

TU-K Series

SUCTION CUP TU-K TYPE



Features

- Suitable for safely handling PCBs, LCD panels, Solar cells, and other electronics components.

Applications [Suitable for Handling]

- Solar cell
- PCB
- Electronic components

Order No.

TU3.5

K

S

M5

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 Size Ø [VACUUM PAD]	 Material	 Thread Size
TU3.5-K : Ø 3.5	N : NBR	X : [NONE]
TU6-K : Ø 6	S : SILICON	FM4-K-1 : M4 Male [TU3.5]
TU8-K : Ø 8	WS : WHITE SILICON	FM5-K-1 : M5 Male [TU3.5]
TU10-K : Ø10	CS : CONDUCTIVE SILICON	FM4-K-2 : M4 Male [TU6~TU10]
TU15-K : Ø15	U : URETHANE	FM5-K-2 : M5 Male [TU6~TU10]
	B,V : Fluorine	
	MF : Mark Free	
	BS : BLACK SILICON	

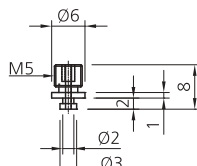
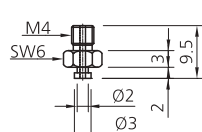
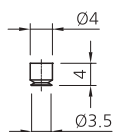
TU-K Series

□ Individual Items
■ Assembly

TU3.5-K-()

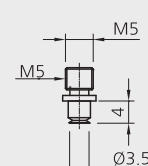
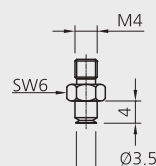
FM4-K-1

FM5-K-1



TU3.5-K-()-FM4

TU3.5-K-()-FM5



TU6-K-()-X

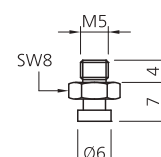
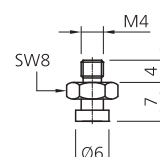
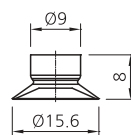
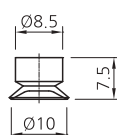
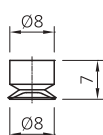
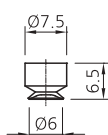
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TU10-K-()-X

TU15-K-()-X

FM4-K-2

FM5-K-2

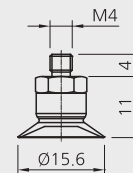
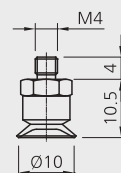
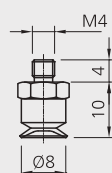
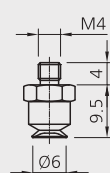


TU6-K-()-FM4

TU8-K-()-FM4

TU10-K-()-FM4

TU15-K-()-FM4

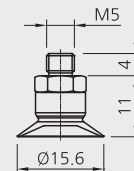
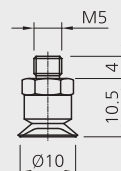
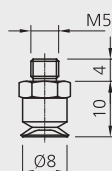
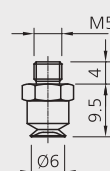


TU6-K-()-FM5

TU8-K-()-FM5

TU10-K-()-FM5

TU15-K-()-FM5



TBZ Series



Product features

- Suitable for the safe handling of electronic circuit components, including PCB boards, LCDs, and solar cells.

Suitable for Handling

- Solar cell
- PCB
- Electronic components

Order No.

TBZ

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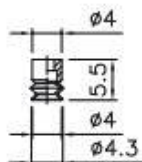
Size Ø [VACUUM PAD]	Material	Thread Size
4 : Ø4.3	N : NBR	X : [NONE]
6 : Ø6.5	S : SILICON	FM4-K-1 : M4 Male [TBZ4]
8 : Ø8.5	WS : WHITE SILICON	FM5-K-1 : M5 Male [TBZ4]
10 : Ø11	CS : CONDUCTIVE SILICON	FM4-TBA-2 : M4 Male [TBZ6, TBZ8]
15 : Ø15.4	U : URETHANE	FM5-TBA-2 : M5 Male [TBZ6, TBZ8]
20 : Ø20.4	B,V : Fluorine	FM4-TBZ-1 : M4 Male [TBZ10, TBZ15]
30 : Ø30.4	HS : HIGH TEMP SILICON	FM4-TBZ-2 : M4 Male [TBZ20]
40 : Ø40	MF : Mark Free	FM4-TBZ-3 : M4 Male [TBZ30, TBZ40]
	BS : BLACK SILICON	FM5-TBZ-1 : M5 Male [TBZ10, TBZ15]
		FM5-TBZ-2 : M5 Male [TBZ20]
		FM5-TBZ-3 : M5 Male [TBZ30, TBZ40]

* Specifications are subject to change without prior notice for quality improvement.

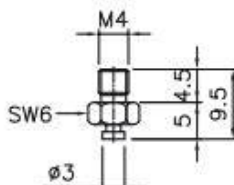
TBZ Series

□ Individual Items
■ Assembly

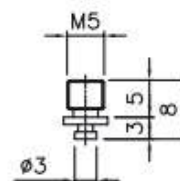
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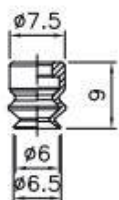
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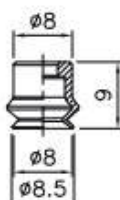
FM5-K-1



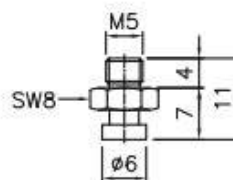
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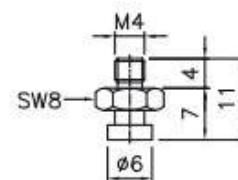
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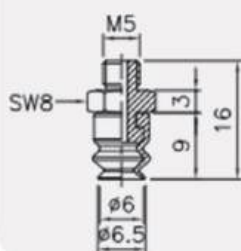
FM4-TBA-2



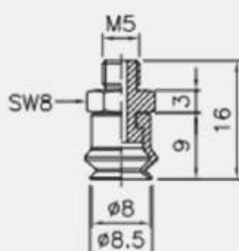
FM5-TBA-2



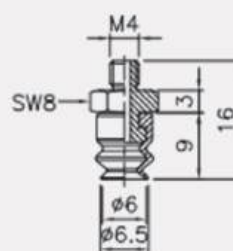
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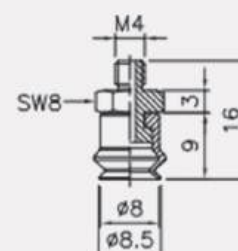
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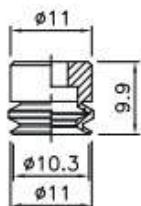
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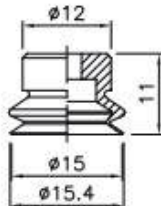
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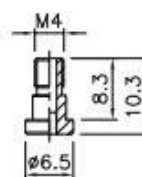
TBZ10



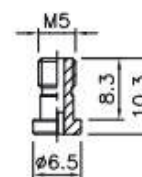
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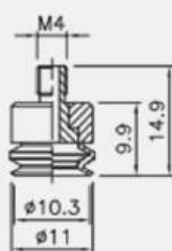
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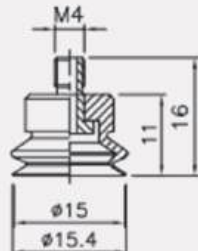
FM5-TBZ-1



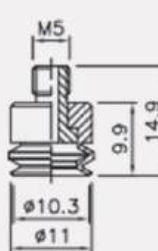
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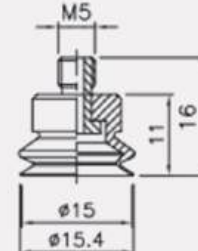
TBZ15-()-FM4



TBZ10-()-FM5



TBZ15-()-FM5

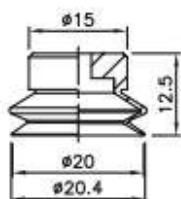


TBZ Series

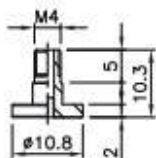
☐ Individual Items

☒ Assembly

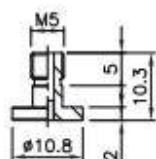
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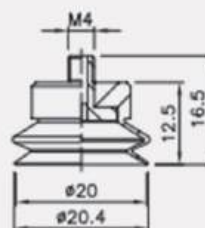
FM4-TBZ-2



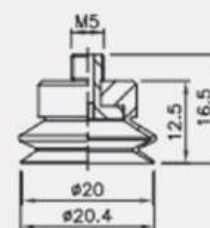
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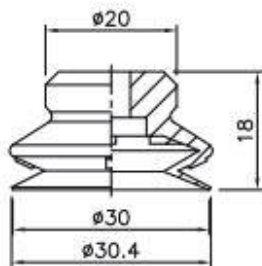
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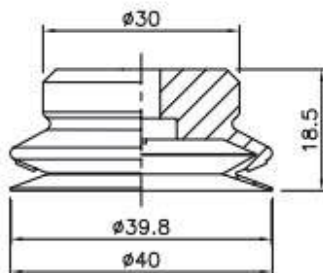
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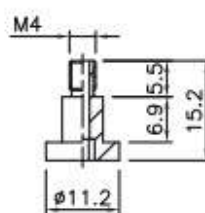
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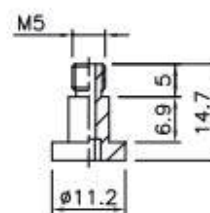
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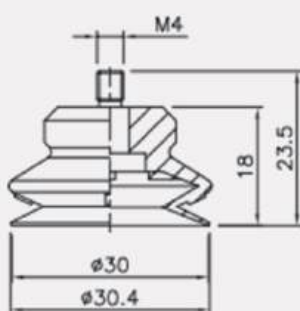
FM4-TBZ-3



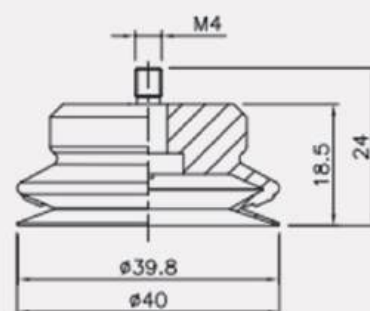
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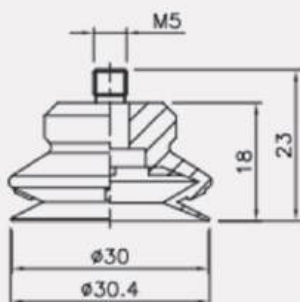
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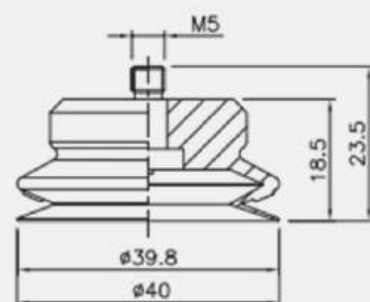
TBZ40-()-M4



TBZ30-()-M5



TBZ40-()-M5



VACUUM PAD



TBA Series

Product Features

Electronic circuit components such as PCB substrates, LCDs, and Solar cells can be safely transferred.

Vertical Lifting Force (kg)

MODEL \ Perpendicular Lifting Force	-30kPa	-60kPa	-90kPa
TBA3	0.01	0.04	0.7
TBA4	0.03	0.08	0.1
TBA6	0.08	0.16	0.25
TBA8	0.15	0.34	0.5
TBA10	0.15	0.34	0.5
TBA10M	0.15	0.34	0.5
TBA13M	0.3	0.8	1.1
TBA16M	0.35	0.85	1.12

Suitable for Handling

Solar cell
Printed Circuit Board
Electronic components

Selection Guide



① Vacuum Pad

TBA	TBA Series
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② Pad Size

Symbol	3	4	6	8	10	10M	13M	16M
Size	Ø3	Ø4.5	Ø7	Ø9	Ø11	Ø12	Ø15	Ø18

③ Material

Symbol	N	S	WS	CS	U	BV	MF	BS
Material	NBR	Silicone	White Silicone	Conductive Silicone	Urethane	Fluorine	Mark Free	Black Silicone

④ Fitting

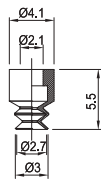
Symbol	FM4	FM5	FM4	FM5	FM4	FM5	FM4	FM5
Fitting Model	FM4-K-1	FM5-K-1	FM4-TBA-1	FM5-TBA-1	FM4-K-2	FM5-K-2	FM4-TBAM	FM5-TBAM
Thread Size	M4 Male	M5 Male	M4 Male	M5 Male	M4 Male	M5 Male	M4 Male	M5 Male
Applicable Pad	TBA3		TBA4~TBA8		TBA10		TBA10M~TBA16M	

Specifications may be changed without notice for quality.

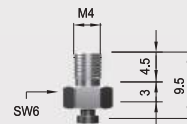
TBA Series

► TBA3~TBA8

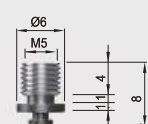
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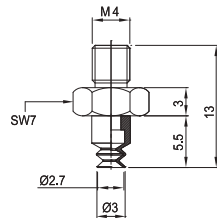
FM4-K-1



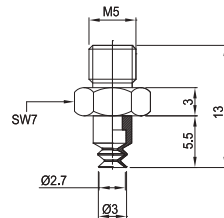
FM5-K-1



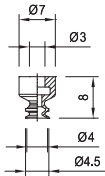
TBA3-()-FM4



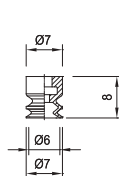
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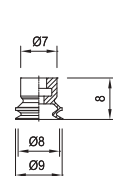
TBA4



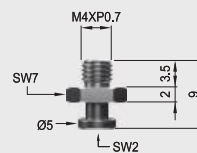
TBA6



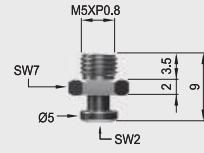
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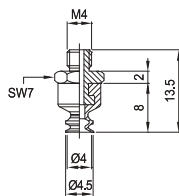
FM4-TBA-1



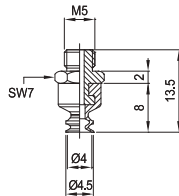
FM5-TBA-1



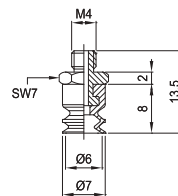
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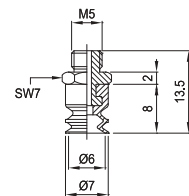
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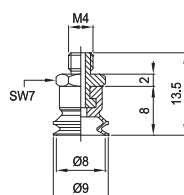
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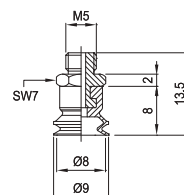
TBA6-()-FM5



TBA8-()-FM4



TBA8-()-FM5

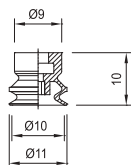


VACUUM PAD

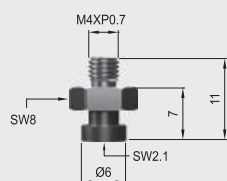
TBA Series

► TBA10~TBA16M

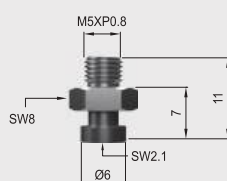
TBA10



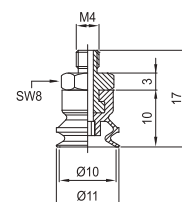
FM4-K-2



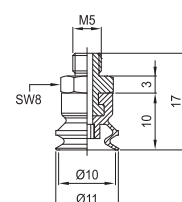
FM5-K-2



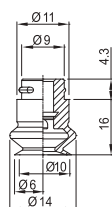
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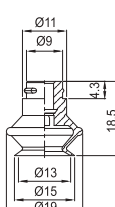
TBA10-()-FM5



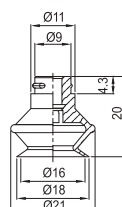
TBA10M



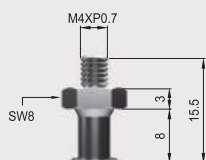
TBA13M



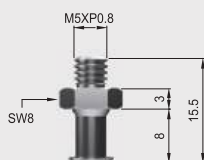
TBA16M



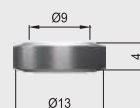
FM4-TBAM



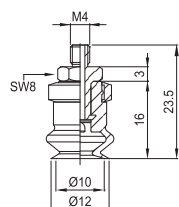
FM5-TBAM



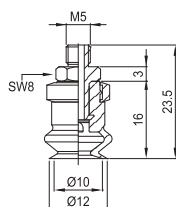
MC ACCESSORY



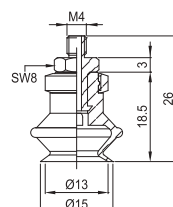
TBA10M-()-FM4



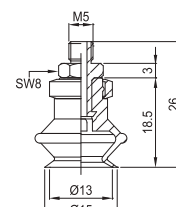
TBA10M-()-FM5



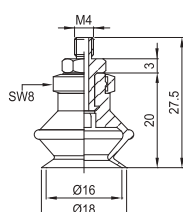
TBA13M-()-FM4



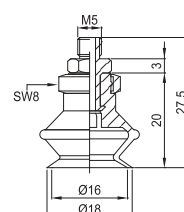
TBA13M-()-FM5



TBA16M-()-FM4



TBA16M-()-FM5



Vacuum Pad ◦

TP2 Series



Product features

- Applicable afor adsorption of thin films, sheets, etc.
- Suppresses deformation of the contact surface during adsorption

Suitable for Handling

- Film
- Glass
- Solar cell

Order No.

TP2 - 15 - CS - FM5

Size Ø [VACUUM PAD]	Material	Thread Size
8 : Ø 8,5	N : NBR	X : [NONE]
10 : Ø 11	S : SILICON	FM4-TP2-1 : [TP2-8]
13 : Ø 13,5	WS : WHITE SILICON	FM4-TP2-2 : [TP2-10~TP2-15]
15 : Ø 16	CS : CONDUCTIVE SILICON	FM4-TP2-3 : [TP2-20]
20 : Ø 21	U : URETHANE	FM4-TP2-4 : [TP2-25~TP2-30]
25 : Ø 26	B,V : Fluorine	FM5-TP2-1 : [TP2-8]
30 : Ø 31	MF : Mark Free	FM5-TP2-2 : [TP2-10~TP2-15]
	BS : BLACK SILICON	FM5-TP2-3 : [TP2-20]
		FM5-TP2-4 : [TP2-25~TP2-30]

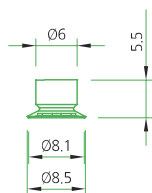
Vertical Lifting Force (kg)

MODEL	-20 Kpa	-60 Kpa	-90 Kpa
TP2-8	0,04	0,27	0,48
TP2-10	0,05	0,34	0,60
TP2-13	0,22	0,65	0,89
TP2-15	0,25	0,75	1,02
TP2-20	0,51	1,22	1,53
TP2-25	0,81	1,88	1,4
TP2-30	1,12	1,45	2,94

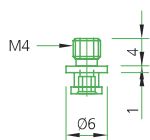
TP2 Series

□ Individual Items
■ Assembly

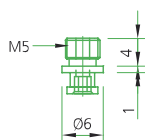
TP2-8()-X



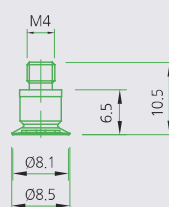
FM4-TP2-1



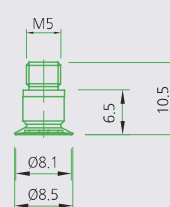
FM5-TP2-1



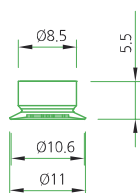
TP2-8()-M4



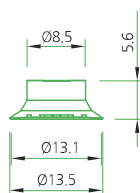
TP2-8()-M5



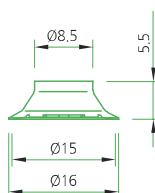
TP2-10()-X



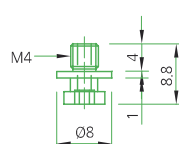
TP2-13()-X



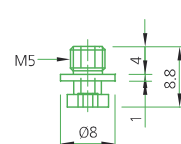
TP2-15()-X



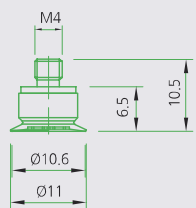
FM4-TP2-2



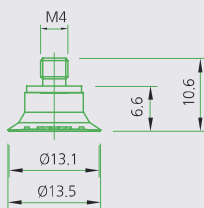
FM5-TP2-2



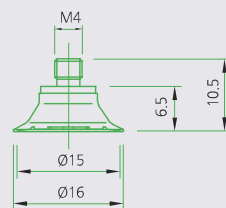
TP2-10()-M4



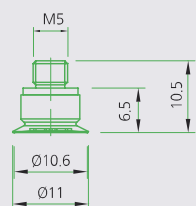
TP2-13()-M4



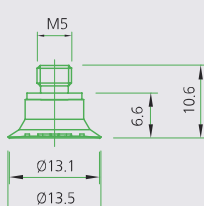
TP2-15()-M4



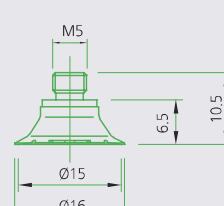
TP2-10()-M5



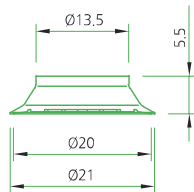
TP2-13()-M5



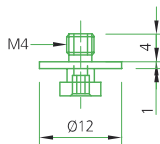
TP2-15()-M5



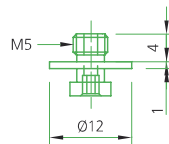
TP2-20-()-X



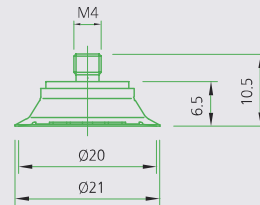
FM4-TP2-3



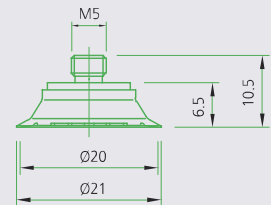
FM5-TP2-3



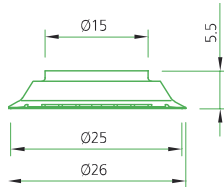
TP2-20-()-M4



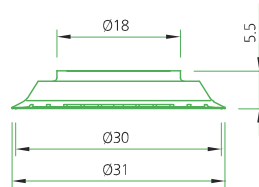
TP2-20-()-M5



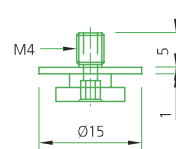
TP2-25-()-X



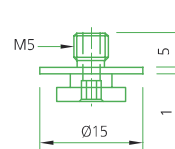
TP2-30-()-X



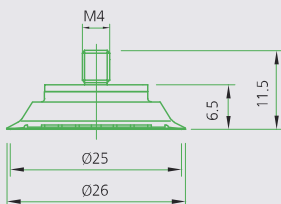
FM4-TP2-4



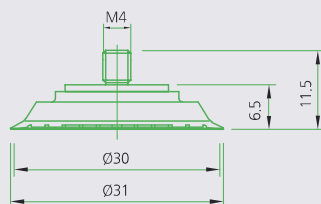
FM5-TP2-4



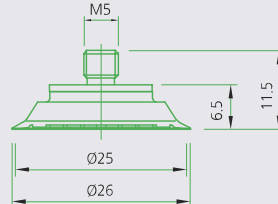
TP2-25-()-M4



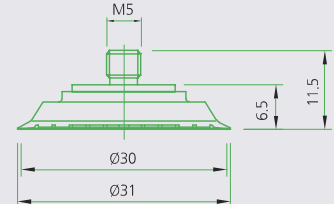
TP2-30-()-M4



TP2-25-()-M5



TP2-30-()-M5



◦ Vacuum Pad

TU Series

UNIVERSAL SUCTION CUP



- ▶ Suitable for flat or slightly curved surfaces.
- ▶ Can also be used for concave objects.

Vertical Load Capacity(KG)

MODEL \ Perpendicular Lifting Force	-20 Kpa	-60 Kpa	-90 Kpa
TU2	0.003	0.01	0.015
TU3.5	0.009	0.04	0.06
TU4	0.02	0.09	0.13
TU6	0.05	0.17	0.25
TU8	0.1	0.29	0.39
TU10	0.15	0.44	0.7
TU8A	0.1	0.29	0.39
TU10A	0.15	0.44	0.7
TU15A	0.35	0.85	1.12

Vacuum Pad

Product features

- Suitable for transporting products with flat or gently curved surfaces
- Can be used for slightly curved or concave workpieces

Applications

- Metal Sheet
- Plastic
- Box Packing

Order No.

TU - 6 - S - M5

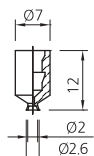
Size Ø [VACUUM PAD]	Material	Thread Size
2 : Ø 2	N : NBR	X : [NONE]
3.5 : Ø 3.5	S : SILICON	FM4-1 : M4 Male [TU8A, TU10A]
4 : Ø 4	WS : WHITE SILICON	FM4-2 : M4 Male [TU2~TU10, TU15A]
6 : Ø 6	CS : CONDUCTIVE SILICON	FM5-1 : M5 Male [TU8A, TU10A]
8 : Ø 8	U : URETHANE	FM5-2 : M5 Male [TU2~TU10, TU15A]
10 : Ø 10	B,V : Fluorine	FM5F-2 : M5 Female [TU2~TU10, TU15A]
8A : Ø 8	MF : Mark Free	
10A : Ø 10	BS : BLACK SILICON	
15A : Ø 15		

TU Series

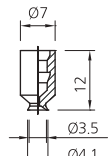
□ Individual Items

■ Assembly

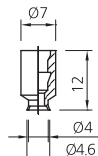
TU2



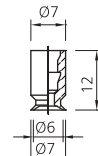
TU3,5



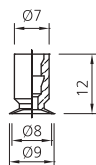
TU4



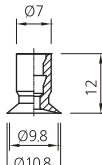
TU6



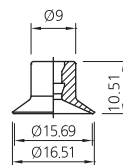
TU8



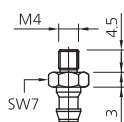
TU10



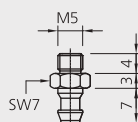
TU15A



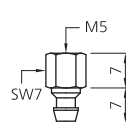
FM4-2



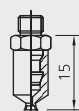
FM5-2



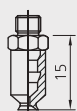
FM5F-2



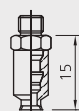
TU2-()-FM5



TU3,5-()-FM5



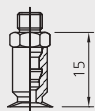
TU4-()-FM5



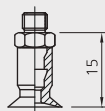
TU6-()-FM5



TU8-()-FM5



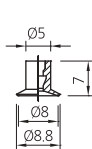
TU10-()-FM5



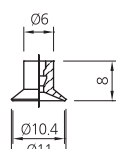
TU15A-()-FM5



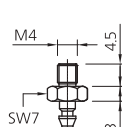
TU8A



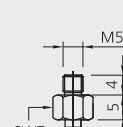
TU10A



FM4-1



FM5-1



TU8A-()-FM5



TU10A-()-FM5



◦ Vacuum Pad

TU Series

UNIVERSAL SUCTION CUP



- Suitable for flat or slightly curved surfaces.
- Can also be used for concave objects.

Vertical Load Capacity(KG)

MODEL \ Perpendicular Lifting Force	-20 Kpa	-60 Kpa	-90 Kpa
TU20	0.61	1.22	1.63
TU25	0.91	1.89	2.5
TU30	1.22	2.55	3.06
TU40	2.04	3.97	5
TU50	3.57	7.44	9.38

Vacuum Pad

Product features

- Suitable for transporting products with flat or gently curved surfaces
- Can be used for slightly curved or concave workpieces

Applications

- Metal Sheet
- Plastic
- Box Packing

Order No.

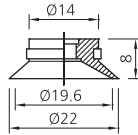
TU - 30 - S - 18M

Size Ø [VACUUM PAD]	Material	Thread Size
20 : Ø 20	N : NBR	X : [NONE]
25 : Ø 25	S : SILICON	FM5-3 : M5 Male [TU20-TU30]
30 : Ø 30	WS : WHITE SILICON	F18M-1 : PF 1/8 Male [TU20-TU30]
40 : Ø 40	CS : CONDUCTIVE SILICON	F18F-1 : PF 1/8 Female [TU20-TU30]
50 : Ø 50	U : URETHANE	F18M-2 : PF 1/8 Male [TU40]
	B,V : Fluorine	F18F-2 : PF 1/8 Female [TU40]
	MF : Mark Free	F14M-1 : PF1/4 Male [TU40]
	BS : BLACK SILICON	F18M-3 : PF 1/8 Male [TU50]
		F18F-3 : PF 1/8 Female [TU50]
		F14M-2 : PF1/4 Male [TU50]

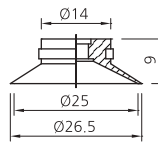
TU Series

☐ Individual Items
☒ Assembly

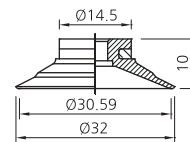
TU20



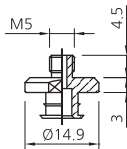
TU25



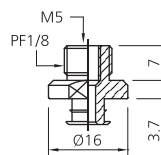
TU30



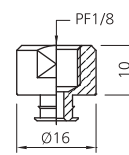
FM5-3



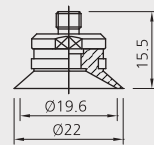
F18M-1



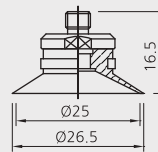
F18F-1



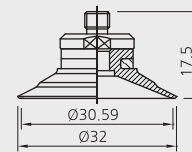
TU20-()-FM5



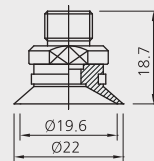
TU25-()-FM5



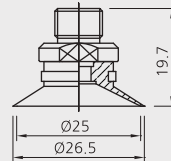
TU30-()-FM5



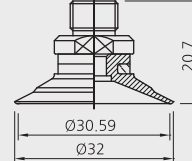
TU20-()-F18M



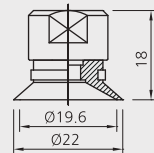
TU25-()-F18M



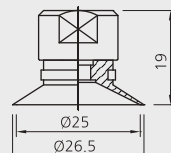
TU30-()-F18M



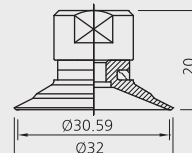
TU20-()-F18F



TU25-()-F18F



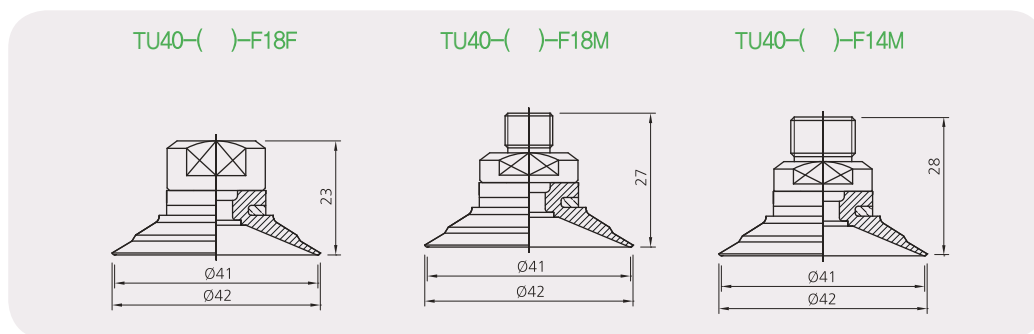
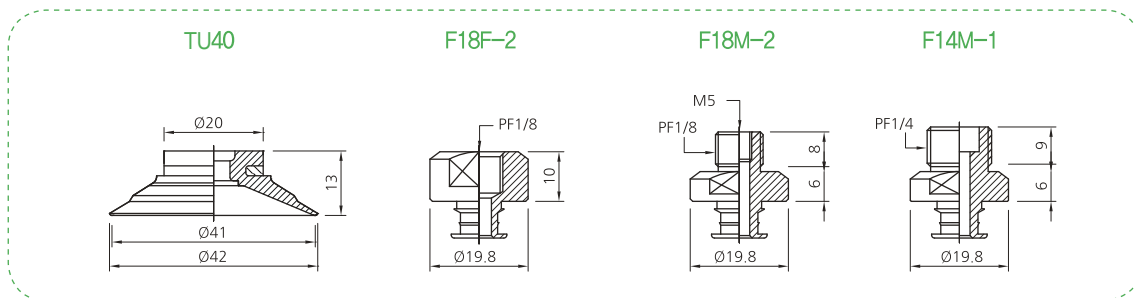
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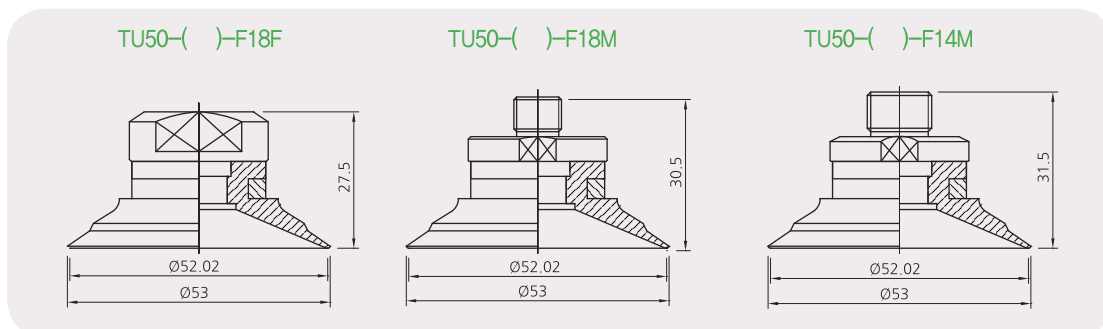
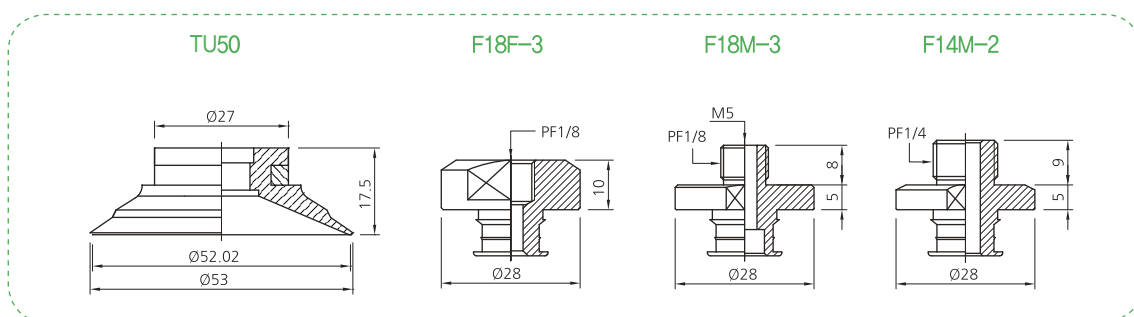
TU Series

□ Individual Items
■ Assembly

TU40



TU50



Vacuum Pad



TUJ Series

► Features | Product Features

- | A suitable pad for environments that require multiple small pads, such as round bars.
- | Excellent for narrow, long work such as substrates and semiconductors.

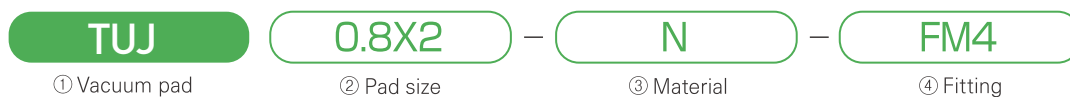
► Applications | Suitable for Handling

- | Substrate, Semiconductor
- | Small glass container
- | Steel plate
- | Electronic components, Circuit organs

► Vertical Load Capacity (Kg)

MODEL	Perpendicular Lifting Force	-30 kPa	-60 kPa	-90 kPa
TUJ0.8X2		0.003	0.01	0.015
TUJ2X4		0.031	0.082	0.1
TUJ2X8		0.06	0.16	0.2
TUJ2X8D		0.06	0.16	0.2
TUJ3X8		0.072	0.19	0.24
TUJ3X14.5		0.12	0.23	0.3
TUJ4X13		0.104	0.277	0.347

► Order No.



① Vacuum Pad

TUJ	TUJ Series
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② Pad Size

Symbol	0.8X2	2X4	2X8	2X8D	3X8	3X14.5	4X13
Size	Ø0.8X2.8	Ø2.6X4.6	Ø1.9X7.9	Ø1.9X8.3	Ø2.8X8	Ø3X14.5	Ø4X13

③ Material

Symbol	N	S	WS	CS	U	BV	MF	BS
Material	NBR	Silicone	White Silicone	Conductive Silicone	Urethane	Fluorine	Mark Free	Black Silicone

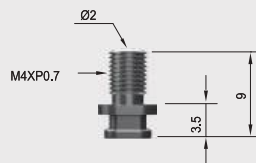
④ Fittings

Symbol	FM4	FM5	FM4F	FM5F	FM4F	FM5F
Fitting Model	FM4-TUJ0.8X2	FM5-TUJ0.8X2	FM4F-1-TUJ	FM5F-1-TUJ	FM4F-2-TUJ	FM5F-2-
Thread Size	M4 Male	M5 Male	M4 Female	M5 Female	M4 Female	M5 Female
Applicable Pad	TUJ0.8X2		TUJ2X8		TUJ3X8~	4X13

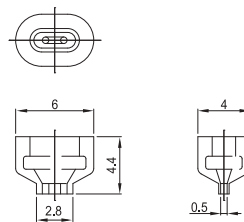
Vacuum Pad

► TUJ0.8X2

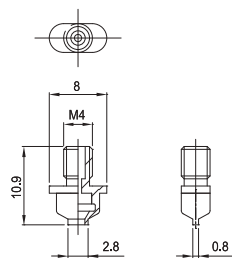
FM4-TUJ0.8X2



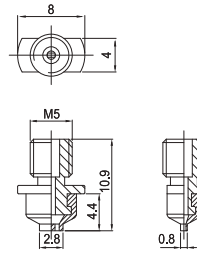
TUJ0.8X2



TUJ0.8X2-()FM4

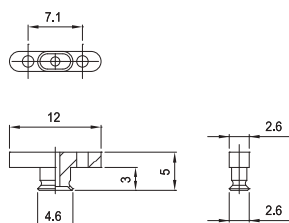


TUJ0.8X2-()FM5



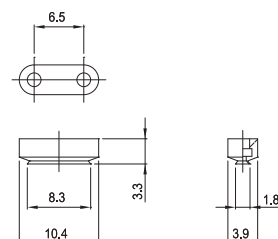
► TUJ2X4

TUJ2X4



► TUJ2X8D

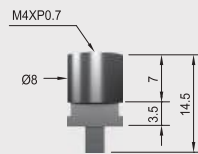
TUJ2X8D



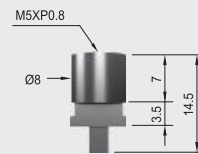
TUJ Series

TUJ2X8

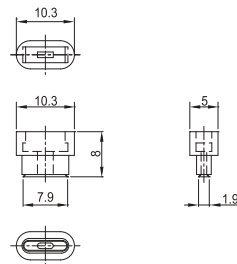
FM4F-1-TUJ



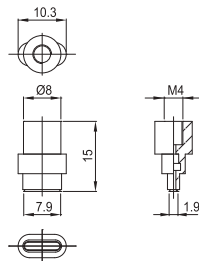
FM5F-1-TUJ



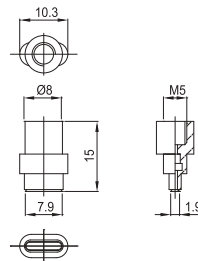
TUJ2X8



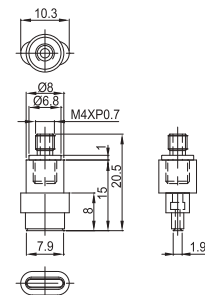
TUJ2X8-()-FM4F



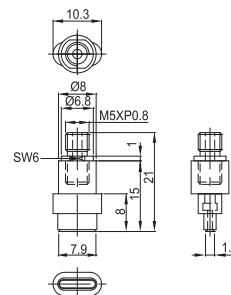
TUJ2X8-()-FM5F



TUJ2X8-()-FM4



TUJ2X8-()-FM5

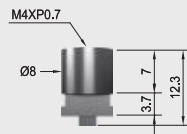


Vacuum Pad

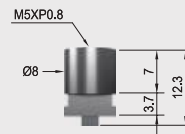
TUJ Series

TUJ3X8~TUJ4X13

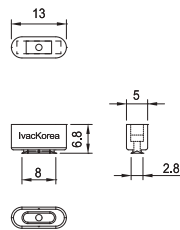
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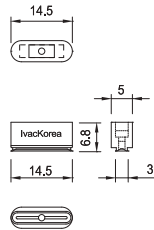
FM5F-2-TUJ



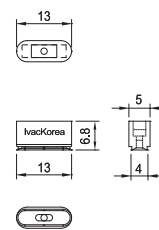
TUJ3X8



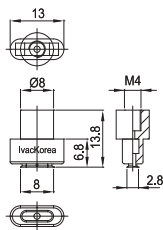
TUJ3X14.5



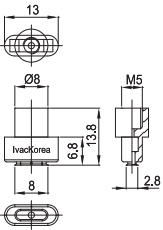
TUJ4X13



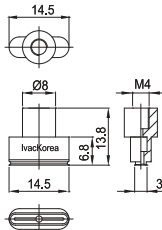
TUJ3X8-()FM4F



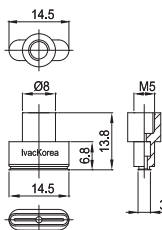
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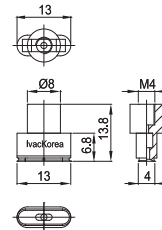
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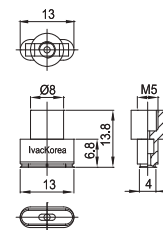
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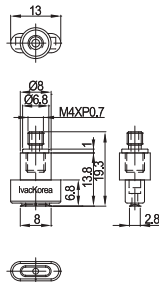
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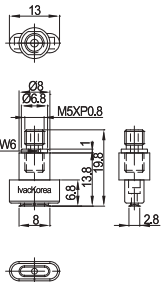
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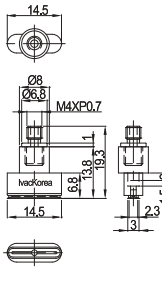
TUJ3X8-N-FM4



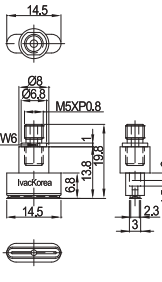
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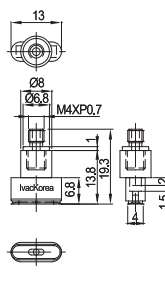
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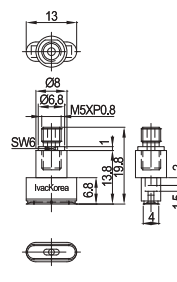
TUJ3X14.5-N-FM5



TUJ4X13-N-FM4



TUJ4X13-N-FM5



Vacuum Pad



TUJ Series

Features | Product Features

- A suitable pad for environments that require multiple small pads, such as round bars.
- Excellent for narrow, long work such as substrates and semiconductors.

Applications | Suitable for Handling

- Substrate, Semiconductor
- Small glass container
- Steel plate
- Electronic components, Circuit organs

Vertical Load Capacity (Kg)

MODEL	Perpendicular Lifting Force	-30 kPa	-60 kPa	-90 kPa
TUJ8X20		0.38	0.83	1.21
TUJ8X30		0.52	1.21	1.66
TUJ15X45		1.06	2.88	4.22
TUJ20X60		1.93	5.10	7.65
TUJ22X62		2.4	5.75	8.3
TUJ23X200		4.35	8.7	13.05
TUJ35X110		5.0	13.4	17.4
TUJ60X140		13.4	38.0	53.0

Order No.

TUJ **8X20** **N** **FM5**
 ① Vacuum pad ② Pad size ③ Material ④ Fitting

① Vacuum Pad

TUJ	IUJ Series
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② Pad Size

Symbol	8X20	8X30	15X45	20X60	22X62	23X200	35X110	60X140
Size	Ø8X20	Ø8X30	Ø15X45	Ø20X60	Ø22X62	Ø22X62	Ø37X114	Ø61X140

③ Material

Symbol	N	S	WS	CS	U	BV	MF	BS
Material	NBR	Silicone	White Silicone	Conductive Silicone	Urethane	Fluorine	Mark Free	Black Silicone

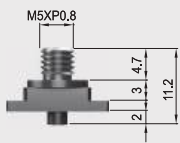
④ Fittings

Symbol	FM5	FM5F	F18F	F18F	F38F	F38F
Fitting Model	FM5-3-TUJ	FM5F-3-TUJ	F18F-1-TUJ	F18F-2-TUJ	F38F-TUJ-1	F38F-TUJ-2
Thread Size	M5 Male	M5 Female	PF1/8 Female	PF1/8 Female	PF3/8 Female	PF3/8 Female
Applicable Pad	TUJ8X20~TUJ8X30		TUJ15X45~TUJ20X60	TUJ22X62,TUJ23X200	TUJ35X110	TUJ60X140

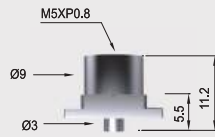
Vacuum Pad

TUJ8X20~TUJ8X30

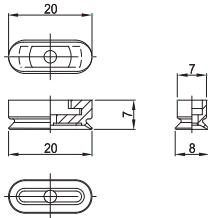
FM5-3-TUJ



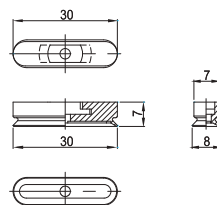
FM5F-3-TUJ



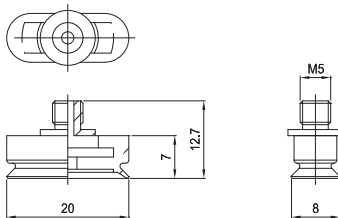
TUJ8X20



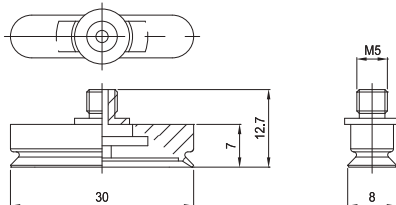
TUJ8X30



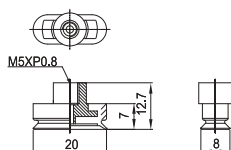
TUJ8X20(-)FM5



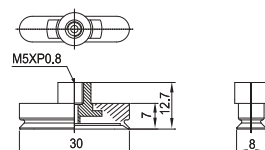
TUJ8X30(-)FM5



TUJ8X20(-)FM5F



TUJ8X30(-)FM5F

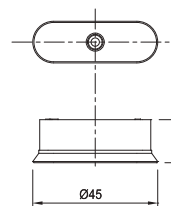


J15X45~TUJ20X60

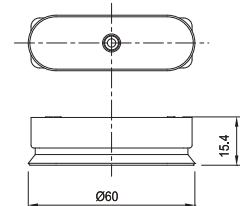
F18F-1-TUJ



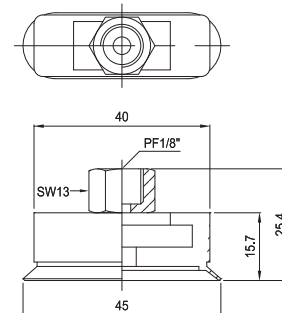
TUJ15X45-



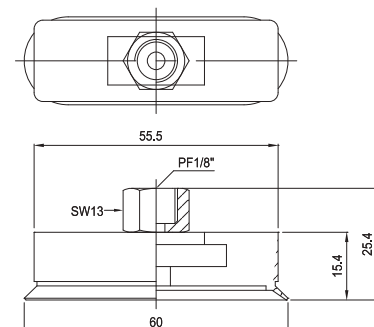
TUJ20X60



TUJ15X45(-)F18F

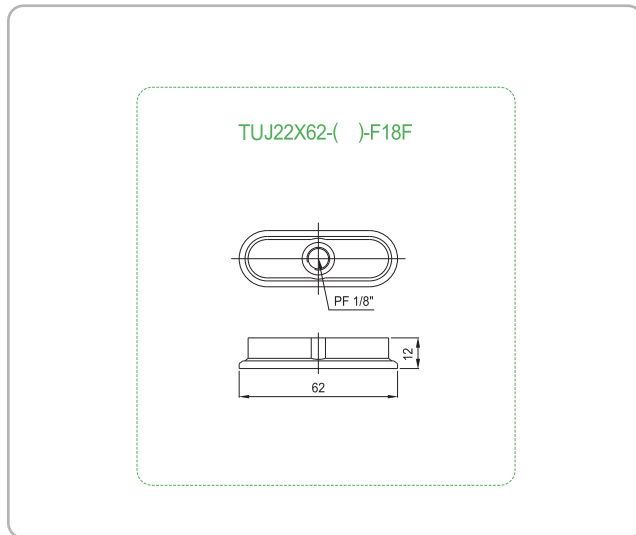


TUJ20X60(-)F18F

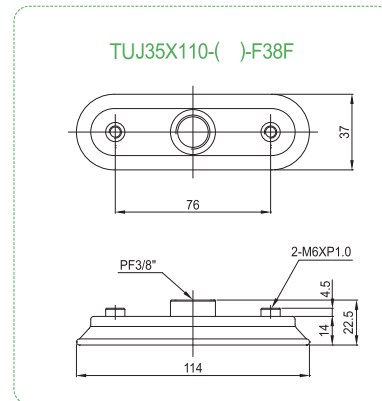


TUJ Series

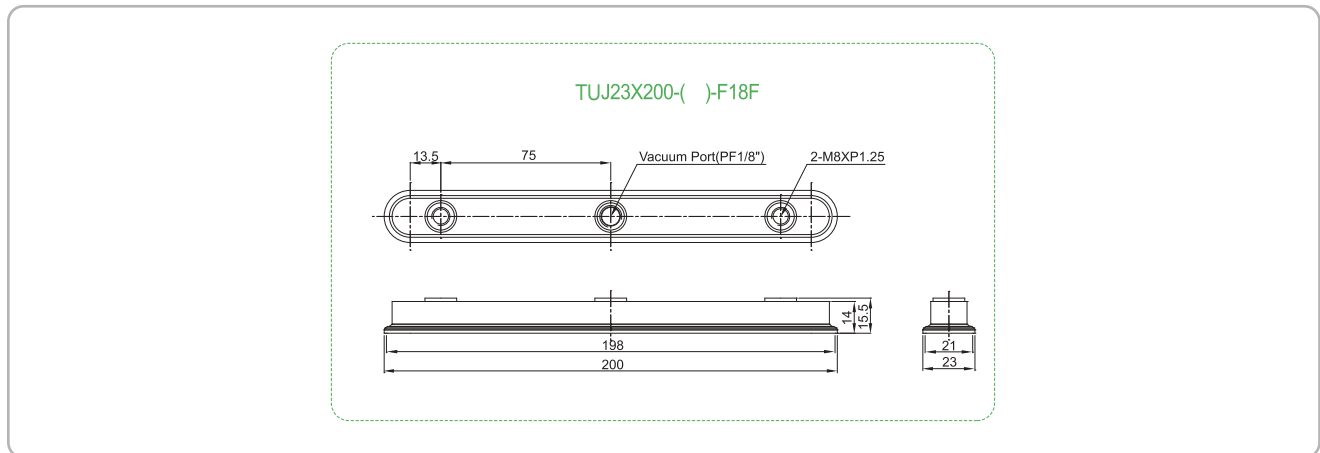
TUJ22X62



TUJ35X110



TUJ23X200



TUJ60X140

