	6
SPJ40-FE15B6-M14	40	92	30	24	17	M14×1	17	15
SPJ50-FE6B6-M14	50	77	13	24	17	M14×1	17	6
SPJ50-FE15B6-M14	50	94	30	24	17	M14×1	17	16

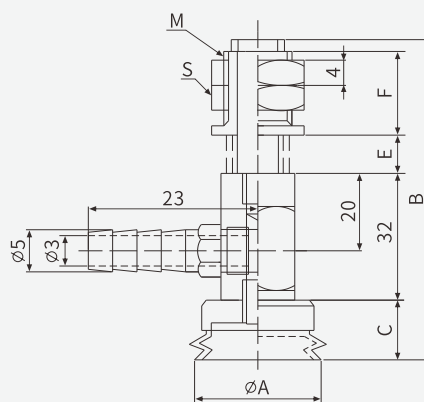
SB
SBA
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SPA
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SPF
SPJ
SPU
SNP
SOP

Dimensions (mm)

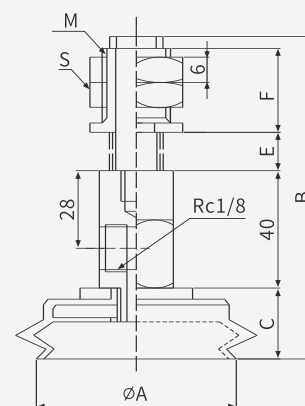
Lateral direction connection-Pagoda fitting



Suction cup diameter 6-8



Suction cup diameter 10-50



Suction cup diameter 60-80

Model/ Size	A	B	E	F	M	S	Buffer stroke
SPJ6-FE3LB6-M9	6	53	6	13	M9×1	12	3
SPJ6-FE10LB6-M9	6	67	20	13	M9×1	12	10
SPJ8-FE3LB6-M9	8	53	6	13	M9×1	12	3
SPJ8-FE10LB6-M9	8	67	20	13	M9×1	12	10
SPJ10-FE4LB6-M11	10	61.5	8	19	M11×1	14	4
SPJ10-FE10LB6-M11	10	73.5	20	19	M11×1	14	10
SPJ15-FE4LB6-M11	15	63	8	19	M11×1	14	4
SPJ15-FE10LB6-M11	15	75	20	19	M11×1	14	10
SPJ20-FE4LB6-M11	20	65	8	19	M11×1	14	4
SPJ20-FE10LB6-M11	20	77	20	19	M11×1	14	10
SPJ25-FE6LB6-M14	25	88.5	13	24	M14×1	17	6
SPJ25-FE15LB6-M14	25	105.5	30	24	M14×1	17	15
SPJ30-FE6LB6-M14	30	91	13	24	M14×1	17	6
SPJ30-FE15LB6-M14	30	108	30	24	M14×1	17	15
SPJ35-FE6LB6-M14	35	91	13	24	M14×1	17	6
SPJ35-FE15LB6-M14	35	108	30	24	M14×1	17	15
SPJ40-FE6LB6-M14	40	91	13	24	M14×1	17	6
SPJ40-FE15LB6-M14	40	108	30	24	M14×1	17	15
SPJ50-FE6LB6-M14	50	93	13	24	M14×1	17	6
SPJ50-FE15LB6-M14	50	110	30	24	M14×1	17	15
SPJ60-FE10LR1-M16	60	114	20	28	M16×1.5	21	10
SPJ60-FE30LR1-M16	60	154	60	28	M16×1.5	21	30
SPJ70-FE10LR1-M16	70	115	20	28	M16×1.5	21	10
SPJ70-FE30LR1-M16	70	155	60	28	M16×1.5	21	30
SPJ80-FE10LR1-M16	80	115	20	28	M16×1.5	21	10
SPJ80-FE30LR1-M16	80	155	60	28	M16×1.5	21	30



Features

- ◇ Standard flat suction cup ,suitable for handling workpiece with even surface.
- ◇ Large-area internal pattern can effectively increase the friction force during handling process.
- ◇ Swivel structure design, free to adjust the angle within a certain range, which makes the installation more flexible.
- ◇ Various sizes suitable for workpiece of different sizes.

Applications

- ◇ Steel plate ◇ Wooden plate ◇ Plywood

How to order

SPU 15 N - M5M

① ② ③ ④

① Series	② Diameter	③ Material & Hardness	④ Connection thread
SPU	10 - φ10mm 40 - φ40mm 15 - φ15mm 50 - φ50mm 20 - φ20mm 60 - φ60mm 25 - φ25mm 80 - φ80mm 30 - φ30mm 100 - φ100mm 35 - φ35mm	N - NBR 55 WS - White silicone 50	Nil - Suction cup alone M5M - M5 Male thread G1M - G1/8 Male thread G2M - G1/4 Male thread

Selection

Model	M5M	G1M	G2M
SPU10 — 35	●	—	—
SPU40 — 50	—	●	—
SPU60 — 100	—	—	●

◇Note: "●"- standard, in stock."—" - unavailable.

SB

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SPF

SPJ

SPU

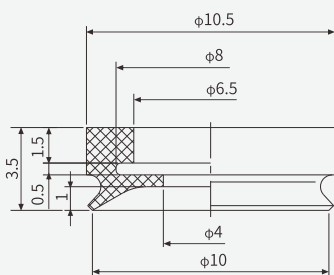
SNP

SOP

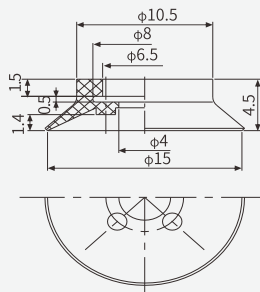
Technical parameters

Model	Pull-out force (N)	Inner volume (cm ³)	Recommended hose dia. (mm)
SPU10	3.5	<0.1	4
SPU15	8	0.2	6
SPU20	15	0.5	6
SPU25	24	1.1	6
SPU30	32	1	6
SPU35	43	2.4	6
SPU40	60	3.4	6
SPU50	92	5.7	8
SPU60	127	11	8
SPU80	226	25.3	8
SPU100	355	38	10

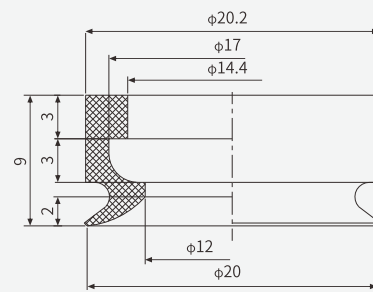
◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Dimensions (mm)


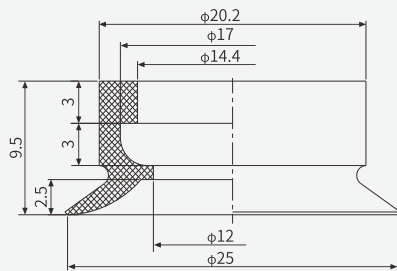
SPU10



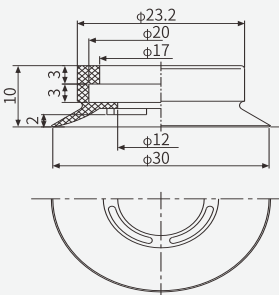
SPU15



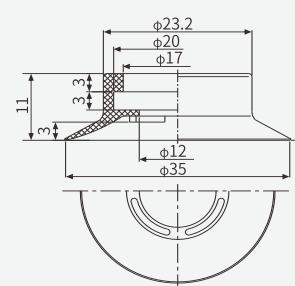
SPU20



SPU25

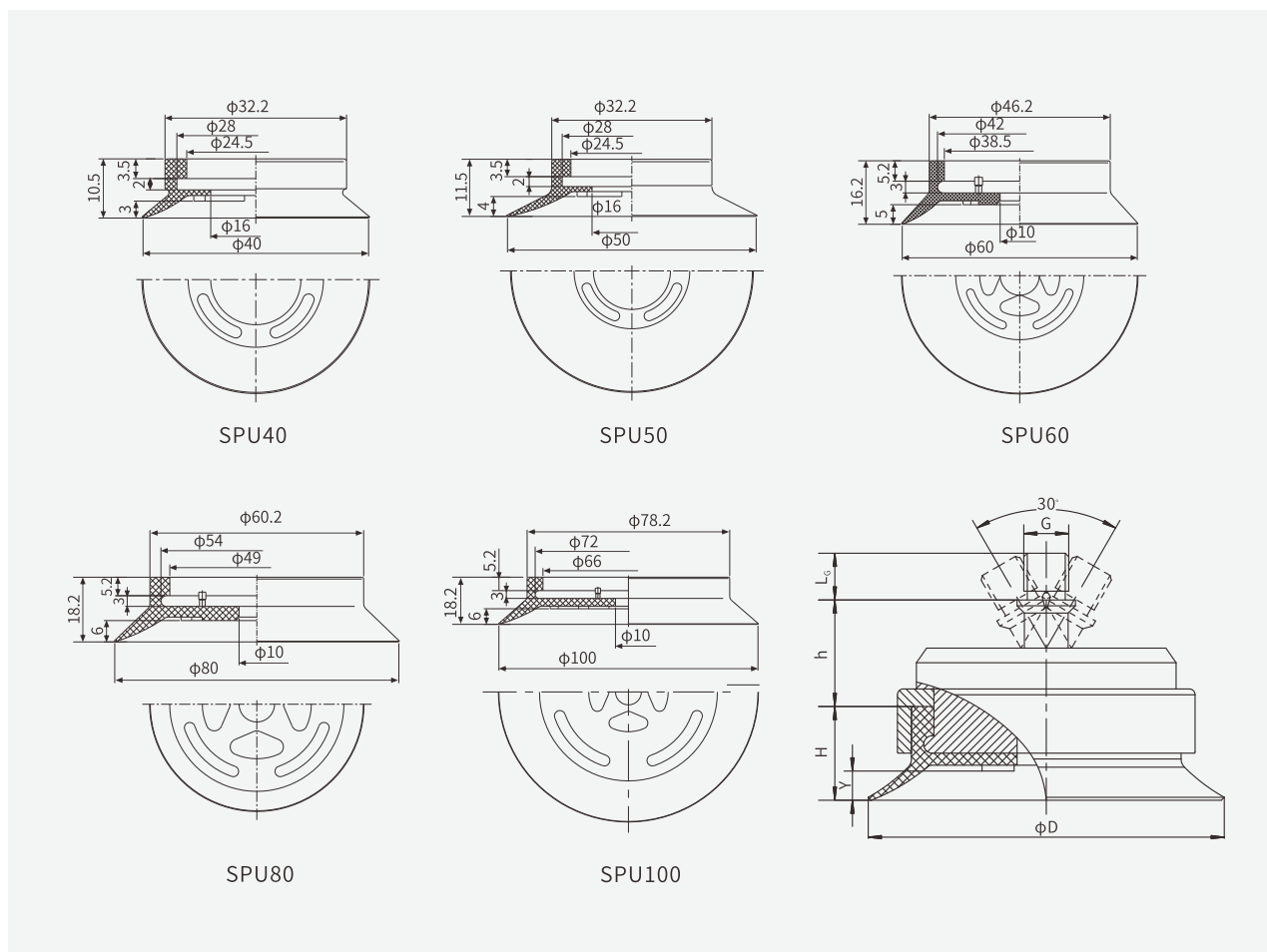


SPU30



SPU35

Dimensions (mm)



Model/ Size	D	H	Y	h	G	L _c
SPU10-M5M	10.6	3.5	1	9	M5	5
SPU15-M5M	15.8	4.5	1.4	9	M5	5
SPU20-M5M	20.6	9	2	13	M5	5
SPU25-M5M	25.6	9.5	2.5	13	M5	5
SPU30-M5M	30.6	10	2	13	M5	5
SPU35-M5M	35.6	11	3	13	M5	5
SPU40-G1M	40.6	10.5	3	18	G1/8	6.5
SPU50-G1M	50.6	11.5	4	18	G1/8	6.5
SPU60-G2M	61	16.2	5	22	G1/4	9
SPU80-G2M	81	18.2	6	22	G1/4	9
SPU100-G2M	101.2	18.2	6	22	G1/4	9

◇ Note: Please refer to suction cup, locking fitting and level compensator on page 24.

SB

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SBLP

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SOB

SOF

SOG

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SHB

SZ

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SAO

SPA

SPC

SPF

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SPU

SNP

SOP



How to order

SPU30N - L B6 - M10M

①

②

③

④

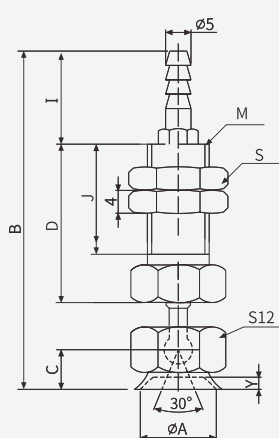
① Model	② vacuum port direction	③ Vacuum port connection	④ Mounting thread
Refer to suction cup on page	Nil - Vertical L - Lateral	B6 - Pagoda fitting $\phi 6$ Hose R1 - G1/8 Female thread	M4F - M4 $\times$ 0.7 Female thread M6F - M6 $\times$ 1 Female thread M8F - M8 $\times$ 1.25 Female thread M8M - M8 $\times$ 1 Male thread M10M - M10 $\times$ 1 Male thread M14M - M14 $\times$ 1 Male thread M16M - M16 $\times$ 1.5 Male thread

Selection

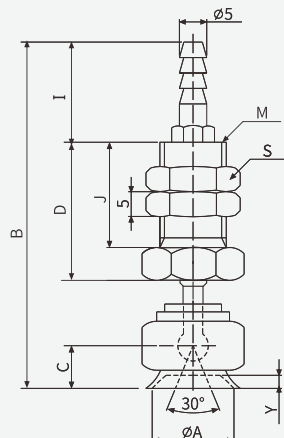
Model	Vacuum port connection	Mounting thread
SPU10-15	B6	M8M
	LB6	M4F
SPU20-35	B6	M10M
	LB6	M6F
SPU40-50	B6	M14M
	LB6	M8F
SPU60-100	R1	M16M
	LR1	M16M

Dimensions (mm)

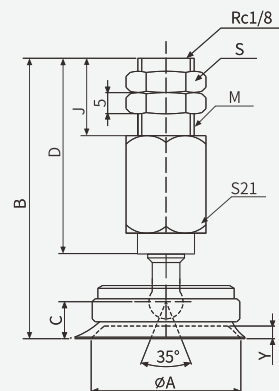
Vertical direction connection -Pagoda fitting



Suction cup diameter 6-8



Suction cup diameter 10-50



Suction cup diameter 60-80

Model/ Size	A	B	C	D	I	J	M	Y	S
SPU10-B6-M8M	10	50.5	5	22	16	17	M8×1	1	12
SPU15-B6-M8M	15	51.5	6	22	16	17	M8×1	1.4	12
SPU20-B6-M10M	20	70	9	22	16	22	M10×1	2	14
SPU25-B6-M10M	25	70.5	9.5	32	16	22	M10×1	2.5	14
SPU30-B6-M10M	30	71	10	32	16	22	M10×1	2	14
SPU35-B6-M10M	35	72	11	32	16	22	M10×1	3	14
SPU40-B6-M14M	40	76.5	11	32	16	22	M14×1	3	17
SPU50-B6-M14M	50	77.5	12	32	16	22	M14×1	4	17
SPU60-R1-M16M	60	78.2	16	40	—	23	M16×1.5	5	21
SPU80-R1-M16M	80	80.2	18	40	—	23	M16×1.5	6	21
SPU100-R1-M16M	100	80.2	18	40	—	23	M16×1.5	6	21

SB

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SBB

SBF

SBOF

SFT

STP

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SBLP

SF

SU

SUF

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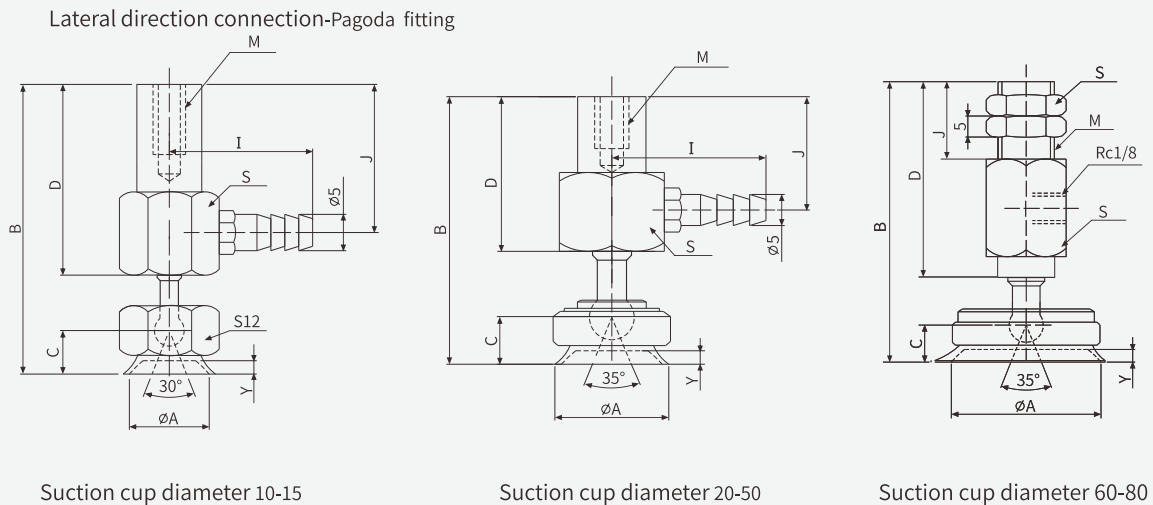
SPF

SPJ

SPU

SNP

SOP

Dimensions (mm)


Model/ Size	A	B	C	D	I	J	M	Y	S
SPU10-LB6-M4F	10	34.5	5	22	21	14	M4 Depth 6	1	10
SPU15-LB6-M4F	15	35.5	6	22	21	14	M4 Depth 6	1.4	10
SPU20-LB6-M6F	20	54	9	32	23	20	M6 Depth 8	2	14
SPU25-LB6-M6F	25	54.5	9.5	32	23	20	M6 Depth 8	2.5	14
SPU30-LB6-M6F	30	55	10	32	23	20	M6 Depth 8	2	14
SPU35-LB6-M6F	35	56	11	32	23	20	M6 Depth 8	3	14
SPU40-LB6-M8F	40	60.5	11	32	23	20	M6 Depth 8	3	14
SPU50-LB6-M8F	50	61.5	12	32	23	20	M6 Depth 8	4	14
SPU60-LR1-M16M	60	78.2	16	40	-	23	M16×1.5	5	21
SPU80-LR1-M16M	80	80.2	18	40	-	23	M16×1.5	6	21
SPU100-LR1-M16M	100	80.2	18	40	-	23	M16×1.5	6	21



How to order

SPU10N - F E 10 LB6 - M11

① ② ③ ④ ⑤ ⑥

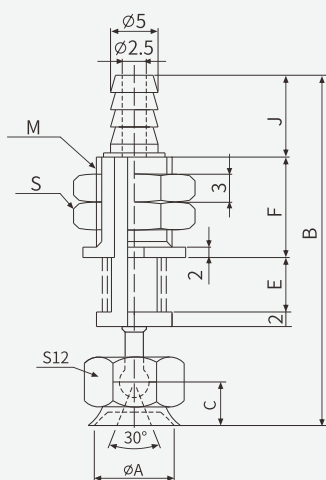
① Model	② Level compensator type	③ Buffer style	④ Buffer stroke
Refer to suction cup on page 222-224	F -PSPF Series	E -External spring	4 15 6 30 10
⑤ Vacuum port connection		⑥ Mounting thread	
B6 - Vertical, One touch fitting $\phi 6$ hose		M11 - M11 $\times$ 1	
LB6 - Lateral, One touch fitting $\phi 6$ hose		M14 - M14 $\times$ 1	
R1 - Vertical, Rc1/8 Female thread		M16 - M16 $\times$ 1.5	
LR1 - Lateral, Rc1/8 Female thread			

Selection

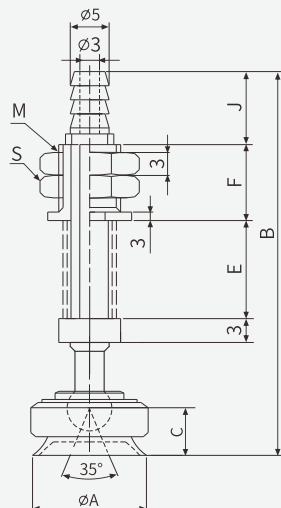
Model	Buffer stroke		Vacuum port connection		Mounting thread
SPU10-15	4	10	B6	LB6	M11
SPU20-35	6	15	B6	LB6	M14
SPU40-50	6	15	B6	LB6	M14
SPU60-100	10	30	R1	LR1	M16

Dimensions (mm)

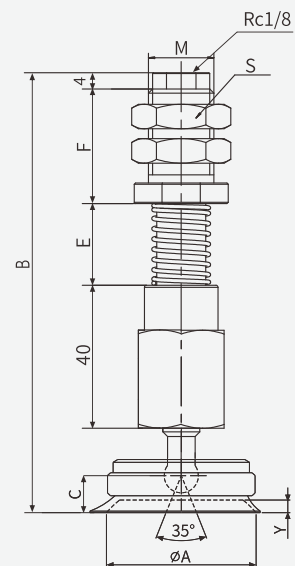
Vertical direction connection -Pagoda fitting



Suction cup diameter 10-15



Suction cup diameter 20-50

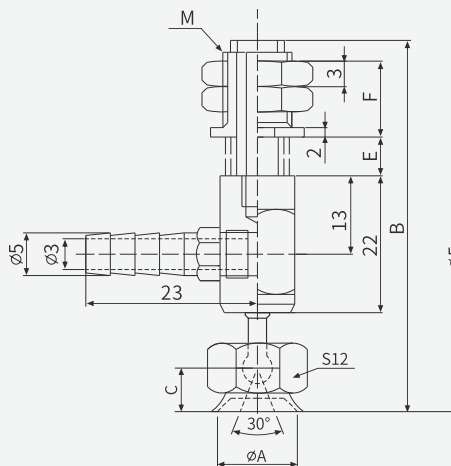


Suction cup diameter 60-100

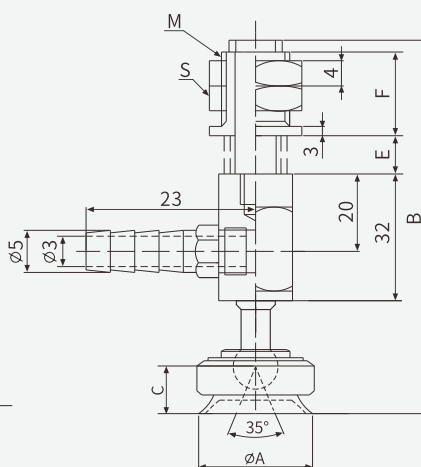
Model/ Size	A	B	C	E	F	J	M	S	Buffer stroke
SPU10-FE4B6-M11	10	55.5	5	8	19	16	M11×1	14	4
SPU10-FE10B6-M11	10	67.5	5	20	19	16	M11×1	14	10
SPU15-FE4B6-M11	15	57	6	8	19	16	M11×1	14	4
SPU15-FE10B6-M11	15	69	6	20	19	16	M11×1	14	10
SPU20-FE6B6-M14	20	59	9	13	24	17	M14×1	17	6
SPU20-FE15B6-M14	20	71	9	30	24	17	M14×1	17	15
SPU25-FE6B6-M14	25	72.5	9.5	13	24	17	M14×1	17	6
SPU25-FE15B6-M14	25	89.5	9.5	30	24	17	M14×1	17	15
SPU30-FE6B6-M14	30	75	10	13	24	17	M14×1	17	6
SPU30-FE15B6-M14	30	92	10	30	24	17	M14×1	17	15
SPU35-FE6B6-M14	35	75	11	13	24	17	M14×1	17	6
SPU35-FE15B6-M14	35	92	11	30	24	17	M14×1	17	15
SPU40-FE6B6-M14	40	75	11	13	24	17	M14×1	17	6
SPU40-FE15B6-M14	40	92	11	30	24	17	M14×1	17	15
SPU50-FE6B6-M14	50	77	12	13	24	17	M14×1	17	6
SPU50-FE15B6-M14	50	94	12	30	24	17	M14×1	17	16
SPU60-FE10B8-M16	60	130.2	16	20	28	—	M16×1.5	21	10
SPU60-FE30B8-M16	60	170.2	16	60	28	—	M16×1.5	21	30
SPU80-FE10B8-M16	80	132.2	18	20	28	—	M16×1.5	21	10
SPU80-FE30B8-M16	80	172.2	18	60	28	—	M16×1.5	21	30
SPU100-FE10B8-M16	100	132.2	18	20	28	—	M16×1.5	21	10
SPU100-FE30B8-M16	100	172.2	18	60	28	—	M16×1.5	21	30

Dimensions(mm)

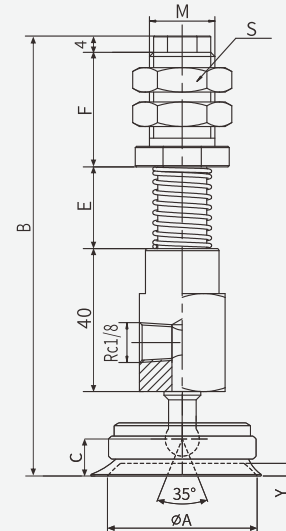
Lateral direction connection-Pagoda fitting



Suction cup diameter 10-15



Suction cup diameter 20-50



Suction cup diameter 60-100

Model/ Size	A	B	E	F	M	S	Buffer stroke
SPU10-FE4LB6-M11	10	64.5	8	19	M11×1	14	4
SPU10-FE10LB6-M11	10	76.5	20	19	M11×1	14	10
SPU15-FE4LB6-M11	15	65.5	8	19	M11×1	14	4
SPU15-FE10LB6-M11	15	77.5	20	19	M11×1	14	10
SPU20-FE6LB6-M11	20	95	13	24	M14×1	17	6
SPU20-FE15LB6-M11	20	112	30	24	M14×1	17	15
SPU25-FE6LB6-M14	25	95.5	13	24	M14×1	17	6
SPU25-FE15LB6-M14	25	112.5	30	24	M14×1	17	15
SPU30-FE6LB6-M14	30	96	13	24	M14×1	17	6
SPU30-FE15LB6-M14	30	113	30	24	M14×1	17	15
SPU35-FE6LB6-M14	35	97	13	24	M14×1	17	6
SPU35-FE15LB6-M14	35	114	30	24	M14×1	17	15
SPU40-FE6LB6-M14	40	101.5	13	24	M14×1	17	6
SPU40-FE15LB6-M14	40	118.5	30	24	M14×1	17	15
SPU50-FE6LB6-M14	50	102.5	13	24	M14×1	17	6
SPU50-FE15LB6-M14	50	119.5	30	24	M14×1	17	15
SPU60-FE10LR1-M30	60	144	20	45	M30×1.5	36	10
SPU60-FE30LR1-M30	60	180	60	45	M30×1.5	36	30
SPU80-FE10LR1-M30	80	146	20	45	M30×1.5	36	10
SPU80-FE30LR1-M30	80	182	60	45	M30×1.5	36	30
SPU100-FE10LR1-M30	100	146	20	45	M30×1.5	36	10
SPU100-FE30LR1-M30	100	182	60	45	M30×1.5	36	30

SB

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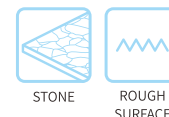
SPF

SPJ

SPU

SNP

SOP



Features

- ◇ Suitable for very rough and uneven surface and all other applications in which traditional suction cups can't be used.
- ◇ NF(black) is suitable for handling workpiece with rough surface and for outdoor use. Good weather and ozone aging resistance, but poor in yield elasticity and storage stability. It is not suitable for food industry.
- ◇ OF(orange) is suitable for handling workpiece with very rough surface. It has good yield elasticity, wear resistance, tear resistance, high cut resistance and good malleability, but poor in oil resistance, heat resistance and aging resistance. It is not suitable for food industry.
- ◇ Various sizes suitable for workpiece of different sizes.

Applications

- ◇ Buckle plate
- ◇ Tile
- ◇ Marble
- ◇ Cement board
- ◇ Grid metal plate

Usage

◇ The sponge lip can compensate the gap on the rough surface, which can be used in the occasion that the general suction cup cannot suck the workpiece firmly. However, more attention needs to be paid while using due to its poor tear resistance. The sponge lip only has the sealing function and cannot handle the pulling condition. Hence, firstly be sure to press the flat rectangular foam rubber pad and the workpiece to the limit, and then open the vacuum to pick up the workpiece. When releasing the workpiece, firstly place it in the specified position, then stop vacuum in order to protect the sponge lip from tearing. Please consult with customer service if any thing unclear in actual operation.

How to order

SNP 50×135 NF - G2F

① ② ③ ④

① Series	② Dimension	③ Material & Hardness	④ Connection thread
SNP	50×135	NF - Neoprene foam rubber	G2F - G1/4 Female thread
	60×135	OF - Geranium foam rubber	G3F - G3/8 Female thread
	75×107		G4F - G1/2 Female thread
	68×290		
	140×290		

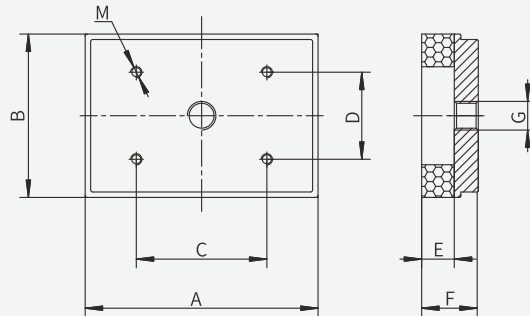
Selection

Model/ Connection thread	G2F	G3F	G4F
SNP50×135	●	—	—
SNP60×135	●	—	—
SNP75×107	●	—	—
SNP68×290	—	●	—
SNP140×290	—	—	●

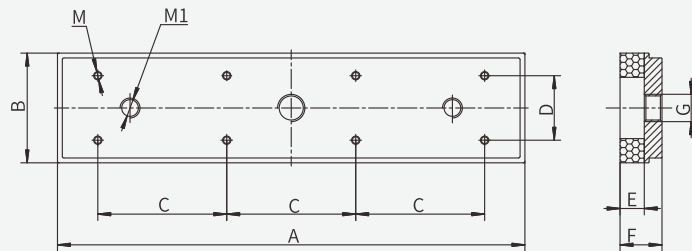
◇Note: "●"- standard, in stock. "—" - unavailable.

Dimensions (mm)

SNP50×135
SNP60×135
SNP70×107



SNP68×290
SNP140×290



Model/ Size	Pull—out force (N)	A	B	C	D	E	F	G	M	M1
SNP50×135	60	135	50	80	30	15	26	G1/4	4—M5	—
SNP60×135	80	135	60	80	40	15	26	G1/4	4—M5	—
SNP75×107	90	107	75	60	40	15	26	G1/4	4—M5	—
SNP68×290	250	290	68	80	40	15	26	G3/8	8—M5	2—M12
SNP140×290	720	290	140	80	100	15	26	G1/2	8—M5	2—M12

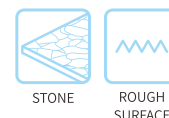
◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull—out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Spare parts

Item	Model		Applicable flat rectangular foam rubber pad
	NF	OF	
Sponge	SNP50×135NF	SNP50×135OF	SNP50×135
	SNP60×135NF	SNP60×135OF	SNP60×135
	SNP75×107NF	SNP75×107OF	SNP75×107
	SNP68×290NF	SNP68×290OF	SNP68×290
	SNP140×290NF	SNP140×290OF	SNP140×290

Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



Features

- ◇ Suitable for very rough and uneven surface and all other applications in which traditional suction cups can't be used.
- ◇ NF(black) is suitable for handling workpiece with rough surface and for outdoor use. Good weather and ozone aging resistance, but poor in yield elasticity and storage stability. It is not suitable for food industry.
- ◇ OF(orange) is suitable for handling workpiece with a very rough surface. It has good yield elasticity, wear resistance, tear resistance, high cut resistance and good malleability, but poor in oil resistance, heat resistance and aging resistance. It is not suitable for food industry.
- ◇ Various sizes suitable for workpiece of different sizes.

Applications

- ◇ Buckle plate
- ◇ Tile
- ◇ Marble
- ◇ Cement board
- ◇ Grid metal plat

Usage

◇ The sponge lip can compensate the gap on the rough surface, which can be used in the occasion that the general suction cup cannot sucks the workpiece firmly. However, more attention needs to be paid while using due to its poor tear resistance. The sponge lip only has the sealing function and cannot handle the pulling condition. Hence, firstly be sure to press the flat rectangular foam rubber pad and the workpiece to the limit, and then open the vacuum to pick up the workpiece. When releasing the workpiece, firstly place it in the specified position, then stop vacuum in order to protect the sponge lip from tearing. Please consult with customer service if any thing unclear in actual operation.

How to order

SOP 40 NF - G2F

① ② ③ ④

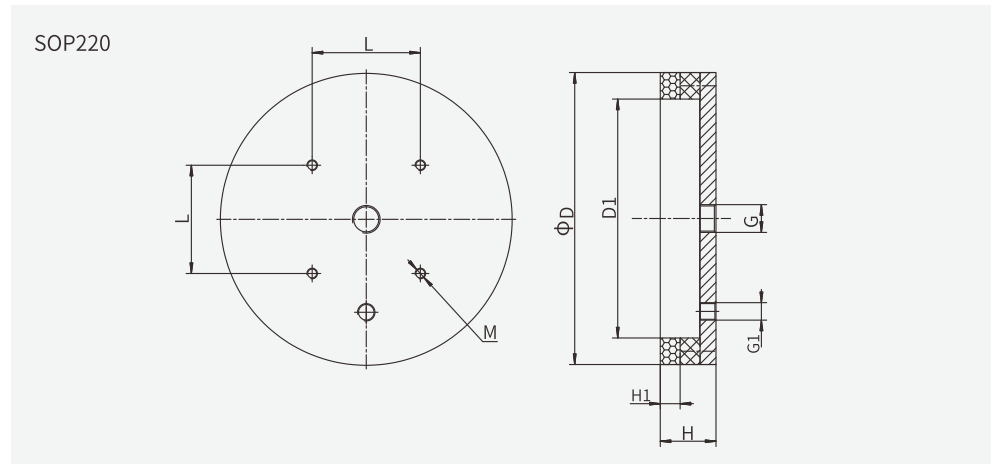
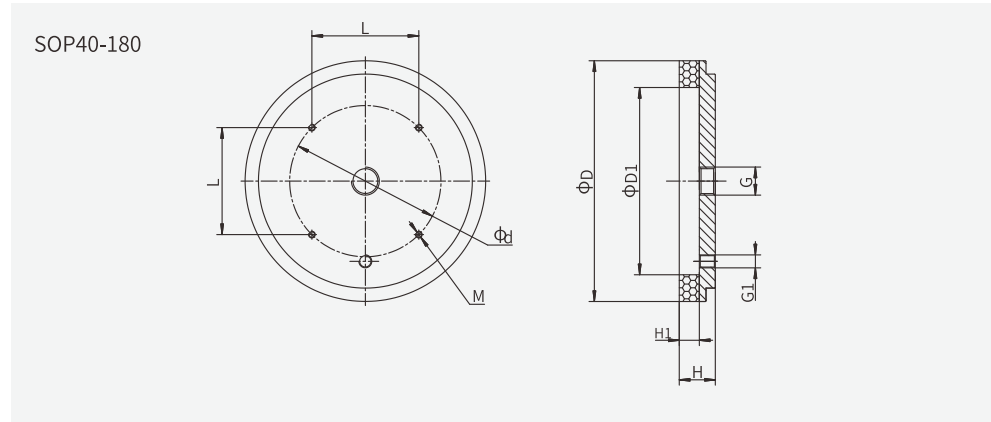
① Series	② Diameter	③ Material & Hardness	④ Connection thread
SOP	40 -φ40mm	NF - Neoprene foam rubber	G2F - G1/4 Female thread
	64 -φ64mm	OF - Geranium foam rubber	G3F - G3/8 Female thread
	92 -φ92mm		G4F - G1/2 Female thread
	127 -φ127mm		
	180 -φ180mm		
	220 -φ220mm		

Selection

Model/ Connection thread	G2F	G3F	G4F
SOP40	●	—	—
SOP64	●	—	—
SOP92	—	●	—
SOP127	—	—	●
SOP180	—	—	●
SOP220	—	—	●

◇Note: "●"- standard, in stock. "—" -unavailable.

Dimensions (mm)



Model/ Size	Pull-out force (N)	D	D1	H	H1	G1	L	M	d	G
SOP40	7.8	40	20	25	15	—	—	—	—	G1/4
SOP64	35	64	40	25	15	—	—	—	40	G1/4
SOP92	85	92	64	26	15	—	—	4—M5	70	G3/8
SOP127	175	127	92	30	15	G1/8	70	4—M5	—	G1/2
SOP180	385	180	127	27	15	G1/8	80	4—M5	—	G1/2
SOP220	635	220	180	42	15	G1/4	85	4—M8	—	G1/2

◇Note: Testing vacuum level -60kPa. Workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces.

Spare parts

Item	Model		Applicable flat circular foam rubber dad
	NF	OF	
Sponge	SOP40NF	SOP40OF	SOP40
	SOP64NF	SOP64OF	SOP64
	SOP92NF	SOP92OF	SOP92
	SOP127NF	SOP127OF	SOP127
	SOP180NF	SOP180OF	SOP180
	SOP220NF	SOP220OF	SOP220

◇Note: Please refer to suction cup with locking fitting and level compensator on page 24.

SB
SBA
SBB
SBF
SBOF
SFT
STP
SBL
SBLP
SF
SU
SUF
SFG
STC
SFF
SFM
SDM
SOB
SOF
SOG
SFP
SBP
SXP
SGP
SDL
SH
SHB
SZ
SAN
SAO
SPA
SPC
SPF
SPJ
SPU
SNP
SOP



D Special Vacuum Gripper

235 SNT Series

237 SLP Series

242 SLB Series



Features

- ◇ The suction cup “floats” on an air cushion for non-contact handling of workpiece.
- ◇ Low vacuum level, high vacuum flow and good compensation for air leakage.
- ◇ Safely separates thin and porous workpieces without sucking air through the workpiece.
- ◇ Various material for cushion on the bottom, which can meet kinds of requirements such as high temperature, mark free, food and wear resistance.
- ◇ Built-in vacuum pump based on Bernoulli principle, no additional vacuum pump required.

Applications

- ◇ Handling fragile workpiece.
 - ◇ Paper
 - ◇ Film
 - ◇ Biscuit

- ◇ PCB
 - ◇ Silicon wafer
 - ◇ Solar cell

How to order

SNT 20 P - S N

① ② ③ ④ ⑤

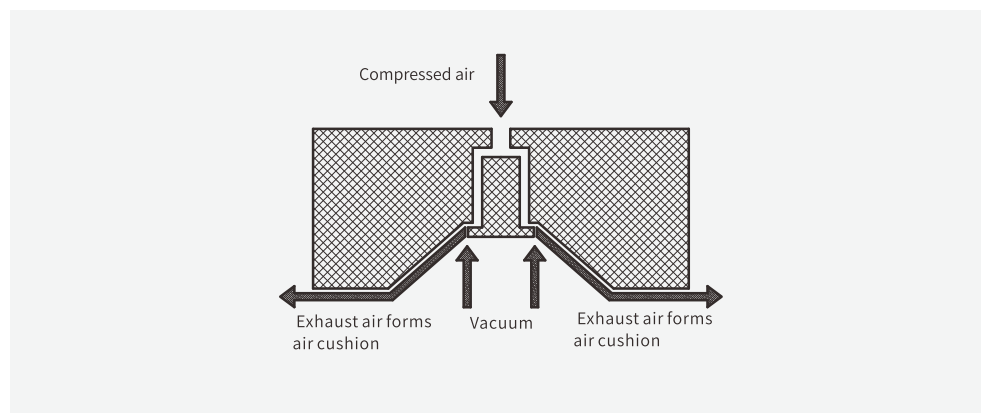
① Series	② Dimension	③ Body material	④ Flow type	⑤ Cushion material
SNT	20 - φ20mm	Nil - Aluminum alloy	S - Standard flow	N - NBR
	30 - φ30mm	P - POM (Food-grade)		PM - POM (Food-grade)
	40 - φ40mm			PK - PEEK (Mark free)
	60 - φ60mm			
	100 - φ100mm			
	120 - φ120mm			

Selection

Model	Body material	Flow type S	Cushion material		
			N	PM	PK
SNT20-120	Nil - Aluminum alloy	●	●	—	●
	P (POM)	●	—	●	—

◇Note: "●"- standard, in stock. "—" -unavailable.

Working principle

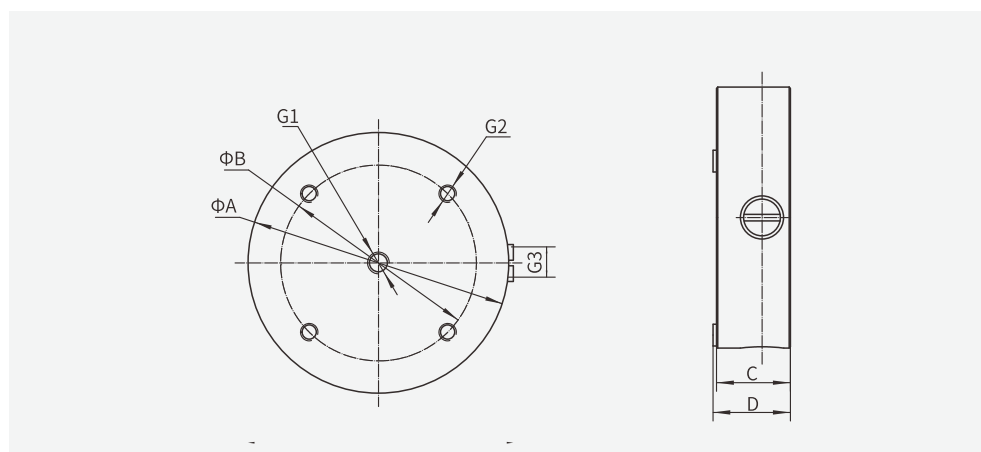


Technical parameter

Model	Pull-out force (N)	Air consumption (NL/min)	Air supply pressure (bar)	Working temperature (°C)	Weight (g)
SNT20	2	80	5.0	0-60	9.5
SNT30	4	100			32
SNT40	6.5	130			51
SNT60	13	150			116
SNT100	46	350			252
SNT120	89	420			365

◇ Note: The tested workpiece is rigid and airtight, air supply pressure range 1-6bar, vertical action. The specified pull-out force does not include a safety factor.

Dimensions (mm)



Model/Size	A	B	C	D	G1	G2	G3
SNT20	20	15	12	12.8	M5	4-M3 Depth 5	—
SNT30	32	22	17	17.8	M5	4-M4 Depth 6	M5
SNT40	40	32	17	17.8	G1/8	4-M4 Depth 6	G1/8
SNT60	60	45	17	17.8	G1/8	4-M4 Depth 6	G1/8
SNT100	100	75	17	17.8	G1/8	4-M4 Depth 6	G1/8
SNT120	120	105	17	17.8	G1/8	4-M4 Depth 10	G1/8



NEW
ENERGY



COMPOSITE
MATERIAL



BATTERY



POROUS
SURFACE



Features

- ◇ Simple structure, integrated with vacuum pump, long lifetime.
- ◇ High vacuum flow, suitable for handling light and porous objects like cellphone screen, perforated plate and fiber sheet.
- ◇ Easy to install and maintain, cost effective.

How to order

SLP 40 - M10 Y D - F1

① ② ③ ④ ⑤ ⑥

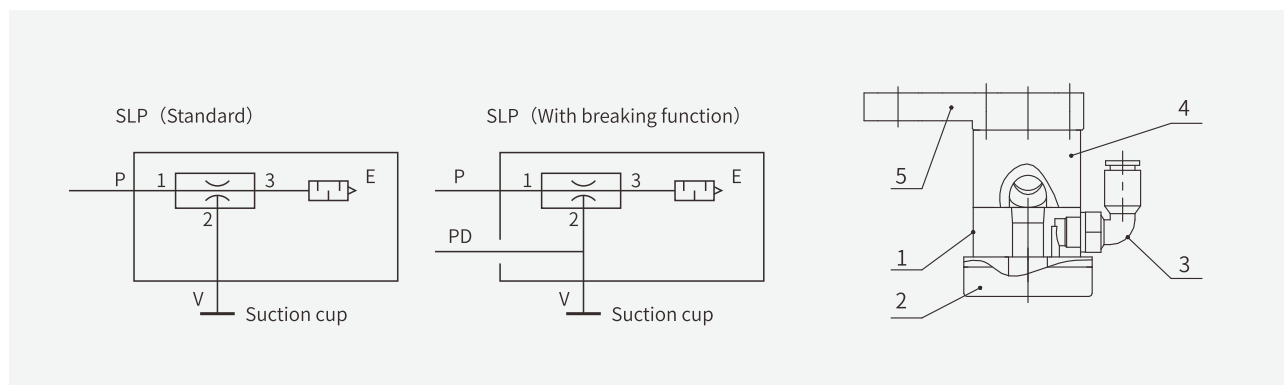
① Series	② Diameter of suction cup	③ Specification of vacuum pump
SLP	40 - $\phi 40\text{mm}$ 60 - $\phi 60\text{mm}$ (POM material)	M10 - Airway $\phi 10\text{mm}$ Breaking M20 - Airway $\phi 20\text{mm}$ Vertical exhaust M30 - Airway $\phi 30\text{mm}$ Vertical exhaust
④ Exhaust direction	⑤ Vacuum breaking function	⑥ Mounting(flange)
Y - Lateral exhaust (Fitting)	Nil - Without breaking function	F1 - 55×6mm
S - Vertical exhaust (With silencer)	D - With vacuum breaking/detection function	F3 - 63×11mm
T - Vertical exhaust (With pagoda fitting)		F4 - 95×11mm
		F5 - 110×13mm

Selection

Series	Diameter of suction cup	Specification of vacuum pump	Exhaust direction			Breaking function/ Vacuum detection function D	Mounting			
			Y	S	T		F1	F3	F4	F5
SLP	40	M10	●	—	—	●	●	●	—	—
			—	●	—	—	—	●	—	—
			—	—	●	—	●	●	—	—
	60	M20	—	●	●	—	—	—	●	—
		M30	—	●	●	—	—	—	—	●

◇Note: "●"- standard, in stock. "—" - unavailable.

Air circuit diagram/Structural diagram



Main parts	No	Item	Material
	1	Vacuum pump	Aluminum alloy
	2	Suction cup	POM
	3	Air inlet fitting	Brass
	4	Connection block	Aluminum alloy
	5	Clamp,Flange	Aluminum alloy

Technical parameters

Model	Working temperature (°C)	Operating pressure range (bar)	Air supply pressure (bar)	Max. vacuum flow (NL/min)	Max. air consumption (NL/min)	Max. vacuum level (-kPa)
SLP40-M10	0~60(Non-freezing)	1-7	5.0	520	150	13
SLP60-M20				1,760	245	5
SLP60-M30				2,320	375	4

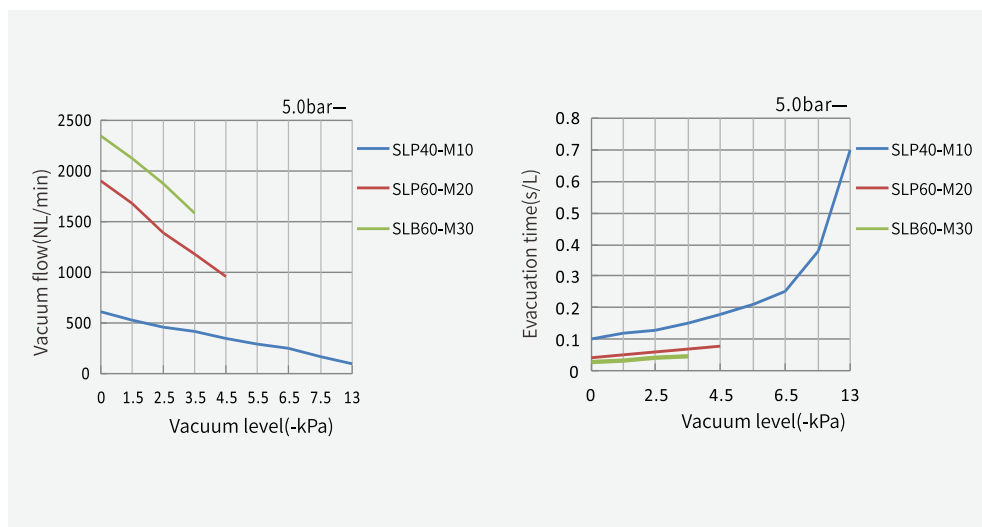
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	1.5	2.5	3.5	4.5	5.5	6.5	7.5	13
SLP40-M10	5.0	150	520	500	460	410	340	290	240	160	90
SLP60-M20	5.0	245	1,760	1,620	1,380	1,180	950	—	—	—	—
SLP60-M30	5.0	375	2,320	2,070	1,870	1,580	—	—	—	—	—

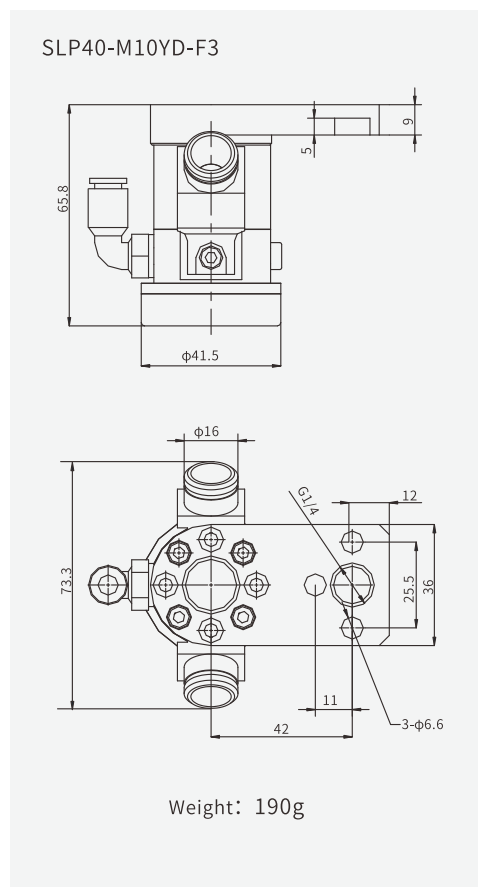
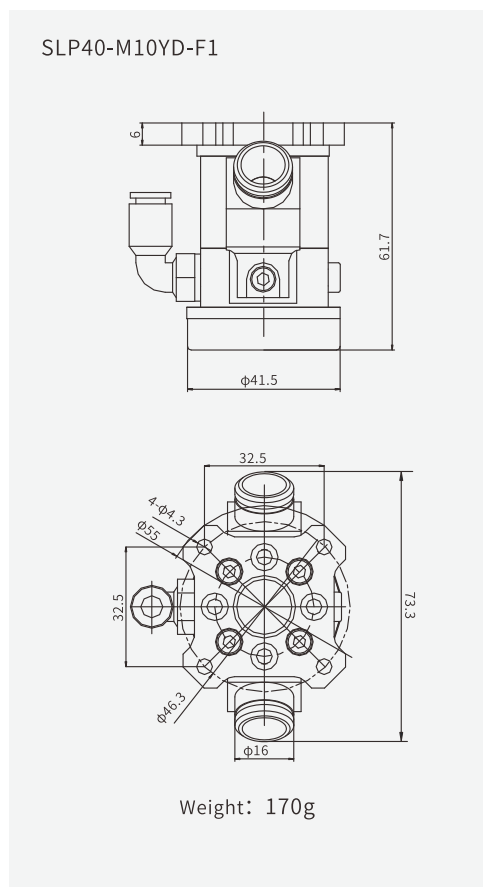
Evacuation time(S/L) to reach different vacuum levels(-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	1.5	2.5	3.5	4.5	5.5	6.5	7.5	13	Max. vacuum level (-kPa)
SLP40-M10	5.0	150	0.1	0.12	0.13	0.15	0.18	0.21	0.25	0.38	0.7	13
SLP60-M20	5.0	245	0.04	0.05	0.06	0.07	0.08	—	—	—	—	5
SLP60-M30	5.0	375	0.03	0.035	0.04	0.045	—	—	—	—	—	3.5

Technical parameter

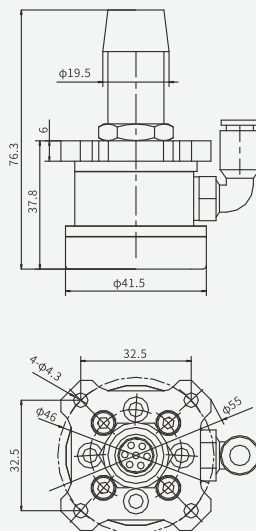


Dimensions (mm)



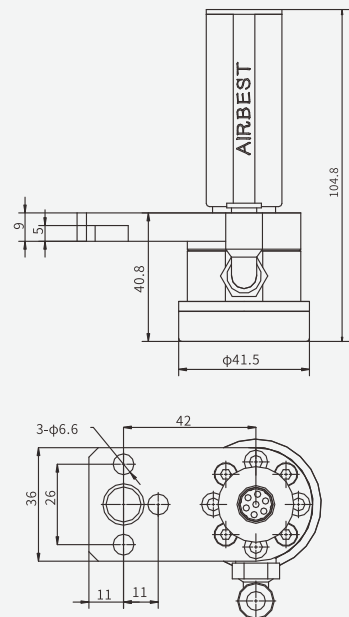
Dimensions (mm)

SLP40-M10T-F1



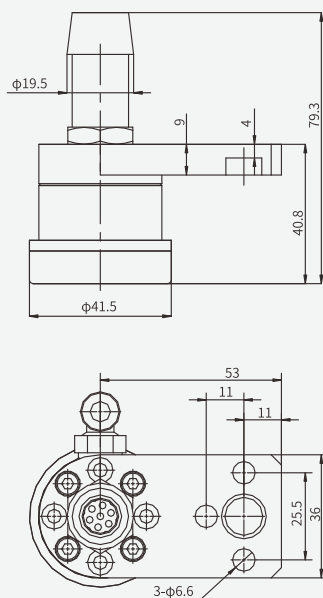
Weight:122g

SLP40-M10S-F3



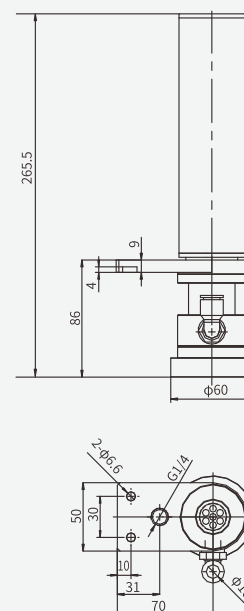
Weight:142g

SLP40-M10T-F3



Weight:145g

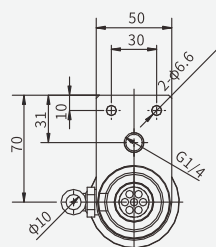
SLP60-M20S-F4



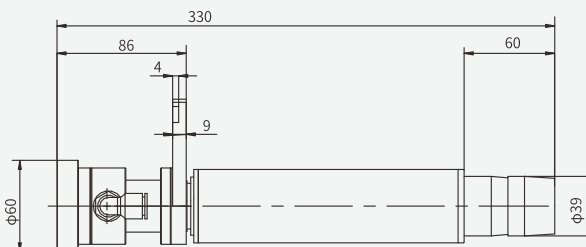
Weight:670g

Dimensions (mm)

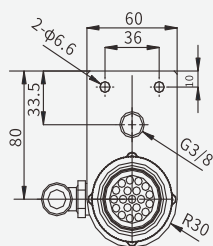
SLP60-M20T-F4



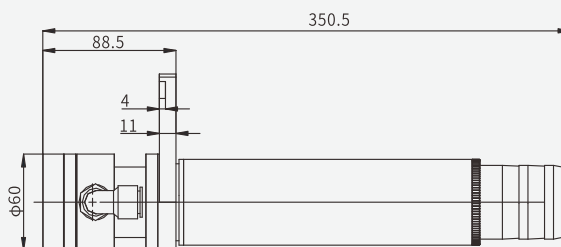
Weight:801g



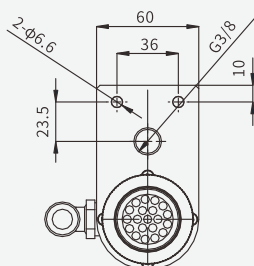
SLP60-M30T-F5



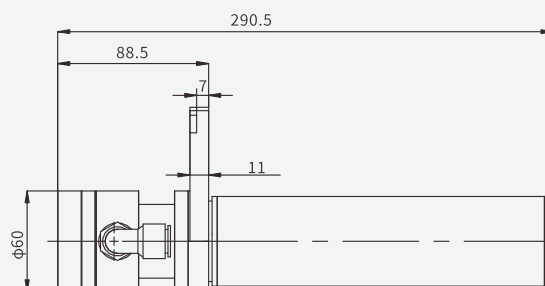
Weight:930g



SLP60-M30S-F5



Weight:857g





Features

- ◇ Simple structure, integrated with vacuum pump, easy to maintain
- ◇ Large vacuum flow, mainly used in handling objects like perforated plate, food, irregular parts, etc.

How to order

SLB 50 N - M10 T- F1

① ② ③ ④ ⑤ ⑥

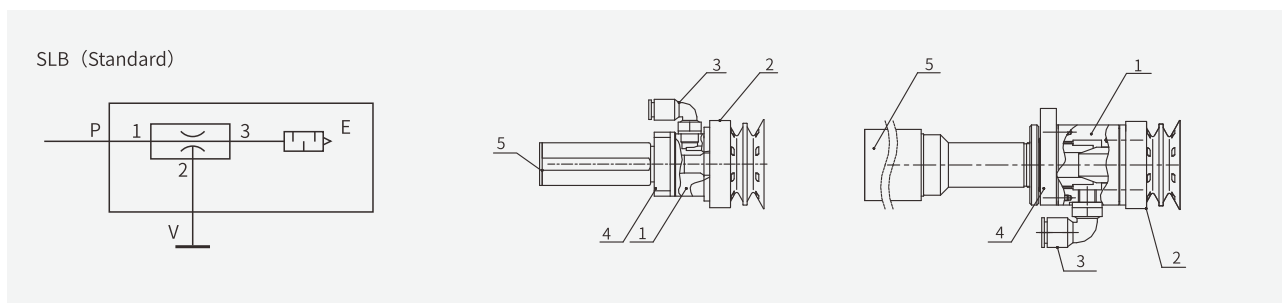
① Series	② Diameter of suction cup	③ Material of suction cup
SLB	30 - Φ30mm 50 - Φ50mm	N - NBR 70 WS - White silicone 50 E - EPDM 70
④ Specification of vacuum pump	⑤ Exhaust direction	⑥ Mounting(Flange)
M7 - Airway Φ7mm vertical exhaust	S - Vertical exhaust(With silencer)	F1 - 55×6mm
M10 - Airway Φ10mm vertical exhaust	T - Vertical exhaust(With pagoda fitting)	F3 - 63×11mm
M20 - Airway Φ20mm vertical exhaust		F4 - 95×11mm
M30 - Airway Φ30mm vertical exhaust		F6 - 110×13mm
P7 - Airway Φ6.5mm vertical exhaust		F7 - 75×45mm

Selection

Series	Diameter of suction cup	Specification of vacuum pump	Exhaust direction		Mounting				
			T	S	F1	F3	F4	F6	F7
SLB	30	M7/M10	●	—	●	●	—	—	—
			—	●	●	●	—	—	—
	50	M10	●	—	●	●	—	—	—
			—	●	—	●	—	—	—
		M20	●	●	—	—	●	—	—
		M30	●	●	—	—	—	●	—
		P7	—	●	—	—	—	●	—
		P15	—	●	—	—	—	—	●

◇ Note: "●"- standard, in stock. "—" - unavailable.

Air circuit diagram/Structural diagram



Main parts	No	Item	Material	No	Item	Material
	1	Vacuum pump	Aluminum alloy	4	Clamp、Flange	Aluminum alloy
	2	Suction cup	N / WS / E	5	Silencer	
	3	Air inlet fitting	Brass			

Technical parameters

Model	Working temperature (°C)	Operating pressure range (bar)	Air supply pressure (bar)	Max. vacuum flow (NL/min)	Max. air consumption (NL/min)	Max. vacuum level (-kPa)
SLB30-M7	0-60(Non-freezing)	1-7	5.0	320	70	8
SLB30/50-M10				540	165	13
SLB50-M20				1,720	245	5
SLB50-M30				2,320	375	4
SLB50-P7				280	340	70
SLB50-P15				1,650	660	30

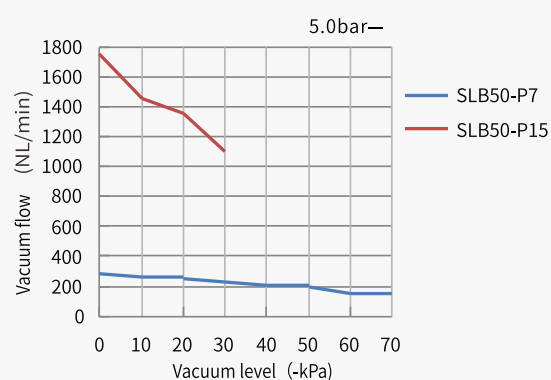
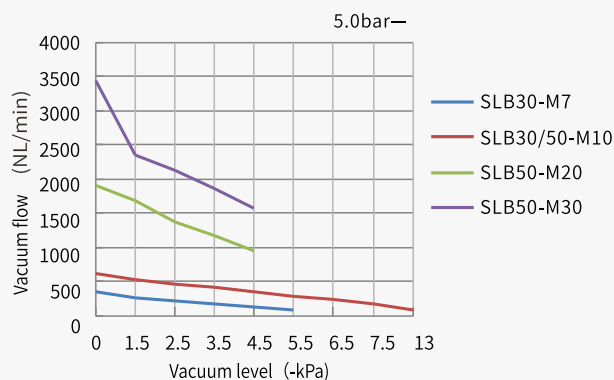
Vacuum flow (NL/min) at different vacuum levels (-kPa)

Model	Air supply pressure bar	Air consumption NL/min	0	1.5	2.5	3.5	4.5	5.5	6.5	7.5	13	Max. vacuum level (-kPa)
SLB50-M7	5.0	70	320	270	220	180	130	90	—	—	—	8
SLB50-M10	5.0	165	540	520	460	410	340	290	240	160	90	13
SLB50-M20	5.0	245	1,720	1,680	1,380	1,180	950	—	—	—	—	5
SLB50-M30	5.0	375	2,320	2,120	1,870	1,580	—	—	—	—	—	4

Vacuum flow (NL/min) to reach different vacuum levels (-kPa)

Model	Air supply pressure bar	Air consumption NL/min	0	10	20	30	40	50	60	70	Max. vacuum level (-kPa)
SLB50-P7	5.0	340	280	260	250	230	210	200	150	140	70
SLB50-P15	5.0	660	1,650	1,450	1,350	1,100	—	—	—	—	30

Technical parameters

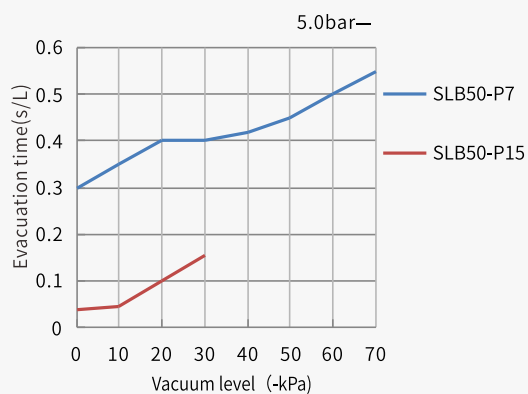
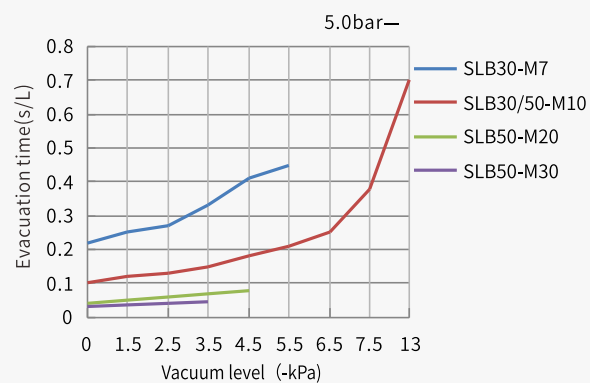


Evacuation time(s/L) at different vacuum levels(-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	1.5	2.5	3.5	4.5	5.5	6.5	7.5	13	Max. vacuum level -kPa
SLB30-M7	5.0	70	0.22	0.25	0.27	0.33	0.41	0.45	—	—	—	8
SLB30/50-M10	5.0	165	0.1	0.12	0.13	0.15	0.18	0.21	0.25	0.38	0.7	13
SLB50-M20	5.0	245	0.04	0.05	0.06	0.07	0.08	—	—	—	—	5
SLB50-M30	5.0	375	0.03	0.035	0.04	0.045	—	—	—	—	—	3.5

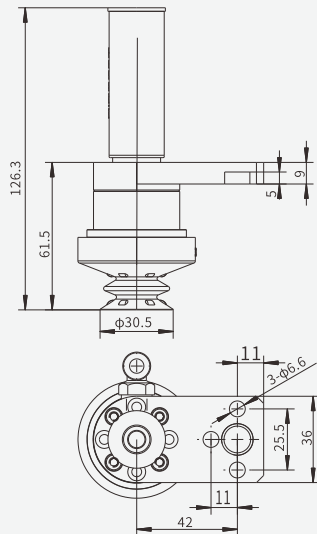
Evacuation time(s/L) to reach different vacuum levels(-kPa)

Model	Air supply pressure (bar)	Air consumption (NL/min)	0	10	20	30	40	50	60	70	Max. vacuum level -kPa
SLB50-P7	5.0	340	0.3	0.35	0.37	0.4	0.42	0.45	0.5	0.55	70
SLB50-P15	5.0	660	0.04	0.045	0.1	0.055	—	—	—	—	30



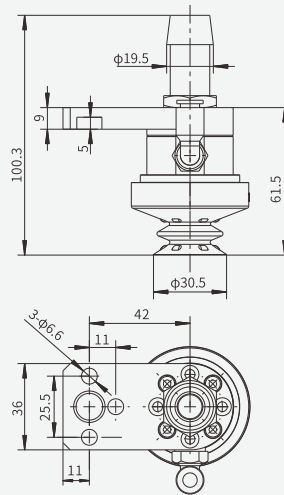
Dimensions (mm)

SLB30-M7S-F3
SBL30-M10S-F3



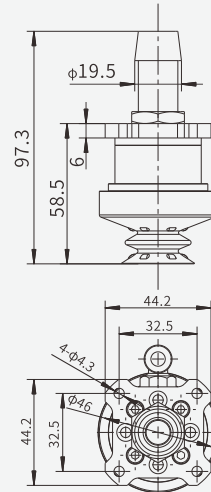
Weight: 161g

SLB30N-M7T-F3
SLB30N-M10T-F3



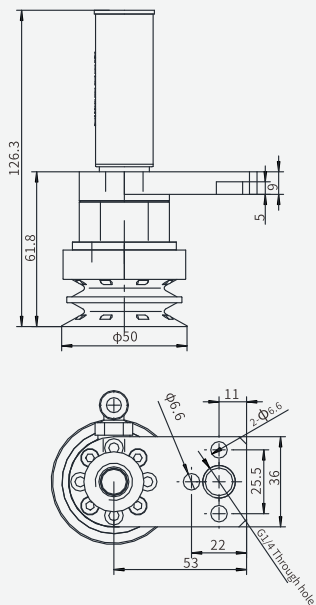
Weight: 159g

SLB30-M7T-F1
SLB30-M10T-F1



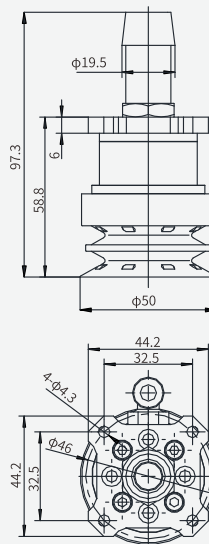
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SLB50-M10S-F3



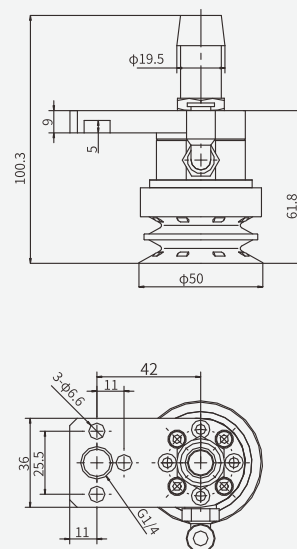
Weight: 162g

SLB50-M10T-F1



Weight: 139g

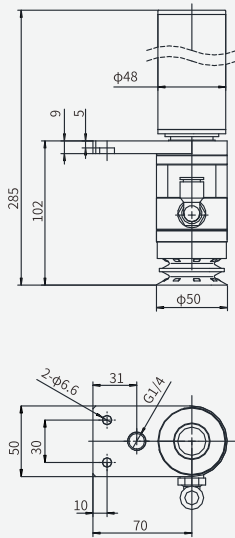
SLB50-M10T-F3



Weight: 160g

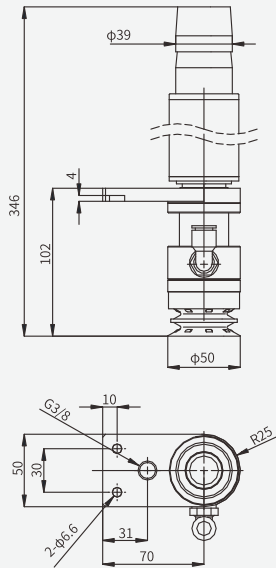
Dimensions (mm)

SLB50-M20S-F4



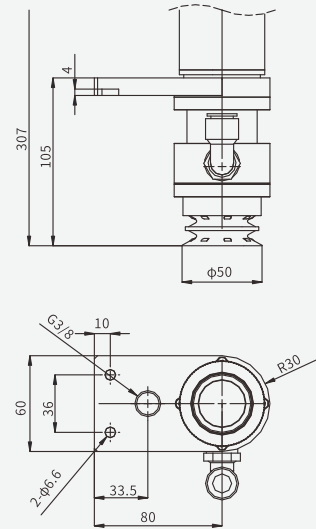
Weight: 692g

SLB50-M20T-F4



Weight: 796g

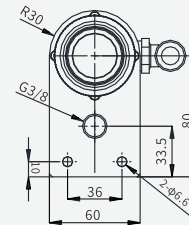
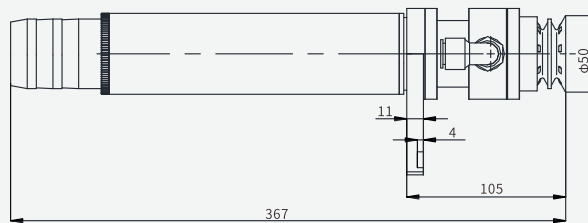
SLB50-M30S-F6



Weight: 925g

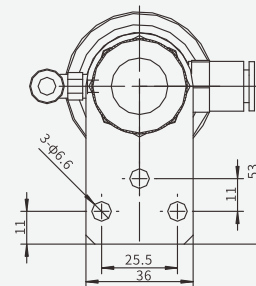
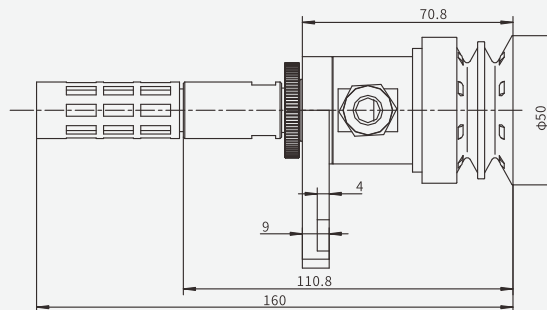
Dimensions (mm)

SLB50-M30T-F6



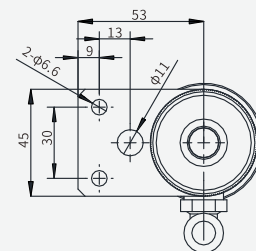
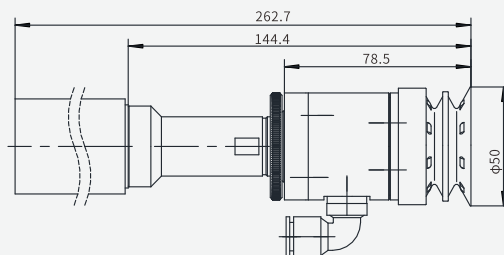
Weight: 925g

SLB50-P7S-F6

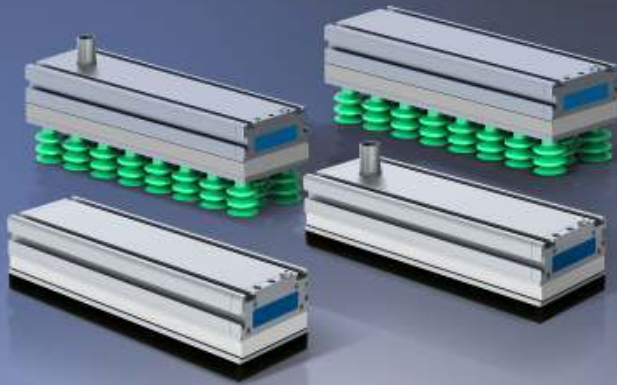


Weight: 276g

SLB50-P15S-F7



Weight: 477g



E Vacuum Gripping System

248	TXC Series
254	TXM Series



Suction cup type



Sealing gasket(Sponge) type

Features

- ◇ The body is made of aluminum alloy, strong structure and light weight.
- ◇ Multistage vacuum pump is used as vacuum source, high vacuum flow and short response time.
- ◇ Integrated with vacuum generation, vacuum filter, vacuum breaking, exhaust silence and built-in check valve.
- ◇ Built-in check valve can automatically block free suction port to reduce the loss of vacuum flow.

Applications

- ◇ PCB ◇ Wooden plate ◇ Carton ◇ Metal plate ◇ Plastic

How to order

TXC 120×400 A - V

① ② ③ ④

① Series	② Dimension		③ Adsorbing type	④ Check valve
TXC	120×60	120×800	A - Sealing gasket(Sponge) type	Nil- Standard, Without check valve
	120×300	120×1000	B - Suction cup type	V - With check valve
	120×400	120×1200	(Suction cup model-SPC40S)	
	120×600			

◇Note: Except standard vacuum gripping system TXC and TXM series, AIRBEST also offers tailor-made vacuum gripping system. If any tailor-made demand, please consult with AIRBEST.

Selection

Model/Specification	A	A-V	B	B-V
TXC120×60	●	●	—	—
TXC120×300	●	●	●	●
TXC120×400	●	●	●	●
TXC120×600	●	●	●	●
TXC120×800	●	●	●	●
TXC120×1000	○	○	○	○
TXC120×1200	○	○	○	○

◇Note: "●"- standard, in stock. "○"-selective, no stock. "—" -unavailable.

Technical parameters

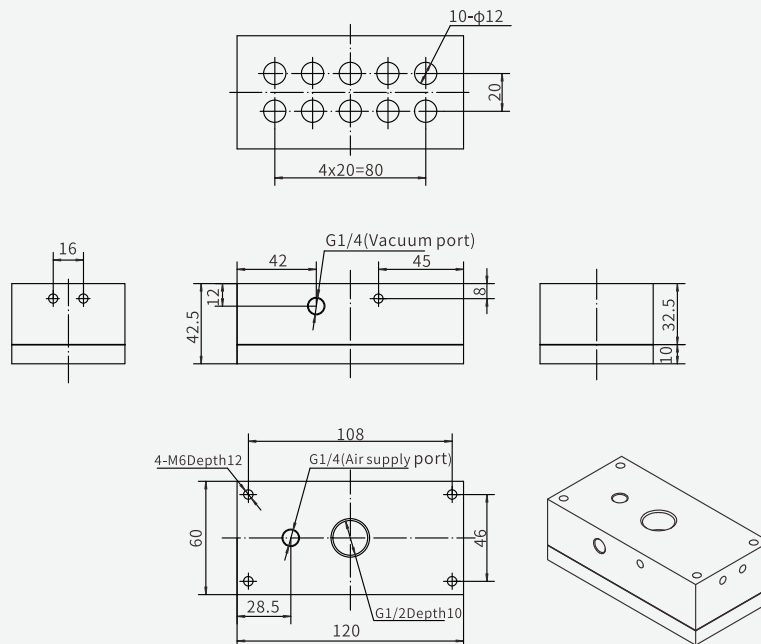
Model	Air supply pressure(bar)	Max. vacuum level (-kPa)	Max. vacuum flow (NL/min)	Max. Air consumption (NL/min)
TXC120×60	6.0	83	150	85
TXC120×300	6.0	75	640	215
TXC120×400	6.0	75	640	215
TXC120×600	6.0	75	1,250	430
TXC120×800	6.0	75	1,250	430
TXC120×1000	6.0	75	1,950	830
TXC120×1200	6.0	75	1,950	830

Model	Suction force (N)	weight(kg)				Recommended hose dia.(mm)
		A	A-V	B	B-V	
TXC120×60	68	0.5	0.4	—	—	8
TXC120×300	516	2.5	2.7	3.5	3.6	8
TXC120×400	689	2.8	3.4	4.5	4.6	8
TXC120×600	1,030	3.5	5.1	6.5	6.7	8
TXC120×800	1,378	4.2	6.5	8.5	8.7	8
TXC120×1000	1,949	4.6	7.1	10.5	10.7	10
TXC120×1200	2,260	5.6	7.5	11.2	11.5	10

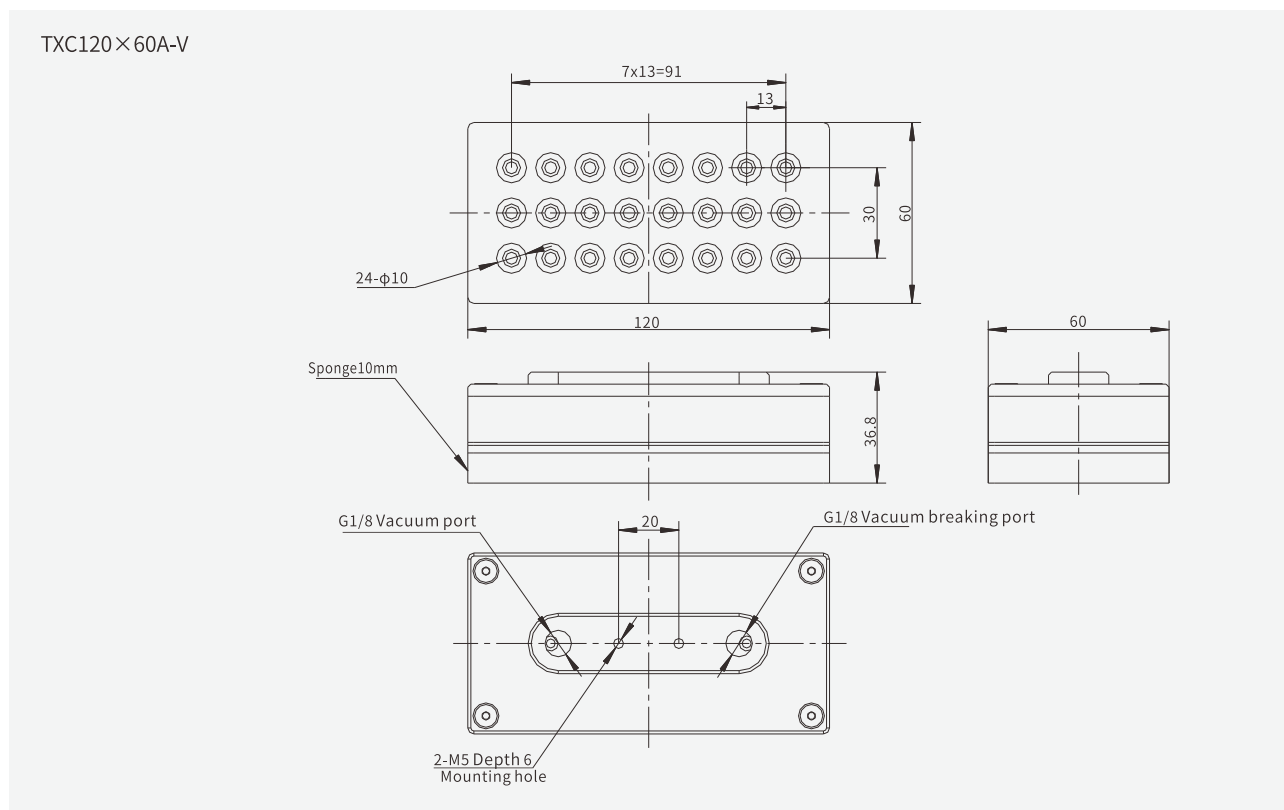
◇Note:Testing vacuum level -60kPa.The data of suction force as above are figured out in the condition that the vacuum gripper is fully covered by a rigid airtight workpiece, and without including safety factor. Working temperature:-20~80°C.

Dimensions (mm)

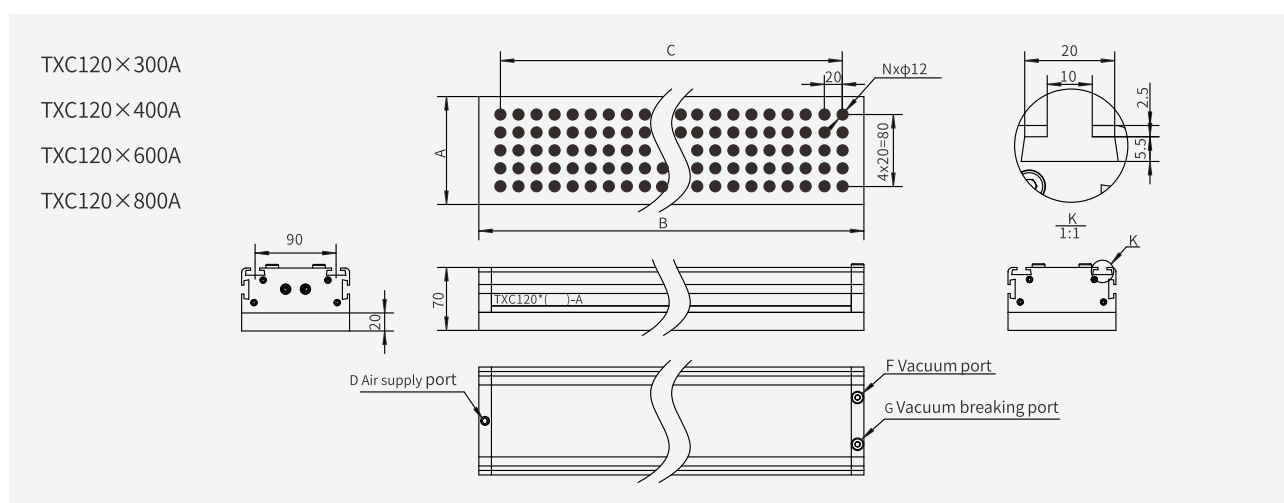
TXC120×60A



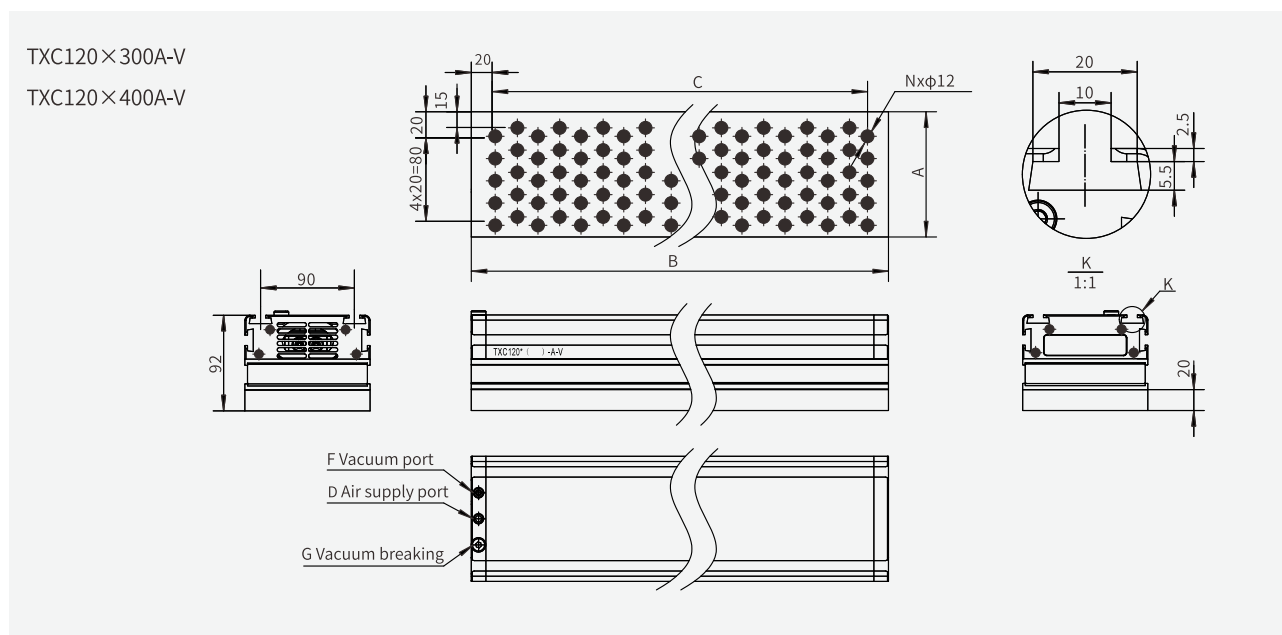
Dimensions (mm)



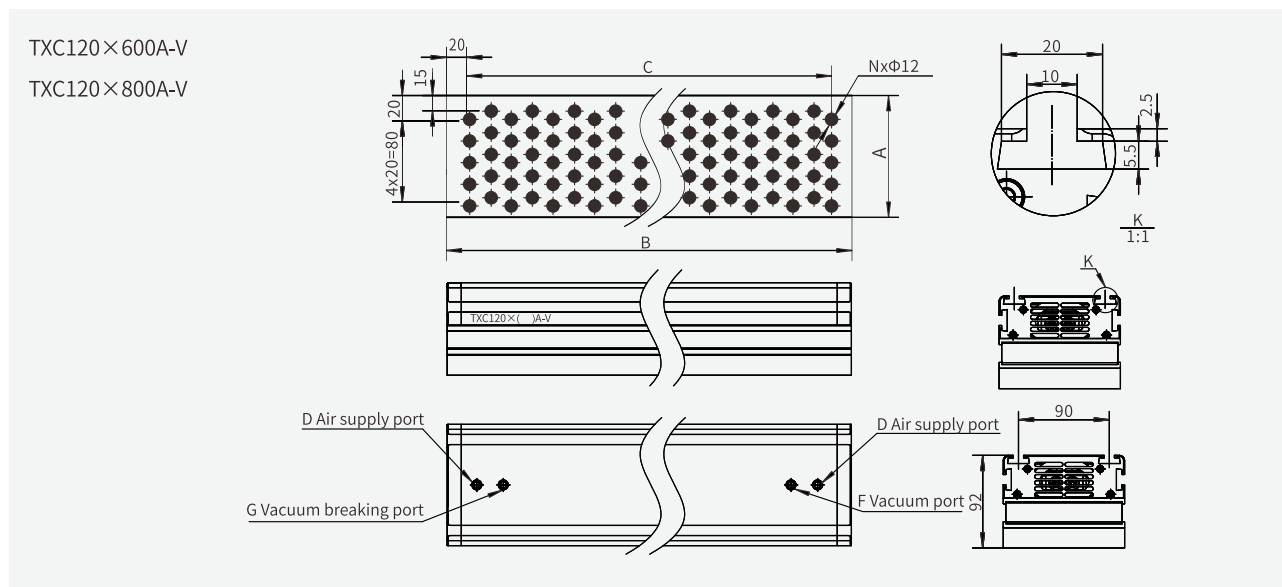
◇Note:TXC120x60A-V is standard equipped with an external vacuum pump ABM30-C.



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXC120×300A	120	328	280	G1/8	G1/8	G1/8	75
TXC120×400A	120	428	380	G1/8	G1/8	G1/8	100
TXC120×600A	120	628	580	G1/8	G1/8	G1/8	150
TXC120×800A	120	828	780	G1/8	G1/8	G1/8	200

Dimensions (mm)


Model/Size	A	B	C	D	F	G	N(suction hole number)
TXC120×300A-V	120	300	260	G1/8	G1/8	G1/8	70
TXC120×400A-V	120	400	360	G1/8	G1/8	G1/8	95



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXC120×600A-V	120	600	560	Φ8	Φ8	Φ8	145
TXC120×800A-V	120	800	760	Φ8	Φ8	Φ8	195

Note: Φ8 means hose diameter.

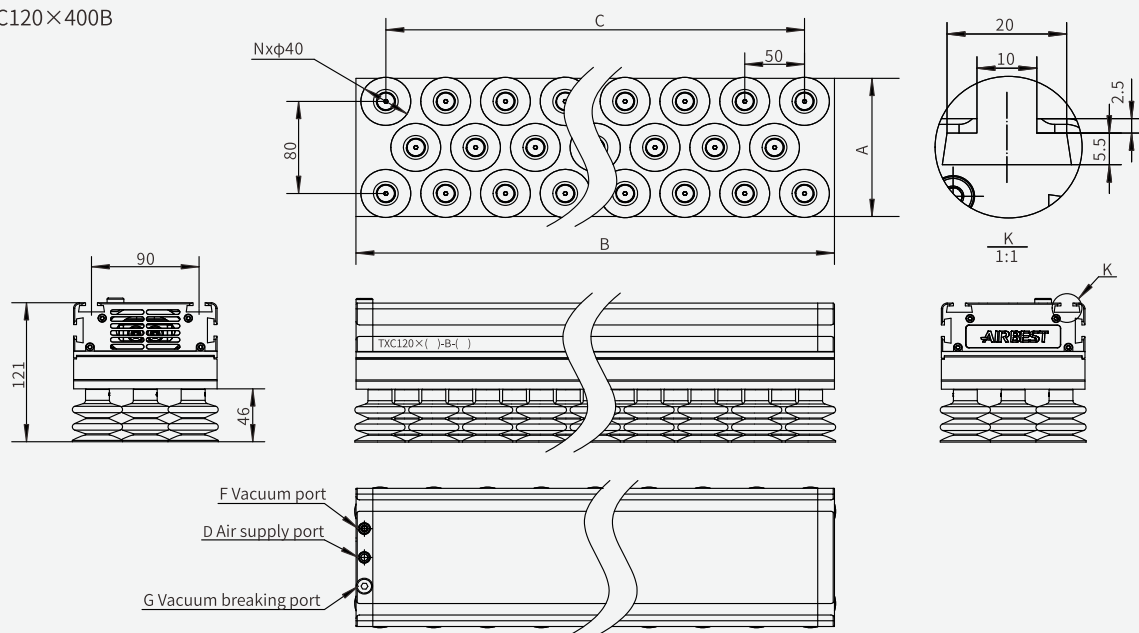
Dimensions (mm)

TXC120×300B-V

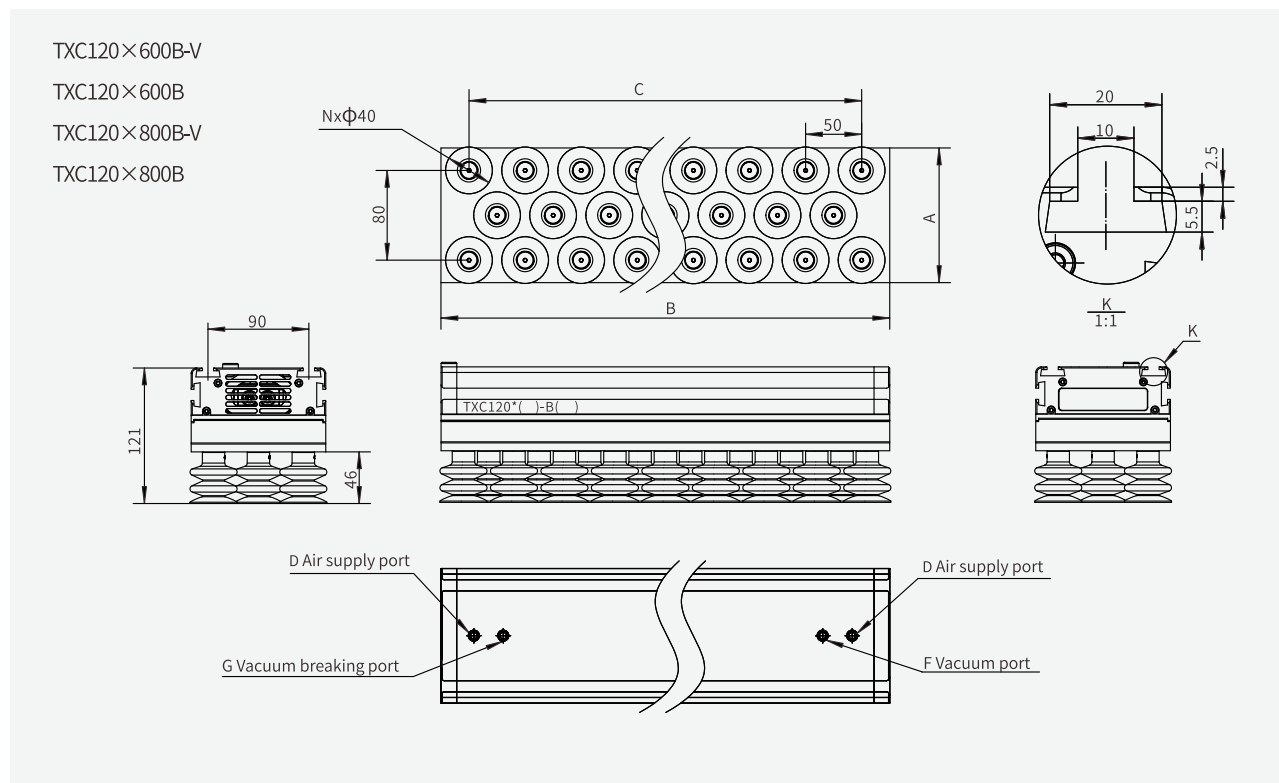
TXC120×300B

TXC120×400B-V

TXC120×400B



Model/Size	A	B	C	D	F	G	N (suction hole number)
TXC120×300B-V	120	300	250	G1/8	G1/8	G1/8	17
TXC120×300B							
TXC120×400B-V	120	400	350	G1/8	G1/8	G1/8	23
TXC120×400B							

Dimensions (mm)


Model/Size	A	B	C	D	F	G	N(suction hole number)
TXC120×600B-V	120	600	550	$\Phi 8$	$\Phi 8$	$\Phi 8$	35
TXC120×600B							
TXC120×800B-V	120	800	750	$\Phi 8$	$\Phi 8$	$\Phi 8$	47
TXC120×800B							

◇Note: $\Phi 8$ means hose diameter. For dimension of TXC120x1000 and TXC120x1200, please consult with AIRBEST.

Spare parts

Item	Model	Applicable vacuum gripping system
Sponge	TXC120×60NF	TXC120×60A
	TXC120×300NF	TXC120×300A
	TXC120×400NF	TXC120×400A
	TXC120×600NF	TXC120×600A
	TXC120×800NF	TXC120×800A
	TXC120×300NF-V	TXC120×300A-V
	TXC120×400NF-V	TXC120×400A-V
	TXC120×600NF-V	TXC120×600A-V
	TXC120×800NF-V	TXC120×800A-V



Suction cup type



Sealing gasket(Sponge) type

Features

- ◇ The body made of aluminum alloy, with strong structure and light weight.
- ◇ External vacuum generating device (such as vacuum pump, vacuum blower)
- ◇ Built-in check valve can automatically block free suction port to reduce the loss of vacuum flow.

Applications

- ◇ PCB ◇ Wooden plate ◇ Carton stacking ◇ Carton destacking

How to order

TXM 120×60 A - V

① ② ③ ④

① Series	② Dimension		③ Adsorbing type	④ Check valve
TXM	22×38	120×600	A - Sealing gasket(Sponge) type B - Suction cup type (Suction cup model-SPC40S)	Nil - Standard, without check valve V - With check valve
	22×76	120×800		
	120×60	120×1000		
	120×300	120×1200		
	120×400			

Selection

Model/Specification	A	A-V	B	B-V
TXM22×38	●	—	—	—
TXM22×76	●	—	—	—
TXM120×60	—	●	—	—
TXM120×300	●	●	●	●
TXM120×400	●	●	●	●
TXM120×600	●	●	●	●
TXM120×800	●	●	●	●
TXM120×1000	○	○	○	○
TXM120×1200	○	○	○	○

◇Note: "●"- standard, in stock. "○"-selective,no stock. "—"-unavailable.

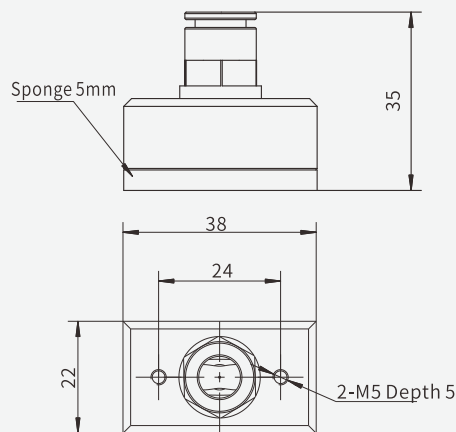
◇Note: TXM series vacuum gripping system excludes vacuum pump. Vacuum pump should be selected according to actual working condition.
If need, please consult with AIRBEST for pratical application.

Technical parameters

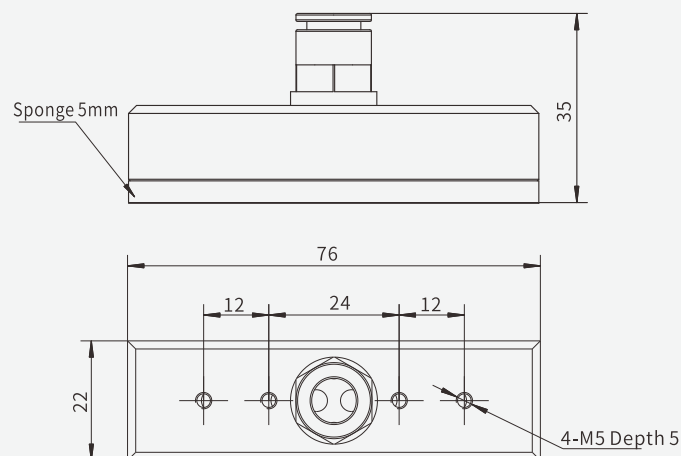
Model	Weigh(kg)				Recommended hose dia.(mm)
	A	A-V	B	B-V	
TXM22×38	0.045	—	—	—	8
TXM22×76	0.068	—	—	—	8
TXM120×60	—	0.4	—	—	8
TXM120×300	2.5	2.6	3.4	3.5	32
TXM120×400	3.2	3.2	4.4	4.5	32
TXM120×600	4.7	4.9	6.2	6.4	32
TXM120×800	6.2	6.4	8.2	8.4	32
TXM120×1000	7.7	7.9	9.5	9.7	63
TXM120×1200	8.9	9.1	10.3	10.6	63

Dimensions (mm)

TXM22×38A

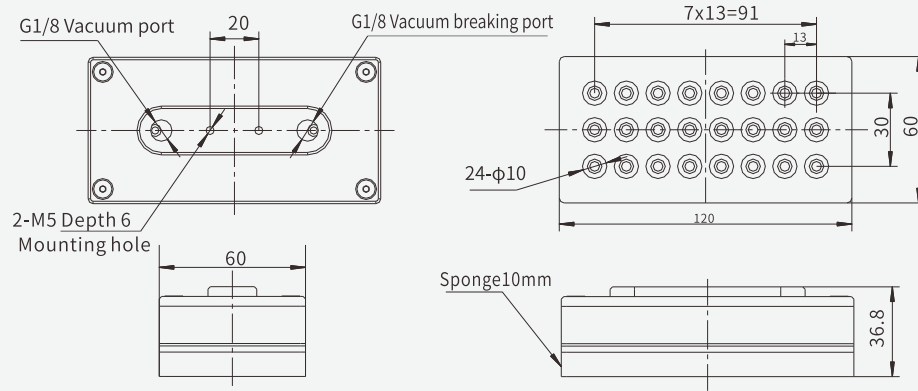


TXM22×76A



Dimensions (mm)

TXM120×60A-V

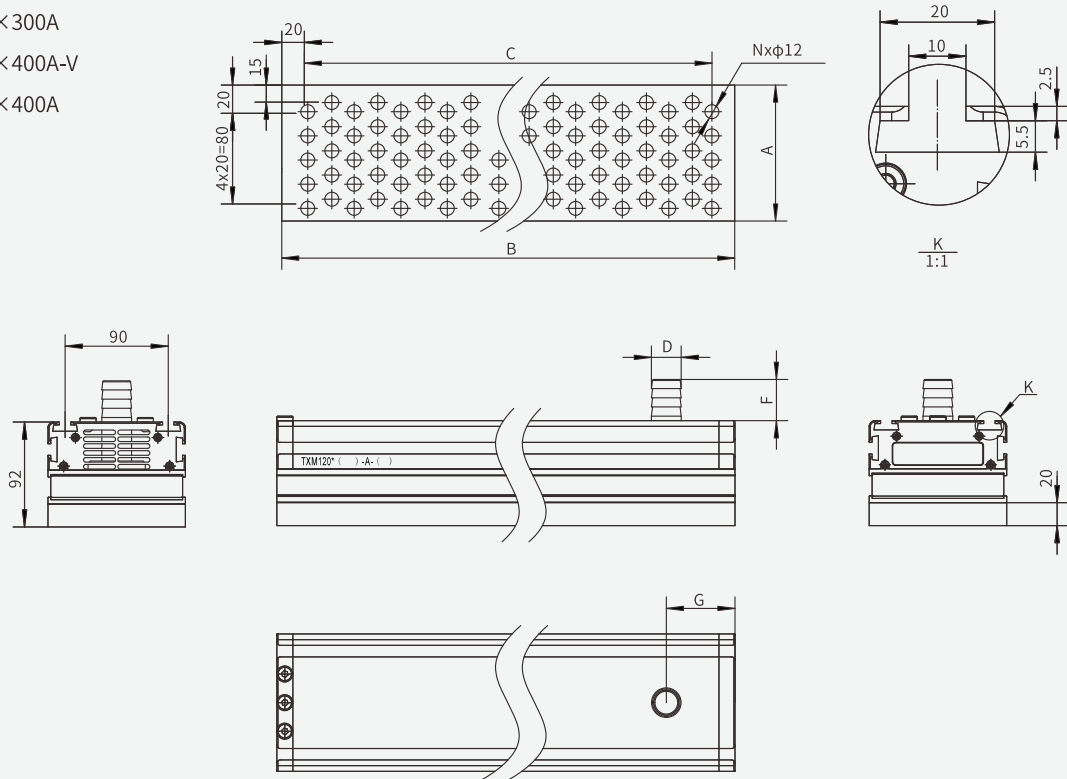


TXM120×300A-V

TXM120×300A

TXM120×400A-V

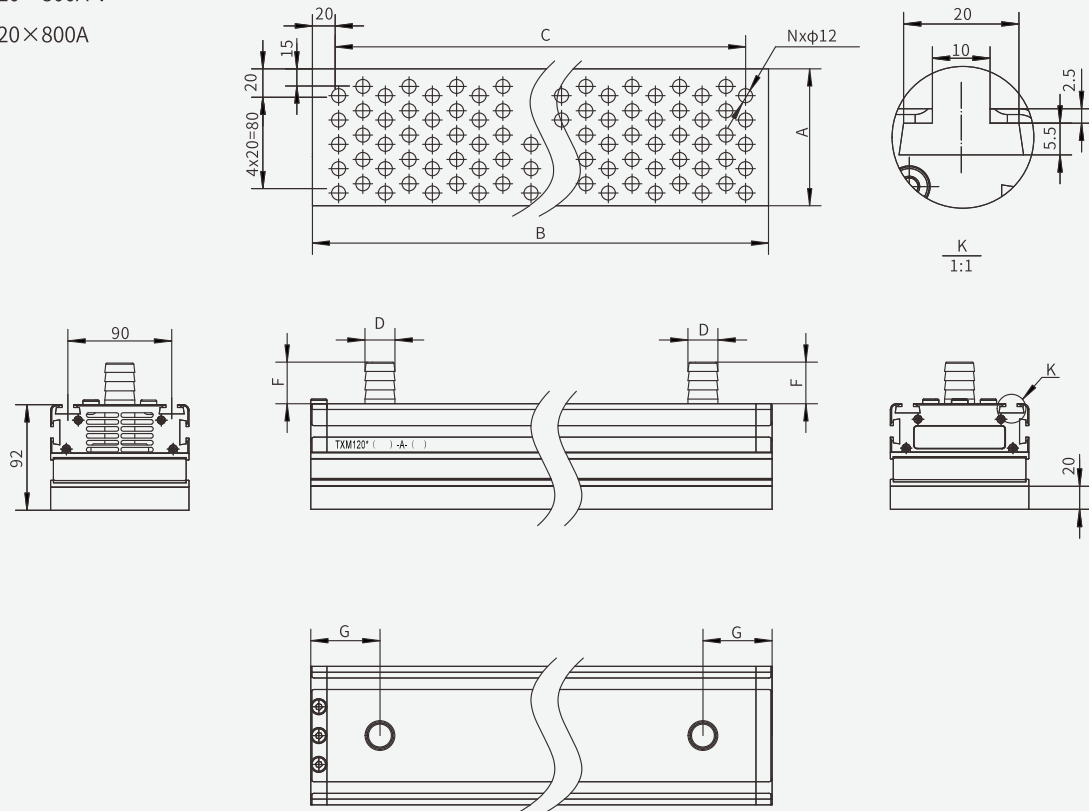
TXM120×400A



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXM120×300A-V	120	300	260	Φ25	36	60	70
TXM120×300A							
TXM120×400A-V	120	400	360	Φ25	36	60	95
TXM120×400A							

Dimensions (mm)

TXM120×600A-V
TXM120×600A
TXM120×800A-V
TXM120×800A



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXM120×600A-V	120	600	560	Φ32	36	60	145
TXM120×600A							
TXM120×800A-V	120	800	760	Φ32	36	60	195
TXM120×800A							

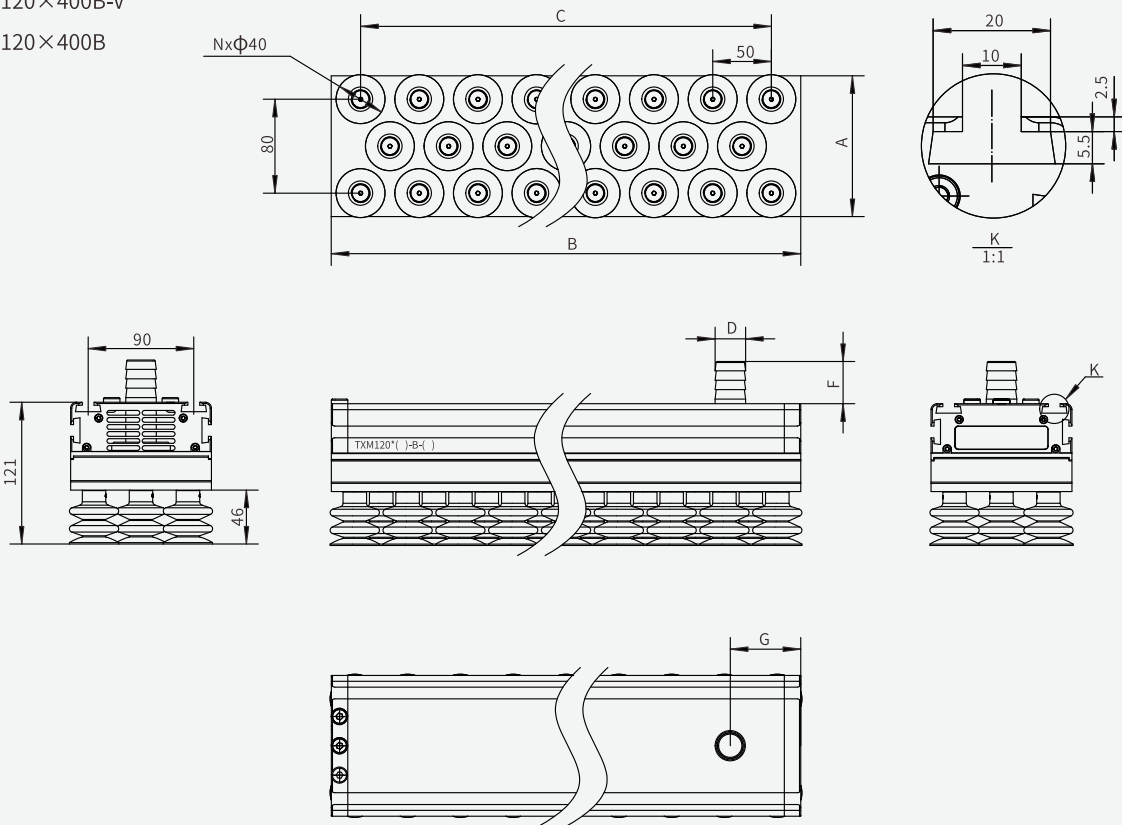
Dimensions (mm)

TXM120×300B-V

TXM120×300B

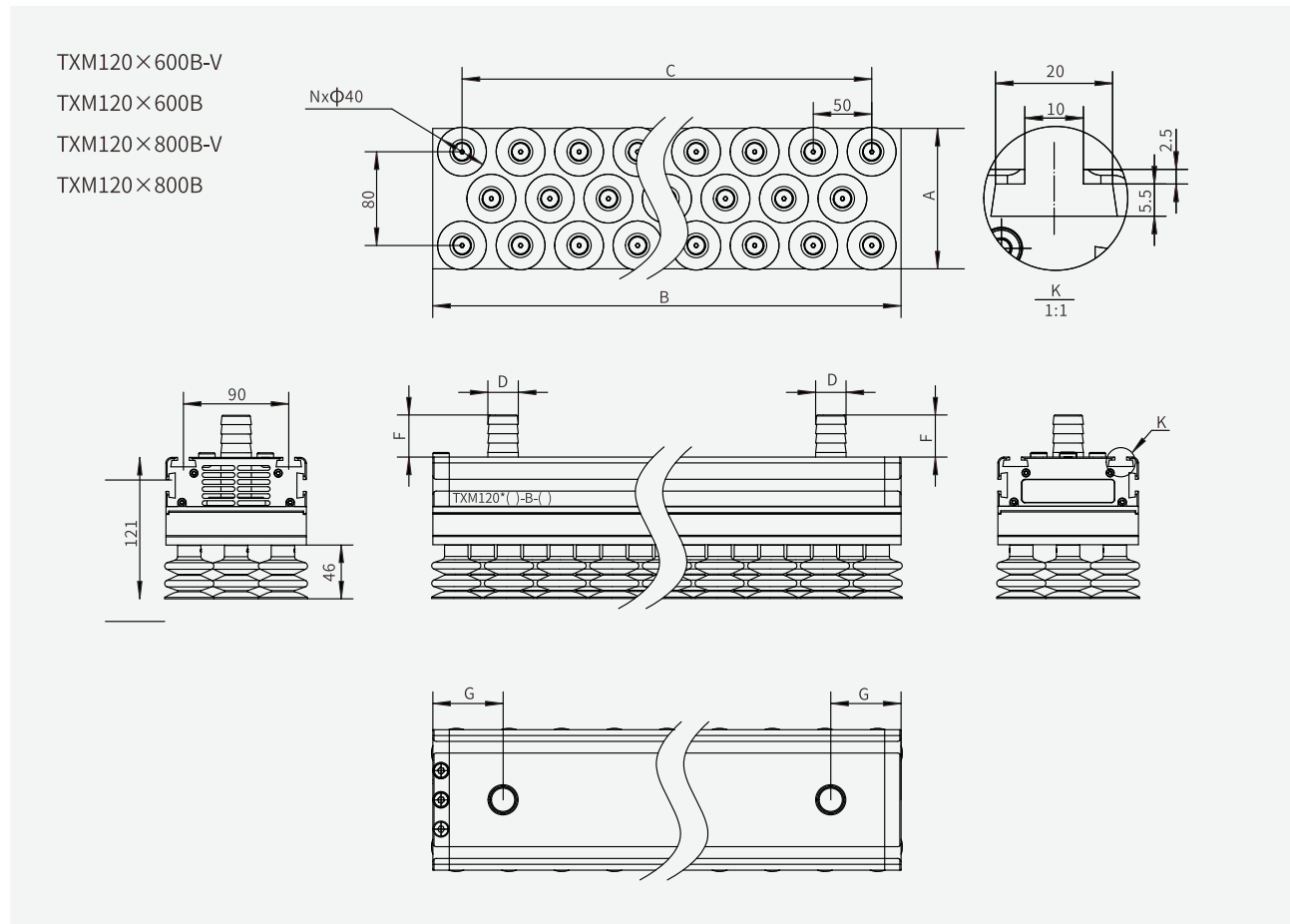
TXM120×400B-V

TXM120×400B



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXM120×300B-V	120	300	250	Φ25	36	60	17
TXM120×300B							
TXM120×400B-V	120	400	350	Φ25	36	60	23
TXM120×400B							

Dimensions (mm)



Model/Size	A	B	C	D	F	G	N(suction hole number)
TXM120×600B-V	120	600	550	Φ33	36	60	35
TXM120×600B							
TXM120×800B-V	120	800	750	Φ33	36	60	47
TXM120×800B							

◇Note: φ8 means hose diameter. For dimension of TXC120x1000 and TXC120x1200, please consult with AIRBEST.

Spare parts

Item	Model	Applicable vacuum gripping system
Sponge	TXC22×38NF	TXM22×38A
	TXC22×76NF	TXM22×76A
	TXC120×60NF	TXM120×60A
	TXC120×300NF	TXM120×300A、TXM120×300A-V
	TXC120×400NF	TXM120×400A、TXM120×400A-V
	TXC120×600NF	TXM120×600A、TXM120×600A-V
	TXC120×800NF	TXM120×800A、TXM120×800A-V



F Mounting Parts

260 PSPE Series

264 PSPT Series

268 PSPH Series

269 PSPF Series

272 PJS Series

278 PJT Series

280 PJF Series

284 PJB Series

285 PJH Series



Features

- ◇ Stainless steel guide rod, corrosive resistance and wear resistance.
- ◇ Built-in oilless bushing has good wear resistance, which enhances lifetime.
- ◇ Horizontal vacuum circuit design can connect with multiple level compensators.
- ◇ Non-rotating design ensures accurate positioning of workpiece.

Applications

- ◇ Small size and light spring, suitable for electronics industry.

How to order

PSPE - I 10 L A4 M5M - M10

① ② ③ ④ ⑤ ⑥ ⑦

① Series	② Buffer style	③ Buffer stroke	④ Rotary type	⑤ Vacuum port connection	⑥ Suction cup connection	⑦ Mounting thread
PSPE	I - Built-in spring	10 20 30 40 50	Nil - Vertical rotating R - Vertical non-rotating L - Lateral rotating B - Lateral non-rotating	Nil- M5 Female thread A4- One touch fitting φ4 hose A6- One touch fitting φ6 hose	M5M- M5 Male thread M5F - M5 Female thread	M10 - M10×1

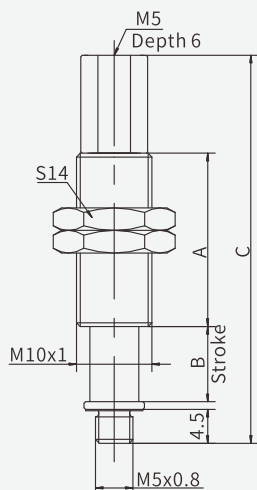
Selection

Model	Buffer stroke	Rotary type	Vacuum port connection			Suction cup connection		Mounting thread
			Nil	A4	A6	M5M	M5F	
PSPE-I	10 40	Nil	●	-	-	●	●	M10
	20 50	R	●	-	-	●	-	
	30	L	-	●	●	●	-	
		B	-	●	●	●	-	

◇◇Note: "●"- standard, in stock. "-"-unavailable.

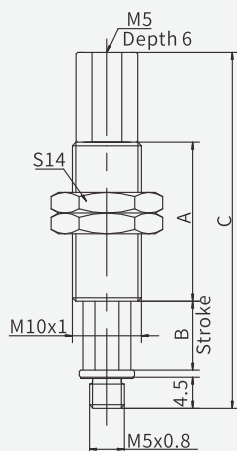
Dimensions (mm)

M5M Vertical rotating



Model/size	A	B	C	F1 (N)	F2 (N)
PSPE-I10M5M-M10	23	10	51.5	1.0	3.0
PSPE-I20M5M-M10	51	20	89.5		
PSPE-I30M5M-M10	51	30	99.5		
PSPE-I40M5M-M10	77	40	135.5		
PSPE-I50M5M-M10	77	50	145.5		

M5M Vertical non-rotating



Model/size	A	B	C	F1 (N)	F2 (N)
PSPE-I10RM5M-M10	23	10	51.5	1.0	3.0
PSPE-I20RM5M-M10	51	20	89.5		
PSPE-I30RM5M-M10	51	30	99.5		
PSPE-I40RM5M-M10	77	40	135.5		
PSPE-I50RM5M-M10	77	50	145.5		

PSPE

PSPT

PSPH

PSPF

PJS

PJT

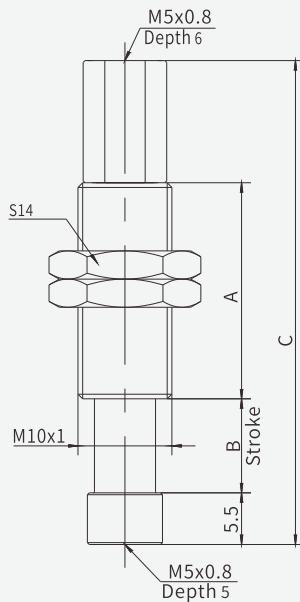
PJF

PJB

PJH

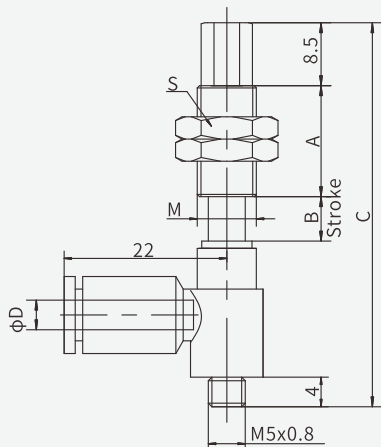
Dimensions (mm)

M5F Vertical rotating



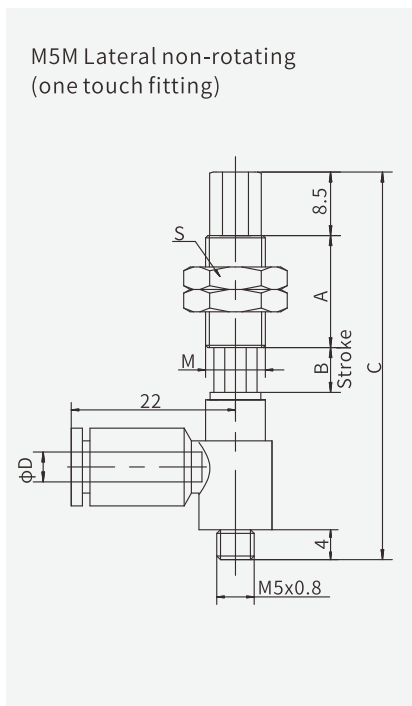
Model/size	A	B	C	F1 (N)	F2 (N)
PSPE-I10M5F-M10	23	10	51.5	1.0	3.0
PSPE-I20M5F-M10	51	20	89.5		
PSPE-I30M5F-M10	51	30	99.5		
PSPE-I40M5F-M10	77	40	135.5		
PSPE-I50M5F-M10	77	50	145.5		

M5M Lateral rotating(one touch fitting)



Model/size	A	B	C	D	S	M	F1 (N)	F2 (N)
PSPE-I6LA4M5M-M8	15	6	52	4	12	M8×1	0.8	1.2
PSPE-I6LA6M5M-M8	15	6	52	6				
PSPE-I10LA4M5M-M8	43	10	84	4				
PSPE-I10LA6M5M-M8	43	10	84	6				
PSPE-I15LA4M5M-M8	43	15	89	4				
PSPE-I15LA6M5M-M8	43	15	89	6				
PSPE-I25LA4M5M-M8	43	25	99	4				
PSPE-I25LA6M5M-M8	43	25	99	6				
PSPE-I10LA4M5M-M10	23	10	64	4	14	M10×1	1.0	3.0
PSPE-I10LA6M5M-M10	23	10	64	6				
PSPE-I20LA4M5M-M10	51	20	102	4				
PSPE-I20LA6M5M-M10	51	20	102	6				
PSPE-I30LA4M5M-M10	51	30	112	4				
PSPE-I30LA6M5M-M10	51	30	112	6				
PSPE-I40LA4M5M-M10	77	40	148	4				
PSPE-I40LA6M5M-M10	77	40	148	6				
PSPE-I50LA4M5M-M10	77	50	158	4				
PSPE-I50LA6M5M-M10	77	50	158	6				

Dimensions (mm)



Model/size	A	B	C	D	S	M	F1(N)	F2(N)
PSPE-I6BA4M5M-M8	15	6	52	4	12	M8×1	0.8	1.2
PSPE-I6BA6M5M-M8	15	6	52	6				
PSPE-I10BA4M5M-M8	43	10	84	4				
PSPE-I10BA6M5M-M8	43	10	84	6				
PSPE-I15BA4M5M-M8	43	15	89	4				
PSPE-I15BA6M5M-M8	43	15	89	6				
PSPE-I25BA4M5M-M8	43	25	99	4				
PSPE-I25BA6M5M-M8	43	25	99	6				
PSPE-I10BA4M5M-M10	23	10	64	4	14	M10×1	1.0	3.0
PSPE-I10BA6M5M-M10	23	10	64	6				
PSPE-I20BA4M5M-M10	51	20	102	4				
PSPE-I20BA6M5M-M10	51	20	102	6				
PSPE-I30BA4M5M-M10	51	30	112	4				
PSPE-I30BA6M5M-M10	51	30	112	6				
PSPE-I40BA4M5M-M10	77	40	148	4				
PSPE-I40BA6M5M-M10	77	40	148	6				
PSPE-I50BA4M5M-M10	77	50	158	4				
PSPE-I50BA6M5M-M10	77	50	158	6				

◆Note: "F1 "means spring force at 0 stroke, F2 means spring force at max stroke.



Features

- ◇ Corrosive resistance and wear resistance, smoothly operating.
- ◇ Built-in oil free bushing has good wear resistance, which enhances lifetime.
- ◇ Built-in and external spring, 2 types for option.
- ◇ G1/4 and G3/8 light weight design reduces the load on the robot.

Applications

- ◇ Various connection threads are available, suitable for all kinds of applications such as packaging and handling of metal plate, etc.

How to order

PSPT - I 10 LM5 G1M- M16

① ② ③ ④ ⑤ ⑥

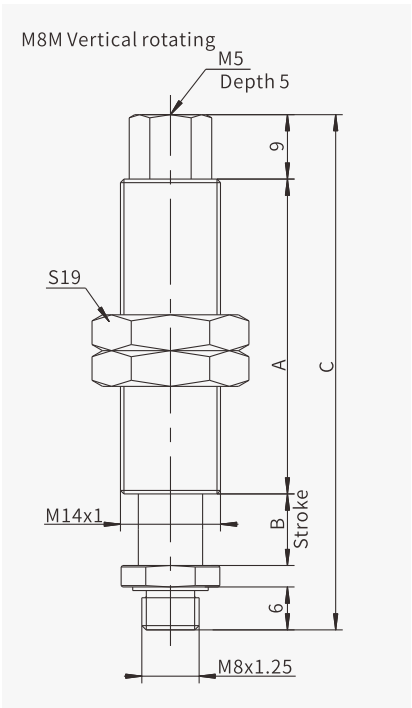
① Series	② Buffer style	③ Buffer stroke	④ Vacuum port connection	⑤ Suction cup connection	⑥ Mounting thread
PSPT	I - Built-in spring	10	Nil - Vertical rotating	M8M - M8 Male thread	M14 - M14×1
		20	R - Vertical non-rotating	G1M - G1/8 Male thread	M16 - M16×1
		30	LM5 - Lateral rotating M5	G2M - G1/4 Male thread	M18 - M18×1
	E - External spring	50		G3M - G3/8 Male thread	
		75		G1F - G1/8 Female thread	
		90		G2F - G1/4 Female thread	

Selection

Model	Buffer style		Buffer stroke(mm)						Connection thread	Mounting thread		
	I	E	10	20	30	50	75	90		M14	M16	M18
PSPT	●	-	●	●	●	●	-	-	M8M	●	-	-
	●	-	●	●	●	●	-	-	G1M, LM5G1M, G1F	-	●	-
	●	-	●	●	●	●	-	-	G2M, RG2M, G2F	-	-	●
	●	-	●	●	●	●	-	-	G3M, RG3M	-	-	●
	-	●	-	-	-	-	●	●	G2M, G3M	-	-	●

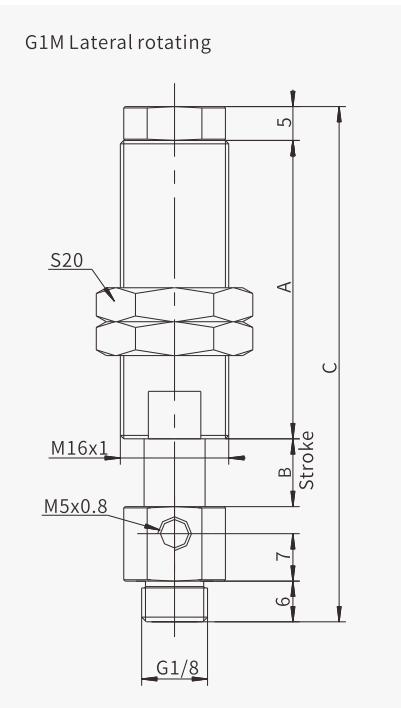
◇Note: "●"- standard, in stock. "-"-unavailable.

Dimensions(mm)

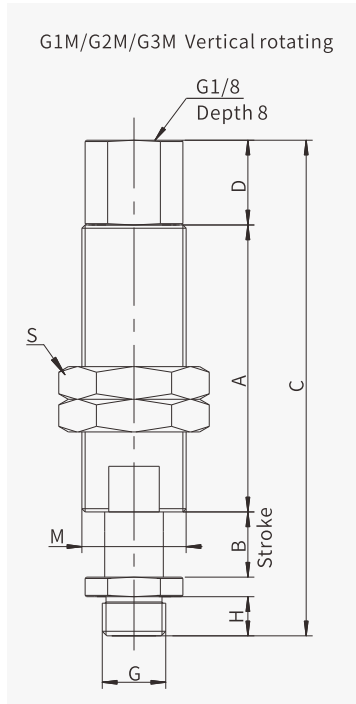


Model	A	B	C	F1 (N)	F2 (N)
PSPT-I10M8M-M14	44	10	72	2.0	5.5
PSPT-I20M8M-M14	44	20	82		
PSPT-I30M8M-M14	44	30	92		
PSPT-I50M8M-M14	75	50	143		

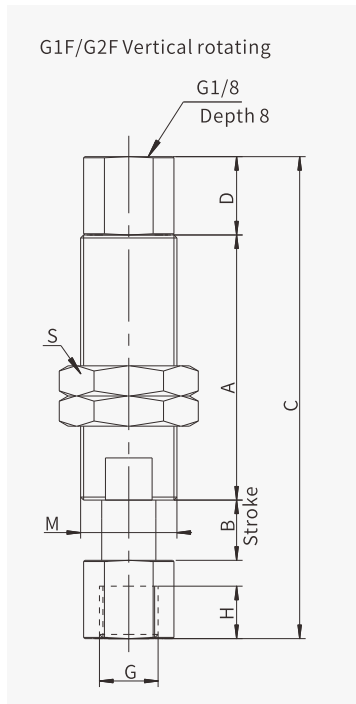
◇Note: "F1 "means spring force at 0 stroke, F2 means spring force at max stroke.



Model	A	B	C	F1 (N)	F2 (N)
PSPT-I10LM5G1M-M16	44	10	76	2.0	5.5
PSPT-I20LM5G1M-M16	44	20	86		
PSPT-I30LM5G1M-M16	44	30	96		
PSPT-I50LM5G1M-M16	75	50	147		

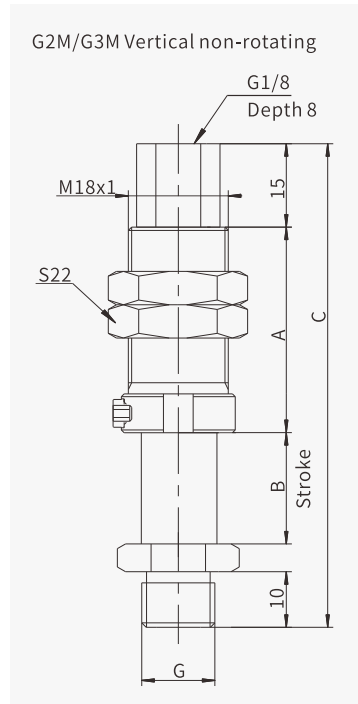
Dimensions(mm)


Model	A	B	C	D	G	H	S	M	F1(N)	F2(N)
PSPT-I10G1M-M16	44	10	76	13	G1/8	6	20	M16x1	2.0	5.5
PSPT-I20G1M-M16	44	20	86							
PSPT-I30G1M-M16	44	30	96							
PSPT-I50G1M-M16	75	50	147							
PSPT-I10G2M-M18	28	10	65	15	G1/4	8	22	M18x1	4.0	7.0
PSPT-I20G2M-M18	38	20	85							
PSPT-I30G2M-M18	48	30	105							
PSPT-I50G2M-M18	68	50	145							
PSPT-I10G3M-M18	28	10	65	15	G3/8	8	22	M18x1	4.0	7.0
PSPT-I20G3M-M18	38	20	85							
PSPT-I30G3M-M18	48	30	105							
PSPT-I50G3M-M18	68	50	145							

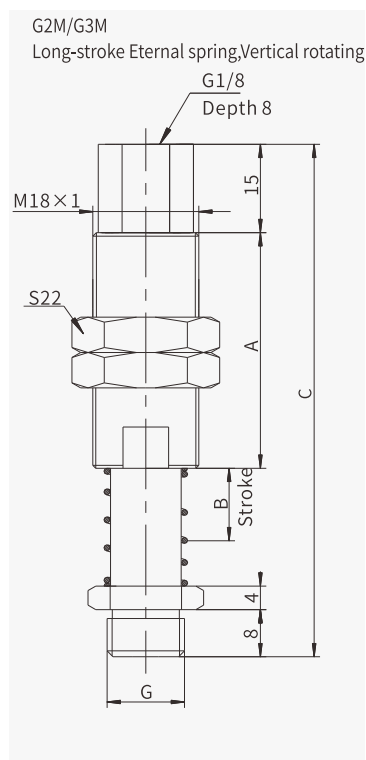


Model	A	B	C	D	G	H	S	M	F1(N)	F2(N)
PSPT-I10G1F-M16	44	10	80	13	G1/8	8	20	M16x1	2.0	5.5
PSPT-I20G1F-M16	44	20	90							
PSPT-I30G1F-M16	44	30	100							
PSPT-I50G1F-M16	75	50	151							
PSPT-I10G2F-M18	28	10	70.5	15	G1/4	12	22	M18x1	4.0	7.0
PSPT-I20G2F-M18	38	20	90.5							
PSPT-I30G2F-M18	48	30	110.5							
PSPT-I50G2F-M18	68	50	150.5							

Dimensions(mm)



Model	A	B	C	G	F1(N)	F2(N)
PSPT-I10RG2M-M18	30	10	70	G1/4	4.0	7.0
PSPT-I20RG2M-M18	40	20	90			
PSPT-I30RG2M-M18	50	30	110			
PSPT-I50RG2M-M18	70	50	150			
PSPT-I10RG3M-M18	30	10	70	G3/8	4.0	7.0
PSPT-I20RG3M-M18	40	20	90			
PSPT-I30RG3M-M18	50	30	110			
PSPT-I50RG3M-M18	70	50	150			



Model	A	B	C	G	F1(N)	F2(N)
PSPT-E75G2M-M18	40	75	170	G1/4	4.5	17.0
PSPT-E90G2M-M18	40	90	185			
PSPT-E75G3M-M18	40	75	170	G3/8	4.5	17.0
PSPT-E90G3M-M18	40	90	185			

◇Note: "F1 "means spring force at 0 stroke, F2 means spring force at max stroke.



Features

- ◇ Heavy-duty spring for heavy-duty applications.
- ◇ Built-in oil free bushing has good wear resistance, which enhances life time.

Applications

- ◇ Suitable for applications where there is height difference.
- ◇ For condition in which shock absorption is required during handling process.
- ◇ For condition of short operating cycle and fast movement.

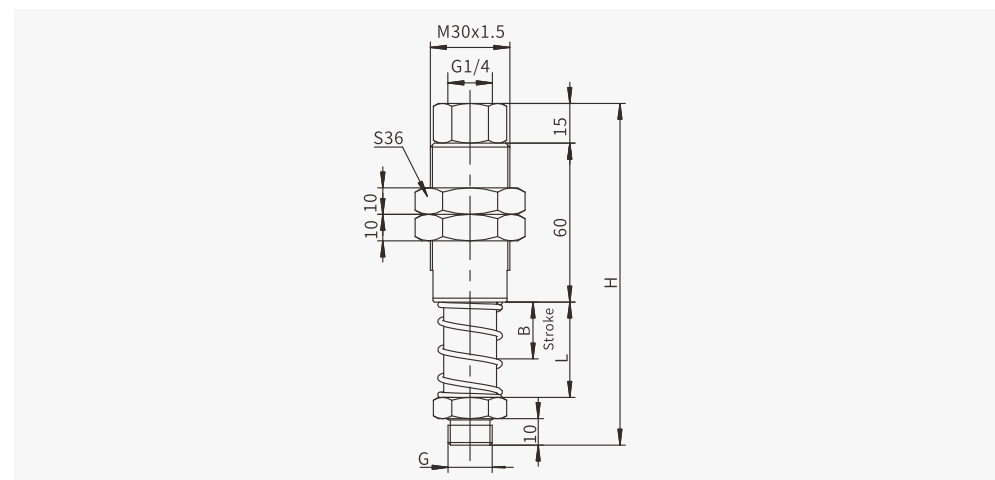
How to order

PSPH - E 25 G3M - M30

① ② ③ ④ ⑤

① Series	② Buffer style	③ Buffer stroke	④ Suction cup connection	⑤ Mounting thread
PSPH	E - External spring	25 75 50 90	G3M - G3/8 Male thread G4M - G1/2 Male thread	M30 - M30×1.5

Dimensions(mm)



Model	G	B	L	H	F1(N)	F2(N)
PSPH-E25G3M-M30	G3/8	25	36	129	24	74
PSPH-E50G3M-M30		50	65	158	17	77
PSPH-E75G3M-M30		75	107	200	41	79
PSPH-E90G3M-M30		90	119	212	29	74
PSPH-E25G4M-M30	G1/2	25	36	129	24	74
PSPH-E50G4M-M30		50	65	158	17	77
PSPH-E75G4M-M30		75	107	200	41	79
PSPH-E90G4M-M30		90	119	212	29	74

◇Note: "F1 "means spring force at 0 stroke, F2 means spring force at max stroke.



Features

◇ Corresponding to the thread of suction cup, a variety of connection are available.

Applications

◇ Small size and light spring, suitable for electronics industry.

How to order

PSPF - E 6 L B6 M5F - M14

① ② ③ ④ ⑤ ⑥ ⑦

① Series	② Buffer style	③ Buffer stroke		④ Vacuum circuit
PSPF	E - External spring	4	15	Nil - Vertical rotating
		6	30	L - Lateral rotating
		10		
⑤ Vacuum port connection		⑥ Suction cup connection		⑦ Mounting thread
B6 - Pagoda fitting φ6 hose		M5F - M5 Female thread		M11 - M11×1
R1 - Rc1/8 Tapered thread		M8F - M8 Female thread		M14 - M14×1
		M10M - M10×1.25 Male thread		M16 - M16×1.5

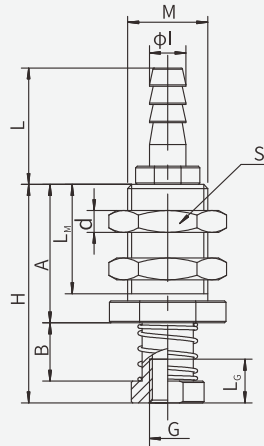
◇ Note: Suction cup connection thread refers to the thread connecting to the fitting for suction cup.
Mounting thread refers to the thread installing to the external bracket.

Selection

Model	Buffer stroke	Connection thread		Mounting thread
PSPF-E	4, 10	B6M5F	LB6M5F	M11
	6, 15	B6M5F	LB6M5F	M14
	6, 15	B6M8F	LB6M8F	M14
	10, 30	-	LR1M10M	M16

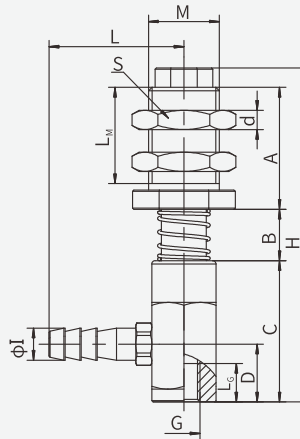
Dimensions(mm)

Female thread vertical rotating



Model	H	G	L _G	M	L _M	A	B	L	d	S	I	Buffer stroke
PSPF-E4B6M5F-M11	30	M5	6	M11×1	15	19	8	16	3	14	5	4
PSPF-E10B6M5F-M11	42						20					10
PSPF-E6B6M5F-M14	40	M5	6	M14×1	19	24	13	17	4	17	5	6
PSPF-E15B6M5F-M14	57						30					15
PSPF-E6B6M8F-M14	40	M8	8	M14×1	19	24	13	17	4	17	5	6
PSPF-E15B6M8F-M14	57						30					15

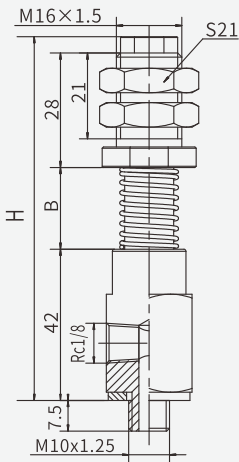
Female thread lateral rotating



Model	H	G	L _G	M	L _M	A	B	C	D	L	d	S	I	Buffer stroke
PSPF-E4LB6M5F-M11	52	M5	6	M11×1	15	19	8	22	9	21	3	14	5	4
PSPF-E10LB6M5F-M11	64						20							10
PSPF-E6LB6M5F-M14	73	M5	6	M14×1	19	24	13	32	12	23	4	17	5	6
PSPF-E15LB6M5F-M14	90						30							15
PSPF-E6LB6M8F-M14	73	M8	8	M14×1	19	24	13	32	12	23	4	17	5	6
PSPF-E15LB6M8F-M14	90						30							15

Dimensions(mm)

Male thread lateral rotating



Model	H	B	Buffer stroke
PSPF-E10LR1M10M-M16	94	20	10
PSPF-E30LR1M10M-M16	134	60	30

Mounting Parts
PSPE
PSPT
PSPH
PSPF
PJS
PJT
PJF
PJB
PJH



Features

- ◇ Standard fitting for suction cup , easy for choice.
- ◇ Separate structure design, reusable and reduce cost greatly.

How to order

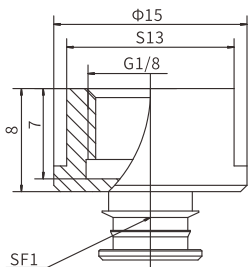
PJS - G1F - SF1 - EW

① ② ③ ④

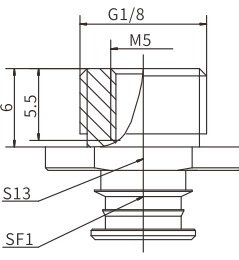
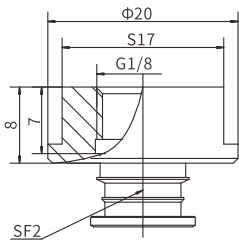
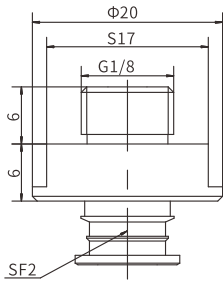
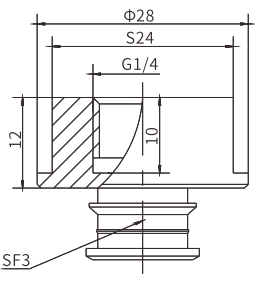
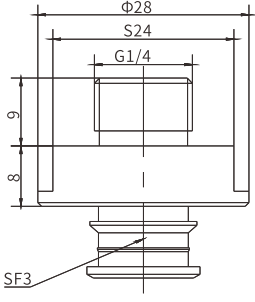
① Series	② Connection thread	③ Suction cup connection	④ Special specification
PJS	M3M - M3 Male thread	SF (1-7)	Nil - Standard ,without special specification EW - Built-in mesh filter EH - Built-in mesh filter and vacuum efficiency valve
	M5F - M5 Female thread	SC (1-6)	
	M5M - M5 Male thread	ST (1-8)	
	M8M - M8 Male thread		
	G1F - G1/8 Female thread		
	G1M - G1/8 Male thread		
	G2F - G1/4 Female thread		
	G2M - G1/4 Male thread		
	G3F - G3/8 Female thread		
	G4F - G1/2 Female thread		

◇ Optional special specifications such as EW and EH.

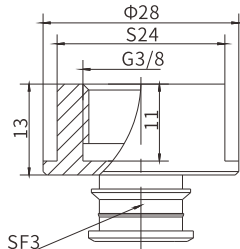
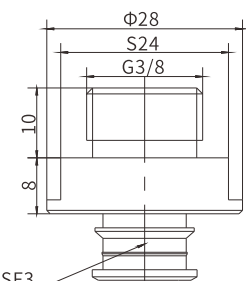
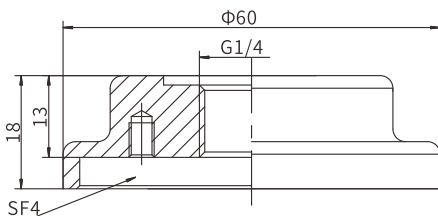
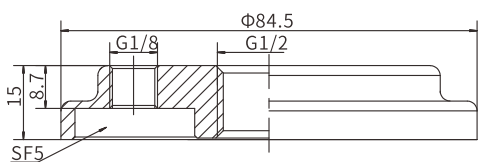
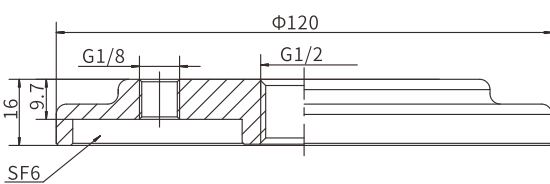
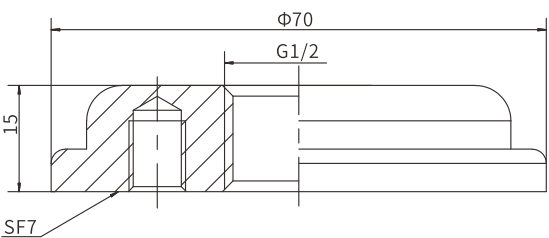
SF type

Model	Diagram	Applicable suction cup	Special specification
PJS-G1F-SF1		SU20, 25, 30 SF20, 25, 30 SB17, 20 SBL20 SBP20 SXP20, 25, 30 SFP20, 30 SGP25, 35	EW EH

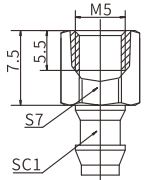
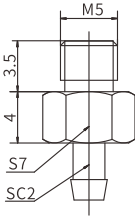
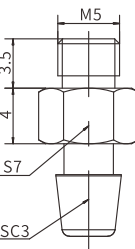
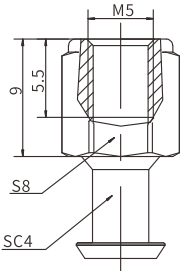
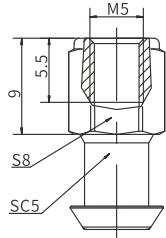
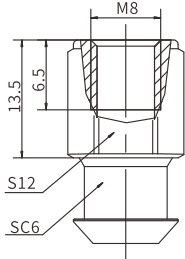
SF type

Model	Diagram	Special specification	Applicable suction cup
PJS-G1M-SF1		EW EH	SU20, 25, 30 SF20, 25, 30 SB17, 20 SBL20 SBP20 SXP20, 25, 30 SFP20, 30 SGP25, 35
PJS-G1F-SF2		EW EH	SU40 SF40 SB30, 40 SBL30, 40 SBP30, 40 SXP35, 40 SFP40 SGP45
PJS-G1M-SF2			
PJS-G2F-SF3		EW EH	SU50 SF50 SB50 SBL50 SBP50 SXP50 SGP55
PJS-G2M-SF3			

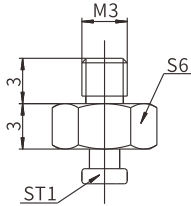
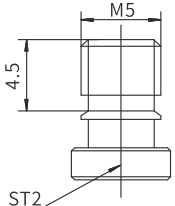
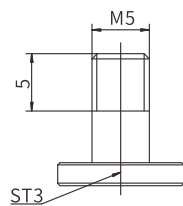
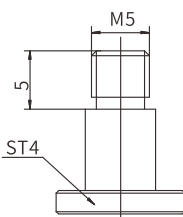
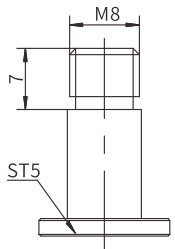
SF type

Model	Diagram	Special specification	Applicable suction cup
PJS-G3F-SF3		EW EH	SU50 SF50 SB50 SBL50 SBP50 SXP50 SGP55
PJS-G3M-SF3			
PJS-G2F-SF4		EW	SF75
PJS-G4F-SF5		EW	SF110 SB110
PJS-G4F-SF6		EW	SF150 SB150
PJS-G4F-SF7		EW	SF200

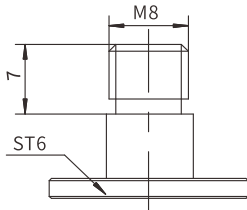
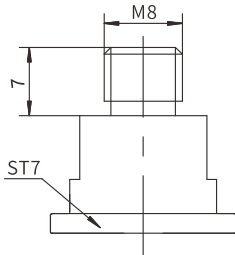
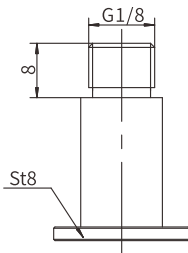
SF type

Model	Diagram	Applicable suction cup
PJS-M5F-SC1		SZU2, 4, 6, 8 SZB6, 8 SB6 SU2, 4
PJS-M5M-SC2		SU6, 8 SB5, 8
PJS-M5M-SC3		SU10, 15 SF15 SB10, 12, 15 SBL15
PJS-M5F-SC4		SZU10, 13, 16 SZB10, 13, 16 SZC10, 13, 16 SD10, 16
PJS-M5F-SC5		SZU20, 25, 32 SZB20, 25, 32 SZC20, 25, 32 SD25
PJS-M8F-SC6		SZU40, 50 SZB40, 50 SZC40, 50 SD40

SF type

Model	Diagram	Applicable suction cup
PJS-M3M-ST1		SPF2, 3.5 SPJ4
PJS-M5M-ST2		SPA10A, 10B SPA15A, 15B, 15X SPA20A, 20B SPF5, 6, 8, 10, 15 SPJ6, 8, 10, 15 SPC5, 7
PJS-M5M-ST3		SPA30B SPF20 SPJ20, 25
PJS-M5M-ST4		SPF25, 30, 35, 40 SPJ30, 35, 40
PJS-M8M-ST5		SPC30, 40, 60 SBA33

SF type

Model	Diagram	Applicable suction cup
PJS-M8M-ST6		SPF50 SPJ50
PJS-M8M-ST7		SPA25A, 30A SPA40A, 50A
PJS-G1M-ST8		SPC90

PSPE

PSPT

PSPH

PSPF

PJS

PJT

PJF

PJB

PJH



Features

- ◇ Various specifications to achieve conversion between different threads.
- ◇ Copper plated nickel material.

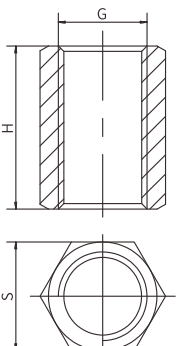
How to order

PJT - M5M - M8F

① ② ③

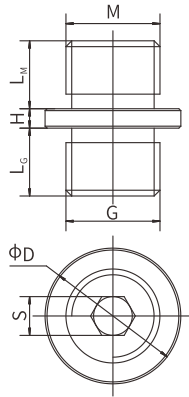
① Series	② Connection thread(1)	③ Connection thread(2)
PJT	M5F - M5 Female thread	Nil - Same as connection thread(1)
	M5M - M5 Male thread	M5F - M5 Female thread
	M8F - M8 Female thread	M5M - M5 Male thread
	M8M - M8 Male thread	M8F - M8 Female thread
	G1F - G1/8 Female thread	M8M - M8 Male thread
	G1M - G1/8 Male thread	G1F - G1/8 Female thread
	G2F - G1/4 Female thread	G1M - G1/8 Male thread
	G2M - G1/4 Male thread	G2F - G1/4 Female thread
	G3F - G3/8 Female thread	G2M - G1/4 Male thread
	G3M - G3/8 Male thread	G3F - G3/8 Female thread
		G3M - G3/8 Male thread
		G4F - G1/2 Female thread
		G4M - G1/2 Male thread

Dimensions(mm)

Adapter type	Diagram	Model	G	H	S
Equal-diameter female-female thread		PJT-M5F	M5	11	8
		PJT-M8F	M8	15	10
		PJT-G1F	G1/8	18	12
		PJT-G2F	G1/4	22	16
		PJT-G3F	G3/8	24	19

Adapter type
Diagram
Model
G
M
L_M
L_G
H
D
S

Equal-diameter male-male thread


PJT-M5M

M5

M5

5

5

1.5

8

2.5

PJT-M8M

M8

M8

7

7

1.5

12

3

PJT-G1M

G1/8

G1/8

7

7

1.5

14

4

PJT-G2M

G1/4

G1/4

9

9

2

17

5

PJT-G3M

G3/8

G3/8

10

10

2

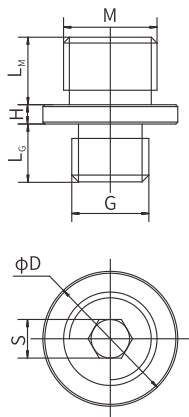
21

5

◇Note: PJT series adapters are equipped with seal ring.

Adapter type
Diagram
Model
G
M
L_M
L_G
H
D
S

Different diameter male-male thread


PJT-M5M-M8M

M5

M8

7

5

1.5

12

2.5

PJT-M8M-G1M

M8

G1/8

7

7

1.5

14

4

PJT-G1M-G2M

G1/8

G1/4

9

7

2

17

5

PJT-G2M-G3M

G1/4

G3/8

10

9

2

21

5

PJT-G3M-G4M

G3/8

G1/2

12

10

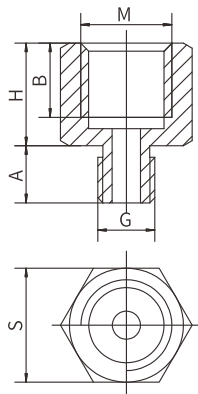
2

24

6

Adapter type
Diagram
Model
G
M
A
B
H
S

Different diameter female-male thread


PJT-M5M-M8F

M5

M8

5

7

9

10

PJT-M8M-G1F

M8

G1/8

7

8

10

12

PJT-G1M-G2F

G1/8

G1/4

7

10

13

16

PJT-G2M-G3F

G1/4

G3/8

9

10

13

19

PJT-G3M-G4F

G3/8

G1/2

10

12

15

24



Features

◇ Match the connection thread of suction cup, a variety of connection and mounting are available.

Applications

◇ Small size and light spring, suitable for electronics industry.

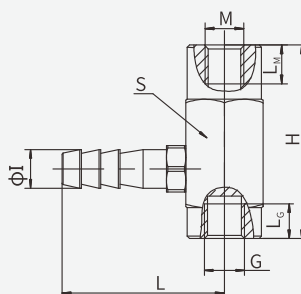
How to order

PJF - L B 6 - M4F - M5F

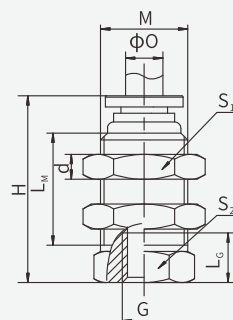
① ② ③ ④ ⑤ ⑥

① Series	② Vacuum port direction	③ Connection	④ Hose
PJF	Nil - Vertical L - Lateral	A - One touch fitting B - Pagoda fitting R1 - Rc1/8	4 - φ4 Hose 6 - φ6 Hose 8 - φ8 Hose
⑤ Mounting thread		⑥ Suction cup connection	
M4F - M4 Female thread	M8M - M8×1 Male thread	M5F - M5 Female thread	M8F - M8 Female thread
M5F - M5 Female thread	M10M - M10×1 Male thread	G1F - G1/8 Female thread	G2F - G1/4 Female thread
M6F - M6 Female thread	M12M - M12×1 Male thread	G3F - G3/8 Female thread	
M8F - M8 Female thread	M14M - M14×1 Male thread		
M10F - M10 Female thread	M16M - M16×1.5 Male thread		

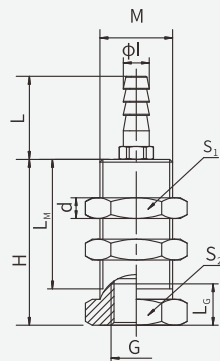
Dimensions(mm)



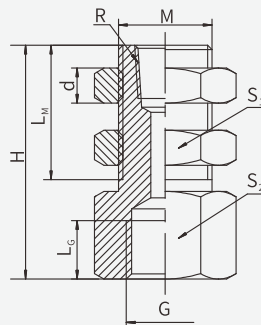
Model	H	G	L _g	M	L _m	S	I	L
PJF-LB6-M4F-M5F	22	M5	6	M4	6	10	5	21
PJF-LB6-M6F-M5F	32	M5	6	M6	8	14	5	23
PJF-LB6-M6F-M8F	32	M8	8	M6	8	14	5	23
PJF-LB6-M8F-G1F	32	G1/8	6	M8	6.5	14	5	23



Model	H	G	L _g	M	L _m	S ₁	S ₂	d	O
PJF-A4-M12M-M5F	27.5	M5	6	M12×1	17.5	14	12	4	4
PJF-A6-M14M-M5F	30	M5	6	M14×1	18	17	14	4	6
PJF-A6-M14M-M8F	30	M8	6	M14×1	18	17	14	4	6
PJF-A6-M14M-G1F	30	G1/8	6	M14×1	18	17	14	4	6
PJF-A8-M16M-G2F	40	G1/4	8	M16×1.5	23	21	17	6	8

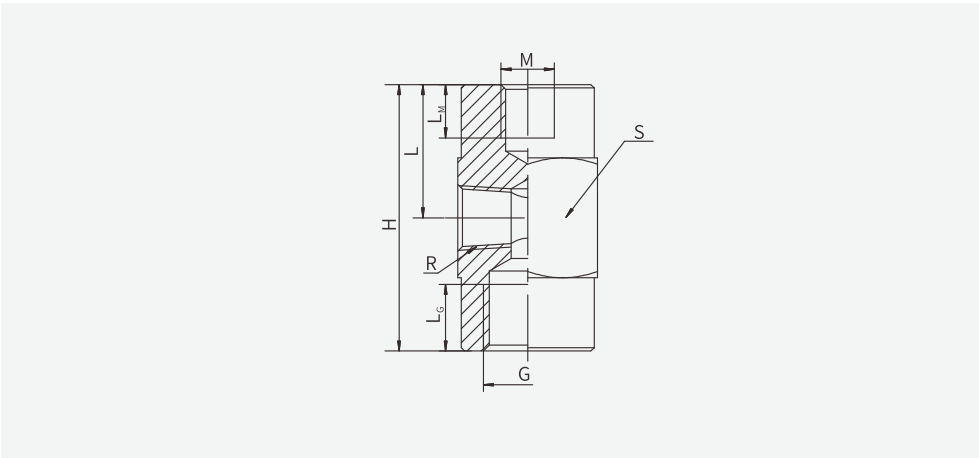
Dimensions(mm)


Model	H	G	L _g	M	L _m	S ₁	S ₂	L	d	l
PJF-B6-M8M-M5F	22	M5	5	M8×1	17	12	12	16	3	5
PJF-B6-M10M-M5F	32	M5	6	M10×1	22	14	14	16	3	5
PJF-B6-M10M-M8F	32	M8	8	M10×1	22	14	14	16	3	5
PJF-B6-M14M-G1F	32	G1/8	8	M14×1	22	17	17	16	4	5



Model	H	G	L _g	M	L _m	S ₁	S ₂	d	R
PJF-R1-M16M-G2F	40	G1/4	10	M16×1.5	23	21	21	6	Rc1/8
PJF-R1-M16M-G3F	40	G3/8	11	M16×1.5	23	21	21	6	Rc1/8

Dimensions(mm)



Model	H	G	L _G	M	L _M	S	L	R
PJF-LR1-M10F-G2F	40	G1/4	10	M10	8	21	20	Rc1/8
PJF-LR1-M10F-G3F	40	G3/8	11	M10	8	21	20	Rc1/8



Features

- ◇ Flexible connection for deflection in any direction with a maximum deflection angle of 12°.
- ◇ High-strength steel with good stability.

How to order

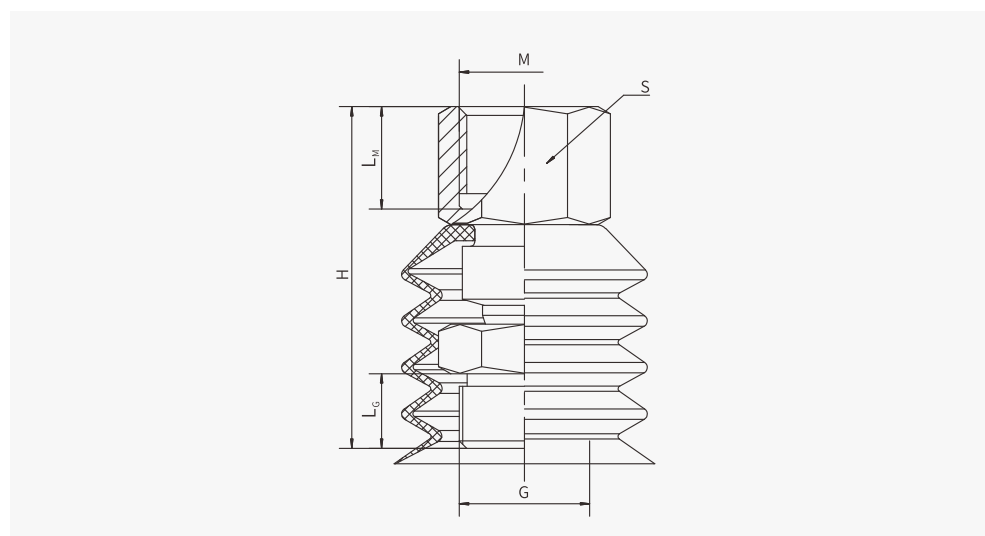
PJB - G4M

①

②

① Series	② Connection thread
PJB	G1M - G1/8 Male thread G4M - G1/2 Male thread

Dimensions(mm)



Model/Size	H	G	L _G	M	L _M	S	Max. deflection	Weight(g)
PJB-G1M	33	G1/8	7	G1/8	8	12	12°	20
PJB-G4M	52	G1/2	12	G1/2	15	24	12°	113



Features

- ◇ Ball clamp structure with adjustable height and angel for workpiece with irregular surface.
- ◇ Made of high-strength aluminum alloy and light duty.

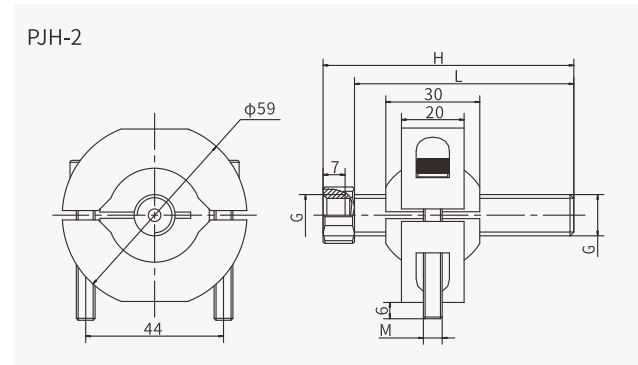
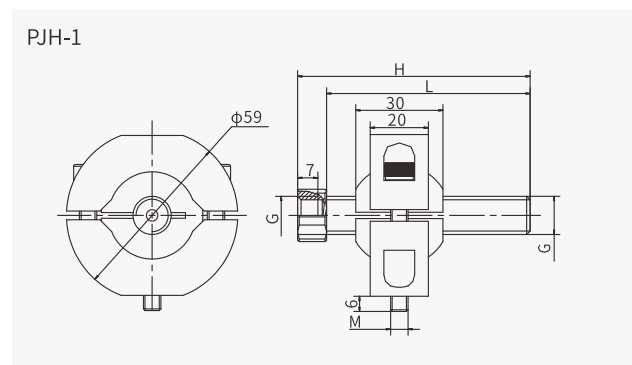
How to order

PJH - 1 A - 80

① ② ③ ④

① Series	② Mounting thread	③ Connection thread	④ Length of connecting rod
PJH	1 - 1×M5 Fixed screw 2 - 2×M6 Fixed screw	A - G1/4 B - G3/8	80 - 80mm 100 - 100mm 140 - 140mm 200 - 200mm

Dimensions(mm)



Model	G	M	H	L	Max. deflection
PJH-1A-80	G1/4	M5	80	70	15°
PJH-1A-100			100	90	
PJH-1A-140			140	130	
PJH-1A-200			200	190	
PJH-1B-80	G3/8	M5	80	70	15°
PJH-1B-100			100	90	
PJH-1B-140			140	130	
PJH-1B-200			200	190	

Model	G	M	H	L	Max. deflection
PJH-2A-80	G1/4	2-M6	80	70	15°
PJH-2A-100			100	90	
PJH-2A-140			140	130	
PJH-2A-200			200	190	
PJH-2B-80	G3/8	2-M6	80	70	15°
PJH-2B-100			100	90	
PJH-2B-140			140	130	
PJH-2B-200			200	190	



G Vacuum Accessories

286 ZFA Series

292 AZFC Series

295 ZFB Series

297 ZFL Series

299 ZFP Series

301 ZVAB Series

302 ZVAC Series

303 ZVAA Series

304 ZVEA Series

305 ZVEV Series

306 ZVR Series

308 ZVT Series

311 ZPDA Series

316 ZPDB Series

319 ZCE Series

321 ZSA Series

322 ZPMR Series



Features

- ◇ Straight through design, one-touch fitting, with bracket, easy assemble.
- ◇ Small size and light weight.
- ◇ The housing is transparent with arrows on it indicating the direction of the airflow.
- ◇ Transparent housing , easy to indicate degree of contamination.
- ◇ Filter element is replaceble.
- ◇ Suitable for vacuum or positive pressure system.

Applications

- ◇ Suitable for vacuum system and positive pressure with light or medium dirt level.

How to order

ZFA 5 4 U
 ① ② ③ ④

① Series	② Filter area	③ Hose diameter	④ Bracket
ZFA	5 - Filter area 790mm ² 7 - Filter area 1280mm ²	4 - Φ4 Hose 6 - Φ6 Hose 8 - Φ8 Hose 10 - Φ10 Hose 12 - Φ12 Hose	U - Standard, with bracket

Selection

Model	Hose diameter					Bracket
	4	6	8	10	12	
ZFA5	●	●	—	—	—	●
ZFA7	—	●	●	●	●	●

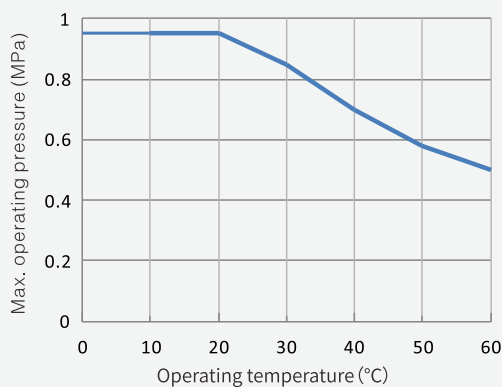
◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

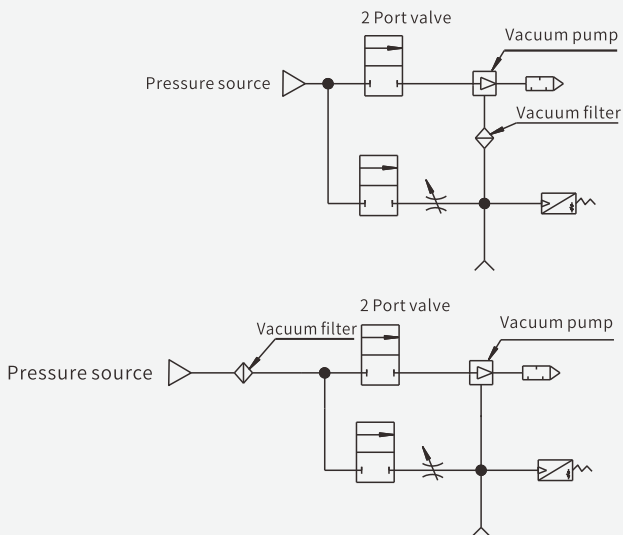
Model	Applicable hose dia. (mm)	Fluid	Rated operating pressure range	Max pressure resistance	Positive pressure flow (L/min)	Vacuum flow (L/min)	Ambient and fluid temperature (°C)	Removal efficiency (μm)
ZFA54U	Φ4	Air, Nitrogen	-0.1~1.0MPa	1.2MPa	10	10	0~60	5
ZFA56U	Φ6				130	75		
ZFA76U	Φ6				140	80		
ZFA78U	Φ8				280	110		
ZFA710U	Φ10				320	120		
ZFA712U	Φ12				370	140		

◇Note: Positive pressure flow is tested at air supply pressure 0.1MPa.

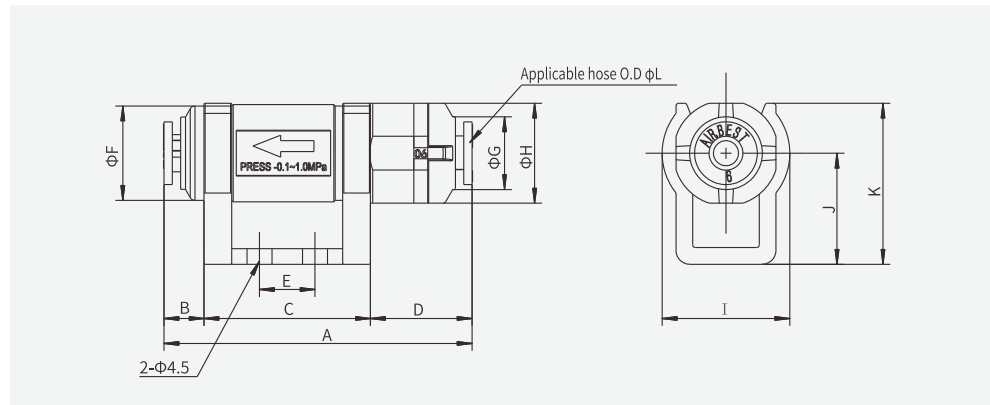
Max. operating pressure and temperature



Application diagram



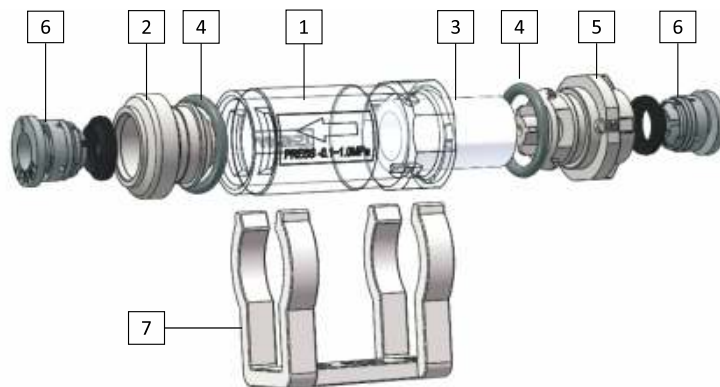
Dimensions (mm)



Model/Size	A	B	C	D	E	F	G	H	I	J	K	L
ZFA54U	55.5	8	30	10	10	17	13	19	23	20	29	4
ZFA56U	55.5	8	30	10	10	17	13	19	23	20	29	6
ZFA76U	67	10.5	34	12	14	21.5	15.5	23	29	24	35	6
ZFA78U	69.5	12	34	13	14	21.5	16	23	29	24	35	8
ZFA710U	78.5	17	34	18	14	21.5	19.5	23	29	24	35	10
ZFA712U	78.5	17	34	18	14	21.5	21	23	29	24	35	12

Structural diagram

Components



No.	Item	Material	Q'ty
1	Housing	PC	1
2	Rear cap	PBT	1
3	Filter element	PE	1
4	O-ring	NBR	2
5	Front cap	PBT	1
6	One-touch fitting	—	2
7	Bracket	PBT	1

Repair kits



Tool

Tool model	Applicable vacuum filter
ZFA5-SP	ZFA54, 56
ZFA7-SP	ZFA76, 78, 710, 712



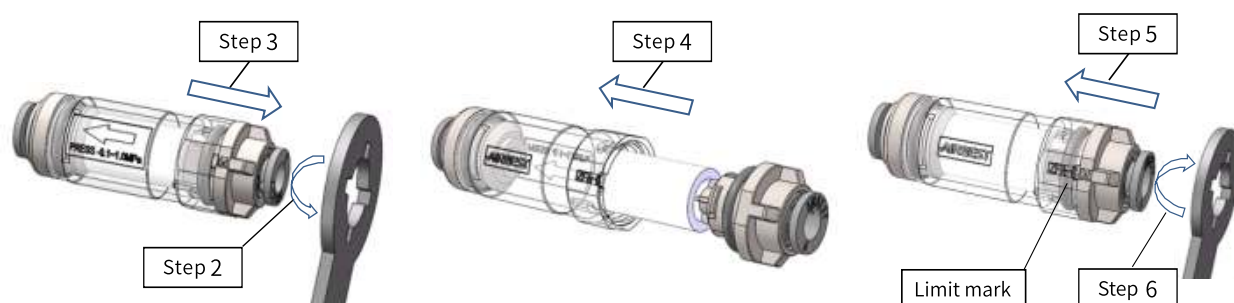
Filter element

Filter element model	Dimension	Applicable vacuum filter
ZFA5-FE	8x12xL20	ZFA54, 56
ZFA7-FE	12x16xL25	ZFA76, 78, 710, 712

Filter element replacement

Steps:

1. Stop supplying air and reduce the pressure in the vacuum filter to atmospheric pressure.
2. Put tool on the front cap and turn it 90° anti-clockwise.
3. Pull out the front cap, remove the filter element, and if there is dust inside the housing, clean it with an air gun (make sure that it does not damage the O-ring).
4. Install new filter element on the front cap and insert it into the housing.
5. Align the side without number of front cap at the limit mark, and push it until touching the housing.
6. Rotate clockwise with the tool until it stops (align the number at the limit mark).



Cautions:

1. When connecting the hose, check the arrow indicating the flow direction. If reverse connecting, airtightness of the filter element cannot be ensured.
2. In one air line, positive and negative pressure should not be used at the same time.
3. Please make sure not to damage the O-ring during assembling and disassembling. And please confirm that there is no air leakage after the filter element is replaced.
4. The vacuum filter and hose shall not withstand external force such as torsion, pull, load, vibration, impact, etc., and external force may cause danger at high positive pressure.
5. There is anti-rotating structure at the limit mark. After replacing the filter element, please confirm the position of the limit mark.
6. Please use vacuum filter at rated working pressure.
7. Compressed air operation may cause danger. Therefore, filter replacement and other maintenance should be operated by a person who has sufficient knowledge and experience in air mechanics while complying with product specifications.



Features

- ◇ Straight through design, one-touch fitting, with bracket, easy assemble.
- ◇ Small size and light weight.
- ◇ Transparent housing , easy to indicate the degree of contamination.
- ◇ Filter element is replaceable.

Applications

- ◇ Suitable for vacuum system and positive pressure with light or medium dirt level.

How to order

ZFA 50 - 04 U

① ② ③ ④

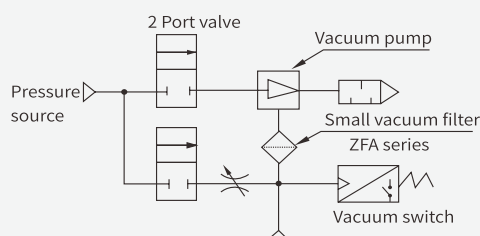
① Series	② Filter area	③ Hose diameter	④ Bracket
ZFA	50 - Max 10NL/min	02 - ϕ 2 Hose 03 - ϕ 3.2 Hose 04 - ϕ 4 Hose	U - Standard, with bracket

Technical parameters

Model	Applicable hose O.D.(mm)	Nominal flow (NL/min)	Fluid	Operating pressure (kPa)	Removal efficiency (μ m)	Ambient and fluid temperature($^{\circ}$ C)	Element differential pressure resistance (bar)	Applicable hose material
ZFA50-02	ϕ 2	2	Air Nitrogen	-100~0	10	0~60	1.5	Nylon PU
ZFA50-03	ϕ 3.2	7						
ZFA50-04	ϕ 4	10						

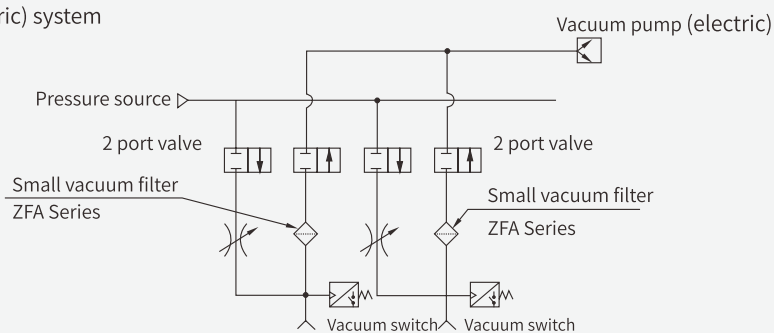
Applications

Application of vacuum pump system

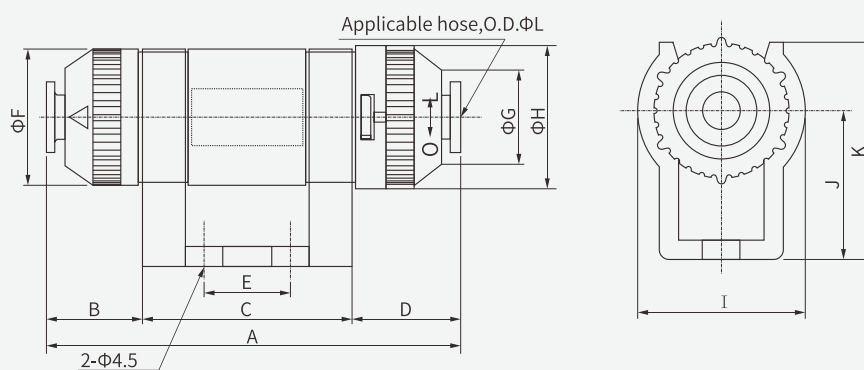


Applications

Application of vacuum pump(electric) system



Dimensions(mm)



Model/ Size	A	B	C	D	E	F	G	H	I	J	K	L
ZFA50-02U	45	13	33	13	25	10	6	10.5	11.5	8.5	12.8	2
ZFA50-03U	60.5	11.5	33	11.5	25	10	—	10.5	11.5	8.5	12.8	3.2
ZFA50-04U	60.5	12.8	33	12.8	25	10	—	10.5	11.5	8.5	12.8	4

Repair kits



Model of filter element

Applicable vacuum filter

ZFA50-FE

ZFA50-02, 50-03, 50-04



Features

- ◇ Straight through design, one touch fitting and with bracket, easy installation .
- ◇ Small size and light weight.
- ◇ Transparent housing, easy to indicate degree of contamination.
- ◇ Filter element is replaceable.

Application

- ◇ Suitable for vacuum system with light or medium dirt level.

How to order

AZFC 100 04 U

① ② ③ ④

① Series	② Vacuum flow	③ Hose outer dia.	④ Bracket
AZFC	100 - Max 20NL/min 200 - Max 50NL/min	04 - φ4 Hose 06 - φ6 Hose 08 - φ8 Hose	U - Standard, with bracket

Selection

Model	Size	Hose outer dia.			Bracket U
		04	06	08	
AZFC	100	●	●	—	●
	200	—	●	●	●

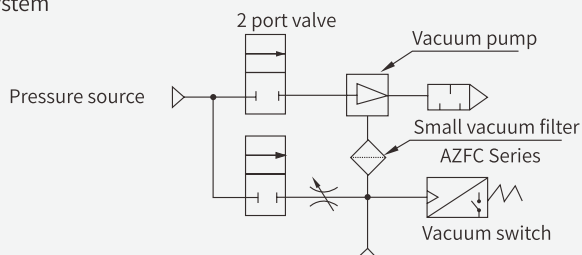
◇Note: "●"- standard, in stock. "○"-selective,no stock."—"-unavailable.

Technical parameters

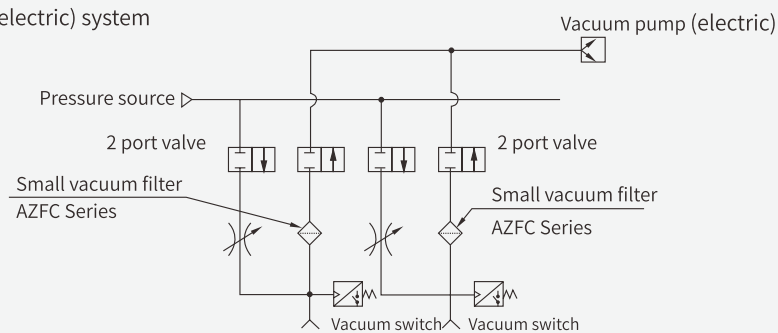
Model	Applicable hose O.D.(mm)	Nominal flow (NL/min)	Fluid	Operating pressure (kPa)	Removal efficiency (μm)	Ambient and fluid temperature(°C)	Element differential pressure resistance (bar)	Applicable hose material
AZFC100-04	φ4	10	Air Nitrogen	-100~0	10	0~60	1.5	Nylon PU
AZFC100-06	φ6	20						
AZFC200-06	φ6	30						
AZFC200-08	φ8	50						

Applications

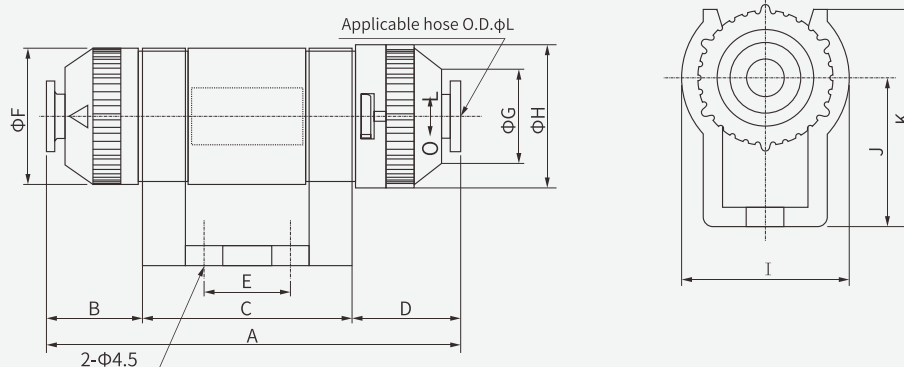
Application of vacuum pump system



Application of vacuum pump(electric) system



Dimensions (mm)



Model/ Size	A	B	C	D	E	F	G	H	I	J	K	L
AZFC100-04U	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	4
AZFC100-06U	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	6
AZFC200-06U	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	6
AZFC200-08U	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	8

Repair kits



Filter element

Model	Applicable vacuum filter
AZFC100-FE	AZFC100-04, 100-06
AZFC200-FE	AZFC200-06, 200-08

Vacuum Accessories

ZFA
ZFAC
ZFB
ZFL
ZFP
ZVAB
ZVAC
ZVAA
ZVEA
ZVEV
ZVR
ZVT
ZPDA
ZPDB
ZCE
ZSA
ZPMR



UNIVERSAL


 COMPOSITE
MATERIAL

 METAL
SHEET


WOOD



PACKAGING



Features

- ◇ Filter dust and other particles from the vacuum flow.
- ◇ Transparent housing, easy to indicate the degree of contamination.
- ◇ Filter element is replaceable.
- ◇ Reduces the risk of operation breakdown or stoppage in the vacuum pump.
- ◇ Various nominal flow rate for option.

Application

- ◇ Suitable for vacuum system with light or medium dirt level.
- ◇ Ideal for using as prefilters, and fine filters for air with varying degrees of contamination

How to order

ZFB 15 U

① ② ③

① Series	② Connection thread	③ Bracket	Material of filter element
ZFB	10 - G3/8 Female thread 15 - G1/2 Female thread 20 - G3/4 Female thread 25 - G1" Female thread 40 - G1 1/2 Female thread	U - Standard, with bracket	PE, Removal efficiency 10μm

Selection

Model	Filter element	Bracket
ZFB10	●	●
ZFB15	●	●
ZFB20	●	●
ZFB25	●	●
ZFB40	●	●

◇Note: "●"- standard, in stock.

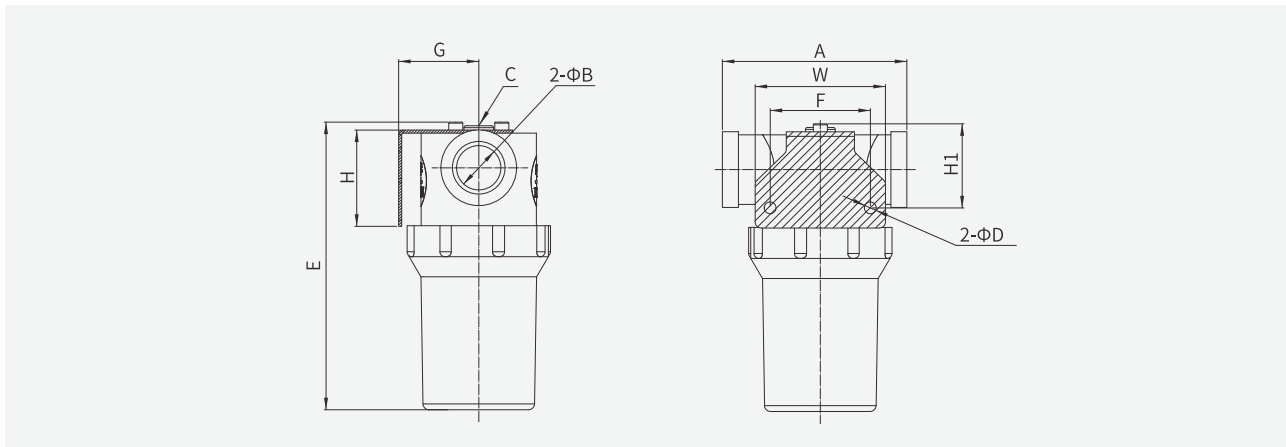
AIRBEST ZFB Series

Vacuum Filter

Technical parameters

Model	Operating pressure (kPa)	Material	Temperature (°C)	Removal efficiency (μm)	Nominal flow NL/min	Internal volume (cm ³)	Filter area (m ²)	Weight (g)
ZFB10	-100~0	PA	-20~80	10(PE)	150	45	0.003	70
ZFB15		PC			900	195	0.010	168
ZFB20		PE			900	205	0.010	170
ZFB25					2,520	495	0.019	424
ZFB40					5,100	675	0.023	550

Dimensions (mm)



Model/ Size	A	B	C	D	E	F	G	H	H1	W
ZFB10	76.5	2-G3/8	NPSF1/8	6	74.5	50	40	48	43.5	65
ZFB15	91.5	2-G1/2	NPSF1/8	6	134.5	50	40	48	43.5	65
ZFB20	92	2-G3/4	NPSF1/8	6	143.5	50	40	48	43.5	65
ZFB25	127	2-G1"	NPSF1/8	6	169.5	70	56	52	48	85
ZFB40	127	2-G1"1/2	NPSF1/8	6	212.5	70	56	52	48	85

Repair kits



Filter element

Model	Applicable vacuum filter
ZFB10-FE	ZFB10
ZFB20-FE	ZFB15, 20
ZFB25-FE	ZFB25
ZFB40-FE	ZFB40



UNIVERSAL



COMPOSITE
MATERIAL



METAL
SHEET



WOOD



Features

- ◇ Filter dust and other small particles from the entry port.
- ◇ Transparent housing, easy to indicate degree of contamination.
- ◇ It can be connected directly to the vacuum port of vacuum pump, such as ABM and ABX, etc.
- ◇ Inline vacuum filter has compact structure and small size, economic and environmental protective.

Application

- ◇ Suitable for vacuum system with light or medium dirt level.

How to order

ZFL 06

①

②

① Series

ZFL

② Port Size

06 - $\phi 6$ hose (Direct-insert type)

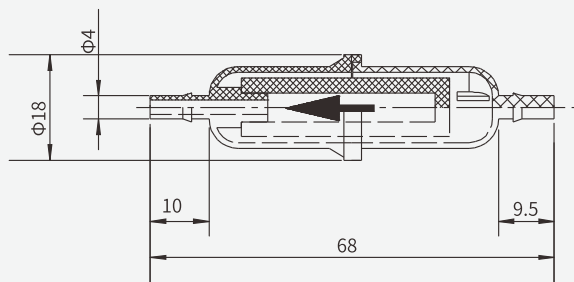
10 - G3/8 Male thread

Technical parameters

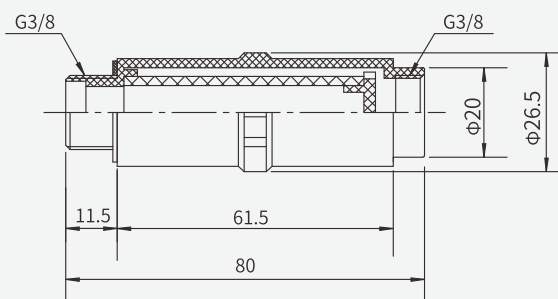
Model	Operating pressure (kPa)	Material	Temperature (°C)	Removal efficiency (μm)	Nominal flow (NL/min)	Internal volume (cm^3)	Weight (g)
ZFL06	- 100~0	PP	0-80	20-25	25	4	3.5
ZFL10		PE			220	20	13

Dimensions (mm)

ZFL06



ZFL10



ZFA

ZFB

ZFL

ZFP

ZVAB

ZVAC

ZVAA

ZVEA

ZVEV

ZVR

ZVT

ZPDA

ZPDB

ZCE

ZSA

ZPMR



Features

- ◇ It can effectively prevent solid particles or dust from being sucked into the vacuum pump or system, reduce wear, improve operation reliability, extend the lifetime of vacuum pump, and also effectively protect components of vacuum system (such as vacuum valve, vacuum gauge, etc.).
- ◇ Consist of a steel housing and a lid with quick locking clips. Rugged all steel construction for heavy duty applications. Quickly exchangeable filter element. Large dirt holding capacity and easy cleaning. High filtration precision up to 99% (10µm particles), and the gas temperature is -15~90°C.
- ◇ Various nominal flow rate for option.

Application

- ◇ Suitable for dusty environments, removal efficiency reaches 99%.
- ◇ Effectively filters incoming air and protects vacuum generating devices (such as vacuum pumps and blowers).

How to order

ZFP 30

①

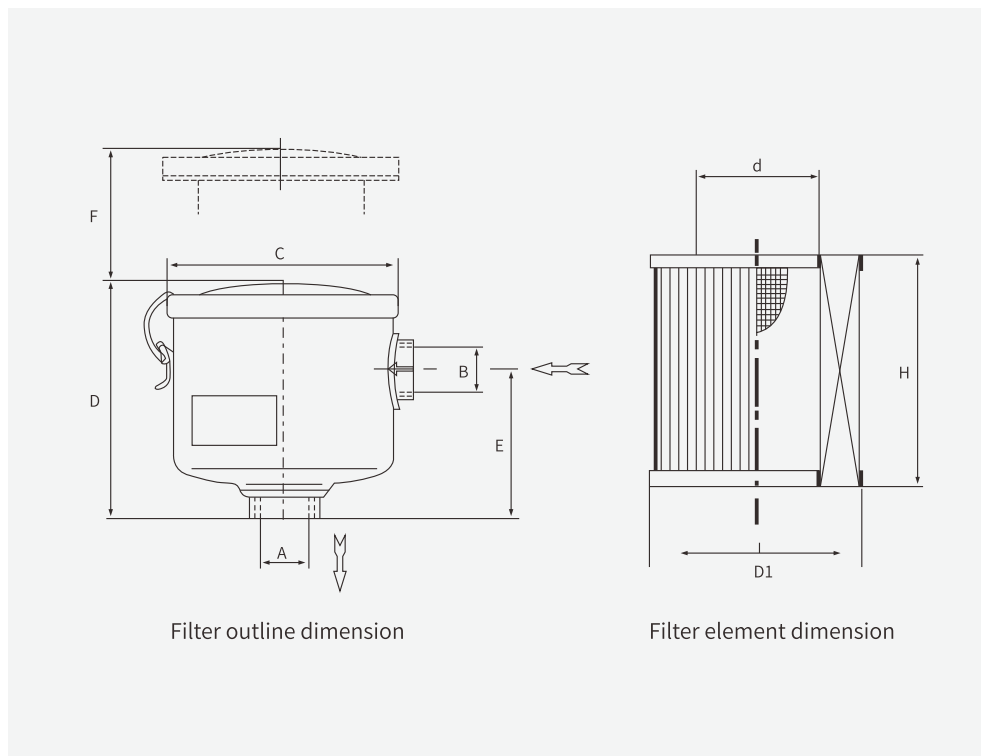
②

① Series	② Nominal flow
ZFP	30 - 32m ³ /h 40 - 42m ³ /h 100 - 100m ³ /h 120 - 120m ³ /h 300 - 300m ³ /h

Technical parameters

Model	Material	Temperature range (°C)	Removal efficiency (µm)	Weight (kg)	Nominal flow (m ³ /h)
ZFP30	Aluminum alloy	-15~90	10	1	32
ZFP40				1	42
ZFP100				1.4	100
ZFP120				2.3	120
ZFP300				6.9	300

Dimensions (mm)



Model/ Size	A	B	C	D	E	F	D1	d	H
ZFP30	G1/2	G1/2	101	90	53	70	65	38	69
ZFP40	G3/4	G3/4	101	90	53	70	65	38	69
ZFP100	G1"1/4	G1"1/4	146	110	70	75	98	60	70
ZFP120	G1"1/4	G1"1/4	185	170	115	130	128	64	125
ZFP300	G2"	G2"	222	258	125	240	150	88	222

Repair kits

Filter element

Model	Applicable vacuum filter
ZFP30-FE	ZFP30, 40
ZFP100-FE	ZFP100
ZFP120-FE	ZFP120
ZFP300-FE	ZFP300



Features

- ◇ Converts vacuum signal into pneumatic signal
- ◇ Different vacuum ranges are set by adjusting the screws on the valve.
- ◇ There are 2 different functional valves for option: normally open valve and normally closed valve.

How to order

ZVAB - NC

①

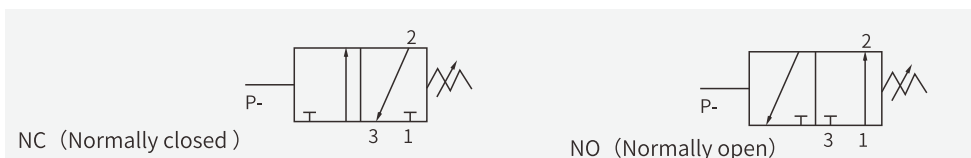
②

① Series	② Function	Connection thread
ZVAB	NC - Normally closed NO - Normally open	Standard, G1/8 male thread

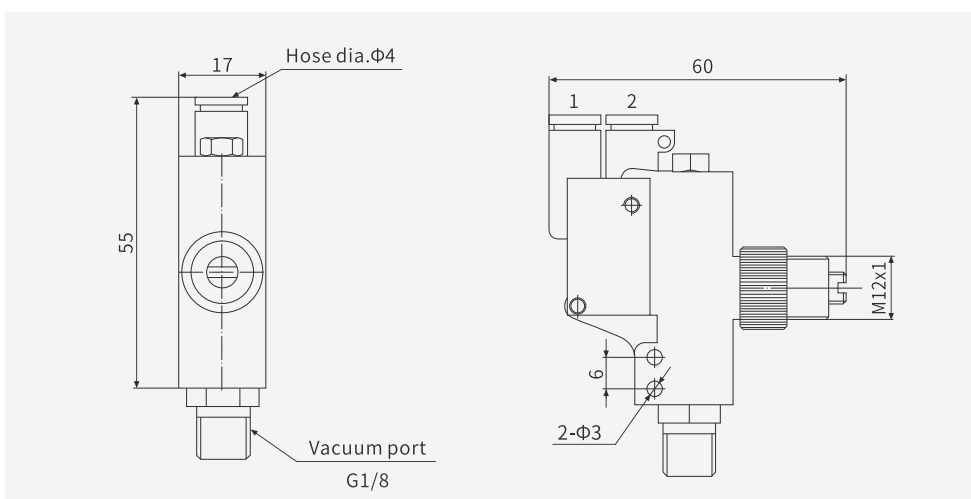
Technical parameters

Model	Out-put function	Pressure (bar)	Signal range (-kPa)	Hysteresis (-kPa)	Temperature (°C)	Weight (g)
ZVAB-NC	NC	1.5-8	15-95	12	-10~60	44
ZVAB-NO	NO	1.5-8	10-95	3		

Symbol



Dimensions (mm)





Features

- ◇ It works together with ZVAB-NC.
- ◇ ZVAB-NC provides an air control signal to realize the opening and closing of the control valve and save energy.

How to order

ZVAC - NO

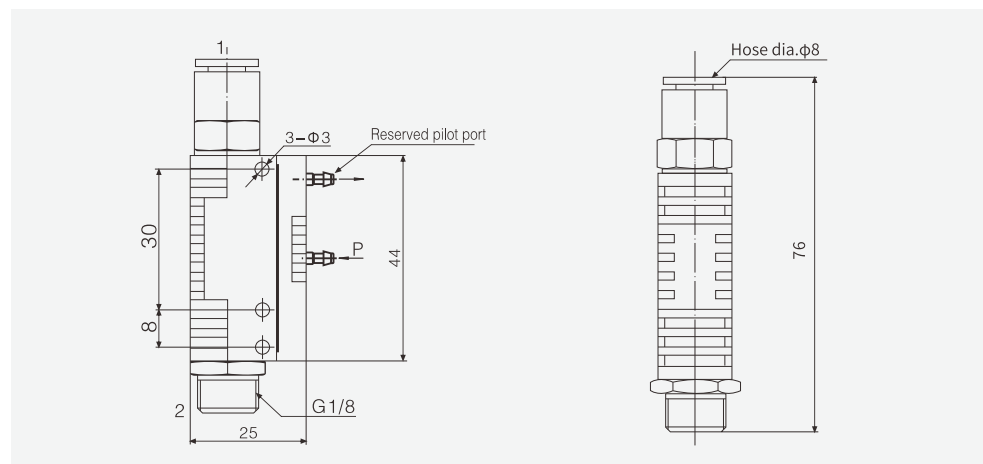
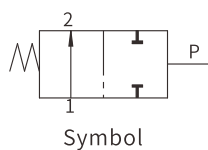
① ②

① Series	② Function	Connection thread
ZVAC	NO - Normally open	Standard, G1/8 male thread

Technical parameters

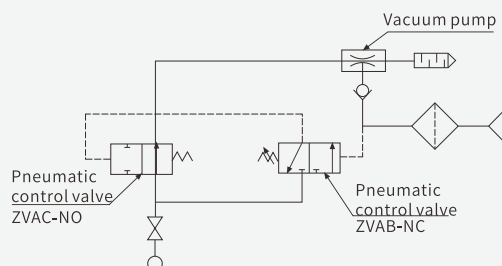
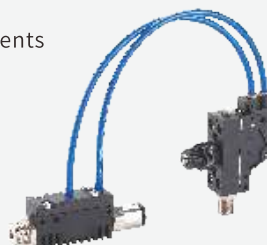
Air supply pressure (bar)	Operating temperature (°C)	Control mode	Action mode	Weight(g)
1-8	0-60	Pneumatic control	NO	55

Dimensions (mm)



Energy-saving system

ZVU-ES
Components





Features

- ◇ 2 position 2 port reversing valve (normally open) with G1/8 and G1/4 air entry ports returns the air signal through the vacuum switch to realize the air supply opening and closing and energy saving.
- ◇ The small valve can control a large flow of compressed air.

How to order

ZVAA - G1F

①

②

① Series

ZVAA

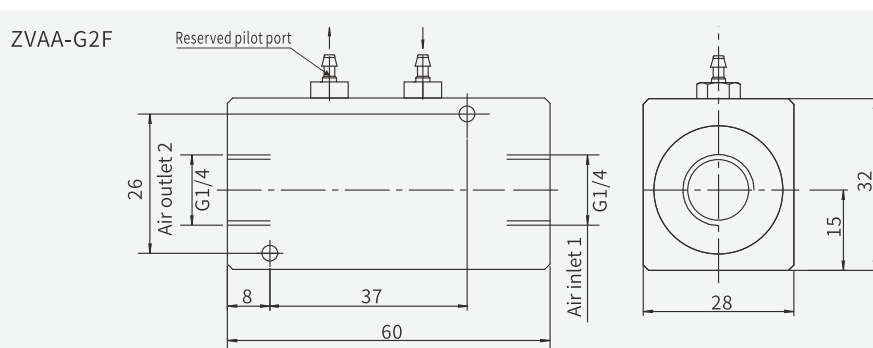
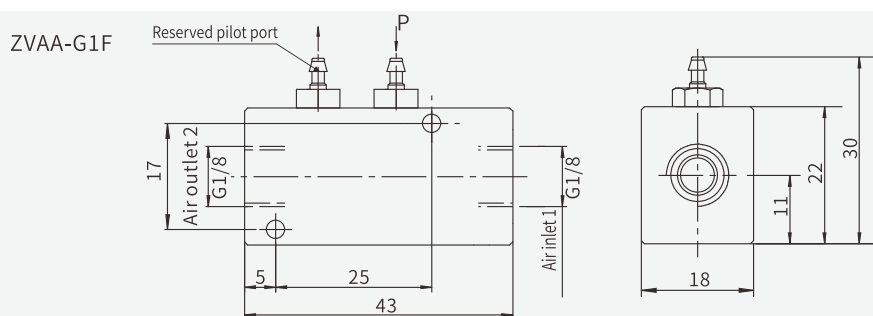
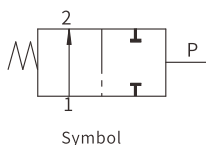
② Connection thread

G1F - G1/8 Female thread
G2F - G1/4 Female thread

Technical parameters

Air supply pressure (bar)	Output function	Ambient temperature (°C)	Material
3.5-7	NO(Normally open)	0-60°C	Aluminum alloy

Dimensions (mm)





Features

- ◇ The small valve (normally closed) can remote control compressed air with large flow, and supply compressed air when the current is switched.

How to order

ZVEA - G1F

①

②

① Series

ZVEA

② Connection thread

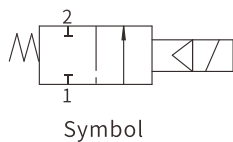
G1F - G1/8 Female thread

G2F - G1/4 Female thread

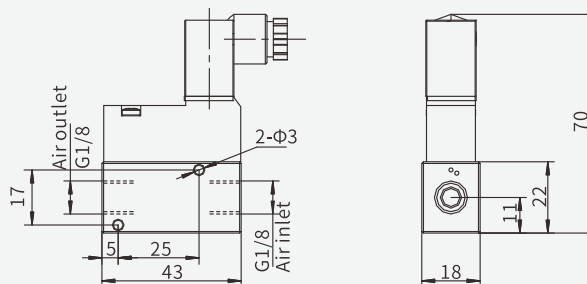
Technical parameters

Air supply pressure (bar)	Output function	Material	Operating temperature (°C)	Operating voltage (V)	Current consumption (W)
3.5-7	NC (Normally closed)	Aluminum alloy	0-60°C	DC24	0.85

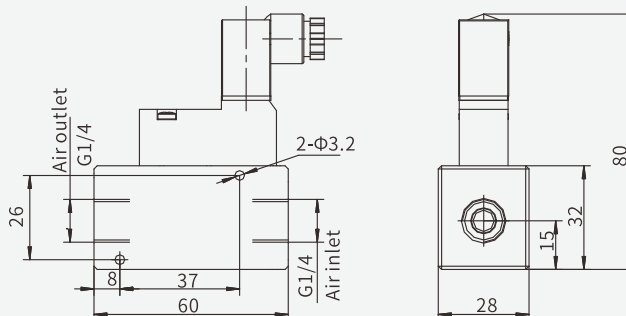
Dimensions (mm)



ZVEA-G1F



ZVEA-G2F





Features

- ◇ It is a direct operated, two-position, three port solenoid valve. Which is especially designed for vacuum system, normally closed.
- ◇ The base of valve is made of aluminum alloy, sturdy and durable.
- ◇ Short response time and high action frequency.

How to order

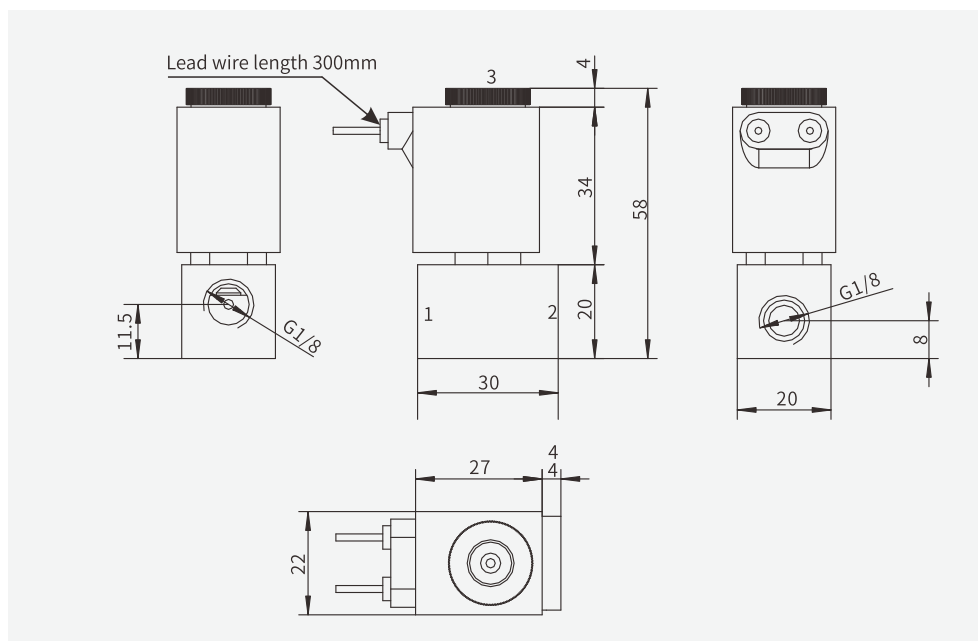
ZVEV - G1F

① Series	② Connection thread	Standard rated voltage
ZVEV	G1F - G1/8 Female thread	DC24V

Technical parameters

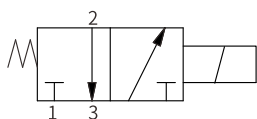
Pressure range (kPa)	Response time (ms)	Output function	Flow (NL/min)	Wire lead-out type	Power consumption (W)	Ambient temperature(°C)	Impact and vibration resistance(m/s ²)
-100~0	10	NC (Normally closed)	52	Direct lead -out type 300mm	3.5	0-50	30/50

Dimensions (mm)



Air line connection diagram

- 1=Vacuum device
2=Suction cup
3=Ventilation





Features

- ◇ In the process of grabbing workpiece, it will not affect the whole vacuum system once suction cups do not suck the workpiece or the workpiece falls off after absorption.
- ◇ In above condition, the suction cups are isolated from vacuum system to make sure that the vacuum level and vacuum flow in the whole vacuum system are maintained. It is specific for gripping workpieces with varying sizes and shaped in a vacuum system.

How to order

ZVR 05 - G1M

① ② ③

① Series	② Over flow port diameter	③ Suction cup connection thread	
ZVR	04 - $\phi 0.4\text{mm}$	M5F - M5 Female thread	M5M - M5 Male thread
	05 - $\phi 0.5\text{mm}$	G1F - G1/8 Female thread	G1M - G1/8 Male thread
	06 - $\phi 0.6\text{mm}$	G2F - G1/4 Female thread	G2M - G1/4 Male thread
	10 - $\phi 1.0\text{mm}$	G3F - G3/8 Female thread	G3M - G3/8 Male thread
	12 - $\phi 1.2\text{mm}$	G4F - G1/2 Female thread	G4M - G1/2 Male thread

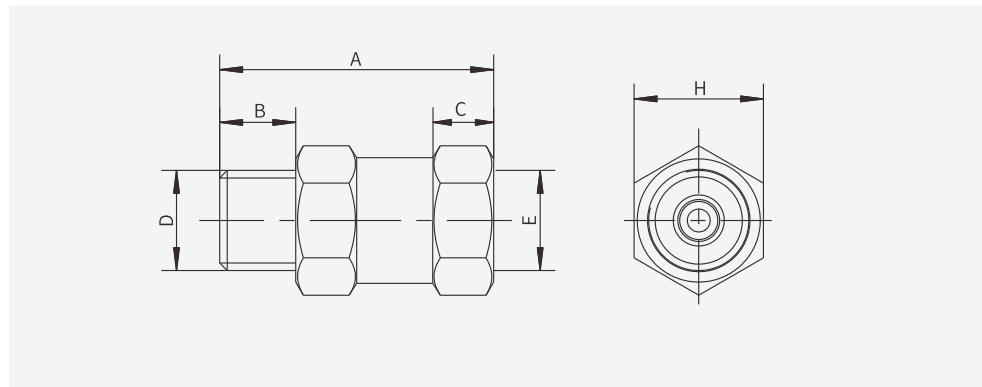
Selection

Model/ Connection thread	M5		G1		G2		G3		G4	
	M	F	M	F	M	F	M	F	M	F
ZVR04	●	●	—	—	—	—	—	—	—	—
ZVR05	—	—	●	●	—	—	—	—	—	—
ZVR06	—	—	—	—	●	●	—	—	—	—
ZVR10	—	—	—	—	—	—	●	●	—	—
ZVR12	—	—	—	—	—	—	—	—	●	●

◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

Model	Suction flow at -30kPa (NL/min)	Suction flow at -60kPa (NL/min)	Max.blow flow (NL/min)
ZVR04-M5	1.2	1.3	80
ZVR05-G1	2.3	2.5	310
ZVR06-G2	2.9	3.4	340
ZVR10-G3	7.3	8	590
ZVR12-G4	8.1	9	790

Dimensions (mm)


Model/ Size	A	B	C	D	E	H
ZVR04-M5	20	4.5	4.5	M5	M5	8
ZVR05-G1	28	8	8	G1/8	G1/8	14
ZVR06-G2	36	10	11	G1/4	G1/4	17
ZVR10-G3	39	10	12	G3/8	G3/8	22
ZVR12-G4	41	12	14	G1/2	G1/2	27



Features

- ◇ Compact size, simple structure, suitable for vacuum handling system in narrow space.
- ◇ For suction cup circuit which does not cover the working surface, it can reduce vacuum leakage efficiently and ensure the stability of the system.

How to order

ZVT 60 - G1M

① Series	② Port diameter	③ Connection thread
ZVT	25 - Φ 0.25	100 - Φ 1.0
	40 - Φ 0.4	120 - Φ 1.2
	60 - Φ 0.6	150 - Φ 1.5
	80 - Φ 0.8	200 - Φ 2.0
		G1M - G1/8 Male thread G2M - G1/4 Male thread

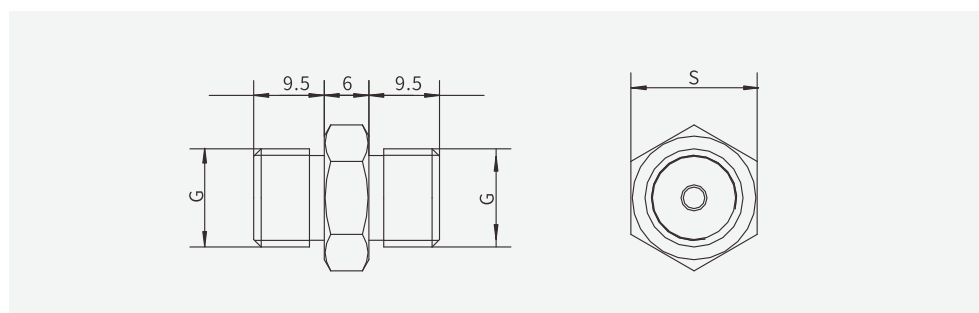
Selection

Model/Connection thread	G1M	G2M
ZVT25	●	—
ZVT40	●	●
ZVT60	●	●
ZVT80	●	●
ZVT100	●	●
ZVT120	●	●
ZVT150	—	●
ZVT200	—	●

◇Note: "●"- standard, in stock. "—" -unavailable.

Technical parameters

Model	Vacuum flow (NL/min) -30kPa	Vacuum flow (NL/min) -60kPa	Weight (g)	
			G1M	G2M
ZVT25	0.2	0.3	6	—
ZVT40	1	1.3	6	8
ZVT60	3.1	3.2	6	8
ZVT80	5	5.2	6	8
ZVT100	7.7	8.5	6	8
ZVT120	12.5	12.8	6	8
ZVT150	22.2	23.5	—	8
ZVT200	34	36.5	—	8

Dimensions (mm)


Model	G	S
ZVT-G1M	G1/8	14
ZVT-G2M	G1/4	17



Features

- ◇ Compact size and light weight, it can directly connected to air supply port or vacuum port.
- ◇ The square design is more suitable for panel mounting, and a variety of mounting brackets and panels are available.
- ◇ Used for condition monitoring of the vacuum system, optimizing the duty cycle and adjusting the system loop.

How to order

ZPDA - C NV - G1M - AB

①

②

③

④

⑤

① Series

ZPDA

② Pressure range

C - Compound
V - Vacuum
P - Positive

③ Output specification

NV - 2NPN+1 Analog(Voltage) output (1-5V)
NA - 2NPN+1 Analog(Current) output (4-20mA)
PV - 2PNP+1 Analog(Voltage) output (1-5V)
PA - 2PNP+1 Analog(Current) output (4-20mA)

④ Connection thread

R1M - R1/8 Male thread, M5 Female thread
G1M - G1/8 Male thread, M5 Female thread

⑤ Accessories

Nil - Without accessory
AB - A type mounting bracket
BB - B type mounting bracket
PS - Panel adapter
PC - Panel adapter+front protective lid

Selection

Model	Output specification				Connection thread	
	NV	NA	PV	PA	R1M	G1M
ZPDA-C	●	○	●	○	●	○
ZPDA-V	●	○	●	○	●	○
ZPDA-P	○	○	○	○	○	○

◇Note: "●"- standard, in stock. "○"-selective, no stock.

Technical parameters

Model		ZPDA-C (Compound)	ZPDA-V (Vacuum)	ZPDA-P (Positive)
Rated pressure range		-100.0 ~ 100.0 kPa	-101.3 ~ 0.0 kPa	0.0 ~ 1.000 MPa
Setting pressure range		-101.0 ~ 101.0 kPa	-101.3 ~ 10.0 kPa	-0.100 ~ 1.000 MPa
Withstand pressure		300 kPa		1.5 MPa
Fluid		Air,Non-corrosive/Non-flammable gas		
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		—
Power supply voltage		12 ~24V DC±10%Ripple(P-P)10% or less		
Currnet consumption		≦40mA (Without load)		
Switch output		NPN:open collector 2 outputs Max.loadc current: 125mA Max.supply voltage: 30VDC Residual voltage: ≦1.5V(load current 125mA)		PNP:open collector 2 outputs Max.loadc current: 125mA Max.supply voltage: 24VDC Residual voltage: ≦1.5V(load current 125mA)
Repeatability (Switch output)		±0.2% F.S.±1digit or less		
Hysteresis	One point set mode	Adjustable(*1)		
	Hystersis mode			
	Window comparator mode			
Response time		≦2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms selectable)		
Output short circuit protection		Yes		
7 segment LCD display		Three colors (Red / Green / Orange) main&unit display,orange sub-display(Sampling rate:5times/1sec.)		
Indicator accuracy		≦±2% F.S.±1digit (ambient temperature:25±3℃)		
Switch ON indicator		Orange1&2 Indicator		
Analog output (Voltage Output)(*2)		Output Voltage: 1~5V≦±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	Enclosure	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		R1M:R1/8 male thread,M5; G1M:G1/8 male thread,M5		
Lead wire		Oil-resistance cable(0.15mm2)		
Weight		Approx*80g (with2-meter lead wire)		

NOTE: *1: Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

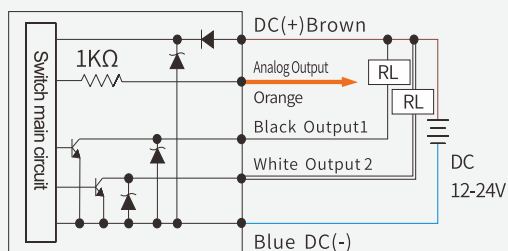
*2: If analog voltage output is selected, the analog current output cannot be selected at the same time.

*3: If analog current output is selected, the analog voltage output cannot be selected at the same time.

Output circuit wiring diagrams

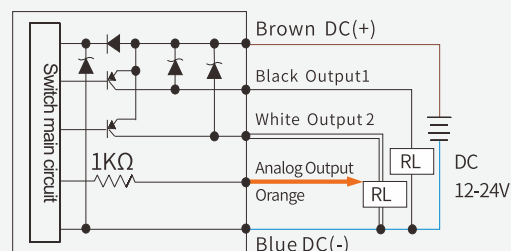
ZPDA-NV

2 NPN+Analog Voltage output(1~5V)



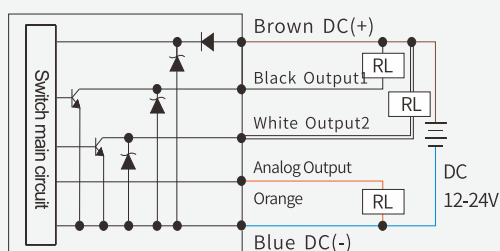
ZPDA-PV

2 PNP+Analog Voltage output(1~5V)



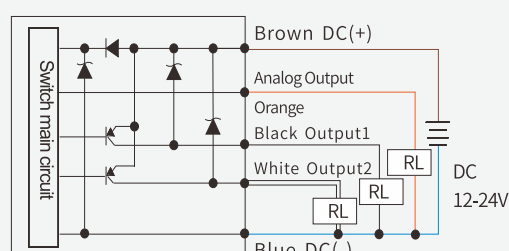
ZPDA-NA

2 NPN+Analog Current output(4~20mA)

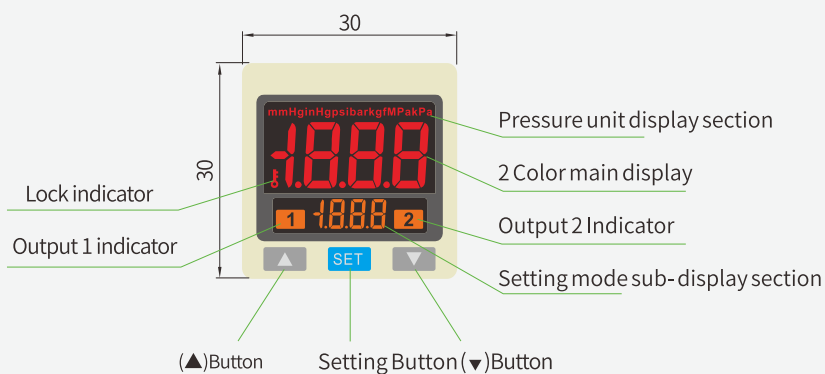


ZPDA-PA

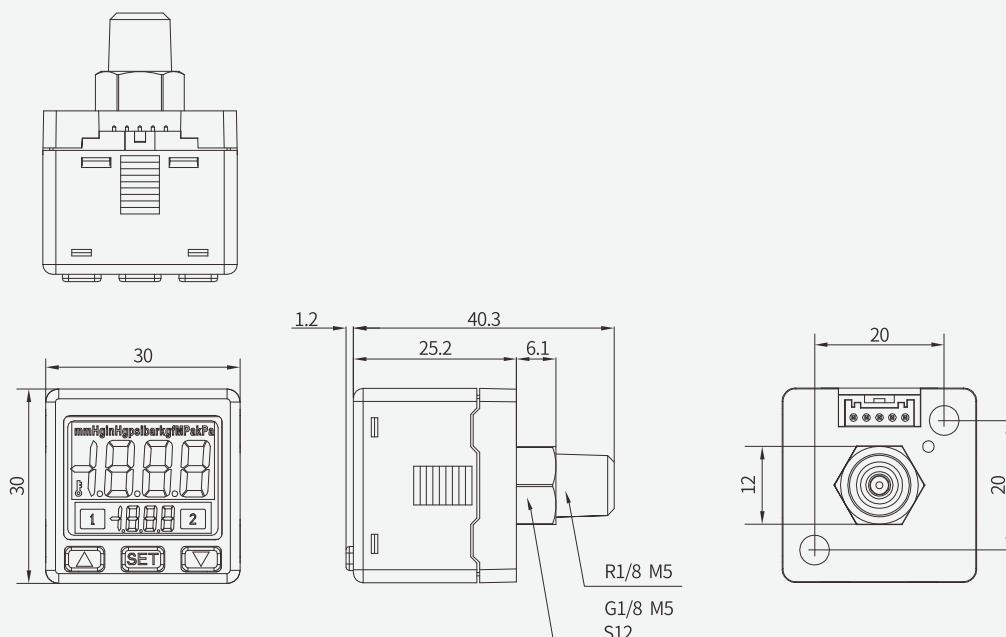
2 PNP+Analog Current putput(4~20mA)



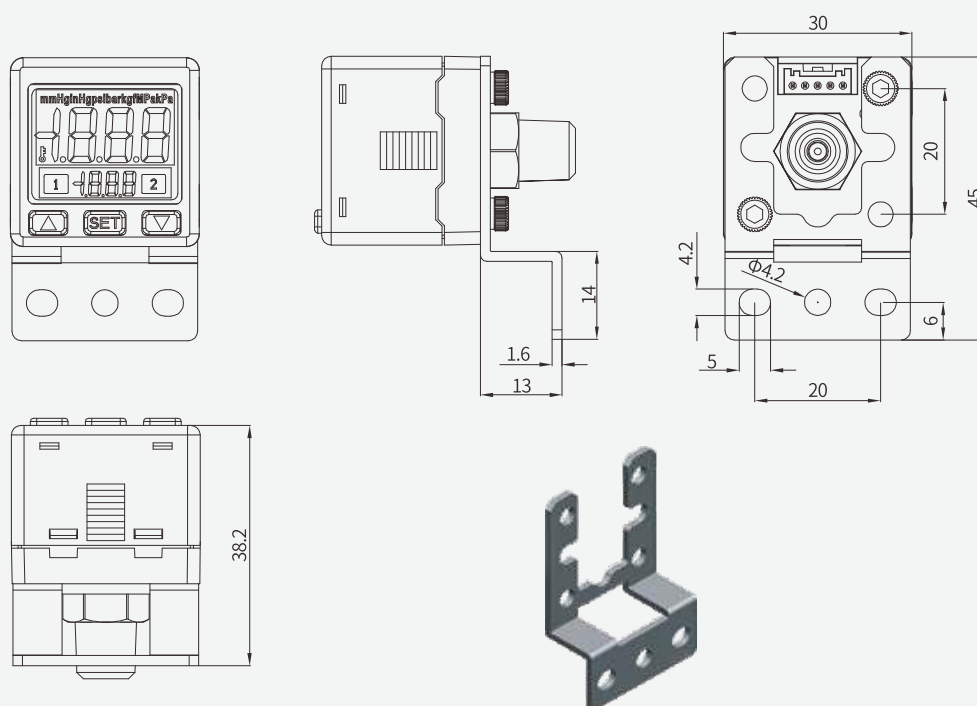
Panel instructions



Dimensions (mm)

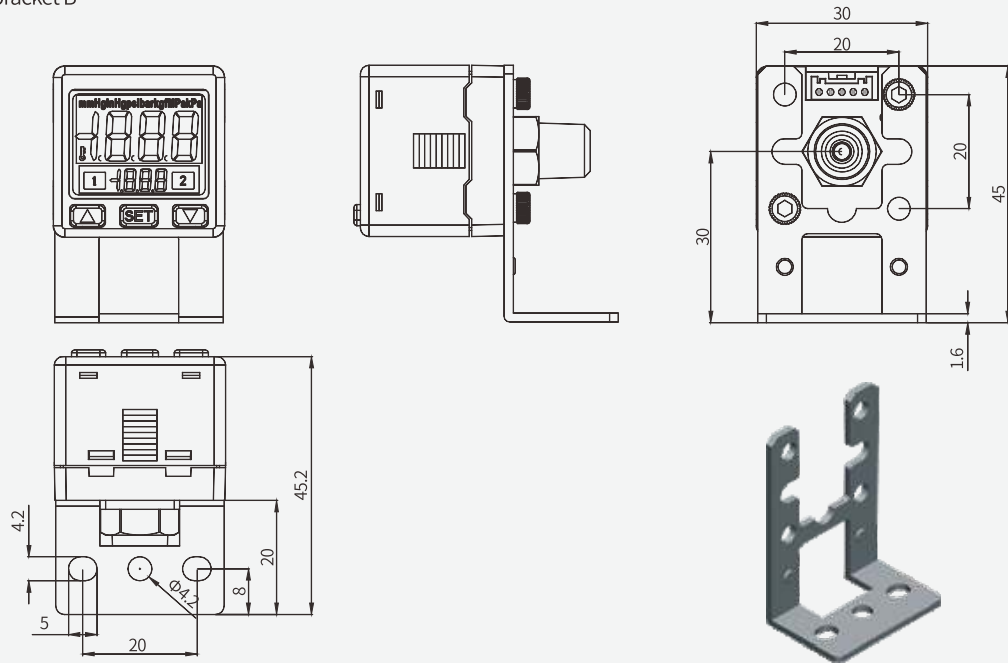


AB-Mounting bracket A

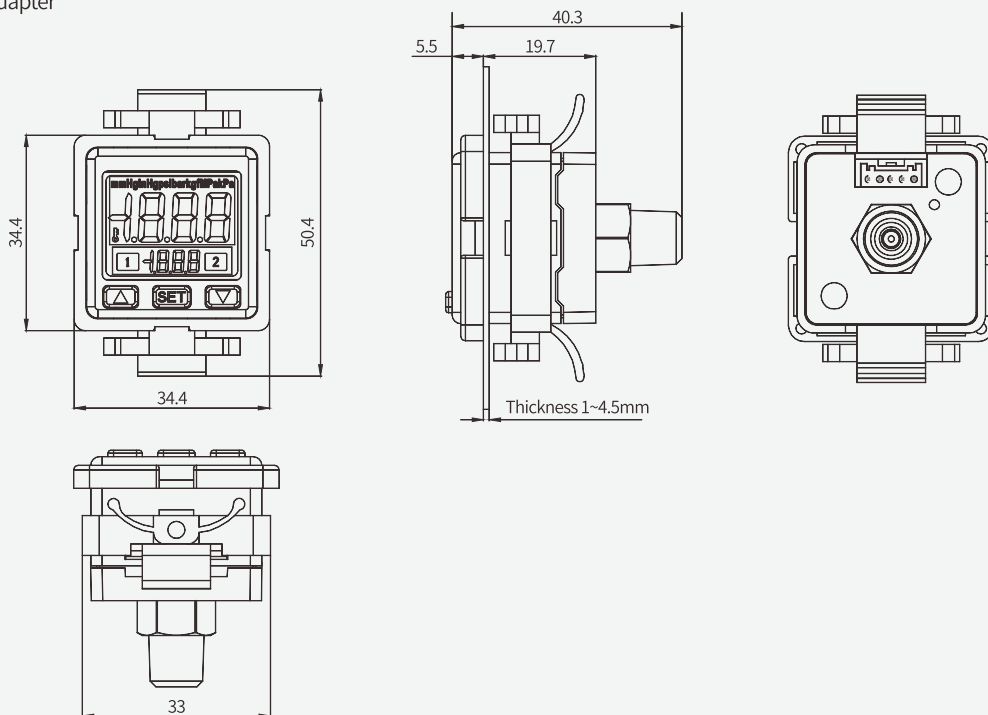


Dimensions (mm)

BB-Mounting bracket B



PS-Panel adapter



ZFA

ZFB

ZFL

ZFP

ZVAB

ZVAC

ZVAA

ZVEA

ZVEV

ZVR

ZVT

ZPDA

ZPDB

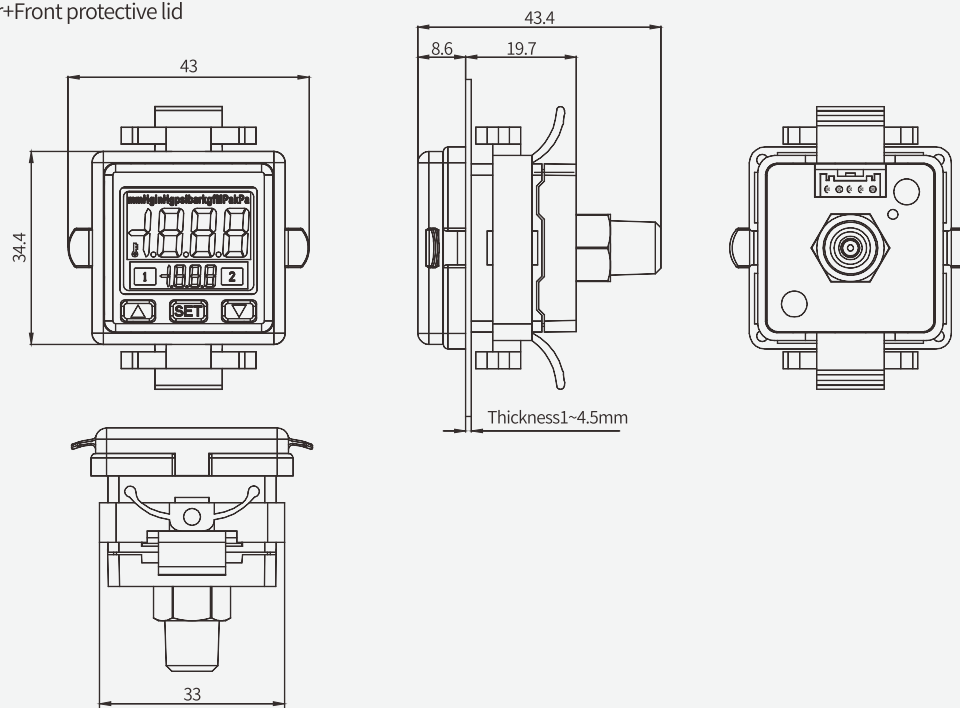
ZCE

ZSA

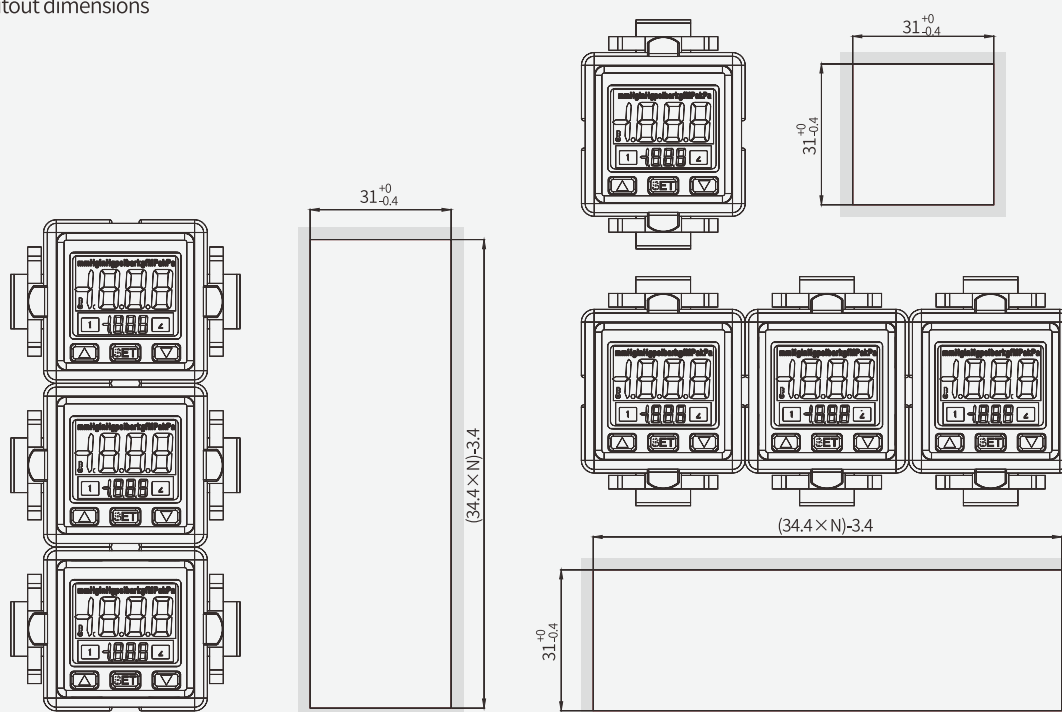
ZPMR

Dimensions (mm)

PC-Panel adapter+Front protective lid



Panel cutout dimensions





Features

- ◇ Compact size and light weight, it can directly connected to air supply port or vacuum port.
- ◇ Used for condition monitoring of the vacuum system, optimizing the duty cycle and adjusting the system loop.
- ◇ Suitable for automation industry.

How to order

ZPDB - P N - G1M - CN4

①

②

③

④

⑤

① Series	② Pressure range	③ Output specification	④ Connection thread	⑤ Cable/Connector
ZPDB	C - Compound V - Vacuum P - Positive	N - 2NPN Output P - 2PNP Output	G1M - G1/8Male thread P1M - PT1/8Male thread T1M - NPT1/8Male thread	Nil - With 2-meter 4Pin cable, no connector CN4 - 0.3-meter cable with M8 4Pin male connector CS4 - 0.3-meter cable with M8 4Pin male connector, additional M8 4Pin female connector

Selection

Model	Output specification		Connection thread			Cable/Connector		
	N	P	G1M	P1M	T1M	Nil	CN4	CS4
ZPDB-C	○	○	●	○	○	●	○	○
ZPDB-V	●	●	●	○	○	●	○	○
ZPDB-P	○	○	●	○	○	●	○	○

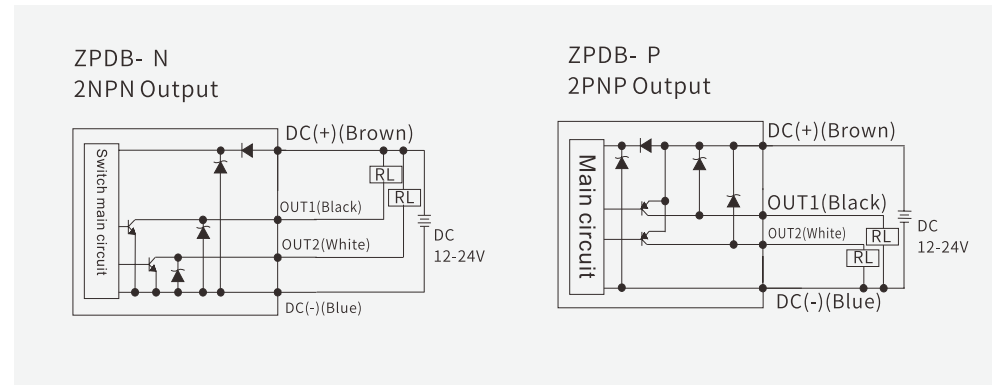
◇Note: "●"- standard, in stock. "○"-selective, no stock.

Technical parameters

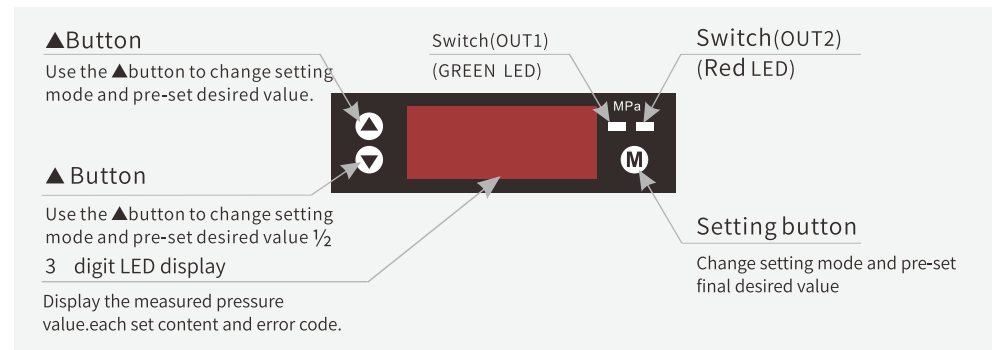
Model		ZPDB-C (Compound)	ZPDB-V (Vacuum)	ZPDV-P (Positive)
Rated preddure range		-100.0 ~ 100.0 kPa	-101.3 ~ 0.0 kPa	0.000 ~ 1.000 MPa
Setting pressure range		-100.0 ~ 100.0 kPa	-101.3 ~ 10.0 kPa	-0.100 ~ 1.000 MPa
Withstandpressure		300 kPa		1.5 MPa
Fluid		Filtered air,Non-corrosive gas/Non-flammable gas		
Set pressure resolution	kPa	0.1	—	
	MPa	—	0.001	
	kgf/cm²	0.001	0.01	
	bar	0.001	0.01	
	psi	0.01	0.1	
	inHg	0.1	—	
	mmHg	1	—	
	mmH₂O	0.1	—	
Power supply voltage		12 to 24VDC ±10%,Ripple(P-P)10% or less		
Current consumption		55mA or less		
Switch output		NPN:open collector 2 outputs Max.load current: 80mA Max.supply voltage: 30V DC Residual voltage: ≤1V (load current 80mA)	PNP:open collector 2 outputs Max.load current: 80mA Max.suppluy voltage: 24V DC Residual voltage: ≤1V (Load current 80mA)	
Repeatability		±0.2%F.S. ±1digit or less		
Hysteresist	Hysteresis mode	Adjustable		
	Window comparator mode	Fixed (3 digits)		
Response time		≤2.5ms (chattering-proof function:24ms,192ms and 768ms selectable)		
Output short circuit protection		Yes		
Display		3 1/2digit LED display (Sampling rate:5 times/1sec)		
Indicator accuracy		±2% F.S.±1 digit (ambient temperature:25±3°C)		
Indicator		Green LED (OUT1), Red LED (OUT2)		
Environment Enclosure		IP 40		
	Ambient temp.range	Opertion: 0~50°C, storage: -20~60°C (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35~85%RH (No condensation)		
	Withstand voltage	1000VAC1 in 1-min (between case and lead wire)		
	Insulation resistance	50 Mohm min,(at 500V DC)(between case and lead wire)		
	Vibration	Total amplitude 1.5mm, 10Hz~55Hz~10Hz two hurs each direction of X,Y and Z.		
	Shock	980m/s² (100G) 3 times each in direction of X,Y and Z		
Temperature characteristic		±2% F.S.of detected pressure (25°C) at temp.Range of 0~50°C		
Port size		P1M:PT1/8 male thread,M5; T1M:NPT male thread,M5; G1M:G1/8 male thread,M5		
Lead wire		Oil-resistance cable (0.15mm²)		
Weight		Approx,*67g (with 2-meter lead wire) , Approx.*35g (with male connector)		

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.

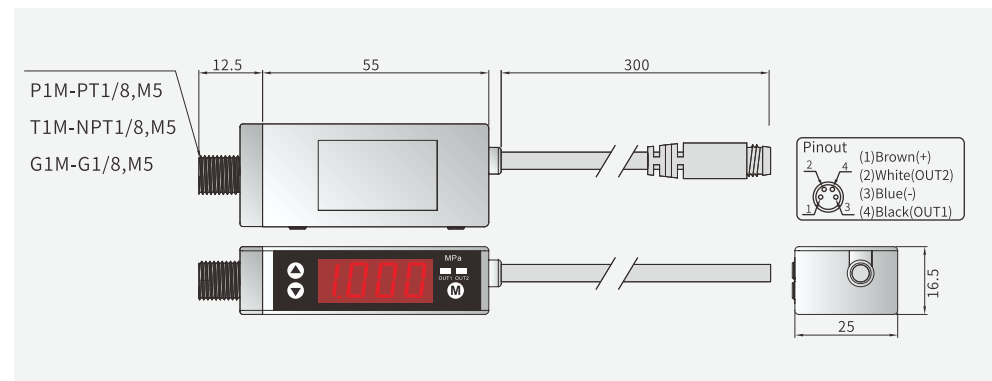
Output circuit wiring diagram



Panel instructions

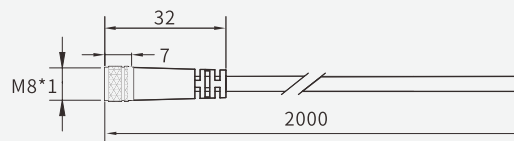


Dimensions (mm)



Spare parts

M8 4pin Female connector
ZPDB-I20F4-CB





Function

- ◇ According to the output signal of vacuum pressure switch, vacuum control unit controls the connection and disconnection of relative solenoid valve to open and close air supply port of vacuum pump, in order to minimize the air supply volume within the vacuum range we set up, realizing energy saving.

Features

- ◇ Control of vacuum valve and release valve
- ◇ PNP and NPN
- ◇ Lead wire 3.8m, realizing remote connection
- ◇ M8 fitting is connecting with vacuum pressure switch.

How to order

ZCE - N 38

① ② ③

① Series	② Electric signal specification	③ Lead wire
ZCE	N - NPN signal P - PNP signal	38 - 3.8m

Wiring method

- ◇ Power output:DC(12V-24V),depends on operating voltage of vacuum sensor and solenoid valve.
- ◇ External input wiring method
 - Brown wire:positive power input wire
 - White wire:OUT2 output of vacuum sensor
 - Blue wire:GND
 - Black wire:connect power to release vacuum,no connection or connect GND no action.
 - Grey wire:connect power to stop every saving,no connection or connect GND energy saving works.
- ◇ Output wiring(connect solenoid valve)
 - Vacuum valve:connect blue wire and brown wire.
 - Release valve:connect blue wire and black wire.
 - Connect vacuum pressure switch:M8 female connector.

Setting after connecting with ZPDB series vacuum switch

- ◇ Solenoid valve and vacuum control unit of vacuum pressure switch and vacuum pump can be energized after correctly connected. Do not open the power at the moment.
- ◇ Check the vacuum switch display screen(Normal display is 0.0,OUT1 and OUT2 no display.).
- ◇ Press M button, enter option P-1,set min. Vacuum level value(upper and down button),setting value should not be higher than , max vacuum degree of vacuum pump. After confirmation, press M button. P-1 value is stop value after vacuum pump stop working.
- ◇ Press M button, enter option P-2,set min. Vacuum level value(upper and down button),P-2 value should be lower than P-1 value, after confirmation, press M button.
- ◇ Combination of above step 3 and 4 can realize energy saving function. If no need of energy saving function, P-2 value can be set up higher than P-1 value.
- ◇ In the process of operation, if the vacuum pump which is saving energy, need to stop working, you could connect GND with grey wire and blue wire. Then vacuum pressure switch still can display, solenoid valve of vacuum pump power off.

Cautions

- ◇ Please confirm that output mode of vacuum pressure switch matches with vacuum control unit before usage.
- ◇ Please confirm that the operating voltage of vacuum pressure switch and solenoid valve of vacuum pump is same before use.
- ◇ Please confirm that connecting lines of solenoid valve of vacuum pump and vacuum control unit are correctly connected.
- ◇ Reconfirm function of different lines before debugging,in order to avoid wrong operation.



Features

- ◇ The silencers which are fitted to many standard vacuum pumps can be ordered separately as replacements. They significantly reduce noise level on all exhaust application.

How to order

ZSA - G1M

①

②

① Series	② Connection thread	
ZSA	G1M	- G1/8 Male thread
	G3M	- G3/8 Male thread
	G6M	- G3/4 Male thread
	G2M	- G1/4 Male thread
	G4M	- G1/2 Male thread
	G8M	- G1" Male thread

Dimensions (mm)



Model	L1	L2	L3	L4	G	Weight(g)
ZSA-G1M	5	41	14	46	G1/8	3
ZSA-G2M	8	65	20	73	G1/4	20
ZSA-G3M	8	64	24	72	G3/8	25
ZSA-G4M	7	121	30	128	G1/2	35
ZSA-G6M	7	119	40	126	G3/4	55
ZSA-G8M	7	119	49	126	G1"	175

◇ The body of ZSA-G8M is made of Aluminum alloy, and the other models are made of Nylon.



Features

- ◇ Mechanical pressure gauge, panel is made of acrylic , and ABS black plastic for case.
- ◇ Back entry type mounting, universal specifications, easy to use.

How to order

ZPMR - P

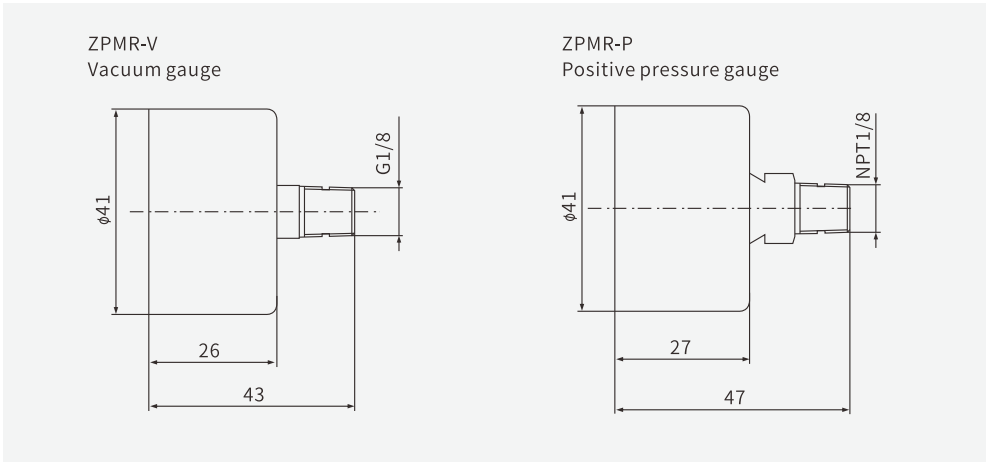
① ②

① Series	② Pressure type	Standard connection thread
ZPMR	P -Positive V -Vacuum	T1M - NPT1/8 Male thread G1M - G1/8 Male thread

Technical parameters

Pressure type	Pressure range	Dial size	material of connector
P - Positive	0 ~ 1 MPa	1.5"	Brass
V -Vacuum	-100 ~ 0 kPa		

Dimensions (mm)



Vacuum Accessories

- ZFA
- ZFB
- ZFL
- ZFP
- ZVAB
- ZVAC
- ZVAA
- ZVEA
- ZVEV
- ZVR
- ZVT
- ZPDA
- ZPDB
- ZCE
- ZSA**
- ZPMR**

Dear customers:

In order to standardize product line and plan the future industrial layout, Airbest plans to make universal changes to the current product (refer to catalogue of 2017 version) models to increase product model identification and regulate product naming.

The introduction of the new version involves the naming of all the products of Airbest, which may cause confusion to the customer and actual business confusion. Airbest apologizes for the negative impact brought by it.

Before 2020 (old product models are valid until the end of 2019), Airbest products will still accept orders from customers for both new and old models. The products can still be ordered with the old model while the product logo will be switched to the new model. If there are special requirements (if the old model label must be used), please confirm with Airbest sales customer service in advance.

Airbest is committed to continuously improve the vacuum technology and the quality, and continuously provide technical support to better serve both new and old customers. The popularity change of the product models does not involve product structure and quality changes (If any upgrade or improvement of product structure, will be separately notified). Airbest will still and always serve customers with the best technology and best quality. In addition, some series of products have been merged, converged or abolished to reduce duplication or redundancy. If there is still demand for such kind of products, please consult with sales customer service for alternatives.

For the inconvenience in model selection, inconsistent or other effects caused by the product model change, apologize again. Your understanding and support will be highly appreciated.

Old model in 2017 version	New model in 2018 version	Page	Remark	Old model in 2017 version	New model in 2018 version	Page	Remark
ABM Series	ABM/ABX Series	25		AZPT Series	-		SZC/U/B+PSPE
ABX Series				AZPR Series	-		SZC/U/B+PJF/PSPE
ABM/ABX Series(Combined type)	ABM/ABX Series	32		SAN Series	SAN Series	174	
ASM Series	ASM/ASX Series	38		SAO Series	SAO Series	176	
ASX Series				SAOT Series	-		SAO+PSPE
AM SERIES	AM/AL/AH Series	41		SAOR Series	-		SAO+PJF/PSPE
AL Series				SPAG Series	SPA Series	177	
AH Series				SPATK/SPAYK Series	-		SPA+PJF
AM Series(Combined type)	AM/AL/AH Series	48		SPATS Series	-		SPA+PSPF
AL Series(Combined type)				SPAYS Series	-		SPA+PSPF
AH Series(Combined type)				SPATKM/SPAYKM Series	-		SPA+PJF
AZL112 Series	AZL Series	56		SPCG Series	SPC Series	192	
AZL212 Series				SPCTK/SPCYK Series	-		SPC+PJF
ACP Series	ACP Series	62		SPFG Series	SPF Series	198	
ACPF Series	ACPF Series	64		SPFTKM/SPFYKM Series	-		SPF+PJF
ACPS Series	ACPS Series	66		SPFTK/SPKYK Series	-		SPF+PJF
ACV Series	ACV Series	68		SPFTS Series	-		SPF+PSPF
AQV Series	AQV Series	73		SPFYS Series	-		SPF+PSPF
AZH Series	AZH Series	75		SPJG Series	SPJ Series	212	
AZU Series	AZU Series	80		SPJTK/SPJYK Series	-		SPJ+PJF
ASBP Series	ASBP Series	83		SPJTS Series	-		SPJ+PSPF
TXC Series	TXC Series	248		SPJYS Series	-		SPJ+PSPF
TXM Series	TXM Series	254		SPJG Series(Mark free suction cup)	SPJ Series	212	
SNP Series	SNP Series	231		SPS Series			Cancel
SOP Series	SOP Series	233		SPUG Series	SPU Series	222	
SB Series	SB Series	85		SPUTKB/SPUYKB Series	-		SPU+PJF
SBA Series	SBA Series	89		SPUTSB/SPUYSB Series	-		SPU+PSPF
SBB Series	SBB Series	91		SNT Series	SNT Series	235	
SBF Series	SBF Series	93		K5 Series	PSPE Series	260	
SBOF Series	SBOF Series	95		K18 Series	PSPT Series	264	
SFT Series	SFT Series	97		K14 Series	PSPT Series	264	
SBL Series	SBL Series	101		K38 Series	PSPT Series	264	
SBLP Series	SBLP Series	104		K12 Series	-		Cancel
SF Series	SF Series	106		PSPH Series	PSPH Series	268	
SU Series	SU Series	111		Fitting for suction cup	PJS Series	272	
SUF Series	SUF Series	115		Universal holder BH Series	PJH Series	285	
SFG Series	SFG Series	116		Bulkhead connector	PJF Series	280	
STC Series	STC Series	117		Ball joint	PJB Series	284	
SFF Series	SFF Series	120		AZFC Series	AZFC Series	292	
SFM Series	SFM Series	123		ABF Series	ZFB Series	295	
SOB Series	SOB Series	127		ALF Series	ZFL Series	297	
SOF Series	SOF Series	130		BF Series	ZFP Series	299	
SOG Series	SOG Series	133		AVS Series	ZVAB Series	301	
SFP Series	SFP Series	135		APS-8 Series	ZVAC Series	302	
SBP Series	SBP Series	137		ES Series	ZVU Series	302	
SXP Series	SXP Series	140		APL Series	ZVAA Series	303	
SGP Series	SGP Series	143		APE Series	ZVEA Series	304	
SDL Series	SDL Series	146		ZVEV Series	ZVEV Series	305	
SD Series	SZD Series	163		FVC Series	ZVR Series	306	
SH Series	SH Series	147		ZVT Series	ZVT Series	308	
SH Series -with buffer	-		SH+PSPT/PSPH	RL3 Series	ZPDA Series	310	
SH Series-without buffer	-		SH+PJF	RL6 Series	ZPDB Series	316	
SHB Series	SHB Series	155		EC Series	ZCE Series	319	
SHB Series-with buffer	-		SHB+PSPT/PSPH	ABS Series	ZSA Series	321	
SHB Series -without buffer	-		SHB+PJF	AB168 Series	ZPMR Series	322	
AZP Series	SZC	163	AZP series C type				
	SZU	163	AZP series U type				
	SZB	163	AZP series B type				