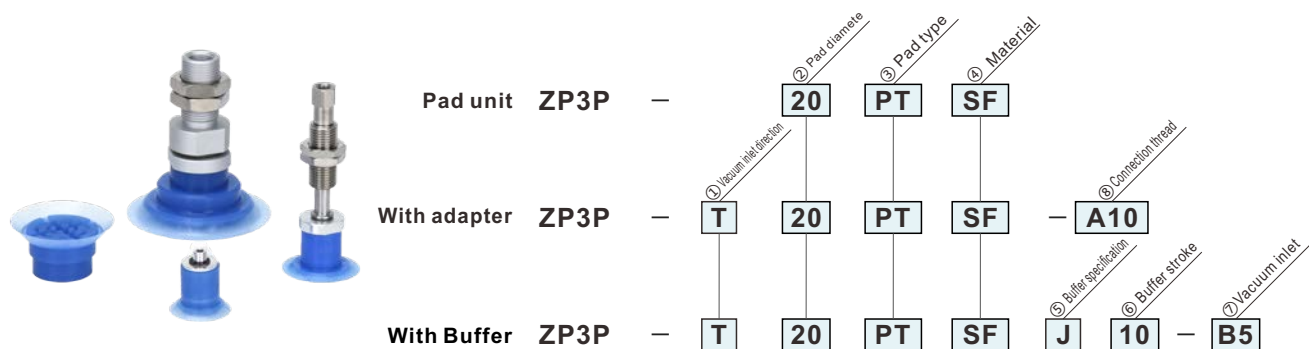


Thin Film Skirt Type Vacuum Pad(ø15 ~ ø50)

ZP3P Series

How to Order



- Good for film packaging applications
- Blue colored pad
- Reduced leakage
- Reduction of wrinkles made on thin workpieces (film, vinyl, etc.) during adsorption

① Vacuum inlet direction
T Vertical

② Pad diameter (mm)
15 ø15
20 ø20
25 ø25
35 ø35
50 ø50

③ Pad type
PT Thin Film Skirt Type

④ Material
SF Silicone rubber

⑤ Buffer specification
J Rotating
K Non-rotating

⑥ Buffer stroke
10 10 mm
20 20 mm
30 30 mm
40 40 mm
50 50 mm

⑦ Vacuum inlet	ø20,ø25	ø35,ø50
Female thread	B5 M5 x 0.8	●
B01 Rc1/8	—	●
One-touch fitting	04 ø4	●
06 ø6	●	●
08 ø8	—	●
N4 ø4 nylon tubing	●	—
Barb fitting	U4 ø4 soft tubing	●
N6 ø6 nylon tubing	●	●
U6 ø6 soft tubing	●	●

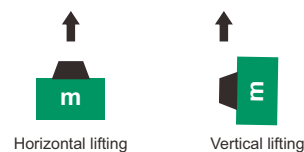
⑧ Connection thread	ø20,ø25	ø35,ø50
Male thread	A5 M5 x 0.8	●
A10 M10 x 1	—	●
A12 M12 x 1.75	—	●
AG1 G1/8	●	●
AG2 G1/4	—	●
AG3 G3/8	—	●
Female thread	B5 M5 x 0.8	●
B8 M8 x 1.25	—	●
Male thread	A12-B5 M12 x 1	●
A12-06 M12 x 1	●	—
AL14 M14 x 1	—	●

Lifting Force and Vacuum Pad Diameter

Depending on the achieved vacuum pressure, the theoretical lifting force may exceed the strength of the vacuum pad, deforming or breaking the pad. The safety factor should be 16 times or more of the theoretical lifting force for horizontal lifting, and it should be 25 times or more for vertical lifting.

$$\text{Calculation of theoretical lifting force } W = P \times S \times 0.1 \times \frac{1}{t}$$

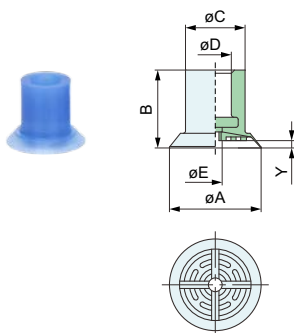
W: Lifting force (N)
P: Vacuum pressure (kPa)
S: Pad area (cm²)
t: Safety factor Horizontal lifting ≥ 16
Vertical lifting ≥ 25



Dimensions

(mm)

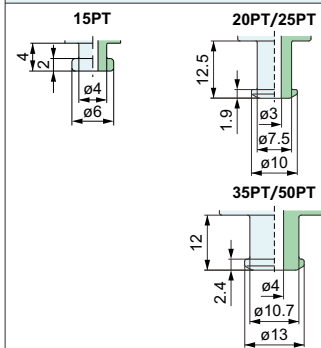
PT Thin Type with Ribs



Model	② Pad dia.	③ Pad type	④ Pad Material	øA	B	øC	øD	øE	Y
ZP3P	15	PT	SF	15	9.5	8.5	4	2	1.5
	20			20	17	13	7	3	1.6
	25			25	17.5	14	7	3	2.5
	35			35	19	14	7	3	3
	50			50	22	20.5	10	4	4.5

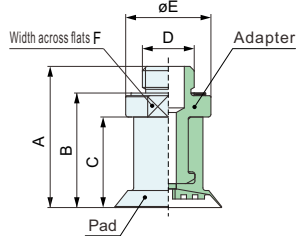
Model for refer: ZP3P-20PTSF

Adapter Mounting Dimensions



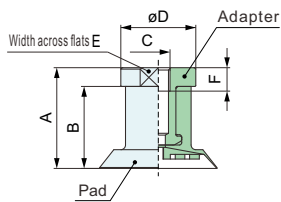
Dimensions

(mm)

PT Male Thread Vertical

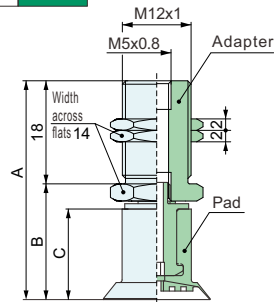
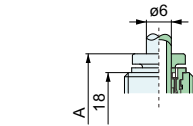
Model						A	B	C	D	øE	F	Adapter
	① Vacuum inlet direction	② Pad dia.	③ Pad type	④ Pad Material	⑤ Connecon thread							
ZP3P	T	15	PT	SF	A5	14.5	11	9.5	M5 x 0.8	8	—	ZP2A-M02P
						22	18.5	17	M5 x 0.8	12	—	ZP3PA-T1-A5
					AG1	26.5	21.5		G1/8	16	14	ZP3PA-T1-AG1
					A5	22.5	19	17.5	M5 x 0.8	12	—	ZP3PA-T1-A5
					AG1	27	22		G1/8	16	14	ZP3PA-T1-AG1
					A10	33.5	26.5	19	M10 x 1	24	21	ZP3PA-T2-A10
		A12	31.7	24	M12 x 1.75	ZP3PA-T2-A12						
		AG1	29.5	24.5	G1/8	ZP3PA-T2-AG1						
		AG2	30.5	24	G1/4	ZP3PA-T2-AG2						
		AG3	31.5		G3/8	ZP3PA-T2-AG3						
		A10	36.5	29.5	22	M10 x 1	24	21	ZP3PA-T2-A10			
		A12	34.7	27		M12 x 1.75			ZP3PA-T2-A12			
		AG1	32.5	27.5		G1/8			ZP3PA-T2-AG1			
		AG2	33.5	27		G1/4			ZP3PA-T2-AG2			
		AG3	34.5			G3/8			ZP3PA-T2-AG3			

Model for refer: ZP3P-T20PTSF-A5

PT Female Thread Vertical

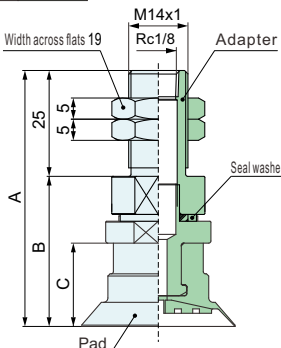
Model	① Vacuum inlet direction	② Pad dia.	③ Pad type	④ Pad Material	⑤ Connection thread	A	B	C	øD	E	F	Adapter
ZP3P	T	15	PT	SF	B5	17.5	9.5	M5 x 0.8	—	8	5	ZP2A-M04
		20				21	17		16	14	5	ZP3PA-T1-B5
		25				21.5	17.5					ZP3PA-T1-B5
		35			25	19	M8 x 1.25	24	21	8	ZP3PA-T2-B8	
		50			28	22					ZP3PA-T2-B8	

Model for refer: ZP3P-T20PTSF-B5

20PT/25PT Male Thread Vertical**B5****06**

Model	① Vacuum inlet direction	② Pad dia.	③ Pad type	④ Pad Material	⑤ Connection thread	A	B	C	Adapter	
ZP3P		15	20	PT	SF	A12-B5	31.7	13.7	9.5	ZP2PA-T1-A12-B5
						A12-06	34.9			ZP2PA-T1-A12-06
		20				A12-B5	39.2	21.2	17	ZP3PA-T1-A12-B5
						A12-06	42.4			ZP3PA-T1-A12-06
		25				A12-B5	39.7	21.7	17.5	ZP3PA-T1-A12-B5
						A12-06	42.9			ZP3PA-T1-A12-06

Model for refer: ZP3P-T20PTSF-A12-B5

35PT/50PT Male Thread Vertical

Model	①	②	③	④	⑤	A	B	C	Adapter
	Vacuum inlet direction	Pad dia.	Pad type	Pad Material	Connection thread				
ZP3P	T	20	PT	SF	AL14	55.5	30.5	17	ZP3PA-T1-AL14
		25				56	31	17.5	
		35				58.5	33.5	19	ZP3PA-T2-AL14
		50				61.5	36.5	22	

Model for refer: ZP3P-T35PTSF-AL14

ZP3P Series

Thin Film Skirt Type Vacuum Pad(ø15 ~ ø50)

With Buffer

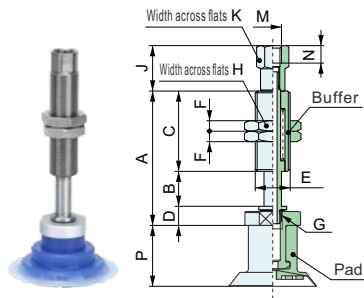
Vertical

Dimensions

(mm)

PT With Buffer Vertical

B5,B01



Dimensions Per pad

② Pad dia.	15	20	25	35	50
P	9.5	17	17.5	19	22

Dimensions Per buffer

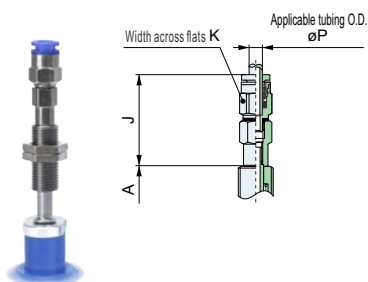
Model	① Vacuum inlet direction	② Pad dia.	③ Pad type	④ Pad Material	⑤ Buffer spec.	⑥ Buffer stroke	⑦ Vacuum inlet	A	B	C	D	E	F	G	H	Buffer	⑨ Buffer spec.	⑩ Buffer stroke	⑪ Vacuum inlet
ZP3P	T	15	PT	SF	J K	10 B5	10	38.8	10	23	5.5	M10x1	3	M5x0.8	14	ZP2PB-T1	J K	10	B5
						20 O4	20	76.5	20	51								20	O4
						30 N4	30	86.5	30	77								30	N4
						40 U4	40	122.5	40	77								40	U4
						50 N6	50	132.5	50	77								50	N6
						50 U6	50	132.5	50	77								50	U6
		20	PT	SF	J K	10 B5	10	38.8	10	23	5.5	M10x1	3	M5x0.8	14	ZP3PB-T1	J K	10	B5
						20 O4	20	76.5	20	51								20	O4
						30 N4	30	86.5	30	77								30	N4
						40 U4	40	122.5	40	77								40	U4
						50 N6	50	132.5	50	77								50	N6
						50 U6	50	132.5	50	77								50	U6
		35	PT	SF	J K	10 B5	10	68.5	10	50	8.5	M14x1	5	M8x1.25	19	ZP3PB-T2	J K	10	B5
						20 O4	20	78.5	20	50								20	O4
						30 N6	30	88.5	30	75								30	N6
						50 U6	50	133.5	50	75								50	U6
						50 N6	50	133.5	50	75								50	N6
						50 U6	50	133.5	50	75								50	U6

Dimensions Per Vacuum Inlet: Female Thread

Model	①	②	③	④	⑤	⑥	⑦	J	K	M	N	Min. hole size
	Vacuum inlet direction	Pad dia.	Pad type	Pad Material	Buffer spec.	Buffer stroke	Vacuum inlet					
ZP3P	T	15 20 25	PT	SF	J K	10,20,30,40,50	B5	13	8	M5x0.8	5	ø2.5
						10	B5	15	10	M5x0.8	5	ø4
		20,30,50				9		ø3				
		35 50				10	B01	16.5	13	Rc1/8	7	ø4
						20,30,50		12				ø3

Model for refer: ZP3P-T20PTSFJ10-B5 Buffer for refer: ZP3PB-T1J10-B5

04,06,08

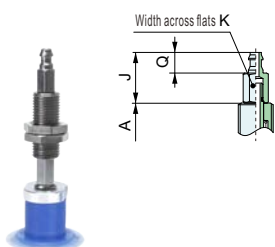


Dimensions Per Vacuum Inlet: One-touch Fitting

Model	①	②	③	④	⑤	⑥	⑦	J	K	øP	Min. hole size
	Vacuum inlet direction	Pad dia.	Pad type	Pad Material	Buffer spec.	Buffer stroke	Vacuum inlet				
ZP3P	T	15 20 25	PT	SF	J K	10,20,30,40,50	04 06	27.8	8(04) 10(06)	4(04) 6(06)	ø2.5
						10	06	35	12	6	ø4
		35 50				08	40.5	14	8	ø3	
						20 30 50	06	30.5	12	6	ø4
							08	36	14	8	ø3

Model for refer: ZP3P-T20PTSFJ10-06 Buffer for refer: ZP3PB-T1J10-06

N4,U4,N6,U6



Dimensions Per Vacuum Inlet: Barb Fitting

Model	① Vacuum inlet direction	② Pad dia.	③ Pad type	④ Pad Material	⑤ Buffer spec.	⑥ Buffer stroke	⑦ Vacuum inlet	J	K	Q	Min. hole size
ZP3P	T	15 20 25	PT	SF	J K	10,20,30,40,50	N4,U4	14	6	5	ø1.7
						10	N6,U6	15		7	ø2.5
		35 50				20,30,50	N6 U6	19	10	7	ø2.5
								12			

Model for refer: ZP3P-T20PTSFJ10-U6 Buffer for refer: ZP3PB-T1J10-U6