GINIER®

MF series

Standard flat type cup. For workpieces with smooth and even surfaces!

Cardboard

Metal plate

Plastic plate

Wide range of cup sizes.

Ø1.5	Ø2	Ø3.5	Ø2X4	Ø3.5X7	Ø2X4	Ø3.5X7	Ø5	Ø6	Ø8	Ø10	Ø15
Ø20	Ø25	Ø30	Ø35	Ø40	Ø50	Ø60	Ø80	Ø95	Ø120	Ø150	Ø200

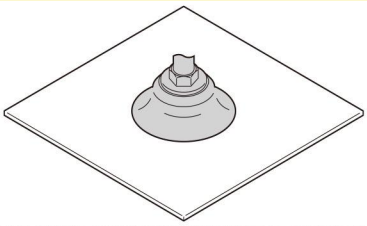
Various fittings for many kinds of applications.

Fixed fitting

Spring fitting

Compact type fitting

Vacuum suction cup-MF type (single layer)



Mainly used to adsorb general workpieces, such as steel plates, etc.

Selection of suction cup

Example:

M-P 8A F N -LH

- 8A: [1]Diameter of suction cup
- N: [2] Material of suction cup
- -LH: No trace adsorption countermeasures

[1]Suction cup diameter

Unit：mm

Code	1.5A	2A	3.5A	2X4	3.5X7	2X4A	3.5X7A	5A	6A	8A	10A	15A	15
Disk diameter	Ø1.5	Ø2	Ø3.5	Ø2X4	Ø3.5X7	Ø2X4	Ø3.5X7	Ø5	Ø6	Ø8	Ø10	Ø15	Ø15
Code	20	20B	25	30	35	40	50	60	80	95	120	150	200
Disk diameter	Ø20	Ø20	Ø25	Ø30	Ø35	Ø40	Ø50	Ø60	Ø80	Ø95	Ø120	Ø150	Ø200

[2]Suction cup material

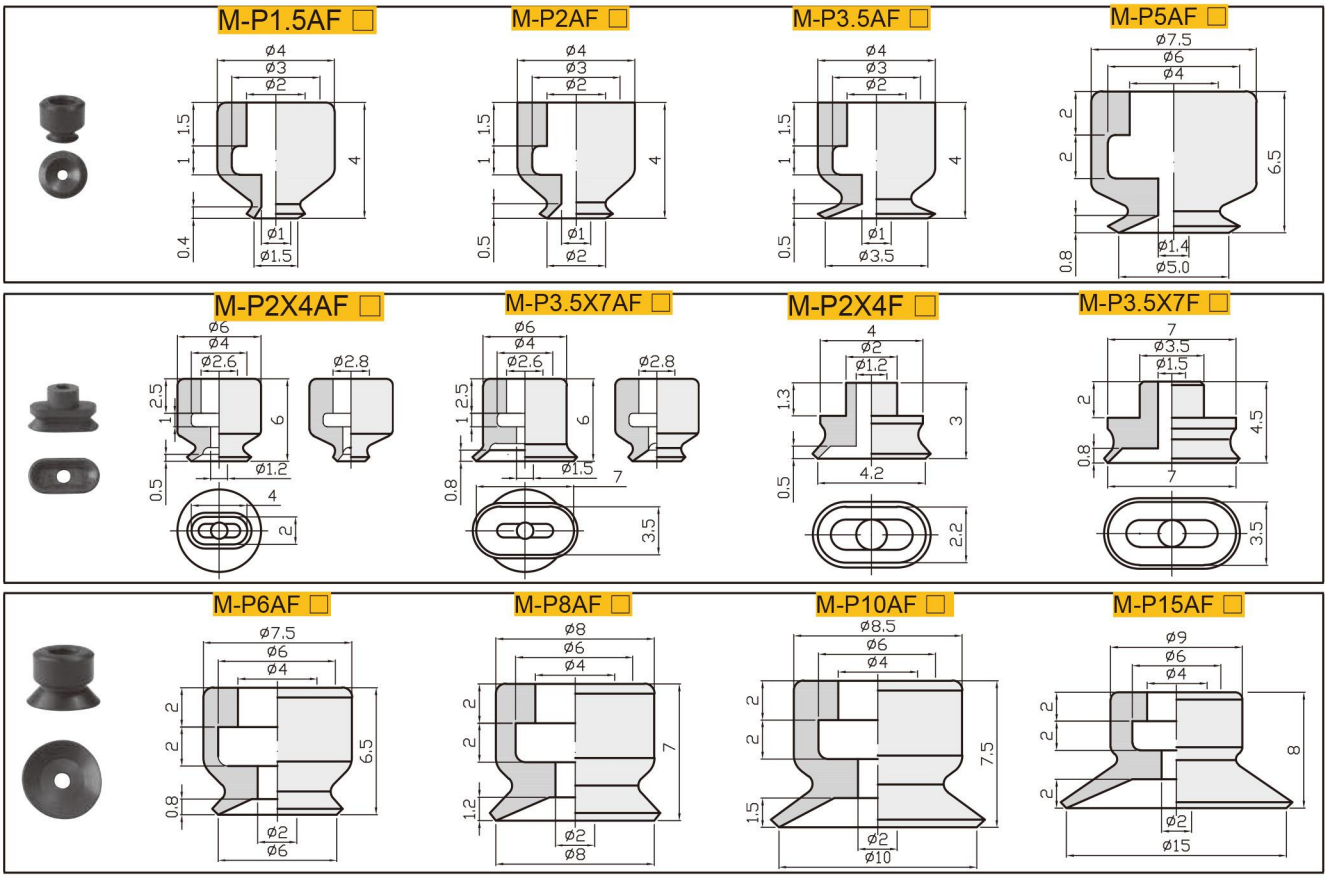
Code	Material	hardnessShoreA	Operating temperature range	colour	Surface resistivity	Applicable suction cup diameter	LH non-marking adsorption countermeasures (Halogenation treatment)
N	Nitrile rubber	A55/S	-20~120℃	black	-	Ø1.5~Ø200	●
S	Silicone Rubber	A55/S	-50~220℃	white	-	Ø1.5~Ø200	-
SE	Anti-static silicone	A55/S	-30~180℃	Black red dot	10^5~10^8Ω·cm	Ø1.5~Ø50	-
FS	Fluorosilicone rubber	A55/S	-30~180℃	red	-	Ø5~Ø50	-
NE	Antistatic Nitrile Rubber	A65/S	0~120℃	Black blue dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●
F	fluororubber	A70/S	-10~230℃	gray	-	Ø1.5~Ø50	-
FE	Anti-static fluorine rubber	A70/S	0~200℃	Black white dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●

Note: Please refer to the front attachment for the material performance of the suction cup; other materials and hardness can be customized, please consult our Unit for details; the yellow font in the table indicates the best-selling products, short delivery time, and high cost performance."●": indicates optional; "-": indicates none.

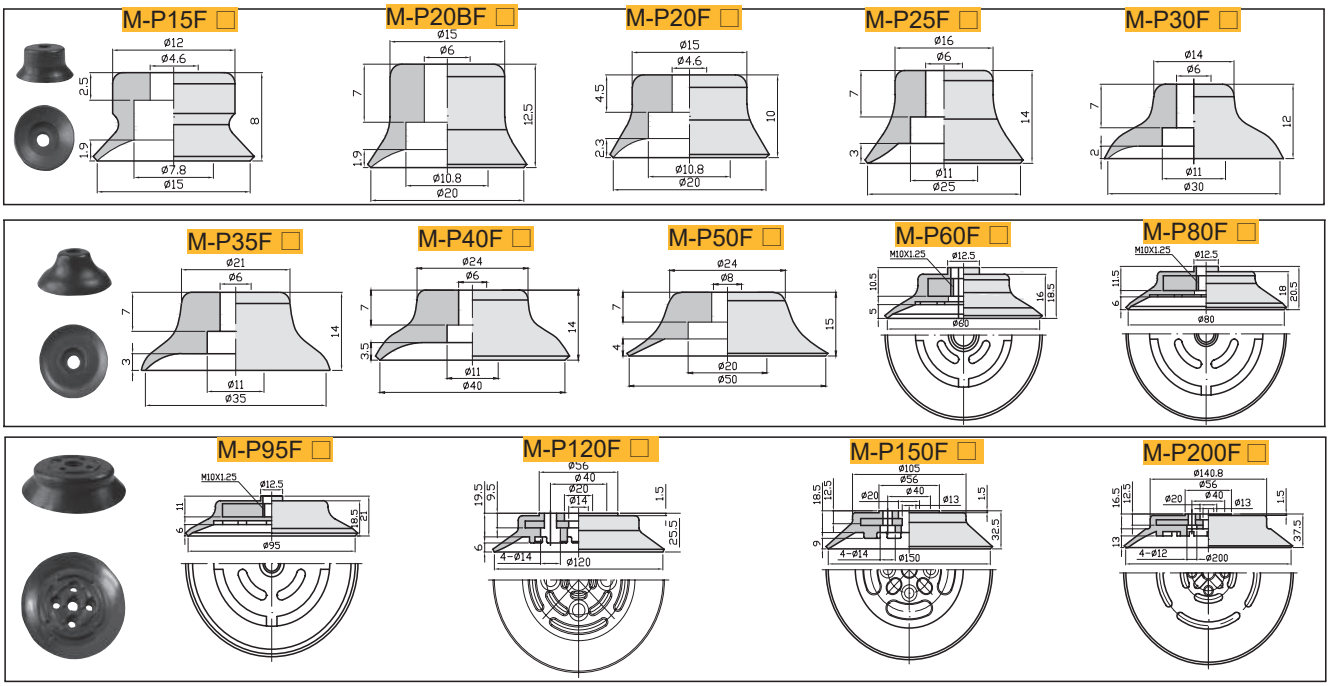
After halogenation treatment, the hardness of the material will increase by A5/S; the mark is the surface yellow point, such as: nitrile rubber after halogenation treatment, the hardness is A60/S, and the mark is black yellow point.

Dimensions

Note: " ★ " is a best-selling specification with sufficient stock.



Vacuum chuck-MF type (single layer)-component



Packing method		date of delivery
D ⩽ 10	10pcs/bag	* ★ "For the best-selling products, the stock is sufficient, The delivery period is generally 5 working days
D ＞ 10	1pcs/bag	

Note: D is the diameter of suction cup opening (mm). For more information, please call us.

Ordering example | M-P10AFN
M-P10AFN-LH

※If no trace adsorption is needed, please add "LH" suffix

Vacuum chuck-MF type (single layer)-component small fixed type direct mounting type

Example:

M-P E 5A F M N -LH

- 5A: ① Suction cup diameter
- M: ② Installation method
- N: ③ Suction cup material
- -LH: No trace adsorption countermeasures

※Please refer to this series of suction cup selection parameters for the selection of suction cup material

① Suction cup diameter

unit：mm

Code	1.5A	2A	3.5A	2X4A	3.5X7A	5A	6A	8A	10A
Disk diameter	Ø1.5	Ø2	Ø3.5	Ø2X4	Ø3.5X7	Ø4	Ø6	Ø8	Ø10
Code	15A	20	20B	25	30	35	40	50	-
Disk diameter	Ø15	Ø20	Ø20	Ø25	Ø30	Ø35	Ø40	Ø50	-

② Installation method

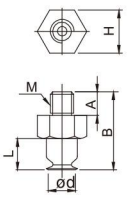
M	External thread installation
F	Internal thread installation

■ PE small fixed type direct mounting type (M means external thread mounting)

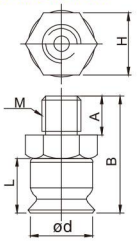
unit：mm

model					parameter				
code	Disc diameter d	trip S	type	texture of material	vacuum InterfaceD	M	A	H	L
M-PE	1.5A	F	M 外螺纹安装	N S SE FS NE F FE	10	M3X0.5	3	5.5	4
	2A				10	M3X0.5	3	5.5	4
	3.5A				10	M3X0.5	3	5.5	4
	2X4A				12	M3X0.5	3	5.5	6
	3.5X7A				12	M3X0.5	3	5.5	6
	5A				14.5	M5X0.8	5	8	6.5
	6A				14.5	M5X0.8	5	8	6.5
	8A				15	M5X0.8	5	8	7
	10A				15.5	M5X0.8	5	8	7.5
	15A				16	M5X0.8	5	8	8
	20				24	G1/8	10	14	10
	25				28	G1/8	10	14	14
	30				26	G1/8	10	14	12
	35				28	G1/8	10	14	14
	40				28	G1/8	10	14	14
	50				29	G1/8	10	14	15

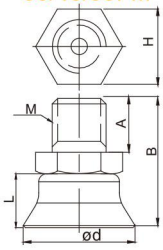
M-PE1.5A/2A/3.5A/ 2X4A/3.5X7AFM



M-PE5A/6A/8A/ 10A/15AFM



M-PE20/25/30/ 35/40/50FM



Ordering example: M-PE8AFMN / M-PE8AFMN-LH

※If no trace adsorption is needed, please add "LH" suffix

※Suction cup material "N S SE FS" is a best-selling product with short delivery time and high cost performance.Other materials and hardness can also be customized, please consult our Unit for details.

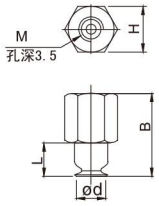
※Please refer to the P series bracket specifications for the specifications and selection of individual bracket

■ PE small fixed type direct mounting type (F means internal thread mounting)

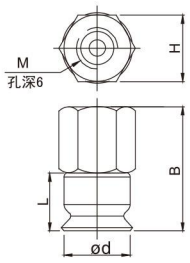
unit：mm

model					parameter				
code	Disc diameter d	trip S	type	texture of material	vacuum InterfaceD	M	A	H	L
M-PE	1.5A	F	F	N S SE FS NE F FE	10	M3X0.5	-	5.5	4
	2A				10	M3X0.5	-	5.5	4
	3.5A				10	M3X0.5	-	5.5	4
	2X4A				12	M3X0.5	-	5.5	6
	3.5X7A				12	M3X0.5	-	5.5	6
	5A				14.5	M5X0.8	-	8	6.5
	6A				14.5	M5X0.8	-	8	6.5
	8A				15	M5X0.8	-	8	7
	10A				15.5	M5X0.8	-	8	7.5
	15A				16	M5X0.8	-	8	8
	20				24	Rc1/8	-	14	10
	25				28	Rc1/8	-	14	14
	30				26	Rc1/8	-	14	12
	35				28	Rc1/8	-	14	14
	40				28	Rc1/8	-	14	14
	50				29	Rc1/8	-	14	15

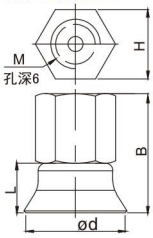
M-PE1.5A/2A/3.5A/ 2X4A/3.5X7AFF



M-PE5A/6A/8A/ 10A/15AFF



M-PE20/25/30/ 35/40/50FF



Ordering example: M-PE8AFFN / M-PE8AFFN-LH

※If no trace adsorption is needed, please add "LH" suffix

※Suction cup material "N S SE FS" is a best-selling product with short delivery time and high cost performance.Other materials and hardness can also be customized, please consult our Unit for details.

※Please refer to the P series bracket specifications for the specifications and selection of individual bracket

In addition to the recommended specifications in the table, the vacuum interface can also be configured as required. Please consult our Unit for details.

Vacuum chuck-MF type (single layer)-component fixed

Example:

M-P A 5A F N 6J -LH

① Bracket type ② Suction cup diameter ③ Suction cup material ④ Vacuum interface No trace adsorption countermeasures

※Please refer to this series of suction cup selection parameters for the selection of suction cup material

① Bracket type

A	Fixed top vacuum port
B	Fixed side vacuum port

③ Suction cup diameter

unit：mm

Code	Material	hardness ShoreA	Operating temperature range	colour	Surface resistivity	Applicable suction cup diameter	LH non-marking adsorption countermeasures (Halogenation treatment)
N	Nitrile rubber	A55/S	-20~120℃	black	-	Ø1.5~Ø200	●
S	Silicone Rubber	A55/S	-50~220℃	white	-	Ø1.5~Ø200	-
SE	Anti-static silicone	A55/S	-30~180℃	Black red dot	10^5~10^8Ω·cm	Ø1.5~Ø50	-
FS	Fluorosilicone rubber	A55/S	-30~180℃	red	-	Ø5~Ø50	-
NE	Antistatic Nitrile Rubber	A65/S	0~120℃	Black blue dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●
F	fluororubber	A70/S	-10~230℃	gray	-	Ø1.5~Ø50	-
FE	Anti-static fluorine rubber	A70/S	0~200℃	Black white dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●

Note: Please refer to the front attachment for the material performance of the suction cup; other materials and hardness can be customized, please consult our Unit for details; the yellow font in the table indicates the best-selling products, short delivery time, and high cost performance."●": indicates optional; "-": indicates none.

After halogenation treatment, the hardness of the material will increase by A5/S; the mark is the surface yellow point, such as: nitrile rubber after halogenation treatment, the hardness is A60/S, and the mark is black yellow point.

④ Vacuum interface

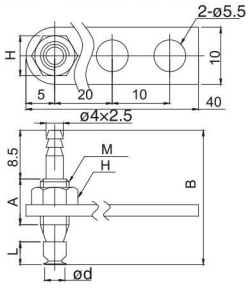
Vacuum interface		Applicable specifications	style
Push-in connector	4J	Ø4x2.5hose	
	6J	Ø6x4hose	
Bamboo joint	4B	Ø4x2.5hose	
	6B	Ø6x4hose	
Thread way	01	Rc1/8	-

■ PA fixed top vacuum port

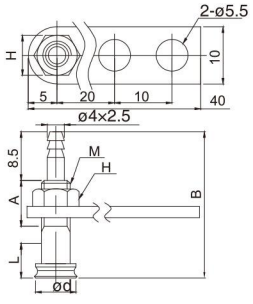
unit：mm

model					parameter				
code	Disc diameter d	trip S	type	texture of material	vacuum InterfaceD	M	A	H	L
M-PA	1.5A	F	N S SE FS NE F FE	4B	23.5	M5X0.8	8	7	4
	2A				23.5	M5X0.8	8	7	4
	3.5A				23.5	M5X0.8	8	7	4
	2X4				24.5	M5X0.8	8	7	6
	3.5X7				25.5	M5X0.8	8	7	6
	5A			6J 6B	42.5	M8X1.25	15.5	12	6.5
	6A				42.5	M8X1.25	15.5	12	6.5
	8A				43	M8X1.25	15.5	12	7
	10A				43.5	M8X1.25	15.5	12	7.5
	15A				44	M8X1.25	15.5	12	8
	15				41	M8X1.25	15.5	12	8
	20				43	M8X1.25	15.5	12	10
	25				57	M10X1.5	20	14	14
	30				55	M10X1.5	20	14	12
	35				57	M10X1.5	20	14	14
	40				57	M10X1.5	20	14	14
	50				58	M10X1.5	20	14	15
	60			01	58.5	M16X1.5	23	21	18.5
	80				60.5	M16X1.5	23	21	20.5
	95				61	M16X1.5	23	21	21

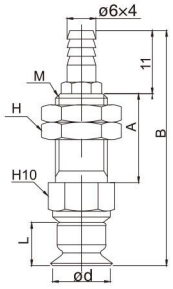
M-PA1.5A/2A/3.5AF-4B



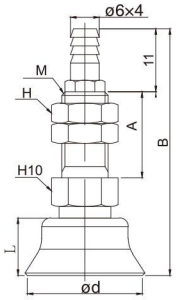
M-PA2X4A/3.5X7AF-4B



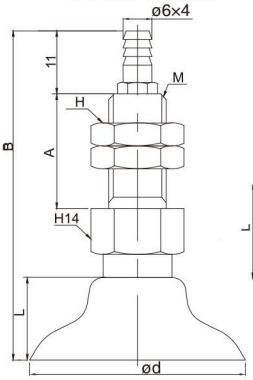
M-PA5A/6A/8A/ 10A/15AF-6B/6J



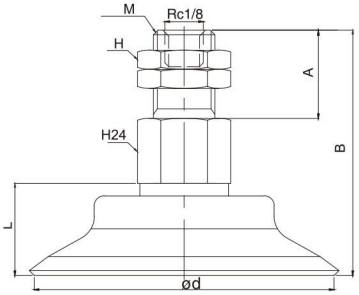
M-PA15A/20F-6B/6J



M-PA25/30/35/ 40/50F-6B/6J



M-PA60/80/95F-01



Ordering example | M-PA15AFN6J M-PA15AFN6J-LH

※If no trace adsorption is needed, please add "LH" suffix

※Suction cup material "N S SE FS" is a best-selling product with short delivery time and high cost performance.Other materials and hardness can also be customized, please consult our Unit for details.

※Please refer to the P series bracket specifications for the specifications and selection of individual bracket

In addition to the recommended specifications in the table, the vacuum interface can also be configured as required. Please consult our Unit for details.

Vacuum chuck-MF type (single layer)-component fixed type

■ PB fixed side vacuum port

unit：mm

model					parameter					
code	Disc diameter d	trip S	type	texture of material	vacuum InterfaceD	M	H	G	C	L
M-PB	1.5A	F	NSSEFSNEFFE	4B	20	M3X0.5	5	11	11	4
	2A				20	M3X0.5	5	11	11	4
	3.5A				20	M3X0.5	5	11	11	4
	2X4				21.5	M3X0.5	5	11	11	1.5
	3.5X7				22.5	M3X0.5	5	11	11	2.5
	5A			6J	29	M4X0.75	10	13	16	6.5
	6A				29	M4X0.75	10	13	16	6.5
	8A				29.5	M4X0.75	10	13	16	7
	10A				30	M4X0.75	10	13	16	7.5
	15A				30.5	M4X0.75	10	13	16	8
	15				30	M6X1	10	14	16	8
	20			6B	32	M6X1	10	14	16	10
	25				46	M6X1	14	20	18	14
	30				44	M6X1	14	20	18	12
	35				46	M6X1	14	20	18	14
	40				46	M6X1	14	20	18	14
	50				47	M6X1	14	20	18	15
	60			01	58.5	M8X1.25	21	-	-	18.5
	80				60.5	M8X1.25	21	-	-	20.5
	95				61	M8X1.25	21	-	-	21
	100				35	M12X1.75	-	-	-	100
	120				75.5	M16X2.0	-	-	-	25.5
	150				82.5	M16X2.0	-	-	-	32.5
	200				87.5	M16X2.0	-	-	-	37.5

※The material of the suction cup "NS SE FS" is a best-selling product with short delivery time and high cost performance.

Other materials and hardness can also be customized, please consult our Unit for details.

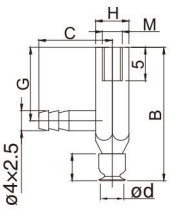
※ The vacuum ports of the same specification in this table are interchangeable, such as 6B and 6J.

※For the specifications and selection of the individual bracket, please refer to the specifications of the M series bracket.

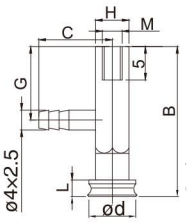
Ordering example | M-PB15AFN6J
M-PB15AFN6J-LH

※If no trace adsorption is needed, please add "LH" suffix

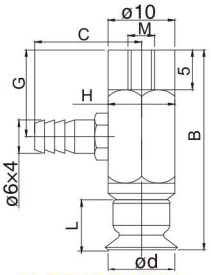
M-PB1.5A/2A/3.5AF-4B



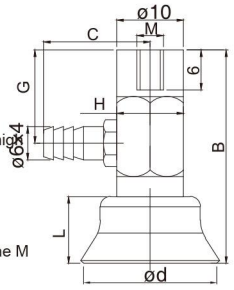
M-PB2X4A/3.5X7F-4B



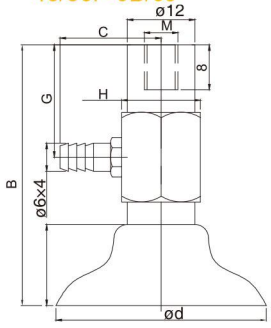
M-PB5A/6A/8A/
10A/15AF-6B/6J



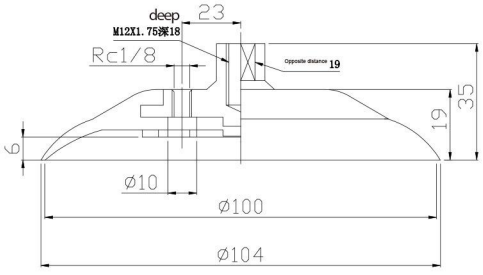
M-PB15A/20F-6B/6J



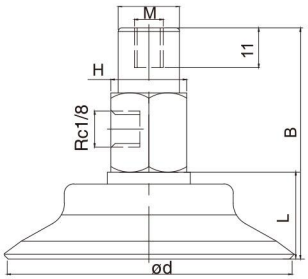
M-PB25/30/35/
40/50F-6B/6J



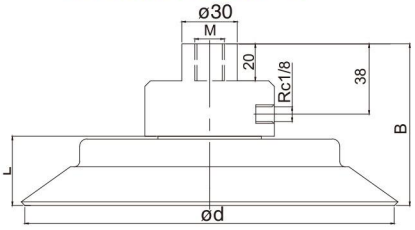
M-PB100F-01



M-PB60/80/95F-01



M-PB120/150/200F-01



In addition to the recommended specifications in the table, the vacuum interface can also be configured as required. Please consult our Unit for details.

Vacuum chuck-MF type (single layer)-component spring

Example: M-P C 5A - 10 F H N 6J -LH

- C — ① Bracket type
- 5A — ② Suction cup diameter
- 10 — ③ Spring stroke
- H — ④ Carriage rotation method
- N — ⑤ Suction cup material
- 6J — ⑥ Vacuum interface
- -LH — No trace adsorption countermeasures

※Please refer to this series of suction cup selection parameters for the selection of suction cup material

⑤ Suction cup material

Code	Material	hardnessShoreA	Operating temperature range	colour	Surface resistivity	Applicable suction cup diameter	LH non-marking adsorption countermeasures (Halogenation treatment)
N	Nitrile rubber	A55/S	-20~120℃	black	-	Ø1.5~Ø200	●
S	Silicone Rubber	A55/S	-50~220℃	white	-	Ø1.5~Ø200	-
SE	Anti-static silicone	A55/S	-30~180℃	Black red dot	10^5~10^8Ω·cm	Ø1.5~Ø50	-
FS	Fluorosilicone rubber	A55/S	-30~180℃	red	-	Ø5~Ø50	-
NE	Antistatic Nitrile Rubber	A65/S	0~120℃	Black blue dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●
F	fluororubber	A70/S	-10~230℃	gray	-	Ø1.5~Ø50	-
FE	Anti-static fluorine rubber	A70/S	0~200℃	Black white dots	10^5~10^8Ω·cm	Ø1.5~Ø50	●

Note: Please refer to the front attachment for the material performance of the suction cup; other materials and hardness can be customized, please consult our Company for details; the yellow font in the table indicates the best-selling products, short delivery time, and high cost performance."●": indicates optional; "-": indicates none.

After halogenation treatment, the hardness of the material will increase by A5/S; the mark is the surface yellow point, such as: nitrile rubber after halogenation treatment, the hardness is A60/S, and the mark is black yellow point.

① Bracket type

C	Spring-loaded top vacuum port
D	Spring-loaded side vacuum port

④ Carriage rotation method

Rotation method	display method
Reversible	no
Anti-rotation	H

⑥ Vacuum interface

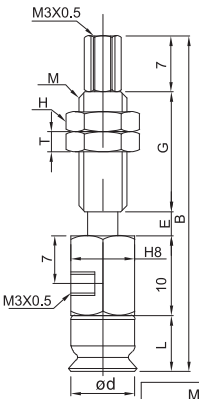
Vacuum interface		Applicable specifications	style
Push-in connector	4J	Ø4x2.5hose	
	6J	Ø6x4hose	
Bamboo joint	4B	Ø4x2.5hose	
	6B	Ø6x4hose	
Thread way	01	Rc1/8	-
	02	Rc1/4	-

■ PD spring type side vacuum port ■ PC spring-loaded top vacuum port

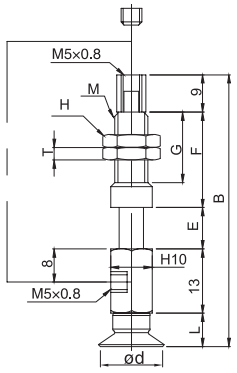
unit：mm

model							parameter						
Code		Disk diameter d	stroke E	Types of	Pad Material	Vacuum interface	Total height B	M	H	T	G	F	L
M-PC	M-PD	1.5A	3	F	N S SE FS NE F FE	4J 4B	39	M6X0.75	8	2.5	-	15	4
			6				42	M6X0.75	8	2.5	-	15	
		2A	3				39	M6X0.75	8	2.5	-	15	4
			6				42	M6X0.75	8	2.5	-	15	
		3.5A	3				39	M6X0.75	8	2.5	-	15	4
			6				42	M6X0.75	8	2.5	-	15	
		5A	3				41.5	M6X0.75	8	2.5	-	15	6.5
			6				44.5	M6X0.75	8	2.5	-	15	
		6A	3				41.5	M6X0.75	8	2.5	-	15	6.5
			6				44.5	M6X0.75	8	2.5	-	15	
		8A	3				42	M6X0.75	8	2.5	-	15	7
			6				45	M6X0.75	8	2.5	-	15	
		10A	3			6J 6B	55.5	M8X0.75	12	3	17	23	7.5
			10				62.5	M8X0.75	12	3	17	23	
			15				75	M8X0.75	12	3	24.5	30.5	
		15A	3				56	M8X0.75	12	3	17	23	8
			10				63	M8X0.75	12	3	17	23	
			15				75.5	M8X0.75	12	3	24.5	30.5	
		20B	6				77.5	M14X1	19	5	28	36	12.5
			15				86.5	M14X1	19	5	28	36	
			30				123.5	M14X1	19	5	50	58	
		25	6				79	M14X1	19	5	28	36	14
			15				88	M14X1	19	5	28	36	
			30				125	M14X1	19	5	50	58	
		30	6				77	M14X1	19	5	28	36	12
			15				86	M14X1	19	5	28	36	
			30				123	M14X1	19	5	50	58	
		35	6				79	M14X1	19	5	28	36	14
			15				88	M14X1	19	5	28	36	
			30				125	M14X1	19	5	50	58	
		40	6				79	M14X1	19	5	28	36	14
			15				88	M14X1	19	5	28	36	
			30				125	M14X1	19	5	50	58	
		50	6				80	M14X1	19	5	28	36	15
			15				89	M14X1	19	5	28	36	
			30				126	M14X1	19	5	50	58	

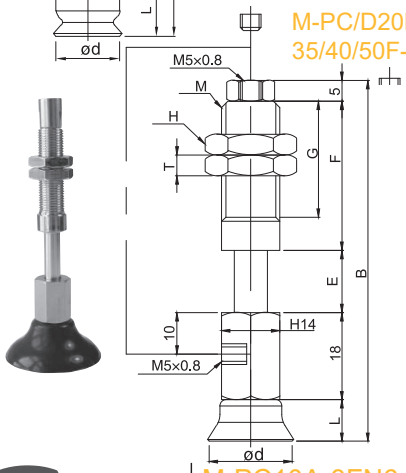
M-PC/D1.5A/2A/3.5A/5A/6A/8AF-4B/4J



-PC/D10A/15AF-6B/6J



M-PC/D20B/25/30/35/40/50F-6B/6J



Ordering example: M-PC10A-3FN6J / M-PC10A-3FN6J-LH

※If no trace adsorption is needed, please add "LH" suffix

Vacuum chuck-MF type (single layer)-component spring type

- PC spring top vacuum port
- PD spring-loaded side vacuum port

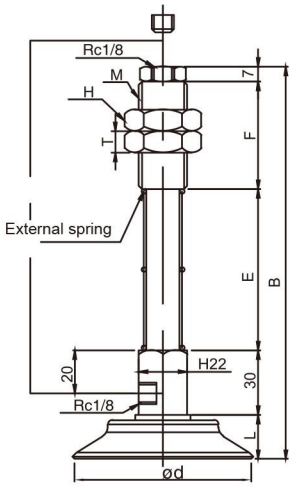
unit：mm

model							parameter						
Code		Disk diameter d	stroke	Types of	Pad Material	vacuum interface	Total height B	M	H	T	G	E	L
M-PC	M-PD	60	10	F	N S SE FS NE F FE	01	125.5	M22X1.5	30	10	50	20	18.5
			30				155.5	M22X1.5	30	10	50	50	
			50				180.5	M22X1.5	30	10	50	75	
		80	10				127.5	M22X1.5	30	10	50	20	20.5
			30				157.5	M22X1.5	30	10	50	50	
			50				182.5	M22X1.5	30	10	50	75	
		95	10				128	M22X1.5	30	10	50	20	21
			30				158	M22X1.5	30	10	50	50	
			50				182	M22X1.5	30	10	50	75	
		120	20			02	157	M30X1.5	36	10	60	35	24
			50				197	M30X1.5	36	10	60	75	
		150	20				164	M30X1.5	36	10	60	35	31
			50				204	M30X1.5	36	10	60	75	
		200	20				169	M30X1.5	36	10	60	35	36
			50				209	M30X1.5	36	10	60	75	

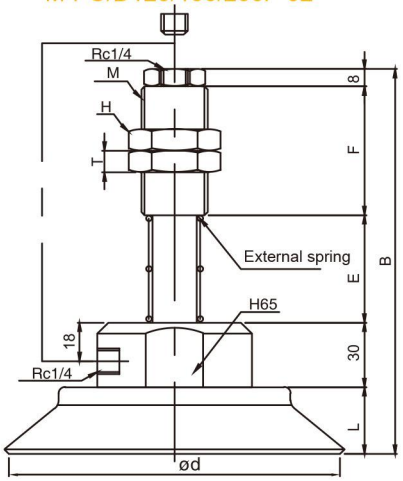
※Suction cup material "N S SE FS" is a best-selling product with short delivery time and high cost performance.Other materials and hardness can also be customized, please consult our Unit for details.

※Please refer to the P series bracket specifications for the specifications and selection of individual bracket

M-PC/D60/80/95F-01



M-PC/D120/150/200F-02



Ordering example | M-PC60-10FN01
M-PC60-10FN01-LH

※If no trace adsorption is needed, please add "LH" suffix

In addition to the recommended specifications in the table, the vacuum interface can also be configured as required. Please consult our Unit for details.

Vacuum chuck-MF type (single layer)-component spring type (anti-rotation)

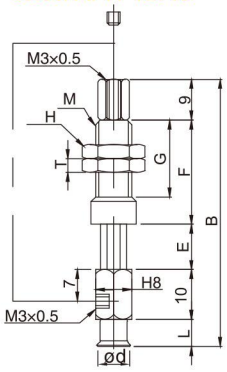
- PC spring top vacuum port
- PD spring type side vacuum port

Rotation method	display method
Reversible	no
Anti-rotation	H

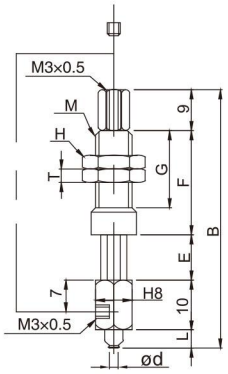
unit：mm

model								parameter						
Code		Disk diameter d	stroke E	Types of	Anti-return	Pad Material	Vacuum interface	Total height B	M	H	T	G	F	L
M-PC	M-PD	1.5A	3	F	H	N S SE FS NE F FE	4J 4B	47	M8X0.75	12	3	17	23	4
			10					54	M8X0.75	12	3	17	23	
			15					66.5	M8X0.75	12	3	24.5	30.5	
		2A	3					47	M8X0.75	12	3	17	23	4
			10					54	M8X0.75	12	3	17	23	
			15					66.5	M8X0.75	12	3	24.5	30.5	
		3.5A	3					47	M8X0.75	12	3	17	23	4
			10					54	M8X0.75	12	3	17	23	
			15					66.5	M8X0.75	12	3	24.5	30.5	
		2X4A	3					49	M8X0.75	12	3	17	23	6
			10					56	M8X0.75	12	3	17	23	
			15					68.5	M8X0.75	12	3	24.5	30.5	
		3.5X7A	3					49	M8X0.75	12	3	17	23	6
			10					56	M8X0.75	12	3	17	23	
			15					68.5	M8X0.75	12	3	24.5	30.5	
		5A	3				6J 6B	54.5	M8X0.75	12	3	17	23	6.5
			10					61.5	M8X0.75	12	3	17	23	
			15					74	M8X0.75	12	3	24.5	30.5	
		6A	3					54.5	M8X0.75	12	3	17	23	6.5
			10					61.5	M8X0.75	12	3	17	23	
			15					74	M8X0.75	12	3	24.5	30.5	
		8A	3					55	M8X0.75	12	3	17	23	7
			10					62	M8X0.75	12	3	17	23	
			15					74.5	M8X0.75	12	3	24.5	30.5	
		10A	3					55.5	M8X0.75	12	3	17	23	7.5
			10					62.5	M8X0.75	12	3	17	23	
			15					75.5	M8X0.75	12	3	24.5	30.5	
		15A	3					56	M8X0.75	12	3	17	23	8
			10					63	M8X0.75	12	3	17	23	
			15					75.5	M8X0.75	12	3	24.5	30.5	
		20B	6					77.5	M14X1	19	5	28	36	12.5
			15					86.5	M14X1	19	5	28	36	
			30						M14X1	19	5	50	58	
		25	6					79	M14X1	19	5	28	36	14
			15					88	M14X1	19	5	28	36	
			30					125	M14X1	19	5	50	58	
		30	6					77	M14X1	19	5	28	36	12
			15					86	M14X1	19	5	28	36	
			30					123	M14X1	19	5	50	58	
		35	6					79	M14X1	19	5	28	36	14
			15					88	M14X1	19	5	28	36	
			30					125	M14X1	19	5	50	58	
		40	6					79	M14X1	19	5	28	36	14
			15					88	M14X1	19	5	28	36	
			30					125	M14X1	19	5	50	58	
		50	6					80	M14X1	19	5	28	36	15
			15					89	M14X1	19	5	28	36	
			30					126	M14X1	19	5	50	58	

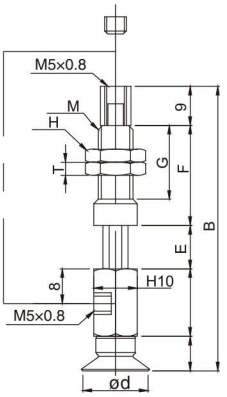
M-PC/D2X4/
3.5X7AFH-4B/4J



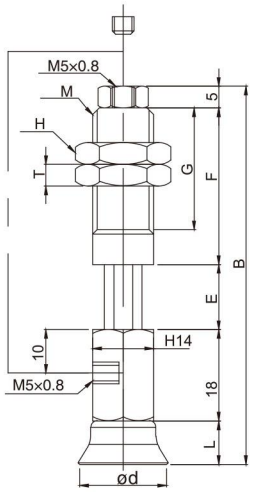
M-PC/D1.5A/2A/
3.5AFH-4B/4J



M-PC/D5A/6A/8A/
10A/15AFH-6B/6J



M-PC/D20B/25/30/
35/40/50FH-6B/6J



※Suction cup material "N S SE FS" is a best-selling product with short delivery time and high cost performance.Other materials and hardness can also be customized, please consult our Unit for details.

※Please refer to the P series bracket specifications for the specifications and selection of individual bracket

Ordering example | M-PC25-6FHN6J
M-PC25-6FHN6J-LH

※If no trace adsorption is needed, please add "LH" suffix

In addition to the recommended specifications in the table, the vacuum interface can also be configured as required. Please consult our Unit for details.